8th FIVE YEAR PLAN
JULY 2020 – JUNE 2025

Promoting Prosperity and Fostering Inclusiveness

General Economics Division (GED)
Bangladesh Planning Commission
Government of the People's Republic of Bangladesh
December 2020

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A Note on this Edition:

National Economic Council (NEC) approved the Eighth Five Year Plan (July2020-June2025) on 29 December, 2020. This is also available in the Bangladesh Planning Commission Website: http://www.plancomm.gov.bd/ for general access. Bangla version of the Eighth Five Year Plan is in the process of publication.

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“No plan, however well-formulated, can be implemented unless there is a total Commitment on the part of the people of the country to work hard and make necessary sacrifices. All of us will, therefore, have to dedicate ourselves to the task of nation building with single-minded determination. I am confident that our people will devote themselves to this task with as much courage and vigour as they demonstrated during the war of liberation.”

The above is an extract, in abridged form, taken from the Foreword of the First Five Year Plan of Bangladesh which was prepared under the guidance and leadership of the **FATHER OF THE NATION, BANGABANDHU SHEIKH MUJIBUR RAHMAN.**

PRIME MINISTER
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

Message

Amid observance of the birth centenary of the Greatest Bangali of all times, Father of the Nation, Bangabandhu Sheikh Mujibur Rahman, and the Golden Jubilee of our independence, I am extremely delighted to present our Government's third successive Five Year Plan (July 2020- June 2025) to the people of Bangladesh since 2009. This flagship document contains the philosophy of realizing the 'Golden Bengal' as dreamed of by the Father of the Nation.

We inherited a very fragile economy when we formed government following a landslide victory in the general election of 2008. By then there was stagnation in the backbone sectors such as energy and power, communication, and foreign exchange reserve including other socio- economic indicators. Awami League Government was able to restore the momentum of that sluggish economy back on track adopting a well-planned path of growth very quickly. Even in less than a decade, our GDP growth surpassed 8.0 percent. But in the last fiscal year 2019-20, the GDP growth rate was recorded 5.2 percent which was attributed to the negative impact of the COVID-19 pandemic. With proper execution of well-planned strategies, schemes, and policies we have set targets to achieve GDP growth at 8.51 percent in the last fiscal year of the Eighth FYP. In FY 2008-09, the country's GDP USD 89 billion, which was then expanded more than three times amounting to USD 302 billion in FY 2018-2019. Our foreign exchange reserve exceeded USD 43 billion. The poverty rate declined to 20.5 percent from 40.0 percent in 2005. Women in Bangladesh are now more empowered than at any time before. Now we are considering the villages as the Central Hub of our development philosophy. Therefore, Bangladesh has now been recognized as a 'Role Model for Development' by the world from the disgraceful remark, 'Bottomless Basket' in the past.

In the field of infrastructure development, the multi-purpose Padma Bridge is the pride of Bangladeshi people. Despite the withdrawal of committed funding by a development partner, this largest bridge of Bangladesh currently under construction by the national finance will connect southwestern parts of Bangladesh to the rest of the country. Construction of metro rail and elevated expressway in the capital with a view to ease the traffic congestion is moving faster. To put the impetus on export trade construction of two deep-sea ports at Payra and Matarbari is approaching towards completion at a faster pace. Considering the future power demand of an economy that is aspiring to become an upper-middle-income country by 2031 and a status of a high-income country by 2041 building of the Rooppur Nuclear Power Plant is underway. Moreover, we have also prepared the 'Bangladesh Delta Plan 2100' to offset the negative externalities of climate change and natural calamities. The objectives of the Bangladesh Delta Plan 2100 will also be realized through the medium-term plans.

The extreme onslaught of the COVID-19 pandemic is still continuing in the world. However, we are trotting up keeping this deadly virus at the bay due to our Government's pragmatic interventions. Presently, our economy is functioning satisfactorily. Keeping all impediments of the COVID-19 pandemic in mind, we have prepared the Eighth Five Year Plan. Following the objectives- recovery from COVID 19, preparing Bangladesh for LDC graduation, achieving SDGs, and setting a trajectory towards a prosperous country by 2041, special importance has been given while preparing this instrument. We expect to achieve an 8.0 percent average growth rate during the plan period, reduce the poverty rate from 20.50 percent to 15.60 percent, and further strengthen the existing social security system while eliminating poverty and narrowing inequality.

I thank the General Economics Division (GED) of the Bangladesh Planning Commission led by its Member (Senior Secretary) for their sincere and hard work relating to formulating the Eighth Five Year Plan (July 2020-June 2025). I hope all concerned public, private, NGOs, CSOs, think tanks, and entrepreneurs- will join together in materializing the goals and targets of the Eighth Plan. I also believe that our venture towards building a self-reliant, happy, and prosperous Bangladesh will be successful indeed. With these achievements, we will be able to offer due respect and sincere tribute to our Father of the Nation Bangabandhu Sheikh Mujibur Rahman.

Joy Bangla, Joy Bangabandhu
May Bangladesh Live Forever

Sheikh Hasina
Hon'ble Prime Minister
Government of the People's Republic of Bangladesh
and
Chairperson, Bangladesh Planning Commission

M. A. Mannan, MP
Minister
Ministry of Planning
Government of the People's Republic of Bangladesh
&
Vice-Chairman, Bangladesh Planning Commission

Message

It is indeed a great pleasure for me to present the Eighth Five Year Plan (July 2020-June 2025) of Bangladesh which has been prepared by the General Economics Division (GED) of Bangladesh Planning Commission as the first in the series of 04 Five Year Plans to complete the agenda of achieving the social and economic transformation visualized in the second "Perspective Plan of Bangladesh 2021-2041'. Eighth Five Year Plan would also be instrumental in attaining Sustainable Development Goals (SDGs), realizing Bangladesh Delta Plan (BDP)-2100 for smooth transition following the LDC graduation. We have adopted this plan at a very auspicious moment as the nation is observing the centennial birth anniversary of the Father of the Nation and celebration of the golden jubilee of our independence.

Eighth Five Year Plan (July 2020-June 2025), which has been approved by the National Economic Council (NEC) on 29 December, 2020 will help to execute the political, social and economic agenda of the present government led by the Hon'ble Prime Minister Sheikh Hasina. The plan has emphasised on appropriate policies and institutions, and devised suitable development strategies for promoting prosperity, fostering inclusiveness, reducing poverty, and inequality. The lessons from the implementation of the Sixth and the Seventh Five Year Plans as instruments for implementing the First Perspective Plan 2021 including the adjustment to the Covid-19 fall out have duly been considered while formulating the Eighth Five Year Plan.

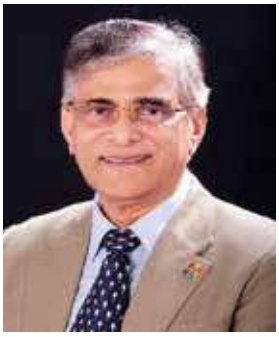
Eighth Five Year Plan mainly centres on six core themes, which included: i) rapid recovery from COVID-19 ii) GDP growth acceleration, employment generation, and rapid poverty reduction with a broad-based strategy of inclusiveness iii) a sustainable development pathway resilient to disaster and climate change iv) sustainable use of natural resources and successful management of the inevitable urbanization transition v) development and improvement of critical institutions, and vi) attaining SDG targets and coping up the impact of LDC graduation.

Effective implementation of the plan will mostly rely on the actions taken by the respective Ministries/ Divisions and stakeholders from both public and private sectors. I would, therefore, call upon all concerned to put their attention and devotion for realizing the goals and targets of the Eighth Five Year Plan so that we can meet our development aspirations and establish a prosperous country within the stipulated timeframe.

Eighth Five Year Plan is the culmination of a huge process that GED has followed with policy makers, ministries and divisions, various private sector bodies, development partners, economists, social scientists, researchers, academia, civil society members, etc. I thank the GED officials for their hard work and efforts which has made this possible even in unprecedented global pandemic COVID-19 situation. I would like to put on record with appreciation the contribution made by the members of the Panel of Economists in formulating this plan.

In fine, I would like to express my sincere thanks and gratitude to the Hon'ble Prime Minister Sheikh Hasina for providing strategic guidance and inspiration to prepare the Eighth Five Year Plan (July 2020-June 2025) of Bangladesh.

(M. A. Mannan, MP)



Dr. Shamsul Alam
Member (Senior Secretary)
General Economics Division (GED)
Bangladesh Planning Commission

Foreword

At the advent of the fifty years' celebration of our great independence and the joyous Mujib birth centenary, the General Economics Division (GED) of Bangladesh Planning Commission has made colossal efforts to put forward the Eighth Five Year Plan (July 2020-June 2025) before the nation. As a constitutional mandate to attain a just and egalitarian society through planned economic growth, the first Five Year Plan was formulated under the prudent guidance and visionary leadership of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman, which laid strong foundation of today's development. Thereafter, a total of seven Five Year Plans were devised till date to map out the strategic vision to be a prosperous nation.

Preparatory process of the Eighth Five Year Plan is marked by the infestation of major global catastrophe 'COVID-19', which has caused consequential economic conundrum across the world. The Eighth Five Year Plan is unique compared to its preceding two plans as it blends the COVID-19 recovery strategies in the macroeconomic framework as well as developing sectoral strategies in the plan. The government was in strong favour of the continuation of the Five Year Plan instead of formulating a separate COVID-19 response plan as discontinuation of the Five Year Plan could slow down the ongoing development initiatives of the government, which are extremely essential to face the challenges of LDC graduation, to meet the targets of SDGs and to fulfill the aspiration of the Vision 2041. Besides, the implementation of the Perspective Plan (PP) 2021-2041 is envisaged in four 'Five Year Plans'; the first quinquennium starts with the Eighth Five Year Plan. Hence, the main objective of the Eighth Five Year Plan is to start the implementation of PP2021-2041 in a way that it brings Bangladesh closer to the goals of achieving UMIC status by 2031 and attaining SDGs targets through managing the challenges of LDC graduation, which will also help to eliminate extreme poverty by 2031.

Prior to the emergence of COVID-19, the performance of the Seventh Five Year Plan in terms of achieving major development targets relating to economic growth, socio-economic transformation and poverty reduction was highly impressive. GDP growth accelerated and the average GDP growth during the Seventh Plan (7.13 per cent) nearly reached the annual average target of the Plan (7.4 per cent). Remarkable progress has been noticed in transforming the economy from an agrarian economy towards a more modern urban-based manufacturing and services-based economy. The export-led manufacturing sector reached new heights, growing at an average pace of 12.7 per cent per year, supported by the greater role of modern service sector activities in areas of transport, banking, real estate, ICT, healthcare and education. A major objective of the Seventh Five Year Plan was to narrow the rural-urban divide by diversifying the economic activity base and the government has been very much successful in this regard through expansion of non-

farm rural enterprises and services. Bangladesh also continued to push ahead with human development, women empowerment and social inclusion as key elements in realizing the dream of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman for achieving a just society with no discrimination on the basis of gender, religion, race or caste. It is worth mentioning that the 2020 Global Gender Gap Report records the solid progress made by Bangladesh in reducing the gender gap. Bangladesh was ranked 50th among 153 countries, even ahead of many advanced countries. Bangladesh has also continued its efforts in managing its environment in a sustainable way, which focused on reduction in air and water pollution, increasing forest coverage and improving preservation of biodiversity. The push toward achieving water safety and reducing long-term risk from climate change and natural disaster gained momentum through the adoption of a techno-economic Bangladesh Delta Plan (BDP2100) covering the whole twenty-first century. The Eighth Plan has accorded top priority to move with proper implementation of the BDP2100.

The preparation of Eighth Five Year Plan was commissioned in 2019. Initially, a 'National Steering Committee' was formed under the chairmanship of the Honorable Minister of Planning to oversight the preparation of the plan. A 'Panel of Economists', under the chairmanship of Dr. Wahiduddin Mahmud, has also been formed comprising luminous Bangladeshi economists, sociologists, educationalists and experts on relevant fields, who gave continuous support in shaping the Eighth Five Year Plan. In this noble initiative, GED has ensured partnership of all the government ministries/divisions/agencies, policy makers, academia, civil society organizations, NGOs, development partners, think-tanks and thought leaders in formulating this plan. A total of twenty five background studies have also been conducted with the help of the eminent experts in their respective fields. Most importantly, the concerned ministries/divisions have provided inputs with updated data that were reflected in the Eighth Five Year Plan.

The Eighth Five Year Plan centers around six core themes, which are (i) rapid recovery from COVID-19; (ii) GDP growth acceleration, employment generation and rapid poverty reduction; (iii) a broad-based strategy of inclusiveness; (iv) a sustainable development pathway that is resilient to disaster and climate change; (v) improvement of critical institutions necessary to lead the economy to Upper Middle Income Country status by 2031; and (vi) attaining SDGs targets and mitigating the impact of LDC graduation. The plan document has been organized around two broad parts. The first part delineates the macroeconomic framework for the plan period (July 2020-June 2025) along with strategic directions and policy framework for promoting inclusiveness, reducing poverty and inequality. It also describes the resource envelop and overall fiscal management tools of the government and specifies the Development Results Framework (DRF) for proper monitoring and evaluation. The second part sets out the sectoral strategies for thirteen sectors (except defense) with some specific targets to attain by FY 2025. The ministries/divisions are expected to follow these sectoral strategies and action measures while preparing their sector specific projects and programs to achieve their respective targets set in the Eighth Five Year Plan.

The Eighth Plan sets to hit the target of 8.51 per cent GDP growth by FY 2025. To accommodate this growth target, the gross investment needs to be raised to 36.59 per cent of GDP by FY 2025 in which private investment will capture the lion's share (27.35 per cent of GDP). The service and manufacturing growths will be the major drivers of GDP growth in this journey. During the Eighth Plan period, the government will also strengthen its initiatives to ensure inclusive growth that will bring down the incidence of poverty to 15.6 per cent and extreme poverty to 7.4 per cent. The proper implementation of any plan needs efficient monitoring and evaluation. The Eighth Five Year Plan adopts a better informed DRF, drawing on the good experiences of the Sixth and Seventh Plans. Both core macro and sectoral quantitative results will be monitored, with the help of 104 DRF indicators (more than half of which are related to SDGs), to measure

the effective implementation of the Eighth Plan. A mid-term review of implementation progress is planned at the end of FY 2023, while a final implementation review will be done at the end of FY 2025, i.e. after the completion of the plan.

I would like to express my heartfelt thanks to the Honorable Prime Minister and the Chairman of National Economic Council for her strategic guidance and well-judged suggestions for finalising the Eighth Plan so that it becomes useful to uplift the well-being of the citizens of Bangladesh. We are also very much thankful to the Honorable Minister of Planning for leading the preparation of the Eighth Five Year Plan. The ministries/divisions and other stakeholders also owe us a debt of gratitude who were deeply involved in providing important and useful inputs for the plan document. The officials of GED (especially PAM Wing), despite COVID-19 outbreak, have put outstanding and tireless effort from drafting part to finalising the Eighth Five Year Plan for which they deserve endless plaudits. Finally, I highly appreciate the contribution of the experts of the 'Panel of Economists' including the civil society participants who have given intimate support in finalising the Eighth Five Year Plan (July 2020-June 2025).

Dr. Shamsul Alam

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ACRONYMS

3R	Reduce, Reuse and Recycle
3R	Rail, Road and Riverie
4th HPNSP	The Fourth Health, Population and Nutrition Sector Programme
6FYP	Sixth Five Year Plan
7FYP	Seventh Five Year Plan
8FYP	Eighth Five Year Plan
a2i	Access to information
AAC	Autoclave Aerated Concrete
ACC	Anti-Corruption Commission
ADB	Asian Development Bank
ADM	Adaptive Delta Management
ADP	Annual Development Programme
ADR	Alternative Dispute Resolution
AEZ	Agro-Ecological Zone
AFOLU	Agriculture, Forestry and Other Land Use
AfT	Aid for Trade
AI	Artificial Intelligence
AIG	Alternative Income Generation
AIIB	Asian Infrastructure Investment Bank
AIMS	Aid Information Management System
AIMS	Assistance Information Management System
AIR	Annual Information Return
AMC	Alternative Medical Care
ANR	Assisted Natural Regeneration
ANS	Air Navigation Services
APA	Annual Performance Agreement
APAMS	Annual Performance Agreement Management System
APIR	Annual Programmes Implementation Report
APR	Annual Programmes Review
APSC	Annual Primary School Census
APTA	Asia Pacific Trade Agreement
AQI	Air Quality Index
ASEAN	Association of Southeast Asian Nations
ATC	Agricultural Technical Committees
ATP	Automatic Train Protection
ATS	Automatic Train Supervision
ATU	Anti-Terrorism Unit
AWD	Alternative Wetting and Drying
BADC	Bangladesh Agricultural Development Corporation
BAEC	Bangladesh Atomic Energy Commission
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
BAPARD	Bangabandhu Academy for Poverty Alleviation & Rural Development
BARD	Bangladesh Academy for Rural Development
BARI	Bangladesh Agricultural Research Institute
BASM	Bangladesh Academy of Securities Market
BAU	Business as Usual
BB	Bangladesh Bank
BBA	Bangladesh Bridges Authority
BBS	Bangladesh Bureau of Statistics
BCC	Bangladesh Computer Council
BCC	Budget Call Circular
BCC	Behavioral Change Communication
BCCRF	Bangladesh Climate Change Resilient Fund
BCCSAP	Bangladesh Climate Change Strategy and Action Plan

BCCTF	Bangladesh Climate Change Trust Fund
BCG	Bangladesh Coast Guard
BCM	Billion Cubic Meters
BCSL	Bangladesh Cable Shilpa Limited
BDF	Bangladesh Development Forum
BDHS	Bangladesh Demographic and Health Survey
BDP2100	Bangladesh Delta Plan 2100
BERC	Bangladesh Energy Regulatory Commission
BEYP	Bangladesh Empower Youth for Work
BFD	Bangladesh Forest Department
BFDC	Bangladesh Flim Development Corporation
BFDS	Bangladesh Freelancers Development Society
BFI	Bangladesh Forest Inventory
BFIS	Bangladesh Forest Information System
BFRI	Bangladesh Forest Research Institute
BFRI	Bangladesh Fisheries Research Institute
BGB	Border Guard Bangladesh
BHE	Bureau of Health Education
BHTPA	Bangladesh Hi-Tech Park Authority
BICM	Bangladesh Institute of Capital Market
BIDA	Bangladesh Investment Development Authority
BIDS	Bangladesh Institute of Development Studies
BIWTA	Bangladesh Inland Water Transport Authority
BIWTC	Bangladesh Inland Water Transport Corporation
BKSP	Bangladesh Krira Shikkha Protishthan
BLPA	Bangladesh Land Port Authority
BLRI	Bangladesh Livestock Research Institute
BMDA	Barind Multipurpose Development Authority
BMET	Bureau of Manpower, Employment and Training
BMRE	Balancing, Modernization, Rehabilitation and Expansion
BNDA	Bangladesh National Digital Architecture
BNH	Bangladesh National Herbarium
BNMC	Bangladesh Nursing & Midwifery Council
BNRS	Bangladesh National REDD+ Strategy
BoP	Balance of Payments
BoI	Board of Investment
BOT	Build Operate Transfer
BP	Bangladesh Parliament
BP	Bangladesh Police
BPC	Bangladesh Petroleum Corporation
BPDB	Bangladesh Power Development Board
BQ	Black Quarter
BR	Bangladesh Railway
BREB	Bangladesh Rural Electrification Board
BRRI	Bangladesh Rice Research Institute
BRT	Bus Rapid Transit
BRTC	Bangladesh Road Transport Corporation
BS-1	Bangabandhu Satellite-1
BSCIC	Bangladesh Small and Cottage Industries Corporation

BSEC	Bangladesh Securities and Exchange Commission
BSMIA	Bangabandhu Sheikh Mujib International Airport
BSRI	Bangladesh Sugarcrop Research Institute
BSS	Bangladesh Shongbad Shongstha
BTCL	Bangladesh Telecommunications Company Limited
BTRC	Bangladesh Telecommunications Regulatory Commission
BWMRI	Bangladesh Wheat and Maize Research Institute
BWDB	Bangladesh Water Development Board
C4C	Capacity Development for City Corporation
CAF	Comparative Advantage Following
CAD	Comparative Advantage Defying
CAAB	Civil Aviation Authority of Bangladesh
CAMS	Continuous Air Monitoring Stations
CBD	Convention of Biological Diversity
CC	Climate Change
CCA	Climate Change Adaption
CCC	Case Coordination Committee
CCHPU	Climate Change and Health Promotion Unit
CCTF	Climate Change Trust Fund
CD	Custom Duty
CD	Channel Depth
CD	Cabinet Division
CDA	Chattogram Development Authority
CDSP	Char Development and Settlement Project
CEPA	Comprehensive Economic Partnership Agreement
CETP	Central Effluent Treatment Plant
CGE	Computable General Equilibrium
CGS	Credit Guarantee Scheme
CHCP	Community Health Care Providers
CHT	Chittagong Hill Tracts
CHTA	Chittagong Hill Tracts Area
CHTDB	CHT Development Board
CIC	Central Intelligence Cell
CMA	Chittagong Marine Academy
CMC	Central Monitoring Committee
C-MPI	Child Multidimensional Poverty Index
CMSE	Cottage, Micro and Small Enterprise
CMSME	Cottage, Micro, Small and Medium Enterprise
CPA	Chittagong Port Authority
CPE	Customer Premises Equipment
CPHS	Citizen Perception Household Survey
CPI	Consumer Price Index
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CPTU	Central Procurement Technical Unit
CSICRD	Climate Smart Integrated Coastal Resource Database
CSO	Civil Society Organizations
CSP	Communications Services Provider
CST	Community Support Team
CTC	Counter Trafficking Committee
CTT	Coal Transshipment Terminal
CRR	Cash Reserve Ratio
DAB	Digital Audio Broadcasting

DAE	Department of Agricultural Extension
DBI	Digital Bangladesh Initiative
DC	Deputy Commissioner
DDM	Department of Disaster Management
DDR	Disaster Risk Reduction
DEDO	Duty Exemption and Drawback
DESCO	Dhaka Electric Supply Company
DEMRS	Digital Evidence Management & Reporting System
DFQF	Duty Free Quota Free
DFS	Digital Financial Services
DGHS	Directorate General of Health Services
DIA	Disaster Impact Assessment
DIFE	Department of Inspection for Factories and Establishments
DIP	Department of Passport and Immigration
DIS	Distribution Management System
DLDD	Desertification, Land Degradation and Drought
DLIs	Disbursement-Linked Indicators
DLS	Department of Livestock Services
DM	District Magistrate
DMTCL	Dhaka Mass Transit Company Limited
DMFAS	Debt Management and Financial Analysis System
DNC	Department of Narcotics Control
DoE	Department of Environment
DoF	Department of Fisheries
DoS	Department of Shipping
DoT	Department of Telecommunications
DoICT	Department of ICT
DoDM	Department of Disaster Management
DP	Development Partner
DP	Delta Plan
DPDC	Dhaka Power Distribution Company
DPE	Directorate of Primary Education
DPHE	Department of public Health Engineering
DPP	Development Project Proposal
DRIP	Digital Risk Information Platform
DRF	Development Results Framework
DRF	Disaster Response Framework
DRR	Disaster Risk Reduction
DSP	Digital Services Provider
DSHE	Directorate of Secondary and Higher Education
DTCA	Dhaka Transport Coordination Authority
DTS	Digital Transformation Strategy
EC	Election Commission
EC	Electronic Commerce
EDB	Ease of Doing Business
EDF	Export Development Fund
EDI	Electronic Data Interchange
EE	Energy Efficiency
EEBL	Excelerate Energy Bangladesh Limited
EFR	Environmental Fiscal Reforms
EFA	Education for All
EFR	Environmental Fiscal Reforms
EGPP	Employment Generation Programme for the Poorest
EGDI	E-Government Development Index
EIF	Enhanced Integrated Framework
e-KYC	Electronic Know Your Customer

E-LMIS	Electronic Logistic Management Information System
EMRD	Energy and Mineral Resources Division
EMP	Environmental Management Plan
EPZ	Export Processing Zone
EPI	Economic and Policy Instruments
EPI	Invironmental Performance Index
EPI	Expanded Programmes on Immunization
EPR	Extended Producer Responsibility
ERD	Economic Relations Division
ERL	Eastern Refinery Limited
ERP	Enterprise Resource Planning
ESP	Essential Service Package
ESF	Energy Security Fund
ETP	Effluent Treatment Plant
EU	European Union
EUAE	Eurasian Economic Union
EVM	Electronic Voting Machines
FAMS	Foreign Assistance Management System
FAO	Food and Agriculture Organization
FBE	Forward Baseline Estimate
FCDI	Flood Control, Drainage & Irrigation
FCD	First Concrete Pouring
FCTC	Framework Convention on Tobacco Control
FD	Finance Division
FDI	Foreign Direct Investment
FIAC	Farmer's Information and Advisory Center
FIAF	Federation of International Film Archives
FIES	Food Insecurity Experience Scale
FIP	Forest Investment Plan
FIR	First Information Report
FMD	Foot and Mouth Disease
FMP	Forestry Master Plan
FPC	Fair Price Card
FRC	Financial Reporting Council
FSM	Faecal Sludge Management
FSRU	Floating Storage and Re-Gasification Unit
FSTPs	Faecal Sludge Treatment Plants
FTA	Free Trade Agreement
FTZ	Free-Trade Zone
FY	Fiscal Year
FYP	Five Year Plans
GAPs	Good Agricultural Practices
GCM	Global Compact for Migration
GCI	Global Competitive Index
GCF	Green Climate Fund
GD	General Diary
GDF	Gas Development Fund
GDP	Gross Domestic Product
GE	Gender Equality
GED	General Economics Division
GEP	Growth Elasticity of Poverty
GGGR	Global Gender Gap Report
GHG	Green House Gas
GIS	Geographical Information System
GMP	Good Manufacturing Practice
GMP	Growth Monitoring and Promotion
GNI	Gross National Income
GoB	Government of the People's Republic of Bangladesh
GPMS	Governance Performance Management System
GRB	Gender Responsive Budgeting
GRS	Grievance Redressal System

GVC	Global Value Chain
GWP	Global Warming Potential
HCI	Heavy and Chemical Industries
HCE	Health Care Establishment
HCR	Head Count Rate
HDC	Hill District Council
HEQEP	Higher Education Quality Enhancement Project
HED	Health Engineering Department
HIC	High Income Country
HIES	Household Income and Expenditure Survey
HPN	Health, Population and Nutrition
HS	Hemorrhagic Septicaemia
HSD	Health Services Division
HSIA	Hazrat Shahajalal International Airport
HSFSP	Higher Secondary Female Stipend Project
HWS	Health Workforce Strategy
HYV	High Yield Variety
IaaS	Infrastructure-as-a-Service
IAS	International Accounting Standards
IBD	Infectious Bronchities
IBAS++	Integrated Budget and Accounting System
ICAO	International Civil Aviation Organization
ICB	Investment Corporation of Bangladesh
ICOR	Incremental Capital Output Ratio
ICS	Improved Cooking Stove
ICT	Information and Communication Technology
ICTD	Information and Communication Technology Division
ICPD	International Conference on Population and Development
ICVGD	The Investment Component of Vulnerable Group Development
IDCOL	Infrastructure Development Company Limited
IFMIS	Integrated Financial Management Information System
IFRS	International Financial Reporting Standards
ILS	International Labor Standard
IMD	Information Management Division
IMED	Implementation Monitoring and Evaluation Division
IMF	International Monetary Fund
IMPACT	Innovative Management of Resources for Poverty Alleviation through Comprehensive Technology
IMT	Institute of Marine Technologies
IoT	Internet of Things
IPR	Intellectual Property Rights
IPM	Integrated Pest Management
IPA	International Phonetic Alphabet
IPF	Investment Project Financing
IRIS	International Recruitment Integrity System
IRD	Internal Resources Division
IRT	Independent Review Team
ISA	International Standards of Auditing
ITS	Intelligent Transportation System
ITU	International Telecommunication Union
ITS	Intelligent Transport System
IVA	Independent Verification Agency
IWRM	Integrated Water Resources Management

IWTMP	Inland Water Transport Master Plan
IWT	Inland Water Transport
IWRM	Integrated Water Resources Management
JCS	Joint Cooperation Strategy
JMP	Joint Monitoring Programmes
JRC	Joint Rivers Commission
KPI	Key Performance Indicators
LCG	Local Consultative Group
LCE	Low-Carbon Economy
LDC	Least Developed Country
LDN	Land Degradation Neutrality
LFS	Labor Force Survey
LFFE	Low-Fossil-Fuel Economy
LGD	Local Government Division
LGED	Local Government Engineering Department
LGI	Local Government Institute
LGRD SSP	Local Government and Rural Development Sector Strategy Paper
LGS	Local Government System
LIC	Low Income Country
LMIC	Lower Middle-Income Country
LMRU	Labor Market Research Unit
LNG	Liquefied Natural Gas
LPI	Index of Trade Logistics Performance
LPL	Lower Poverty Line
M2M	Machine to Machine
MAD	Minimum Acceptable Diet
MAF	Ministry Assessment Format
MARAS	Managed Aquifer Recharge for Artificial Storage
MCS	Monitoring, Control and Surveillance System
MDA	Ministries, Divisions, and Agency
MDD	Minimum Dietary Diversity
MEFWD	Medical Education and Family Welfare Division
MFS	Mobile Financial Services
MHA	Million Hectares
MHVS	Maternal Health Voucher Scheme
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MLE	Medium and Large Enterprise
MNPS	Mobile Number Portability Services
MNH	Maternal and Newborn Health
MoA	Ministry of Agriculture
MoC	Ministry of Commerce
MoCA	Ministry of Cultural Affairs
MoCAT	Ministry of Civil Aviation and Tourism
MoCHTA	Ministry of Chittagong Hill Tracts Affairs
MoDMR	Ministry of Disaster Management and Relief
MoE	Ministry of Education
MoEFCC	Ministry of Environment, Forest and Climate Change
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFL	Ministry of Fisheries and Livestock
MoFood	Ministry of Food
MoHA	Ministry of Home Affairs
MoHFW	Ministry of Health and Family Welfare
MoHPW	Ministry of Housing and Public Works
MoI	Ministry of Industries
MoL	Ministry of Land

MoLE	Ministry of Labour and Employment
MoLGRDC	Ministry of Local Government, Rural Development and Cooperatives
MoLJPA	Ministry of Law, Justice and Parliamentary Affairs
MoPA	Ministry of Public Administration
MoPME	Ministry of Primary and Mass Education
MoR	Ministry of Railways
MoRA	Ministry of Religious Affairs
MoRTB	Ministry of Road Transport and Bridges
MoS	Ministry of Shipping
MoSW	Ministry of Social Welfare
MoU	Memorandum of Understanding
MoWCA	Ministry of Women and Children Affairs
MoWR	Ministry of Water Resources
MPA	Mongla Port Authority
MPI	Multidimensional Poverty Index
MPS	Monetary Policy Statement
MPS	Model Police Station
MR	Menstrual Regulation
MRA	Microcredit Regulatory Authority
MRP	Machine Readable Passport
MRT	Metro Rail Transit
MRT	Mass Rapid Transit
MRV	Machine-Readable Visa
MSPA	Master Sales Purchase Agreement
MSP-VAW	Multi-Sectoral Program on Violence Against Women
MSY	Maximum Sustainable Yield
MTBF	Medium-Term Budgetary Framework
MVA	Manufacturing Value Addition
MYPIP	Multi-Year Public Investment Programme
M&E	Monitoring and Evaluation
NAID	NOC Automation and IMEI Database
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NATP	National Agricultural Technology Project
NARS	National Agricultural Research System
NAW	National Accounting Wing
NBR	National Board of Revenue
NBSAP	National Biodiversity Strategy and Action Plan
NCD	Non-Communicable Disease
NCGP	National Committee on Government Performance
NCS	National Conservation Strategy
ND	New Castle Disease
NDC	Nationally Determined Contribution
NEET	Not in Employment, Education or Training
NEP	National Energy Policy
NEP	National Education Policy
NESCO	Northern Electricity Supply Company Ltd
NFE	National Funding Entities
NFEA	Non- Formal Education Act
NFL	National Forest Inventory
NFMS	National Forest Monitoring System
NFS	Non Factor Service
NHP	National Housing Policy
NHA	National Housing Authority
NID	National Identification

NIE	National Implementing Entities
NIPSOM	National Institute of Preventive and Social Medicine
NIPORT	National Institute for Population Research and Training
NIS	National Integrity Strategy
NLASO	National Legal Aid Services Organization
NMS	Network Monitoring System
NOSCOP	National Oil and Chemical Spill Contingency Plan
NPDM	National Plan for Disaster Management
NPL	Non-Performing Loans
NPA-PSHT	National Plan of Action to Prevent and Suppress of Human Trafficking
NPR	Nominal Protection Rate
NRI	Network Readiness Index
NRCP	National Residue Control Plan
NRCC	National River Conservation Commission
NRT	National Roadmap Team
NSA	National Student Assessment
NSC	National Sports Council
NSDA	National Skills Development Authority
NSDP	National Skills Development Policy
NSDS	National Strategy for the Development of the Statistics
NSDS	National Sustainable Development Strategy
NSIS	National Social Insurance System
NSSF	National Social Security Fund
NSSS	National Social Security Strategy
NTCC	National Tobacco Control Cell
NTDs	Neglected Tropical Diseases
NTMC	National Tele-Communication Monitoring Centre
NTVQF	National Technical and Vocational Qualifications Framework
NUA	New Urban Agenda
NVVN	NTPC Vidyut Vyapar Nigam Ltd
NWDP	National Women's Development Policy
NYP2017	National Youth Policy 2017
OAA	Old Age Allowance
OAG	Office of the Auditor General
OCC	One-stop Crisis Centre
OCAG	Office off the Comptroller and Auditor General of Bangladesh
ODA	Official Development Assistance
ODSs	Ozone Depleting Substances
ODC	Other Duties and Charges
ODP	Ozone Depleting Potential
OECD	Organisation for Economic Cooperation and Development
OFRS	Online Fertilizer Recommendation System
OIA	Osmani International Airport
OIC-CERT	Organization of the Islamic Cooperation-Computer Emergency Response Teams
OMS	Order Management System
OMS	Open Market Sale
O&M	Operation and Maintenance
OTI	Oman Trading International
PaaS	Platform-as-a-Service
PAC	Post-Abortion Care
PC	Planning Commission
PCB	Private Commercial Bank
PD	Power Division
PDBF	Palli Daridro Bimochon Foundation

PECE	Primary Education Completion Examination
PEFA	Public Expenditure Financial Assessment
PEDP	Primary Education Development Programme
PESP	Primary Education Stipend Project
PFM	Public Financial Management
PFS	Proforma for Study Proposal
PGCB	Power Grid Company of Bangladesh Ltd
PHC	Population and Housing Census
PIB	Press Institute Bangladesh
PID	Press Information Department
PIM	Public Investment Management
PIMRW	PIM Reform Wing
PIP	Public Investment Programme
PKSF	Palli Karma Sahayak Foundation
PKI	Public Key Infrastructure System
PLAU	Policy Leadership and Advocacy Unit
PMT	Proxy Means Test
PoP	Point of Presence
PP2021	Perspective Plan 2021
PP2041	Perspective Plan 2041
PPA	Payra Port Authority
PPR	Peste de Petits Ruminant
PPP	Purchasing Power Parity
PPP	Public-Private-Partnership
PRS	Population Registration System
PS	Parliament Secretariat
PSC	Public Service Commission
PSD	Public Security Division
PSDF	Power Sector Development Fund
PSMP	Power System Master Plan
PSPGP	Private Sector Power Generation Policy
PSB	Policy Support Branch
PTA	Preferential Trade Agreement
PTD	Posts and Telecommunications Division
PWD	Persons with Disabilities
PWD	Public Works Department
RAI	Rural Access Indicator
RADP	Revised Annual Development Programme
RBA	Retirement Benefits Authority
RBM&E	Result-Based Monitoring and Evaluation
RBO	River Basin Organization
RD	Regulatory Duty
RDA	Rajshahi Development Authority
RDA	Rural Development Authority
R&D	Research and Development
RE	Renewable Energy
REDD+	Reducing Emission from Deforestation and Forest Degradation
RFW	Results Framework
RHD	Roads and Highways Department
RMG	Readymade Garments
RSTP	Revised Strategic Transport Plan
RTI	Right to Information
RTHD	Road Transport and Highways Division
RYMG	Rice Yield Gap Minimization
SAAO	Sub-Assistant Agricultural Officer
SaaS	Software-as-a-Service
SAF	Sector Appraisal Format
SAFTA	South Asian Free Trade Agreement
SAIA	Shah Amanat International Airport

SASEC	South Asia Sub-Regional Cooperation
SBA	Small Business Administration
SBCC	Social Behaviour Change Communication
SBU	Strategic Business Unit
SBW	Special Bonded Warehouse
SCADA	supervisory control and data acquisition
SCB	State-Owned Commercial Bank
SCM	Subsidies and Countervailing Measures
SCT	Supply Chain Trade
SD	Supplementary Duty
SDG	Sustainable Development Goal
SDP	Skill Development Programme
SDP	Service Delivery Points
SEA	Strategic Environmental Assessment
SEIP	Skills for Employment Investment Project
SEQAEP	Secondary Education Quality and Access Enhancement Program
SEZ	Special Economic Zone
SFDF	Small Farmers Development Foundation
SGICC	Strategy for Governance Improvement of City Corporations
SHED	Secondary and Higher Education Division
SHS	Solar Home System
SID	Statistics and Informatics Division
SLA	Service Level Agreement
SLM	Sustainable Land Management
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SmPR	Six-Monthly Programme Implementation Report
SOC	Security Operations Center
SOD	Standing Orders on Disaster
SOE	State-Owned Enterprise
SOP	Standard Operating Procedure
SPA	Sales Purchase Agreement
SPS	Sanitary and Phyto-sanitary Standards
SPS	Service Process Simplification
SRF	Sector Results Framework
SSD	Security Services Division
SSK	Shasthyo Shuroksha Karmasuchi
SSP	Sector Strategy Paper
SSNPs	Social Safety Net Programmes
STEM	Science, Technology, Engineering and Mathematics
STEP	Skills for Training for Employment Program
STOL	Short Take-Off and Landing
STPs	Software Technology Parks
SVRS	Sample Vital Registration System
SWAp	Sector Wide Approach
SWG	Sector Working Groups
TCF	Trillion Cubic Feet
T&D	Transmission and Distribution
TDS	Tax Deduction at Source
TEU	Twenty-Foot Equivalent Unit
TFR	Total Fertility Rate
TFP	Total Factor Productivity
THNPP	Tribal Health, Nutrition and Population Plan
TLCC	Town Level Coordination Committee
TMED	Technical and Madrassa Education Division
TOD	Transit Oriented Development
TR	Test Relief

TRIPS	Trade Related Intellectual Property Rights
TSC	Technical School and College
TSER	Transforming Secondary Education for Results
TSMP 2041	Transport Sector Master Plan 2041
TSS	Telephone Silpa Shangstha
TTC	Technical Training Centers
TTTC	Technical Teachers' Training College
TVAS	Telecommunication Value Added Service
TVET	Technical and Vocational Education and Training
UDC	Union Digital Center
UDCC	Union Development Coordination Committee
UDD	Urban Development Directorate
UDMCs	Union Disaster Management Committees
UDMC	Upazila Disaster Management Committees
UGC	University Grants Commission
UHC	Universal Health Coverage
UMIC	Upper Middle-Income Country
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNO	Upazila Nirbahi Officer
UP	Union Parishad
UPHC	Urban Primary Health Care
UPL	Upper Poverty Line
USD	United States Dollar
USF	Unclassed State Forest
VDP	Village Defense Party
VGF	Vulnerable Group Feeding
VGD	Vulnerable Group Development
VPN	Virtual Private Network
VTMS	Vessel Traffic Management System
VTTI	Vocational Teachers' Training Institute
WASAs	Water Supply and Sewerage Authorities
WASH	Water, Sanitation and Hygiene
WASRA	Water and Sanitation Regulatory Agency
WARPO	Water Resource Planning Organization
WB	World Bank
WDI	World Development Indicators
WEF	World Economic Forum
WEWB	Wage Earners' Welfare Board
WFP	World Food Programme
WHO	World Health Organization
WPS	Woman Policing Strategy
WSP	Water Safety Plan
WTE	Waste-To-Energy
WTTC	World Travel & Tourism Council
WUA	Water User Association
WWF	World Wide Fund for Nature
WZPDC	West Zone Power Distribution Company
XBRL	Extensible Business Reporting Language
YES	Youth Employment through Skills

Executive Summary

A. Political Context

The governments led by the Awami League have always pursued a planned route for the socioeconomic development of the country. The father of the nation Bangabandhu Sheikh Mujibur Rahman soon after assuming the power initiated massive programmes for rebuilding the war-torn economy in a planned manner. Under his visionary and prudent leadership, the First Five Year Plan (1973-78) was formulated to guide the transformation of the country into *'Sonar Bangla'*, free of poverty, hunger and corruption along with rapid income growth and shared prosperity.

The Honourable Prime Minister Sheikh Hasina realized the importance of effective planning and as such formulated a large number of long and medium-term plans, following the philosophy and path of development shown by the father of the nation Bangabandhu Sheikh Mujibur Rahman. Returning to power in 2009, she reiterated her solidarity with the people and commitment to fight poverty by announcing the Vision 2021 and the associated Perspective Plan 2021 (PP2021) that sought to achieve middle income status by 2021, improve human development and sharply reduce poverty. Astute political leadership and deft economic management by the Honorable Prime Minister allowed Bangladesh to enjoy an uninterrupted 10 years of economic prosperity between FY2009 and FY2019. This period saw per capita income rise from USD 754 to USD 2064, life expectancy increased from 67 years to 73 years, adult literacy expanded from 58% to 75%, poverty incidence fell from 35% to 20.5% and extreme poverty rate declined from 18% to 10.5%. Growing at an average pace of 7% per year during this period, Bangladesh is amongst the fastest growing countries in the world. As a result, Bangladesh moved out from the World Bank-defined list of low-income countries (LIC) to Lower Middle-Income Country (LMIC) in 2015, much earlier than the targeted date of 2021, and in 2018, it met all the UN criteria to graduate from the list of Least Developed Countries (LDC) to a developing country. Bangladesh is expected to formally graduate from LDC in 2024; this is certainly one of the remarkable achievements for Bangladesh in her post-independence era. Encouraged by these successes, the people re-elected Honorable Prime Minister Sheikh Hasina and her party the Awami League with an overwhelming mandate for a third consecutive term on December 30, 2018. She accepted this responsibility with a pledge to work even harder and to translate the dream of her father into reality. To achieve this, the government adopted the Vision 2041 and the associated Perspective Plan 2041 (PP2041) that sets the road map to become an Upper Middle-Income Country (UMIC) and eliminate extreme poverty by FY2031, and to achieve a High-Income Country (HIC) status by FY2041. This 8th Five Year Plan is prepared at the time when the whole nation is observing the centennial birth anniversary of the father of the nation and will celebrate the golden jubilee of independence in 2021.

B. Onslaught of the Unprecedented Global Pandemic COVID-19

As preparations were underway to develop the Eighth Five Year Plan (8FYP) running from FY2021-FY2025, the unforeseen and unprecedented global pandemic COVID-19 struck Bangladesh and the rest of world from around March 2020. The furious and devastating nature of this fast-spreading pandemic has shaken the entire world. Millions have been infected and hundreds of thousands have died around the world. Lockdown measures necessitated to slowdown the rate of growth of COVID-19 spread and the fall in demand have badly damaged the world economy. Despite pouring in trillions of dollars in relief and

economic stimulus, the OECD countries slumped into recession even within the first 4 months of the pandemic, thereby illustrating the furious onslaught of the epidemic. Global efforts are underway to find health solution to end the pandemic, but the end is not yet in sight.

Bangladesh has also been hit hard both on the human health front and on the economy. Fortunately, the level of known infections and deaths are modest in relation to many parts of the world including the neighboring India; yet the peak of the pandemic is still unknown. On the economic front, losses are unprecedented. GDP growth has slowed considerably, export earnings are down sharply, private and public investment rates have fallen and government fiscal revenues have been badly hurt. The Government has moved swiftly to contain the damage taking actions on both the human health front and on the economy. On the health front policy responses have sought to contain the spread of the virus through full and partial lockdowns, providing safety gears and other support to protect the healthcare workers and other essential staff, strengthening healthcare facilities with supplies and equipment, undertaking testing, and educating the masses on the adoption of health safety measures including physical distancing, use of face masks, hand washing and personal hygiene and other support measures. On the economic front, the government has adopted a series economic stimulus packages estimated at Taka 1196.4 billion (4.3% of GDP) with a view to protecting the income of the poor and vulnerable and helping the revival of economic activities.

Bangladesh has decided to open up the economy to avoid a sustained long-term damage to livelihoods. The government believes that there is no necessary tradeoff between human health and health of the economy; rather they are correlated and complementary. The main task is to develop a balanced mix of policies and programmes that address both goals. The government believes that the restoration of human health is of the highest priority to enable workers resume work without fear or unwarranted risk of falling sick. The government is working closely with local epidemiologists and other health experts to find ways to keep workers and families safe while economic activities revive. The strategy is flexible and will adapt to the lessons of international experience and the results in Bangladesh.

C. Implementation Performance of the 7FYP

Prior to the advent of COVID-19, the performance of the Seventh Plan in terms of achieving major development targets relating to economic growth, economic transformation and poverty reduction was highly positive. GDP growth accelerated and grew faster than envisaged in the 7FYP. Thus, the average GDP growth in the first 4 years of the 7FYP (7.6%) exceeds the target in the Plan (7.4%). However, due to COVID-19, the actual average GDP growth rate stands at 7.13% covering the whole 7FYP period. During 2016-2019, Bangladesh was amongst the fastest growing countries in the World. Progress in transforming the economy from a rural-based agrarian economy towards a more modern urban-based manufacturing and services-based economy has been strong. The export-led manufacturing sector reached new heights, growing at an average pace of 12.7% per year. Along with strong growth in construction the GDP share of industry reached 34.6%. Services sector grew robustly at 6%, supported by an expanding role of modern service activities in transport, banking, real estate, ICT, healthcare and education.

A major objective of the 7FYP was to narrow the rural-urban divide by diversifying the economic activity base in the rural areas. Evidence shows that considerable progress was made. Already during the Sixth Plan, the rural economy had been transforming from a pre-dominantly agriculture- based production structure towards more non-farm-based production activities. The Seventh Plan further pushed this transformation.

Agriculture is no longer the pre-dominant source of income in the rural economy. Within agriculture there has a been a slow and steady transformation from cereals to protein-based production such as livestock, poultry, dairy-products, fruits and vegetables and flowers. Export-oriented fisheries have taken up a big role as a source of farm income in Bangladesh. Thus, the share of fisheries in agricultural value-added expanded from 23% in FY2015 to 26% in FY2019. This transformation further strengthened food security. Grain production is now adequate to meet the calorie intake requirements of the population while the greater supply of protein-rich fish, poultry, eggs and milk along with expansion of vegetables and fruits has contributed to improving the food security and food nutrition balance for the population.

The expansion of non-farm rural enterprises and services has opened up new sources of rural income and employment. The growth of income from non-farm sources and the rapid inflow of foreign remittances have supported the increase in demand for a range of activities in construction, housing, trade, transport, schooling, health and other services. The expansion of ICT network and related services along with growth of rural electricity and rural roads have reduced the transaction costs between the rural and urban economies, thereby facilitating better trade and higher prices for the products of the rural economy. The progress on rural transformation is very re-assuring and provides a strong base to move forward further in the Eighth Plan.

Regarding job creation, agriculture continued to transform from a pre-dominantly peasant production system towards a more commercially-oriented production structure and thereby continued to shed labour. New job creation in manufacturing, construction and organized services expanded by an average of 3-4% per year, which is slower than projected in the 7FYP. But growth in new employment was better-than-planned in the overseas market. The good news on the employment front is the improvement in labour productivity. Thus, average national labour productivity grew by a healthy 5.6% per year. Importantly, average labour productivity increased in all sectors including agriculture, where it is estimated to have increased by a record 7.3% per year. This is an important result and provides the basis for sustained increases in real wages and income economy wide and in agriculture. Productivity grew fastest in manufacturing, rising at a hefty pace of 9% per year. Productivity improvements have helped increase real wages in agriculture and manufacturing in both rural and urban areas that have been highly beneficial to the reduction of poverty.

Nevertheless, the slowdown in the rate of job creation in manufacturing, construction and modern services need stronger monitoring with corrective policy measures in the 8FYP. This is particularly important to address the COVID-19 induced unemployment. An additional challenge would be to lower the growing unemployment of the youth population, especially the educated youth, during the 8FYP. Finally, the Fourth Industrial Revolution is requiring rapid changes in skills that needs fast tracking of education quality and skills upgrading program. These issues will be given high priority in the 8FYP.

The incidences of poverty and extreme poverty have both exhibited considerable reduction during the first 4 years of the 7FYP. The incidence of poverty fell to 20.5% in FY2019 while extreme poverty declined to around 10.5%. This progress was achieved due to a number of factors. First, the rapid growth of the economy during the Seventh Plan along with structural change in production provided the basis for growth in employment, labor productivity and real incomes of workers. This is the most important contributor to poverty reduction. Second, the healthy flow of remittances to rural areas supported the growth of consumption and created new jobs in services in rural areas. Third, the spread of micro credit programmes

also helped protect the consumption of the rural poor and buildup of their assets. Fourth, under the Ashrayan Project the government has provided housing facilities to the landless and homeless families. On the occasion of Mujib centenary, the government has allocated Tk. 1,160 Crore in the first phase to provide 65,726 unit houses along with 2 decimal land to the landless and homeless families. Another 128,000 houses will be built in the next one year. So far, 3,57,590 beneficiaries have been rehabilitated by constructing new houses/barracks with government funding. Houses will be constructed for 8,85,622 poor families listed from all districts of the country in phases.

Along with poverty reduction, Bangladesh continued to push ahead with human development, women empowerment and social inclusion as key elements for realizing Father of the Nation Bangabandhu Sheikh Mujibur Rahman's dream of a just society with no discrimination on the basis of gender, religion, race or caste. Life expectancy increased to 73 years in 2019, up from 71 years in 2015, adult literacy increased from 65% in 2015 to 75% in 2019 and child nutrition outcomes improved with the incidence of stunting and wasting falling considerably. On the gender front, having eliminated the gender disparity in primary and secondary education, solid progress has been made in reducing the large gap between male and female students at the tertiary level. Bangladesh has also advanced well in providing the regulatory framework for protection of women's rights and privileges. Progress has been made in increasing the share of women in managerial and professional leadership roles. Political empowerment has been boosted further through increased membership in the national parliament. The 2020 Global Gender Gap Report published by World Economic Forum records the solid progress made by Bangladesh in reducing the gender gap. With an overall score of 0.726, Bangladesh was ranked at 50th among 153 countries, ahead of advanced countries like the USA, Luxembourg, Italy, Korea and Japan and was ranked first among the seven South Asian countries.

The progress in moving towards an equitable and just society during the 7FYP notwithstanding, there are two areas where stronger efforts are needed. First, the women empowerment on the economic front needs more attention. At only 36%, the female labor force participation is very low and not commensurate with UMIC Bangladesh. Second, although all legal and regulatory policies are in place to eliminate all kinds of gender discrimination and prevent violence against women, there are reports about continued violation of these laws including early marriages, spousal abuse, and wage and employment discrimination against female employees in the work place. The 8FYP will make stronger efforts to enhance female labor participation rate and implement all legal provisions to eliminate gender discrimination and violence against women.

Bangladesh has continued the move forward with its environmental management focused on reduction in air and water pollution, increasing forest cover and improving preservation of biodiversity. Adaptation efforts to climate change have been supported by pilot programmes funded through the Bangladesh Climate Change Trust Fund (BCCTF). The disaster management programmes have continued to perform well. The ability to sharply reduce the loss of lives and injuries based on a combination of early warning system, construction and availability of shelters and timely provision of relief and support measures are indicative of the good progress here.

The push toward reducing long-term risk from climate change and natural disaster gained momentum through the adoption of a comprehensive long-term water management strategy known as the Bangladesh Delta Plan (BDP2100) that integrates water, land, environment, climate change and biodiversity in ways

that upon implementation will substantially reduce long-term risks from natural disasters and climate change. This may be a game changer in securing sustainable reductions in poverty linked to natural hazards. The 8FYP will give top priority to implementing the first phase of the BDP2100.

Prudent macroeconomic management has been the hallmark of Bangladesh's long-term development. The 7FYP kept its vigil to stay on track despite some pressures. The inflation rate has come down further to 5.5%. Interest rates are low and the flow of credit to the private sector is adequate. Fiscal prudence has been sustained by keeping the budget deficit at around 5% of GDP. The balance of payments has been comfortable, with low external debt to GDP ratio and no pressure on external debt servicing. Two areas of difficulty are the shortfalls on budget revenues and the stress on the health of the banking sector owing to the surge in non-performing loans (NPLs). At below 9%, the tax to GDP ratio is one of the lowest in the world and growing revenue shortages are making it increasingly difficult to finance critical public expenditure needs in infrastructure, health, education, water resources and social protection. In the banking sector the large value of non-performing loan in both public and private banks, but especially the public banks, are putting pressure on the financial health of the affected banks and preventing sustainable approach to mobilizing deposits while also reducing interest rates on loans. Tax reforms and banking reforms will become even more important as the nation faces to fight the COVID-19 adverse economic effects.

D. Implications of COVID-19 for the 8FYP

The macroeconomic effects of COVID-19 are still unfolding as the pandemic continues to take its toll on human lives, health and wellbeing. Based on available evidence, the main macroeconomic effects for FY2020 outcomes are summarized in Table 1.13, Chapter 1, Part 1 of the Plan document. The effects are severe with substantial losses in GDP (Taka 800 billion), exports ($8 billion), investment (Taka 500 billion) and tax revenues (Taka 200 billion). Additionally, in the short-term unemployment and poverty may likely to rise. The government has taken measures to offset this short-term increase in poverty. However, the full impact to stem the tide of the downturn in the domestic economy will take time to unfold, until such time that the health effects of COVID-19 become manageable, workers return to the work place, and people resume their normal activities so that the demand for service like transport, hotels and restaurants, vacation, tourism, beauty care, education, personal services all return to normal levels. Importantly, the recovery of earnings from exports and remittances will depend upon how quickly the global economy gets back to normal. The recovery of both domestic activity and global economy is predicated upon the discovery of cure or vaccine for COVID-19. The best expectations today are that global recovery could happen in early 2021 calendar year.

The COVID-19 reinforces the importance of speeding up many of the reforms where a performance gap has emerged. This includes revenue performance, private investment climate, export diversification and domestic job creation. The tax performance of Bangladesh has been slipping and this must be reversed quickly with important tax reforms under the 8FYP. Similarly, export diversification and expansion of a diversified manufacturing base are of utmost importance. This will not be possible without substantial increases in domestic and foreign private investment. The 8FYP will focus utmost attention to improving the investment climate for domestic and foreign private investment with a view to offsetting the lack-lustre private sector investment performance in the 7FYP. Finally, the short-term unemployment resulting from COVID-19 including retrenchment of overseas workers will present an immense challenge in the very first year of the 8FYP. Job creation accordingly will be a top priority of the 8FYP.

The COVID-19 effects also bring in new challenges. In addition to the short-term recovery, strategic changes will be needed in several areas relating to healthcare, social protection and access to safe water and sanitation. The health and social protection systems came under pressure during COVID-19 and showed major gaps that will be addressed in the 8FYP. The 8FYP will need to initiate a major overhaul of the healthcare system to strengthen physical facilities, access to healthcare and availability of quality healthcare staff. The COVID-19 has also reinforced the need for a universal healthcare system. Regarding the social security system, the implementation of the NSSS will have to be strengthened with greater funding for social protection-related income transfers to the poor and vulnerable. The COVID-19 also reinforces the importance of access to safe water and sanitation as important instruments for improving health and reducing the spread of COVID infection.

In addition to the above immediate priority reforms, there are four areas where the Eighth Plan will probe deeper and take a more focused and comprehensive approach as envisaged in PP2041. The first concerns the need to build stronger institutions. Emphasis will be placed on institutions like the local government, the urban institutions, land administration, strengthening of the National Board of Revenue, the Bangladesh Bank, and the Public-Private Partnership. The strengthening of the judiciary, the Election Commission and other democratic institutions will continue Secondly, implementation capacity in public agencies and ministries will be upgraded to ensure timely implementation of major public investment programmes and public policies in transport and social sectors. Thirdly, stronger policy focus will be given to the area of income inequality. In particular, reform of public finances that increases the equity of tax collection and public spending are of substantial importance. Especially, the equity aspects of public spending on education and health will be emphasized. Finally, strong implementation of the Bangladesh Delta Plan for ensuring the sound management of water resources, climate change, natural disasters and other environmental hazards will be a major focus for the Eighth Plan. The integration of climate change and environmental management issues in growth and fiscal policy management will be another high priority issue for the Eighth Plan.

E. Development Approach of the 8FYP

The implementation of PP2041 is envisaged in four 5-year phases. The first phase starts with the 8FYP. So, the main task of the 8FYP is to start the implementation of PP2041 in a way that it brings Bangladesh closer to the goals of attaining UMIC status, attaining major SDG targets, and eliminating extreme poverty by FY2031. In the backdrop of these factors, the 8th Plan centres on six core themes:

- Rapid recovery for COVID-19 to restore human health, confidence, employment, income and economic activities;
- GDP growth acceleration, employment generation, productivity acceleration and rapid poverty reduction;
- A broad-based strategy of inclusiveness with a view to empowering every citizen to participate fully and benefit from the development process and helping the poor and vulnerable with social protection- based income transfers;
- A sustainable development pathway that is resilient to disaster and climate change; entails sustainable use of natural resources; and successfully manages the inevitable urbanization transition;
- Development and improvement of critical institutions necessary to lead the economy to UMIC status;
- Attaining SDG targets and coping up the impact of LDC graduation.

F. Strategy for COVID-19 Recovery

The government has demonstrated its resolve to address the challenges emerging from COVID-19 swiftly and comprehensively with a view to minimizing the loss of lives, restoring the health of those affected, removing fear and building confidence, and putting the economy on a path of economic recovery while taking care this is consistent with the restoration of human health and confidence. In addition to implementing the actions already taken in FY2020, the government will take a number of far-reaching steps to improve health care capabilities and facilities in the 8FYP. Funding for healthcare will be increased, public-private cooperation will be strengthened, the capabilities of district-level healthcare facilities will be enhanced, and a Universal Health Care funded through a combination of private and public health insurance schemes will be introduced. The social protection programmes will be strengthened to provide higher income transfers to the poor and vulnerable. Access of the rural and urban population to safe water and sanitation will be enhanced. The economic activity opening up will be phased and implemented in ways that risks to COVID spread are minimized. Bangladesh will learn from the lessons of other country experience in fine tuning its health response to COVID-19. It will also liaise with the World Health Organization and countries that are well advanced in medical search for COVID-19 vaccine and or cure. All efforts will be made to procure these critical medical break-through when available. The capabilities of domestic Pharma and medical research will be enhanced through research grants for research and innovation in the area of COVID-19 cure.

Regarding economic recovery, strong effort will be made to fully implement the stimulus packages announced in April-May 2020. The social protection delivery will be strengthened through a more rapid implementation of the NSSS and increase in funding for poverty-focused social protection programmes. Topmost attention will be given to protect the jobs and enhance new jobs in the cottage, micro and small enterprises (CMSEs) that presently employ an estimated 21 million people. This will be done immediately through the provision of low-cost loans through the banking sector. The Bangladesh Bank will work with commercial banks and the non-bank financial institutions how this can be done in a flexible and low-cost manner. All institutional or regulatory barriers will be removed to reach out these enterprises pro-actively.

G. Accelerating Inclusive Growth

The inclusive growth strategy of 8FYP includes seven pivotal themes:

- Promote labour-intensive, export-oriented manufacturing-led growth along with expansion of the domestic market;
- Promote agricultural diversification;
- Infuse dynamism in CMSMEs;
- Strengthen modern services sector;
- Push exports of non-factor services;
- Promote ICT-based entrepreneurship embracing 4th Industrial Revolution (4IR);
- Strengthen overseas employment.

The main focus of inclusive growth strategy would be to create much more jobs through growth than was possible in the 7FYP both to absorb those newly unemployed owing to COVID-19 and to reap the full benefits of the demographic dividend. Structural transformation during the 6th and the 7th Five Year Plans

have already laid the foundations for industry-led growth. Manufacturing sector has taken the lead supported by the expansion of RMG exports. This has increased the GDP growth rate, increased exports and created 4 million jobs in the RMG sector. However, non-RMG exports have not prospered that has constrained export diversification and slowed down manufacturing job creation in recent years, while the RMG sector will continue to play its major role, the 8FYP growth strategy will put top priority to the production and exports of non-RMG manufacturing to diversify the production and export base in areas including processed food, leather and footwear, light engineering, and pharmaceuticals. Many of these activities, like food processing and leather and footwear, are relatively labour intensive like RMG and have huge external market. So, like RMG they will create jobs and contribute to exports while accelerating value added growth. Emphasis will also be placed to promote efficient import substitution activities with high domestic demand, such as a range of consumer goods. Trade policy bias against exports will be removed by reducing trade protection, the exchange rate will be made more flexible and competitive, and FDI and domestic investment in manufacturing will be promoted through reforms of the investment climate to implement this strategy.

In agriculture, the strategy will be to further increase agriculture diversification while maintaining food security through improvements in farm productivity, supply of inputs, price policy support, water supply, farm credit and marketing support. Agriculture exports will be promoted to increase farm income and employment in non-crop activities especially fisheries, fruits, vegetables and dairy products. The implementation of the first phase of the BDP2100 public investment programme will strengthen water management, lower flood risk, reduce water logging and reduce soil salinity.

The CMSMEs hold the most promise for creating jobs in both rural and urban areas. Global experience from Japan, Taiwan and Korea show the powerful and dynamic role of CMSMEs for exports, growth and employment. Reviving the CMSMEs is the best way to create non-farm jobs in the economy. The less educated youth population in particular are strongly reliant on CMSMEs jobs. The institutional and financial support to CMSMEs will be vastly enhanced through the conversion of the SME Foundation into Small Business Agency (SBA) as in the USA that will serve as a one-stop shop to promote CMSMEs, working closely with the Bangladesh Bank on the financing side.

The services sector has already made substantial progress in converting from low-productivity informal services to high-productivity formal services in areas such as banking, finance, urban transport, ICT, health care, education and tourism. This transformation will be further enhanced by creating incentives for domestic and foreign private investment through regulatory reforms and supportive public investment in related infrastructure. A major growth and employment driver that will be supported is the expansion of services exports. There is a huge trade gap in international shipping services and efforts will be made to capture a larger share of this market. Export prospects are also large in tourism and ICT services. These exports are highly labour intensive and create employment, especially for educated youth. Indeed, the ICT sector has begun to show dynamising in various services activities and holds huge prospects for further job creation for the educated youth. The 8FYP will boost ICT activities through reductions in ICT taxes, through expansion of ICT education and training and through eliminating all regulatory barriers.

The overseas employment and remittances have played a major development role during the 6th and the 7th Plans, creating jobs, providing income and investment. The youth population has benefitted most from overseas jobs. Remittance inflows have not only lowered poverty through direct income transfers, they have

contributed to transforming the rural economy by supporting activities and employment in a range of rural services including construction, housing, transport, trading, health, and education. The 8FYP will build on this solid track record and make further efforts to increase overseas employment and remittances. The COVID-19 has adversely affected overseas employment, but thankfully remittance inflows have remained buoyant owing to the 2% incentive offered by the government. The overseas employment crunch will likely be reversed once the global economy recovers. The 8FYP will make a comprehensive push to expand overseas employment and remittance earnings through G2G negotiations, by lowering the cost of migration through low-cost loans from the Bangladesh Probashi Bank, by increasing training and other services to potential migrants, and by stronger support in the work place against exploitation and abuse in host countries through the local Bangladesh Embassies and High Commissions.

H. Macroeconomic Framework for the 8FYP

Higher growth on aggregate and at the sectoral level will require higher investment. The financing of this investment will have to be done in a way that it does not create problems for macroeconomic stability. The 8th Plan will continue the emphasis on prudent macroeconomic management. Thus, the objective of higher growth will be balanced with efforts to further reduce inflation to an average of 5.0% during the plan period. Fiscal deficit will increase in the first two years of the Plan to adjust to the COVID-19 shock. But fiscal prudence will be restored by increasing tax revenues to bring back the fiscal deficit to around 5% of GDP by FY2023. The strong performance in the balance of payments will be preserved by promoting a strong and diversified export base, focused on both goods and non-factor services (NFS). The scope for increasing exports of NFS is huge, given the large world market, with special emphasis on shipping, tourism, and ICT services (the gig market). Emphasis on accelerating remittance inflows through new employment and improved skill base will be strengthened.

Capital accumulation will continue to be the most important driver of growth. Commensurate with the experiences of other UMIC, the capital intensity of production will rise as income grows and the production structure changes. This is already happening in all sectors of Bangladesh including agriculture, RMG and modern services. With the advent of the Fourth Industrial Revolution (4IR) and the associated technology changes, Bangladesh manufacturing will need to adopt these new capital-intensive technologies to stay competitive. Consequently, the incremental capital output ratio (ICOR) will increase at the sectoral level and on aggregate. Therefore, a major challenge for the 8FYP would be to increase the investment rate from 32% of GDP in FY2020 to 37% of GDP in FY2025 to achieve the projected growth targets. Much of the additional investment will come from the private sector, with the private investment rate projected to grow from 23.6% of GDP in FY2020 to 27.4% of GDP in FY2025. This increase in private investment will only be possible by expanding the role of FDI. The global supply of FDI is large and Bangladesh hardly uses this potential. A key strategic focus of the 8FYP would be to accelerate FDI inflows into Bangladesh through a massive drive to improve the investment climate and strengthen the capabilities of BIDA to do policy-based research, advocacy and deliver speedy and efficient services to foreign investors. Public investment will also need to increase by an additional 1.2% of GDP to support growth through investments in infrastructure and human capital.

Based on the above strategy, total investment under the 8FYP will amount to Tk. 63.6 trillion in constant FY21 prices (the first year of the 8FYP), of which Tk. 47.5 trillion will come from the private sector (75%) and Tk. 16.1 trillion will come from the public sector (25%). As in the past, domestic resources in the form

of domestic savings will continue to play a dominant role in the financing of the Eighth Plan (95%). Foreign savings will provide the remaining 5% of the net financing requirements for the 8FYP. This is a modest recourse to foreign resources is consistent with the governments cautious approach to external debt.

I. Public investment Programme and its Financing

As noted, accelerated private sector investment-both domestic and foreign-will be the key to the success of the Plan, the government's role will be to create the investment-friendly environment, restore and strengthen human health and welfare in the post COVID-19 world, and ease infrastructure constraints. Public investment will grow from 8% of GDP in FY2019 to 9.2% of GDP by FY2025 and the total size of the 8FYP Public Investment Program (PIP) will be Tk. 16.1 trillion in FY2021 prices. Of this, some Tk. 11.9 trillion will be funded through the Annual Development Programme (ADP). The main focus of the ADP will be to sharply improve and strengthen health infrastructure, to build the social protection system, alleviate infrastructure constraints to private investment and GDP growth by fast tracking nationally important projects, and implement the BDP2100.

Topmost priority will be given to develop the healthcare system through increased budgetary allocations, sharply stronger management and partnership with private healthcare. Budgetary allocations to the education sector will be increased to create better human capital through universal general education, skill development programmes, and training and greater access to ICT solutions. Implementation of the National Social Security Strategy (NSSS) will be fast-tracked to provide comprehensive social protection to all poor and vulnerable citizens based on a modern Life Cycle based approach. In the area of infrastructure, in addition to completing the ongoing transformational infrastructure projects, major initiatives will be taken to broaden and accelerate the implementation of other major highways and bridges, power sector projects, and providing access to serviced land to foreign and domestic investors in the context of the Special Economic Zones (SEZ) initiative. Infrastructure projects will be financed both through the ADP and through an enhanced PPP effort. Finally, strong efforts will be made to implement the first phase of the BDP2100.

Taking these considerations into account, Annual Budgets will be formulated in a manner that is consistent with the realization of the Eighth Plan objectives. Annual Budget and ADP will be synchronized to use them as tools for achieving the objectives of the 8FYP. Financing of this large PIP will require strong revenue mobilization effort that has faced difficulties during the 7FYP. The fiscal framework of the 8FYP will implement the fiscal framework of the PP2041 that calls for an increase in the tax to GDP ratio of 3.4 percentage points, growing from 8.9% of GDP in FY2019 to 12.3% of GDP by FY2025 through modernization of tax policy and tax administration, focused on income and value-added taxes. The reliance on import taxes will be lowered to reduce the anti-export bias of trade policy. Prudent spending of public sector resources for better public service delivery and incentive, subsidy and transfer programmes, and improved efficiency of public sector enterprises will be important for public sector resource efficiency and productivity. A modern property tax system will be introduced to increase revenues for local governments, and SOEs including public banks will be reformed to earn profits and eliminate dependency on budget transfers. Additional revenues from these sources will amount to 1% of GDP by FY2025.

J. Strategy for Human Development

Bangladesh gained international recognition for its achievement in human development when compared with countries at similar levels per capita income. Yet, Bangladesh understands that the human development requirements of an UMIC need a much stronger effort than in the past. The COVID-19 has reinforced the importance of transforming the health care system to have much stronger capacities to fight this unprecedented pandemic. The healthcare response to COVID-19 was summarized under Section C above. From the medium-term perspective, the 8FYP will increase budget allocation of healthcare spending from 0.7% of GDP in 2019 to 2.0% of GDP by FY2025, will sharply increase health care facilities, staffing, equipment and supplies, will strengthen partnership with private sector, enhance district-level health care capabilities, and promote tele-health care through ICT solutions. People's access to safe water and sanitation facilities will be enhanced to improve hygiene standards and protect human health. Most importantly, the government will adopt a Universal Healthcare Policy learning from the experiences of Malaysia and Thailand and combining public and private health insurance schemes as relevant. Regarding nutrition, the 8FYP will accelerate the progress made in improving child and mother nutrition with a combination of augmented supply of nutritious food in general and through school mid-day meals, through education campaigns, through nutrition counselling in local health clinics, and through expansion of related social security programmes.

The population management effort has focused on reducing total fertility and slowing down population growth rate through voluntary compliance based on education, health counselling and easy access to low-cost birth control options. This strategy has paid off handsomely as the total fertility rate fell to a low of 2.1, approach replacement rate population growth of 1.2% per year. The focus in the 8FYP will shift more onwards converting population as an asset as a part of the inclusion agenda whereby the emphasis will shift to managing an ageing population, reducing maternal mortality through greater access to birth attended by skilled staff, reduction in early age female pregnancies, enhanced access to reproductive health education and health care, increase in female labor force participation and better use of the youth population in the development process.

Past progress in adult literacy, education and training has upgraded the skills of the workforce and contributed to the gains in average labor productivity. Yet the skills requirements of an UMIC in an environment of the 4IR requires considerable further progress. The 8FYP seek to achieve 100% adult literacy rate and will consolidate past gains in primary and secondary education to accelerate progress in tertiary education. Most focus will be placed on education quality with emphasis on learning and acquiring skills that are relevant to the work place. Education quality will emphasize science, maths and ICT and developing problem solving skills. Technical education will be promoted through expansion of the TVET system. Training programmes will be vastly expanded through public-private partnerships, through on the job training, and through partnership with NGOs and development partners. Primary and secondary education will be decentralized to district level, teacher training will be expanded, private provision of education and training will be promoted, and the education budget will grow from 2.0% of GDP in FY2019 to 3.0% of GDP by FY2025.

K. Poverty Reduction, Social Protection and Inclusion

Bangladesh has a solid track record of reducing poverty. Before COVID-19 struck, poverty rate had declined to 20.5% in 2019 and extreme poverty incidence fell to 10.5%. This is a strong testimony to the success of the development strategies over the past decade. COVID-19 temporarily caused a spike in poverty owing to the loss of income and employment for many poor and vulnerable households. The 8FYP will put top priority to reverse this income loss through job creation and transfer payments with a view to restoring the momentum of poverty reduction to the path envisaged in PP2041, whereby the target is to eliminate extreme poverty by FY2031. The poverty reduction strategy for the 8FYP will build on past successes and strengthen effort where necessary. Thus, a combination of the implementation of the inclusive growth strategy described above that will create jobs and provide higher real income to the poor, implementation of the above-mentioned human development strategy that will improve education and skills of the poor and vulnerable population, inflow of remittance income with enhanced participation from lagging districts, greater supply of credit through the micro-finance institutions as well as the commercial banks, and expanded social protection system will form the core elements of the poverty strategy.

While this strategy is broadly similar to the past strategy, the 8FYP poverty strategy will be enhanced in a number of ways. First, the growth strategy will have much stronger focus on job creation than during the 7FYP. Second, special attention will be given to reduce poverty in the poorest 10 districts through infrastructure supply, credit and social protection income transfers. Third, the planned introduction of Universal Health Care (UHC) will vastly lower the exposure of the poor to a major source of economic shock. Fourth, a major structural improvement in the poverty reduction strategy will be the implementation of a much stronger social protection system nationwide based on the fast-track implementation of the NSSS and higher spending on social protection programmes for the urban and rural poor and vulnerable population. The 8FYP will expand the budget allocation for social protection for the poor (excluding civil service pensions which is not targeted to the poor) from 1.2% of GDP in FY2019 to 2% of GDP by FY2025. Finally, the 8FYP will make the digital/ mobile financial services (DFS/MFS) system more effective in achieving financial inclusion of the poor and marginalized groups. Specific policy interventions include: strengthening the national identification database, improving the payments infrastructure including the establishment of the interoperability amongst digital financial service providers, promoting innovations to make DFS services more supportive of growth of small business holders, and eliminating gender disparity in financial inclusion. These specific strategical enhancements will help reduce income inequality and increase the poverty elasticity of growth.

Along with poverty reduction, social inclusion strategy will be strengthened during the 8FYP. On the gender front, the 8FYP will focus on increasing economic empowerment and better implementation of the 2011 NWDP. Women's labor force participation will be increased through closing the gap between male and female enrollments in tertiary education, especially in TVET, better access to training programmes, improving child care availability, improving safety of women's movements and in the work place, and increasing access to basic facilities like toilet and sanitary napkins in the work place. The strategy for the children's advancement during the 8FYP will emphasize full implementation of all child protection laws and reduction in child poverty through strengthened social protection benefits based on a reformulated Child Benefits Program as envisaged in the NSSS.

The inclusion strategy for ethnic minorities, the physically challenged and the under-privileged groups that face social discrimination on the basis of their profession will remain ingrained as before on the implementation of the Constitution that provides equal rights and opportunities to all citizens irrespective of race, religion, caste, creed or profession. Bangladesh takes great pride in eliminating all legal and regulatory restrictions to inclusion and for building in affirmative actions in its social development policies to protect social inclusion. Inclusion policies are well defined but implementation is limited by administrative capacity constraints at the local level. The strategy for the 8FYP will place special emphasis on improving administrative capacity at both the ministerial and local government levels and strengthening partnerships with civil society organizations.

L. Strategy for Infrastructure Development

The top priority given to infrastructure development during the 6th and 7th Plans has paid off well in boosting GDP growth during the past 10 years. The progress is particularly remarkable in power supply where the country has moved from a power deficit country to a self-sufficient position owing to a massive expansion programme funded through public and private enterprises. Progress was also made in implementing power trade and in initiating a diversification of primary energy to LNG and coal. The LNG and imported coal fuel options-based investments are ongoing and will start production during FY2022-FY2023. The 8FYP power and energy strategy will continue the ongoing good work and strengthen the strategy in several areas. First, the Power Sector Master Plan 2016 (PSMP) will be updated and power expansion programmes will be based on updated demand projections, better use of existing capacity and selection of least-cost options for new generation. Second, emphasis will be placed on renewable energy trough proper fuel-oil pricing and other incentives. Third, the power and energy sector finances will be improved through institutional reforms and pricing policies. Fourth, energy conservation and efficiency improvements will be promoted through proper O&M of power facilities, through adoption of energy efficient technology, and through pricing and taxation of energy consumption.

The transport sector strategy in the 8FYP will follow the strategy initiated in the 7FYP with an emphasis in areas where performance gaps exist. Thus, the strategy would be to develop an efficient, sustainable, safe and regionally balanced transportation system in which various modes complement each other, interface appropriately and, where possible, provide healthy competition to each other. Special emphasis will be placed on the introduction of modern technology for increasing capacity and improving quality and productivity of the system, development of the two seaports with smooth transport links to Dhaka, establishment of effective railway linkages between the east and west zones of the country, integration of road, rail and inland water transport, and participation in global and regional transport connectivity initiatives that help develop the land route links between South Asia and East Asia through Bangladesh. On the investment side, the strategy would continue to prioritize timely completion of all transformational transport infrastructure projects consisting of inter-city bridges, highways, tunnels, and sea ports that helps modernize the Bangladesh transport network so as to improve the mobility of goods and services across the nation, facilitate international trade, reduce cost and improve competitiveness. These transformational projects are highly capital intensive, are multi-year in nature, and require strong supervision to avoid cost over-runs and delays. The 8FYP will maintain the priority given to mass urban transit facilities and will speed up the completion of MRT Line-6 (the first elevated Metro Rail of Bangladesh) by December 2021.

Mindful of the resource constraints and high investment costs, the 8FYP financing strategy would combine ADP allocations with a strong public-private-partnership (PPP) effort. The PPP institution will be strengthened with internationally competent staff with experience in negotiating and managing international PPP contracts. The 8FYP would put special emphasis to improve the inter-modal transport balance, where progress was limited during the 7FYP, with greater emphasis on inland waterways that are low-cost in nature and are environment friendly. The importance of transport, especially air transport, for tourism would be emphasized with a focus on strengthening inter-district airline connectivity and the construction of a new international transport. Greater efforts will be made to improve resource mobilization through the introduction of user charges and fees for a range of public transport services including road user charges, air and sea port fees, inland water and rail fares.

M. Digital Bangladesh and Information Communications Technology (ICT)

The productivity of the labour force depends on education and training, capital stock and technology. The ICT revolution implemented through the Digital Bangladesh initiative of Hon'ble Prime Minister Sheikh Hasina launched in 2009 holds the promise of lifting labor productivity and citizen welfare through the adoption of mobile technology. Bangladesh has already made solid progress during the Sixth and Seventh Plans. Importantly, the critical role of ICT came to the fore in the wake of COVID-19 pandemic. Physical distancing requirements that closed down physical office, business and education enterprises and threatened to disrupt all related activities, are being offset by use of ICT communications through video conferencing. A wide range of services in diverse field including banking, health care, education, business management, public administration, consulting and retail trade where physical presence is not needed are now being conducted virtually online through use of ICT facilities. This has already revolutionized the concept of the work space from office space with mass gathering to individual home-office. Productivity improvements have happened through saving of commuter time and financial cost.

Despite progress, as suggested by international comparison of availability and use of ICT facilities in Bangladesh, there is still a long way to go. A range of policy and institutional constraints will need to be tackled during the 8FYP to further implement the Digital Bangladesh to its fuller potential. A major challenge in this regard is the need to reassess the inconsistency in the tax policy that tends to burden this sector with a tax overload, thereby constraining private investment in ICT infrastructure. Higher service cost owing to taxation lowers consumer demand, thereby constraining the adoption of ICT services. This taxation problem will be addressed speedily to enable stronger progress with ICT during the 8FYP.

Public investment will focus on the supply of fixed infrastructure while public policy will facilitate the private sector expansion of mobile phone technology to unserved areas, incentivize the use of mobile technology, especially in rural areas, and support a more rapid growth of higher value-added mobile services such as internet, video phone and data services. Export of ICT services including software development will be promoted through fiscal incentives. More rapid adoption of e-services in public sector will be encouraged through a programme of digitization of public services including staff training. Special effort will be made to augment ICT education and availability of skilled ICT staff. Emphasis will be placed on development of ICT soft wares for exports through investments in Technology Parks and public investment in ICT research and development

N. Managing the Urban Transition

As Bangladesh moves from LMIC to UMIC, the urbanization of the country will continue to expand. The growing pressure on urban land, water, power, transport, waste management and housing are already being felt in all urban centers of Bangladesh, but especially in the capital city of Dhaka and the port city of Chattogram. The manufacturing sector, which is the main engine for higher growth, is facing increasing challenges from higher land prices, traffic congestion and pressure on urban infrastructure. The Government understands that this urbanization challenge will need to be managed efficiently to ensure the sustainability of the growth effort. Accordingly, the PP2041 develops a long-term road map to manage smoothly the urban transition. The 8FYP will essentially implement that strategy.

Drawing on PP2041 urbanization strategy, the 8FYP urbanization strategy is grounded in the reality that in a market economy urbanization will be linked to the growth of economic activities. The role of public policy to influence the pattern of urbanization will depend upon incentives, regulations, public investments and institutions. Global experience clearly shows the need for decentralized and autonomous urban governments as a key part of the political and administrative layout underlying an UMIC. A sound strategy for reforming city management calls for a three-pronged approach: (i) redefining public-private roles with a view to strengthening this partnership for better services; (ii) strengthening capabilities of public urban service institutions; and (iii) establishing an accountable city government with fiscal decentralization.

Along with institutional reforms to promote the development of strong local government institutions (LGIs), the 8FYP will invest heavily in critical urban services like water supply, drainage, sanitation and waste management. In particular, the access to safe water and sanitation will be enhanced in both urban and rural areas to improve health and fight the COVID-19 infection. Urban housing would be promoted through regulatory simplifications relating to land and property registration, reduction in registration fee, and strengthening of housing mortgage finance.

The funding needs of the urban sector are large. Without fiscal decentralization, service delivery will continue to be inadequate because ADP funding is limited. The 8FYP will accordingly take measures to enhance fiscal decentralization by taking a criteria-based approach to transfers to city corporations and Municipalities. These criteria may include population, poverty, and performance. LGIs, both urban and rural, will be empowered with the use of three other financing strategies. The first is tax mobilization through a modern property tax system as found in UMIC. The second involves private financing, and the third relates to a strong cost recovery policy for urban services. While LGI tax resources and national government transfers will help finance operating costs of the city government and spending programmes on public goods like local roads, drainage systems, parks and maintenance of water bodies, cost recovery will play a dominant role for such services as water supply, sewerage and solid waste disposal. Private provision of these commercial services will also be encouraged. Urban housing would be a pre-dominantly private sector activity. Government subsidy and grants will be provided for low-cost housing for the poor.

O. Sustainable Development

Many laws and regulations have been enacted over the years to protect the environment and programmes and policies are in place to adapt and mitigate the adverse effects of climate change. This progress continued under the 6th FYP and 7th FYP, with special emphasis on air and water pollution control. Important steps

were also taken to improve biodiversity and implement climate change adaptation pilot programmes through the BCCTF resources. An important breakthrough on the strategy and policy front happened recently with the adoption of the BDP 2100 in September 2018. As noted, the implementation of this comprehensive long-term strategy for managing the risks posed by the deltaic formation of the country along with the incidence of natural disasters and climate change will substantially reduce the vulnerability of the population to climate change and natural disasters.

Fundamentally, the main focus of the 8FYP sustainable development strategy is to initiate the first phase implementation of PP2041 environmental management strategy. By integrating environment and climate change considerations in the growth strategy., as proposed under PP2041, Bangladesh will adopt a green growth strategy. The specific strategies, policies and institutional reforms include: (a) Integrating environmental costs into the Macroeconomic Framework; (b) Implementing the Delta Plan to build resilience and reduce vulnerability to climate change; (c) Reduce air and water pollution; (d) Removal of fuel subsidies; (e) Adoption of green tax on fossil fuel consumption; (f) Taxation of emission from industrial units; and (g) Prevention of surface water pollution.

In the first phase of implementation, the 8FYP will prioritize the ongoing efforts to reduce air and water pollution, strengthen forestry management and implement the BDP2100. Efforts will be made to build up institutional capabilities, policies and regulations for the implementation of environmental fiscal reforms (EFR) and the development of the green growth strategy. Proper coordination with global climate change programmes will be maintained along with stronger efforts to mobilize global climate change resources.

P. Strengthening Public Institutions and Governance

Consistent with the long-term goal of PP2041 to attain upper middle-income status in FY2031 and high-income status in FY2041, the government's institutional and governance improvement goals will target a time path to attain the institutional set up found in present day UMICs. The priorities for the 8FYP include:

- Further strengthening of the democratic governance process to ensure participation of all citizens and the sound functioning of all democratic institutions.
- Strengthening of the local government institutions based on a well-defined legal framework that assigns responsibilities along with commensurate financial autonomy.
- Strengthen service delivery through implementing online transactions for all public services with simplified application forms, pre-announced service response timelines and service charges, and an online grievance redressal system.
- Financial and legal support to the judiciary to strengthen its capacity to ensure faster disposal of civil and criminal cases.
- Strengthening of the Bangladesh Bank with recruitment of high-quality staff and implementation of all prudential regulations for the entire banking system. Urgent reform of public banks to reduce non-performing loans, bad lending decisions and to earn profit with zero recourse to Treasury funding.
- Strong implementation of the PP2041 fiscal framework with a special focus on strengthening personal and corporate income tax collections and the VAT through modernization of the tax system. Tax forms will be simplified and tax filing and payments will be made online with no interface between tax collector and tax payer. Audit will be limited, productive and criteria driven. Consideration will be given to separate tax policy from tax collection.

- The SOEs will be urgently reformed to reduce leakage of resources and to enable all enterprises to fully recover cost and earn a reasonable rate of return on assets. A hard budget constraint will be imposed on all SOEs.
- The government's policy of zero tolerance of corruption will be enforced strictly with information on actions shared publicly.
- Strengthening the Anti-Corruption Commission in securing better quality investigations and fair resolutions.

Q. Development Results Framework (DRF)

A major institutional reform that has happened in the approach to planning in Bangladesh is the internalization of an effective results-based Monitoring & Evaluation (M&E) strategy to monitor the implementation of the Plan and associated programmes. The 8FYP adopts a better informed and owned development results framework (DRF), drawing on the good experiences of the 6th and 7th Plans. Both core macro and sectoral quantitative results will be monitored to measure the effective implementation of the 8th Plan. A mid-term review of implementation progress is planned for end 2023, while a final implementation review will be done in end 2025 after the completion of the Plan.

The Bangladesh Bureau of Statistics (BBS) will be empowered for data collection drives for DRF, including MICS, Urban child wellbeing survey, vulnerable pocket-based survey, including implementation of national data quality assurance framework for administrative data from ministries for SDGs, including SDG data monitoring. GED, BBS along with ministries will promote partnerships with independent agencies for collecting data and reporting for specific projects.

BBS can help to make significant advances in the potential for data analysis and use, which would help to improve the lives of population especially women and children in Bangladesh. With government investment, focused efforts can ensure data will be more useful and accessible to (1) Deliver on the SDGs by improving management information systems that collect data at the point of service delivery and by enabling access to local administrative data via portals, (2) Stimulate demand for data by making data more accessible for those responsible for decision-making as well as those seeking to hold them to account, and (3) Harmonize investments, roles, and responsibilities – across both government and development partners/agencies – to reduce overlaps and increase efficiency and effectiveness.

Part 1

MACROECONOMIC PERSPECTIVE: STRATEGIC DIRECTIONS AND POLICY FRAMEWORK

CHAPTER 1

DEVELOPMENT PROGRESS UNDER THE SEVENTH PLAN

1.1 OVERVIEW

The Seventh Five Year Plan (7FYP) was adopted in July 2015, as continuation of the government's efforts to implement the Vision 2021 and the associated Perspective Plan 2021 (PP2021). The 6FYP had started the process of implementing PP2021 and the 7FYP sought to complete this task. Considerable progress was made under the 6FYP, but the government was aware that there was an unfinished agenda in relation to development goals envisioned in the PP2021 that needed to be addressed. The 7FYP therefore reviewed the progress made in the 6FYP, identified the main gaps and set the appropriate goals, targets and strategies as the next step to the completion of the PP2021 development agenda and the implementation of the UN-supported Sustainable Development Goals 2030 (SDGs).

This continuity in medium-term development planning that is linked to a long-term development vision with scope for mid-term corrections has served Bangladesh well by providing it with a flexible development planning instrument that is dynamic and adaptive in nature. This is especially relevant in the context of the ongoing Corona Virus (COVID-19) pandemic that has devasted the global economy with substantial downside implications for Bangladesh. Bangladesh adopted a new Perspective Plan 2041 (PP2041) that defines a long-term vision of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman's dream of a poverty-free and prosperous Bangladesh. The Eighth Five Year Plan (8FYP) is the first in the series of 4 medium term development plans aimed at implementing the PP2041. The lessons from the adaptive and dynamic use of the Sixth and Seventh Plan as instruments for implementing the PP2021 including the adjustment to the COVID-19 impact will be particularly useful in the implementation of the 8FYP as it starts it journey in the backdrop of a massive and unprecedented global crisis.

This chapter provides a big picture review of the implementation of the 7FYP with a view to highlighting the areas of major achievements and progress and identifying areas where there have been implementation gaps. This analysis provides a benchmark for setting the objectives, targets and priorities for the Eighth Plan and the associated macroeconomic and sectoral strategies, policies and programmes. The relevant chapters of the Eighth Plan also provide more details of sectoral performance in the Seventh Plan to set the development context for the sectoral objectives and strategies of the Eighth Plan.

In order to provide a fair assessment of the true performance of the 7FYP implementation, analytically it is important to delink the COVID-19 short-term adverse impact from the medium-term trend-based performance from July 2015 to February 2020. The COVID-19 impact started unfolding from March 2020. The assessment of the 7FYP performance is therefore based on results of the first 4 years of the plan period, that is from FY2016-FY2019. The FY2020 performance is reviewed separately in the context of available information on the impact of COVID-19. The actual FY2020 outcome will likely change as better and more current data is available in the July-August periods.

1.2 PROGRESS WITH ECONOMIC GROWTH, ECONOMIC TRANSFORMATION AND JOB CREATION

The 7FYP made strong progress in achieving the growth and structural transformation targets. GDP growth accelerated as envisaged in the 6FYP. Bangladesh is now amongst the fastest growing countries in the World. The transformation of the production structure away from agriculture to industry and modern services was further enhanced during the 7FYP. This provides a sound basis for further transformation during the Eighth Plan. The area where progress has been more halting concerns job creation. While agriculture continued to transform from a pre-dominantly peasant production system towards a more commercially-oriented production structure and thereby continued to shed labour, manufacturing and organized services sectors did not show the dynamism in the area of job creation that was expected in the 7FYP. As a result, total job creation in these activities was lower than expected, which drove down the rate of labour absorption in these activities.

1.2.1 GDP Growth

The GDP outcomes during the various 5-year plan periods is shown in Table 1.1. Bangladesh has increased its average GDP growth rate since the 4FYP. The average growth rate gained speed during the 6FYP and further accelerated to 7.6% during the first 4 years of 7FYP period. However, due to COVID-19, the actual average GDP growth rate stands at 7.13% covering the whole 7FYP period. Progress with fertility management and consequent rapid reduction in the population growth rate helped increase per capita GDP progressively, reaching an impressive rate of 6.2% during the 7FYP.

Rapid growth in per capita GDP along with continued generous inflow of remittances helped a progressive increase in per capita gross national income (GNI). By 2015 Bangladesh had already crossed the threshold for the World Bank defined lower middle-income country (LMIC). Rapid increase in per capita GNI during the 7FYP set Bangladesh well on the road towards an upper middle- income country (UMIC). In 2018 Bangladesh qualified to graduate from the list of the least developed countries. In FY2020, per capita GNI already reached the US $2064.

Table 1.1: GDP Growth in Various Five Year Plan Periods

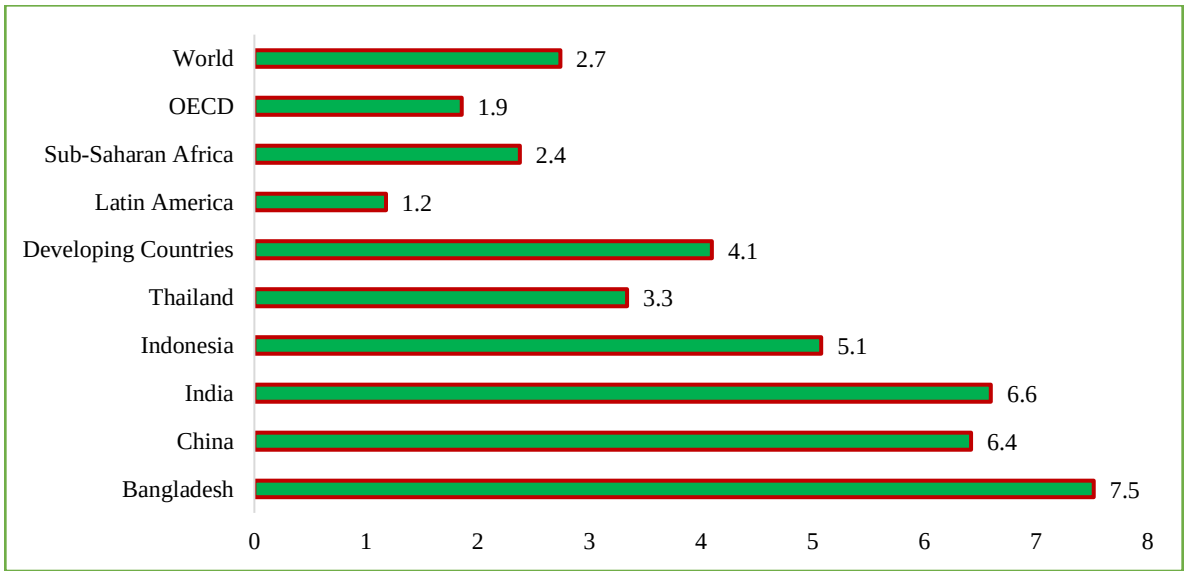
Specific Plan	Plan Period (FY)	Average GDP Growth Rate		Per Capita GDP Growth (%)	Per Capita GNI (US$)*
		Plan (%)	Actual (%)		
First Plan	1973-1978	5.5	4.0	1.3	111
Second Plan	1980-1985	5.4	3.8	1.5	145
Third Plan	1985-1990	5.4	3.8	1.6	204
Fourth Plan	1990-1995	5.0	4.2	2.4	253
Fifth Plan	1997-2002	7.1	5.1	3.5	431
Sixth Plan	2011-2015	7.3	6.3	4.9	1314
Seventh Plan	2016-2020	7.4	7.13	5.73	2064

Source: Bangladesh Bureau of Statistics (BBS) *Per Capita GNI of the terminal year of the FYP

The GDP growth acceleration achieved during the Seventh Plan put Bangladesh on the global map as amongst the fastest growing countries of the World (Figure 1.1). The fact that the average GDP growth rate in Bangladesh during 2016-2020 exceeded those achieved in China and India is truly remarkable and speaks

volumes about the highly successful growth strategy during the 7FYP. This performance also laid the foundations for aspiring to secure UMIC status by the end of FY2031.

Figure 1.1: 7FYP Growth Performance in International Context (% p.a. 2016-2019)



Sources: Global Economic Prospects, June 2019 and January 2020, World Bank Group

1.2.2 Structural Change and Economic Transformation

Consistent with the 6FYP and PP2021 strategies, the 7FYP development strategy emphasized the need to increase the production share of industry and modern services while reducing the dependence on agriculture and informal services. It also continued the emphasis on reducing the gap between rural and urban economies by strengthening the nonfarm sectors of the rural economy. On the industrial front, most emphasis was placed on enhancing the growth of the manufacturing sector to 11.5% during FY2016-2020. Much of this growth was projected to come from export-oriented manufacturing sector. Additionally, the services sector was projected to grow at 6.5% average growth, supported by substantial increases in the growth of modern services and service exports. While agriculture was expected to grow at a modest rate of 3.3%, the rural economy was expected to undergo important structural changes with expansion in rural non-farm activities in manufacturing, trade, construction, transport and services.

Table 1.2 shows that substantial progress was made in further transforming the production structure. The expansion of the manufacturing sector, growing by an average rate of 12.7%, contributed most to improving the production structure. Owing to this strong growth, its GDP share increased from 19% in FY2015 to 23% in FY2019. Construction sector also performed strongly. Consequently, the share of industry in total GDP expanded from 29% in FY2015 to 35% in FY2019. The services sector also grew at an average rate of 6.5%, which is a robust performance. Importantly, the composition of the services sector changed in favour of modern services supported by solid growth in activities such as banking, other financial services, organized transport (air, rail, shipping and roads transport), telecommunications, information communications technology (ICT), education and health services.

Table 1.2: Structural Change in the Economy During the Seventh Plan (% of GDP Constant Prices)

Structure of the Economy	FY2015	FY2019
Agriculture	15.36	13.61
Share of non-crop agriculture	(44.90)	(48.13)
Industry	29.19	34.57
of which Manufacturing	(19.35)	(23.27)
Services	55.45	51.82

Source: National Accounts Statistics, Bangladesh Bureau of Statistics (BBS)

Considerable progress was also made in the diversification of the rural economy. Already during the Sixth Plan, the rural economy had been transforming from a pre-dominantly agriculture- based production structure towards more non-farm-based production activities. The Seventh Plan further pushed this transformation. Evidence shows that agriculture is no longer the pre-dominant source of income in the rural economy. Within agriculture there has been a slow and steady transformation from cereals to protein-based production such as fisheries, livestock, poultry, dairy-products, fruits and vegetables and flowers. Importantly, the export-oriented fisheries sector has taken up a big role as a source of farm income in Bangladesh. Thus, the share of fisheries in agricultural value-added expanded from 23% in FY2015 to 26% in FY2019.

The growth of rural non-farm enterprises is rapidly changing the Bangladesh rural landscape. Non-farm job creation combined with diversification within agriculture and generous inflow of overseas remittance income has created a strong demand base for a number of rural activities related to rural manufacturing, construction, housing, education, health, trade, transport and ICT. The availability of electricity and improved rural roads along with better connectivity to rural and urban markets through ICT and transport networks has facilitated this rural transformation. In particular, use of ICT solutions and reduction in time related to transport of people and goods has improved the flow of information and lowered the transaction costs, thereby increasing rural incomes. The progress on rural transformation is very re-assuring and provides a strong basis to move forward further in the Eighth Plan.

1.2.3 Progress with Investment

As in the past, capital formation was the most important driver of growth. Recognizing the importance of capital formation for growth acceleration, the 7FYP set strong targets for both public and private investment. Substantial progress was made in securing the planned investment targets. The public investment rate even exceeded the target set for the 7FYP. This is somewhat surprising given the revenue constraints faced by the government, the revenue shortfalls were offset by government controls over current spending that protected development spending and also by the expansion of investments by public autonomous corporations from retained earnings and depreciation funds. Private investment also expanded but fell short of target. Some of the shortfall in private investment is accounted for by the sluggish performance of foreign direct investment (FDI) and by the inability of the investment effort under the public-private partnership (PPP) initiative. Both these areas would require renewed efforts in the 8FYP, with particular attention to improving the investment climate for private investment.

Table 1.3. Progress with Investment during 7FYP

Fiscal Years	7FYP Investment rate (% of GDP)			Actual Investment rate (% of GDP)		
	Public	Private	Total	Public	Private	Total
FY15	6.8	22.1	28.9	6.8	22.1	28.9
FY16	6.4	23.7	30.1	6.7	23.0	29.7
FY17	7.1	23.9	31.0	7.4	23.1	30.5
FY18	7.4	24.4	31.8	8.0	23.3	31.3
FY19	7.6	25.1	32.7	8.1	23.5	31.6

Source: Seventh Plan and BBS

1.2.4 Employment and Labour Productivity

The employment challenges for the 7FYP were embedded in three inter-related dimensions:

First, is the need to create adequate number of jobs to absorb the new entrants to the labour force, which constitutes the quantitative challenge. As a result of the ongoing demographic transition, whereby the share of the working population is increasing, the projected growth in the labour force in the 7FYP was 2.9% per annum, which is considerably faster than the population growth rate (1.37% per annum). This was based on the latest labour force data of 2010 (LFS 2010) that was available at the time when the 7FYP was drafted. It showed both a rising share of the working population to total population (the demographic dividend) and a rising share of female labour force participation. The 7FYP saw this as a challenge to create sufficient number of jobs to absorb this growing labour force as well as to reduce underemployment. Accordingly, the 7FYP targeted employment to expand at an average pace of 2.6 million per year.

The second dimension of the 7FYP employment target was related to the quality aspects. While the agriculture sector's employment share in total employment has been falling, it still is the largest source of employment. Research shows that labour productivity and real wages are higher in manufacturing and services sectors, especially organized services. Research also shows that job quality in terms of remuneration and benefits tend to be better on average in formal employment relative to employment in informal sectors. Accordingly, a major objective of the Seventh Plan was to create more jobs in manufacturing and organized services relative to agriculture and the informal economy.

The third dimension relates to the special challenge presented by the growing incidence of youth unemployment, especially educated unemployed youth. The government is acutely aware of the social consequences of a large incidence of unemployed youth, especially educated unemployed youth. The 7FYP aimed to substantially reduce the youth unemployment rate.

Employment strategy: The employment strategy of the Seventh Plan was based on four pillars:

First, was the effort to expand the rate of the growth of the economy, with special emphasis on manufacturing and organized services.

Second, the Seventh Plan took note of the fact that Bangladesh being a labour abundant economy, it will have a comparative advantage in producing and exporting labour intensive products. The experience from RMG manufacturing provides a very strong foundation to this analytical basis of the Seventh Plan.

Accordingly, the 7FYP emphasized the expansion of RMG exports while also seeking to diversify the export base through the promotion of non-RMG exports.

Third, the Seventh Plan sought to build on the successes achieved in the export of labour services especially to the Middle East through a number of policies including information sharing at the district level, easing up remittance inflows through banking sector, providing exchange rate incentives, providing training support to potential migrants, and preventing exploitative behaviour of private employment exchanges.

Fourth and finally, the government took a number of steps to boost youth employment by adopting the National Youth Policy 2017, by strengthening the implementation of technical and vocational education, adopting and implementing a number of skills upgradation projects such as STEP and SEIP, and strengthening the implementation of ICT.

***Seventh Plan employment outcome*:** The latest available labour force data refers to the LFS 2016-17. Owing to this, the approach followed to estimate domestic employment is to use the national employment elasticity between 2010 and 2017 and apply that to the average GDP growth for the 7FYP. Data on overseas employment are obtained directly from the Bureau of Manpower, Employment and Training (BMET). The estimated results are shown in Table 1.4.

Table 1.4: Estimated Job Creation in the Seventh Plan (million workers)

	FY2020 (Plan Target)	7FYP Annual Average	FY 2019 (Estimated)	Actual Annual Average
Domestic Employment	10.9	2.2	4.6	1.2
Overseas Employment	2.0	0.4	2.8	0.7
Total Employment	12.9	2.6	7.4	1.9
Additional Labour Force	9.9	2.0	4.2	1.1

Source: LFS 2016-17; GED Estimates

Several important results emerge. First, total job creation of 7.4 million during the first 4 years of the 7FYP suggests that actual job creation for the full plan would have fallen much short of the targeted 12.9 million even if there was no COVID-19. Second, the shortfall is particularly large in domestic job creation; only 4.6 million estimated new jobs were created in the domestic economy in the first 4 years of the 7FYP as compared with the projected target of 10.9 million for the full plan. In other words, the 7FYP target was to create some 2.2 million domestic jobs per year, but actual job creation is estimated at 1.2 million per year. Third, while domestic job creation fell below target, job creation abroad was much above target (0.7 million per year actual overseas jobs as compared with a target of 0.4 million). This was a huge boost to the Bangladesh economy both in terms of the number of jobs created and inflow of remittances. Importantly, it substantially offset the adverse effects of slower job creation in the domestic economy for unemployment and growth in real wages. Finally, a major surprising result is the substantial unanticipated slowdown in the growth of the domestic labour force. According to the latest available labour force survey of 2016-17 (LFS 2016-17), as compared with a projected labour force growth of 2.9% per year in the 7FYP, the actual labour force grew at an average pace of 1.6% per year between 2010 and 2017. As a result, the actual annual new entrants to the job market was only 1.1 million compared to the 2 million projected in the 7FYP. This surprising result is partly explained by the stagnation in the labour force participation rate of the female population at around 36%. It also reflects the fact that the expected increase in the share of the working age

population to total population did not happen. This is explained by several factors including a greater share of youth in age group 15-24 remaining in education instead of entering the workforce, a rising share of the youth population that is not in employment, education or training (NEET), and a rising share of old age (64+) population. So, when total new domestic jobs are compared with the actual addition to labour force, the result is less disappointing. Nevertheless, in view of substantial underemployment and the fact that 10% of employment is unpaid family labour, the domestic job creation performance of the 7FYP was below the target.

Due to the structural transformation, the labour exodus from agricultural sector continued and employment actually shrunk in numbers, but employment in manufacturing and construction did not grow as expected (Table 1.5). Despite an acceleration in the manufacturing sector growth to 10.4% per year between 2010-2017, manufacturing employment grew very modestly at an annual rate of 4%. As a result, employment elasticity of manufacturing sector fell sharply to a low of only 0.39 between 2010 and 2017. The construction sector employment similarly exhibited a low employment elasticity of only 0.4 (Table 1.6).

Table 1.5: Employment Progress during the 7FYP

Sectors	FY2015 (million workers)	FY2019 (million Workers)	FY2015 (percent share)	FY2019 (percent share)
Agriculture	25.8	24.2	44.0	38.2
Industry	11.5	13.6	19.5	21.6
(Manufacturing)	(8.6)	(9.8)	14.7	15.5
Services	21.4	25.4	36.5	40.1
Total	58.7	63.3	100.0	100.0

Source: GED estimates based on LFS data and using sectoral employment elasticities between 2010 & 2017

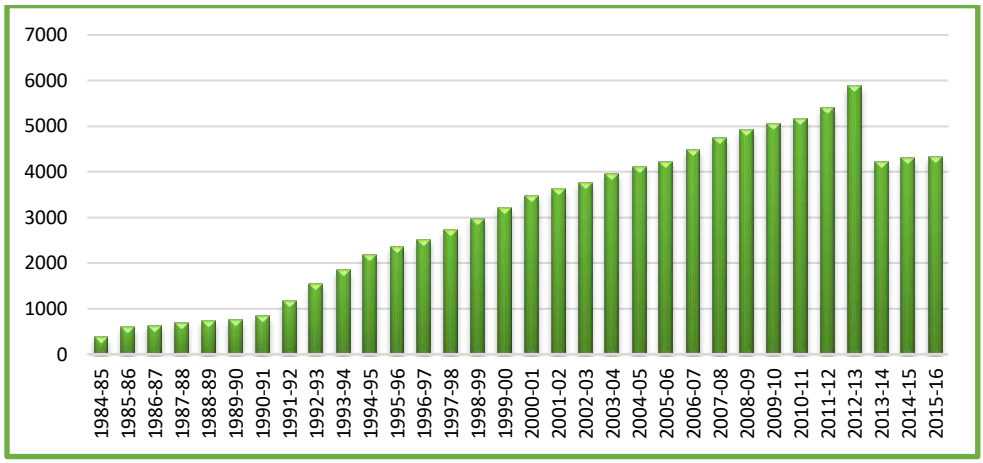
Table 1.6: Total and Sectoral Employment Elasticities of Growth

Sector	2000-2010 (%)	2010-2017 (%)
Growth of agriculture	3.5	3.4
Growth of agricultural employment	2.65	(-0.57)
Agriculture employment elasticity	0.76	Negative
Growth of manufacturing	7.5	10.3
Growth of manufacturing employment	6.2	4.0
Manufacturing employment elasticity	0.83	0.39
Growth of construction, mining, electricity and water	7.5	11.1
Growth of construction, mining, electricity and water employment	9.1	4.5
Construction, mining, electricity and water employment elasticity	1.21	0.41
Growth of services	6.3	6.0
Growth of services employment	2.9	3.3
Services employment elasticity	0.46	0.55
Growth of GDP	5.8	6.8
Growth of employment	3.3	1.7
GDP employment elasticity	0.57	0.25

Source: BBS national accounts and labour force surveys

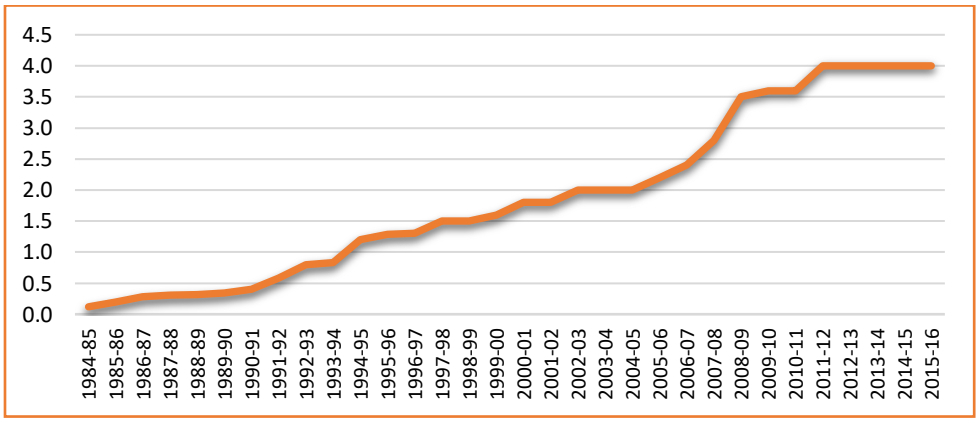
Several factors have contributed to this slowdown in job creation, the most important of which is the enterprise consolidation and automation in the Ready-made Garments (RMG) Sector that created some 4 million jobs between 1990 and 2012, mostly for young women. The consolidation of the RMG sector owing to automation, compliance with safety and other buyer-induced regulations, and scale economies has resulted in a noticeable reduction in the number of RMG enterprises since 2012, which are mostly small-scale in nature and are intensive in low-skill female-oriented employment (Figure 1.2). This has caused a virtual stagnation in RMG total employment at 4.0 million since FY2012 despite rapid growth in RMG production and exports (Figure 1.3). This development has had a large negative effect on manufacturing job creation, especially for urban female youth. Many of the functions performed by these female youth workers are now fully automated.

Figure 1.2: Number of RMG Factories



Source: BGMEA

Figure 1.3: RMG Employment (million workers)

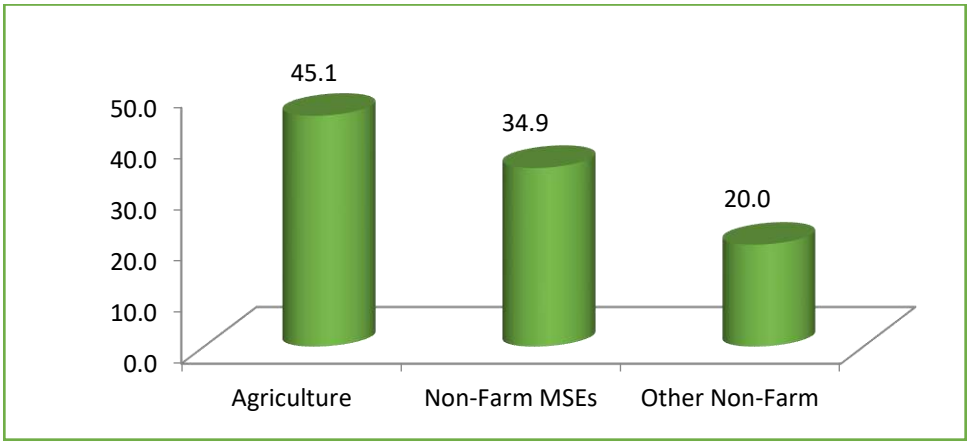


Source: BGMEA

Second, the success in the RMG sector that created an export-oriented labor-intensive manufacturing sector industry has not been repeated elsewhere in the export sector for a range of reasons including the anti-export bias of the trade policy. Thus, despite the dismantling of many trade restrictions, there is still considerable trade protection that favors production for domestic markets. While domestic production and value-added have grown, the employment effects of this import-substituting manufacturing have been modest.

Third, the micro and small enterprises (MSEs) are the backbone for non-farm job creation in Bangladesh. According to the 2013 Census, some 99 per cent of all non-farm enterprises fall in the MSE categories and they provided employment to 20.3 million people in 2013. This makes them the largest source of employment outside agriculture (Figure 1.4). This sector is mostly informal in nature and lacks dynamism owing to a variety of constraints including financing. Non-farm job creation economy wide will benefit most by strengthening this sector.

Figure 1.4: Distribution of Employment 2013 (percentage)

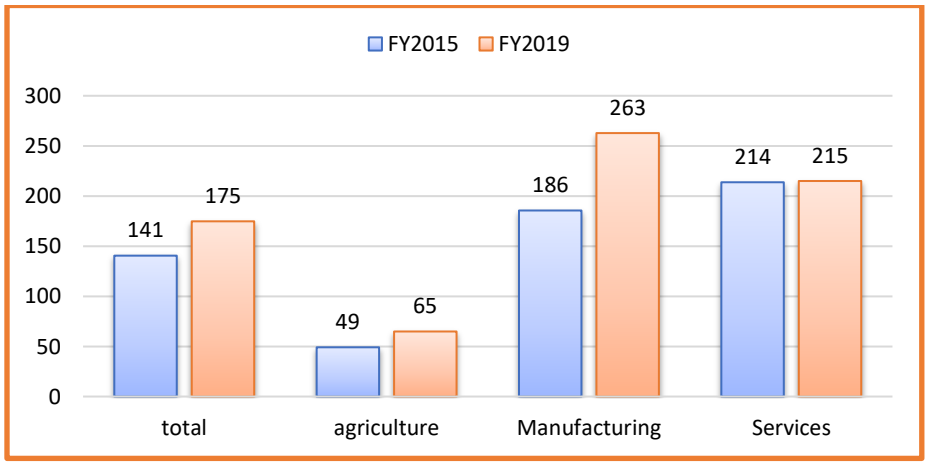


Source: BBS, LFS 2013 and Economic Census 2013

On the qualitative side of employment, the employment structure did improve along the lines envisaged in the 7FYP. The share of low-productivity, low-income agriculture employment in total employment fell substantially to 38%, down from 44% in 2015 (Table 1.4). The share of higher-productivity, higher-income employment grew in manufacturing and other industrial activities. The employment shares of services sector grew rapidly. These are all good news, but the pace of transformation of employment sources was lower than expected in the 7FYP owing to the sharp slowdown in the ability of the manufacturing sector to create jobs despite rapid growth in production and value-added.

Labour productivity: It is well understood that productivity increases are the only sustainable means to increase labour income. Accordingly, a major objective of the 7FYP was to increase average labour productivity, economy wide and especially in agriculture. The changes in average labour productivity are indicated in Figure 1.5, which shows that the average national labour productivity grew by a healthy 5.6% per year. Importantly, average labour productivity increased in all sectors including agriculture, where it is estimated to have increased by a record 7.3% per year. Productivity grew fastest in manufacturing, rising at a hefty pace of 9% per year. While this is great news for competitiveness of the manufacturing sector, the associated slowdown in the rate of growth of manufacturing employment raises an important policy question of whether there is a trade-off between employment and productivity growth and how these two need to be reconciled. This will need to be addressed in the 8FYP. The relative stagnation in service productivity is the consequence of large migration from agriculture and the rural economy in informal urban services, particularly in the category of personal services and trading. Disaggregated labour force data show that productivity and earnings are the highest in professional and formal services in banking, ICT, modern transport, health and education.

Figure 1.5: Growth in Labour Productivity during the 7th Plan
(000 taka 2005-06 prices)



Source: BBS national accounts and LFS data various years

Overseas labour migration: As noted, promotion of overseas labour migration, especially to the oil-rich Middle Eastern Countries, was an important element of the 7FYP employment strategy. Unlike domestic job creation, the progress on this count was much better. Actual outflow of migrant labour substantially exceeded the target in the 7FYP (Table 1.3). Thus, as compared with the planned annual average migrant labour outflow of 0.4 million, actual outflow was 0.7 million. This extra external employment provided a big cushion and softened the adverse effects of a slowdown in domestic job creation. The government supported outward migration with a number of policy support including making better information available to potential migrants, supporting the inflow of remittances through better banking services and special exchange rate incentives, reducing the cost of migration by providing protection against exploitation by middle-men and establishment of the Probashi Kalyan Bank to provide low-cost loan options, and providing better training opportunities.

Progress with youth employment: Despite several initiatives including the adoption of the National Youth Policy 2017, awareness building and training, the youth employment progress during 7FYP fell below expectations (Table 1.7). The percentage of youth unemployment increased from 8% in 2013 to 10.6% in 2017. The unemployment problem of educated youth also accentuated considerably along with a growing incidence of the NEET youth population. The increase in NEET is a part of the reason for the slowdown in labour force growth during the 7FYP. Addressing the youth employment comprehensively will be a major challenge for the 8FYP.

Table 1.7: Progress with the Youth Employment Challenge during the 7FYP

Indicator	LFS 2013	LFS 2017
Youth Population as percent of total population	26.6	27.0
Youth Labour Force as percent of total labour force	38.5	32.0
Youth unemployment rate (%)	8.1	10.6
Higher secondary educated youth unemployment rate (%)	13.6	22.3
Tertiary educated youth unemployment rate (%	16.4	13.4
Youth not in Employment, Education or Training (NEET) (%)	25.4	29.8

Source: LFS 2013 and LFS 2016-17

1.3 PROGRESS WITH REDUCING POVERTY AND INCOME INEQUALITY

1.3.1 Poverty Reduction

The 7FYP sought to reduce e poverty from 24.8% in 2015 to 16.6% and extreme poverty from 12.9% to 8.0% over the same periods. The estimated poverty reduction outcomes are shown in Table 1.8. The last regular HIES was done in 2016-17. The BBS has used the HIES data to estimate poverty reduction up to FY2018. For FY2019, Table 1.8 uses the poverty elasticity with respect to per capita GDP over the 2010-2016 periods. The results suggest that the actual poverty reduction may be fairly close to the 7FYP targets (Table 1.9). So, in the absence of COVID-19 pandemic, the poverty reduction targets of the 7FYP would have been substantially achieved. This is an important result and speaks to the robustness of the poverty strategy in a pre- COVID-19 world. However, moving forward, the poverty reduction strategy may need to be modified to achieve the poverty reduction goals of the SDG 01 and the Perspective Plan 2041 in a post-COVID-19 environment. This is discussed further in chapters 2 and 4 of part 1 and chapter 13 of Part 2.

Table 1.8: Poverty Reduction during the Seventh Plan Period (%)

Year	Poor (Head Count Poverty with Upper Poverty Line (%))	Extreme Poor (Head Count with Lower Poverty Line (%))
2016	24.3	12.9
2017	22.9	12.1
2018	21.8	11.3
2019	20.5	10.5

Source: BBS and GED estimates based on 2010-2016 GDP-Poverty Relationship

The 7FYP poverty reduction strategy consisted of efforts to accelerate growth, increase domestic and foreign employment, improve the pro-poor nature of growth through emphasis on agriculture, micro-credits and public spending on rural infrastructure, and public spending on social protection. Some of the important policy indicators for poverty reduction are summarized in Table 1.9.

Table 1.9: Major Determinants of Poverty in the 7FYP

Performance Indicators	Baseline (2015)	7FYP Target 2020	Estimated 2019
Poverty headcount (%)	24.8	18.6	20.5
Extreme poverty (%)	12.9	8.9	10.5
Average growth of GDP (%)	6.6	7.4	7.5
Rate of growth of agricultural GDP (%)	3.3	3.3	3.5
Agricultural diversification (share of non-crop %)	44.91	52.70	48.13
Expansion of domestic annual employment (million)		2.2	1.1
Expansion of annual overseas employment (million)		0.4	0.7
Average annual spending on social protection excluding civil service (% of GDP)	1.5	1.5	1.2

Source: Seventh Five Year Plan; BBS.

Growth of GDP: GDP growth continues to be the most important determinant of poverty reduction in Bangladesh. So, the acceleration of GDP growth helped lower poverty substantially. Additionally, the continued emphasis on agriculture sector with policy efforts to improve productivity and diversification yielded considerable success that helped improve farm incomes. However, one important point to note is that when the Seventh Plan was adopted the latest HIES data was available for only 2010. The poverty projections were made on the basis of estimated poverty elasticity of growth between 2005 and 2010. The latest HIES done in 2016 showed that actual poverty elasticities fell between 2010 and 2016 (Table 1.10). The fall in the poverty elasticity of growth is an indication that as poverty falls, reaching out the poor through growth efforts alone would not be enough. Other policies aimed at increasing the pro-poor nature of growth and income transfers through social protection spending will need to be strengthened.

Table 1.10: Poverty Elasticity of GDP Growth (%)

Poverty Type	HIES Year	Poverty Elasticity
Poverty	2005-2010	0.8
Extreme Poverty	2005-2010	1.1
Poverty	2010-2016	0.7
Extreme Poverty	2010-2016	0.8

Source: GED estimates based on HIES and national accounts data

Growth in employment, labour productivity and real wages: The pro-poor nature of growth depends to a large extent on three important factors: growth in employment; improvement in labour productivity and increase in real wages. Table 1.4 showed a substantial shortfall in domestic job creation target in the 7FYP mainly owing to the slowdown in the growth of manufacturing employment. The employment stagnation of the RMG sector particularly hurt the absorption of low-skilled female workers that contributed to the lowering of the poverty elasticity of growth. However, the substantial increase in labour productivity is a positive factor.

Table 1.11 shows the growth in real wages by the six major Divisions using HIES data. The results suggest that consistent with rising labour productivity (Figure1.5) and a tightening of the agricultural labour market (Table 1.6), real wages in agriculture increased substantially for all Divisions. Real wages also increased in non-farm employment. This increase in real wages is an important contributor to the decline in rural and urban poverty.

Table 1.11: Real Wage Growth between 2010-2016

Divisions	Rural/Agriculture	Urban/Agriculture	Rural/ Non-Agriculture	Urban/Non-Agriculture	Rural	Urban
Barisal	7.0	7.4	7.0	7.0	6.9	7.0
Chittagong	4.0	4.2	6.1	6.7	5.0	6.8
Dhaka	6.8	6.8	6.0	8.9	6.0	8.9
Khulna	6.8	4.0	8.7	7.4	7.7	7.3
Rajshahi	5.7	6.2	8.1	5.4	6.7	5.9
Sylhet	5.4	8.0	11.4	5.4	8.6	6.4
Bangladesh	5.9	6.8	7.5	4.1	6.5	7.7

Source: Background Paper on Extreme Poverty prepared for 8FYP

Remittances: As noted in Table 1.4, the outflow of migrant workers substantially exceeded 7FYP target. Evidence also shows there was a qualitative improvement in the skill profile of migrant workers. In FY2019, the government also offered a special incentive of 2% higher exchange rate to shore up external remittances. The net result of these developments was a substantial surge in the inflow of remittances since FY2018 (Table 1.12).

Table 1.12: Remittance Performance during the 7FYP

Fiscal Year	Number of Workers (000)	Remittance Inflow ($ billion)
FY2016	758	14.93
FY2017	598	12.77
FY2018	880	14.98
FY2019	675	16.42
FY2020		18.21

Source: Bangladesh Bank

Several research investigations have indicated the highly positive impact of remittances on poverty reduction. Remittances have lowered poverty through several channels. First, the migration of rural workers to international work places is one important factor for the tightening of rural labour market, thereby enabling the growth of real wages. Second, income transfers from remittances have directly supported poverty reduction by increasing the income and consumption of the rural poor. Thirdly, and very importantly, the massive inflow of remittance income into the rural economy has boosted the expansion of housing, construction, trade and other services. These in turn have provided a diversified employment base for rural workers. The multiplier effects of remittance inflows are a major contributor to rural transformation and diversified employment and income base for the rural poor.

Expansion of microcredit: Bangladesh is justly famous globally for pioneering the growth of the microcredit. These programmes have continued to improve access and services during the Seventh Plan. The Bangladesh Bank has taken a strong pro-active role to improve the access of credit and other financial services. New financial instruments based on ICT (mobile banking) are slowly changing the landscape of financial service access to the poor in both rural and urban areas. In the area of micro-credit, rules were developed by the Microcredit Regulatory Authority (MRA) in 2010 to properly supervise MFIs and protect both the borrowers and the lenders. The number of borrowers increased from 20.4 million in FY2015 to 25.76 million in FY2019, while total loans increased from Taka 634 billion to Taka 1335 billion over the same periods.

1.3.2 Income Inequality

Bangladesh has made solid progress in increasing GDP growth and reducing poverty. Nevertheless, an important policy challenge that has emerged concerns income inequality. Evidence suggests that income inequality has been increasing over the years. Accordingly, the Seventh Plan emphasized the reduction of income inequality as an important development objective and incorporated specific income inequality reduction targets in the Development Results Framework (DRF). Specifically, the DRF sought to reduce the Gini coefficient of consumption to 0.30 in FY2020 from 0.32 in FY2010 and to contain the Gini coefficient for income inequality at 0.46. The 7FYP strategy to tackle income inequality included reform of public spending with greater emphasis on health, education, agriculture, rural development; increasing

pro-poor growth through increase in employment, labour productivity and wages, the development of human capital with better access to poor, the expansion of micro-credits and loans to improve the access of the poor to growth, reform of taxes with emphasis on progressive personal income taxation and improved access of the poor to social protection programmes.

The latest available HIES data for 2016 shows that the Gini coefficient of consumption has remain unchanged at around 0.32 as in 2010, while the Gini coefficient of income has increased from 0.46 to 0.48. But data for 2019 is not available. So, in the absence of current data, it is difficult to say conclusively about overall progress with reducing income inequality during the 7FYP. However, some qualitative assessment can be made. On the positive side, the strong growth in agriculture and the diversification of farm production to higher value non-food crop is the most promising factor for improving income distribution. A second positive factor is the expansion of credit to small borrowers through the microcredit schemes. A third positive factor is the increase in real wages. A fourth positive factor is the growth of non-farm rural employment opportunities. However, the implementation of other policy interventions has been less effective. The reform of income taxation into a modern system that taxes all income at progressive rates did not happen. Expenditure policies are broadly on the track but the planned expansion in public expenditure as a percent of GDP on health, education, rural development and social protection has not happened owing to tax revenue shortfalls. The distribution of benefits of social protection suffers from considerable mis-targetting leaving a lot of poor out, while including considerable percentage of non-poor. So, on balance, income inequality remains a major challenge for Bangladesh. The Eighth Plan will need to take a fresh endeavour and provide renewed commitment to reversing the pattern of long-term increase in income inequality in Bangladesh.

1.4 WOMEN EMPOWERMENT, SOCIAL INCLUSION AND SOCIAL PROTECTION

1.4.1 Gender Equality

Bangladesh has earned international recognition for its good performance in increasing women empowerment. This progress continued during the 7FYP. Having eliminated the gender disparity in primary and secondary education, solid progress has been made in reducing the large gap between male and female students at the tertiary level. Bangladesh has also advanced well in providing the regulatory framework for protection of women's rights and privileges. The implementation of the National Women Development Policy (NWDP) 2011 has continued during the 7FYP. Data from LFS 2016-17 shows that progress has been made in increasing the share of female in managerial and professional leadership roles. Political empowerment has been boosted through increased membership in the national parliament.

The 2020 Global Gender Gap Report published by World Economic Forum, records the solid progress made by Bangladesh in reducing the gender gap. The Global Gender Gap Report (GGGR) ranks countries based on their progress towards closing the gender gap across four thematic dimensions: (i) Economic participation and opportunity, (ii) Educational attainment, (iii) Health and survival, and (iv) Political empowerment. With an overall score of 0.726 Bangladesh was ranked at 50th among 153 countries, ahead of advanced countries like the USA, Luxembourg, Italy, Korea and Japan and was ranked first among seven South Asian countries. The areas of strength include eliminating gender gap in eliminating primary and secondary education (rank of 1); in sex ratio at birth (rank of 1); and political empowerment (rank of 1).

Notwithstanding this solid progress, there are several areas that need greater attention during the 8FYP. The GGR shows that the Bangladesh ranking is low in the area of economic participation and opportunity. This concern: low female labour force participation rate, wage discrimination against women, inadequate representation of women in senior civil service positions and inadequate female managerial jobs in the private sector. In social empowerment, laws are adequate but implementation is weak. Stronger implementation of CEDAW and other gender related laws to prevent child marriage, prevent social violence and eliminate all discriminations against female in social and economic spheres remains a major challenge.

1.4.2 Social Inclusion

Bangladesh takes pride in establishing a social system where there is no legal barrier to progress based on religion, gender, caste and profession. Special attention is also given to ensure the protection of children, elderly and the physically challenged. The 7FYP put strong emphasis on ensuring continued progress with the social inclusion agenda. Available evidence suggests that the Seventh Plan's social inclusion strategy implementation is broadly on track. Good progress has been made in the area of child protection. The implementation of the Children Act of 2013 is ongoing, need a costed action plan and allocation of resources accordingly. The concept of Child Focused Budget has been introduced and is being implemented. Child Focused Budget gradually need increasing allocation for effective coverage. The incidence of child malnutrition has reduced significantly. However, progress in the area of children nutrition requires additional effort. The incidence of child poverty is high and the implementation of the consolidated Child Benefits Program recommended by the NSSS needs to be fast-tracked. Implementation capacity for enforcement of the Children Act 2013 also needs strengthening and need deployment of dedicated social service workforce for children including children with disabilities. Data on children living on street and living in orphanages or institutional care facilities are lacking in the country. Deinstitutionalization of children living in institutions or orphanages and family or community based reintegration through developing a foster care mechanism with cash grant will be effective to protect more children in terms of increasing capacity for social integration and cognitive development. Community Based Organizations of Persons with Disabilities and network of persons with disabilities need more support to create opportunity for them to speak about the issues affecting their life. These issues will be tackled more forcefully in the 8FYP.

Regarding Ethnic population, the 7FYP has continued the focus on reducing the growth barriers in the Chittagong Hill Tracts Area (CHTA). Several development schemes to strengthen agriculture, water management, infrastructure and to improve access to health and education have been implemented. The government maintains a regular consultation with the CHTA local population with a view to understanding their concerns and fnding solutions. The development needs of CHTA are large in relation to available resources and continued strong efforts will be needed to reduce the high incidence of poverty found in CHTA districts.

Bangladesh made strong progress in the 6FYP in terms of eliminating legal barriers and introducing enabling environment to improve the welfare of persons with disability (PWD). Of particular note is the ratification of the Disabled Persons Protection and Rights Act in 2013. Among other things, the Act bans educational institutions, enterprises and other organizations from discriminating against PWD. The main task of the 7FYP was to implement these regulations and the enabling environment for supporting the PWD. Based on the findings of the 2012 Disability Detecion Survey, the government developed special programmes in health and education to meet the specific needs of the PWD. The National Social Security

Strategy (NSSS) recommended the establishment of a comprehensive social protection programme for people with disability. While some progress has been made in the programme design, the new social protection programme for PWD is not yet ready. In the meanwhile, implementation of the current safety net programme for PWD has continued. The number of beneficiaries more than quadrupled between 2015 and 2019, increasing from 0.4 million to 1.7 million. The value of the disability benefit is Taka 700 per month. There are some programmes for skill development. A disability information system has also been established under the Department of Social Services.

Finally, the 7FYP social inclusion strategy for marginalized groups such as the Dalits and Sex Workers was to eliminate all discrimination, protect them from social abusive practices and offer special programmes through the NSSS. The legal provisions are in place but implementation is a challenge given limited capacities at the local level. Safety net programmes have made some progress but full inclusion of these marginalized groups in the social protection programme remains a challenge. Overall, the successful implementation of an overarching social inclusion strategy as envisaged in the Constitution requires the institution of strong local government institutions.

1.4.3 Social Protection

Bangladesh has a rich history of commitment to social protection. In June 2015 the Government adopted a new National Social Security Strategy (NSSS) with a view to strengthening the poverty impact of the public spending on social protection and to modernize the social security system to address the social security challenges of a middle- income economy. The main task for the 7FYP was to implement the NSSS. Available evidence suggests the implementation of the NSSS in the first 5 years (FY 2016-FY2020) since adoption in June 2015 has been slow. There was a long delay with start-up of the NSSS implementation and monitoring. Subsequently, with the assistance of development partners, a formal NSSS Implementation Action Plan was adopted in 2018. This Action Plan is comprehensive and if these actions are implemented well it should help considerably in making progress with NSSS despite the time lost.

A recent review of the implementation of the NSSS and the NSSS Action Plan shows that while progress has been made in a number of areas, the overall progress is modest and needs to be consolidated in the 8FYP. Evaluation results of individual programmes continue to show high exclusion and inclusion errors and continued leakages partly because of the pitfalls of poverty targeted approaches. Additionally, the slowdown in tax revenues has contributed to a resource constraint despite strong priority attached to social protection. Excluding civil service pensions, total social protection funding for the poor and vulnerable is only 1.2% of GDP. This is not adequate for a country with 40 million poor and another 20 million who are near poor (1.25 times the poverty line). The COVID-19 has further accentuated the urgency of strengthening the social protection programmes and funding. The 8FYP will make this a top priority both as an important instrument to address the effects of COVID-19 on poverty and vulnurability and to increase the growth elasticity of poverty reduction.

1.5 PROGRESS WITH MACROECONOMIC MANAGEMENT

Prudent macroeconomic management has been the hallmark of Bangladesh's long-term development. The 7FYP maintained this tradition and put considerable emphasis on the need to preserve macroeconomic stability while pursuing aggressively the growth agenda. The Seventh Plan was cognizant that there was no

conflict between macroeconomic stability and growth acceleration. So, the underlying theme of macroeconomic policy management was growth acceleration with macroeconomic stability. The key macroeconomic targets of the 7FYP and actual performance are indicated in Table 1.13. Good progress was made in maintaining macroeconomic stability reflected in low inflation rates, low fiscal deficits, low debt-to-GDP ratio and a stable balance of payments. But progress in the area of fiscal revenues mobilization and achieving the export targets of the 7FYP was weak.

Table 1.13: Key Targets of the 7FYP Macroeconomic Framework

Policy Area	Performance Indicator	Baseline (FY2015)	Plan (FY2020)	Actual (FY2020)
Fiscal Policy	Tax to GDP ratio (%)	8.5	14.1	7.9
	Public expenditure to GDP ratio (%)	13.5	21.1	14.9
	Fiscal Deficit (% of GDP)	3.7	4.7	5.5
	Total Debt (% of GDP)	33.6	36.3	35.98
Balance of Payments	Average growth rate of exports (nominal US$) (%)	-	12.0	1.6
	Exports (% of GDP)	15.7	16.2	12.32
	Current account balance (% of GDP)	1.5	(-) 2.5	(-) 1.24
	Remittance (% of GDP)	7.8	7.6	5.6
	Foreign Reserves (month of imports)	6.3	7.3	7.2
	External Debt (% of GDP)	12.3	11.2	13.4
Monetary Policy	Rate of CPI inflation (%)	6.5	5.5	5.65
	Growth of M2 (%) (end of year)	12.4	15.9	12.64
	Growth of Private Sector Credit	13.2	15.0	13.14

Source: Seventh Plan and Finance Division (FD) Estimates. Note: Growth rates are period averages

1.5.1 Fiscal Management

Fiscal policy performance during the 7FYP has been mixed. The performance is on track regarding fiscal prudence. The budget deficit has been at 5.5% of GDP and total debt to GDP ratio is lower than the Plan target. This is a strong fiscal performance from the point of view of macroeconomic stability, which has supported private investment by avoiding a crowding out impact of fiscal policy and has helped the implementation of monetary policy in fighting inflation. However, there are major concerns in other dimensions of fiscal policy management.

First, there is a major shortfall in tax performance. Compared with the Seventh Plan target of increasing tax to GDP ratio by 5.4 percentage points to 14.1% of GDP by FY2020, the actual tax to GDP ratio reached only to 7.9% of GDP in FY 2020. This is a serious setback following on the heels of a lack-lustre tax performance during the 6FYP.

Second, fiscal discipline has often required either cutbacks or inability to meet the Seventh Plan commitments in certain high priority areas of spending (e.g. in education, health, social protection and environment). The revenue constraint in public spending has been very deep as reflected by the fact that as compared with a spending target of 21% of GDP for FY2020 in the 7FYP, actual public expenditure was only 14.9% in FY2020. This massive 5-6% of GDP shortfall in public spending over the 7FYP has essentially converted into allocation shortfalls in health, education, water resources, environment and

climate change, social protection and O&M spending. The reduction in the poverty elasticity of GDP growth is in part a reflection of this inability of fiscal policy to fully support core poverty reduction programmes owing to revenue constraints.

Third, implementation constraints have slowed down the progress with the timely completion of major infrastructure projects. The delays in the completion of major infrastructure projects have resulted in cost over-runs and delayed benefits, thereby lowering the financial and economic rate of return of these major development projects.

Fourth, the important policy initiative of public-private-partnership in infrastructure did not gain adequate momentum.

The Government is cognizant that these major weaknesses in fiscal policy management on both the revenue and expenditure sides have continued for a long period and these will need to be tackled forcefully in the 8FYP.

More investment for children will be priority of the Government during 8FYP. Following strategic actions will be undertaken: (a) evidences are generated to advocate for greater and better public investments for children by way of analysing child focused budgeting including preparation of budget brief, pursuing fiscal space analysis including institutional investment plans for children, pursuing public expenditure review for children, pursuing cost benefit analysis of selected interventions for children, (b) ccapacity of duty bearers enhanced in child focused budgeting process, (c) involvement of citizen (including children) to empower them to participate in budgeting process to improve transparency and accountability.

1.5.2 External Sector Management

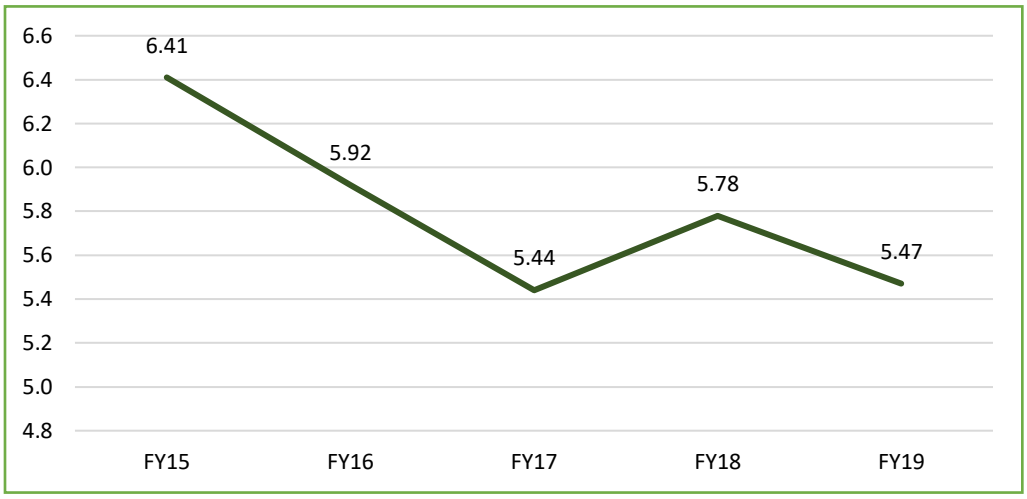
The performance of the Seventh Plan in the external sector is generally strong in terms of maintaining external stability. The current account has been either in surplus or experienced low levels of deficits, the external debt service and external debt to GDP are both low and are at sustainable levels with no pressure on debt repayments. Remittance inflows faced challenges in the early years of the 7FYP but then recovered and are now on a strong footing. Reserves level are comfortable and the nominal exchange rate has been stable. Importantly, foreign exchange reserves exhibit a record bench mark and reached at US$ 36.04 billion in June, 2020 which is sufficient to pay import bill of 7.8 months.

As against these positive aspects, there are two areas of concern. First, the rate of growth of exports fell much short of the Seventh Plan target. The Plan aimed at securing an annual average growth in export earnings of 12% in nominal US Dollars. The actual growth was only 6.8%. This is a rather weak export performance. The sharp slowdown of exports is an important reason for the slowdown in the expansion of the manufacturing sector job. A second concern is the inability to broaden and diversify the export base away from excessive reliance on readymade garments (RMG). On the contrary, the share of RMG exports has increased further, growing from 78% of total exports in FY2015 to 84% in FY2019. Non-RMG exports did not pick up in any significant way. Additionally, non-factor service exports like ICT, shipping and tourism have also not shown dynamism. The diversification of sources of export earnings will be a major challenge for the Eighth Plan.

1.5.3 Inflation Management

A major macroeconomic policy priority of the Seventh Plan was to keep inflation under control and bring the inflation rate below 6%. More specifically, the target was to reduce the average inflation rate from 6.5% percent in FY2015 to 5.5% by the end of the plan period. The trend in inflation in the Seventh Plan is shown in Figure 1.6. Remarkably, the 7FYP has been very successful in implementing the inflation target set in the Plan. Monetary and fiscal prudence allowed domestic liquidity to be managed well that enabled the containment of inflation and bringing it down to 5.5% FY2019. The private sector credit growth, however, fell substantially short of the Plan target. But this was not due to any crowding out effects of fiscal policy or monetary policy tightening. There was a demand constraint that lowered the growth of private credit owing to slowdown of growth of exports and the lower expansion of the private investment rate than was targeted in the Seventh Plan.

Figure 1.6: Trend of Inflation during the Seventh Plan (%)



Source: Bangladesh Bureau of Statistics (BBS)

1.6 PROGRESS WITH INFRASTRUCTURE DEVELOPMENT

1.6.1 Power and Primary Energy

In the area of electricity, the Government followed up on its strong progress with increase in power supply and access to electricity during the 6FYP with another round of a strong and well-rounded reform programme to increase the supply of electricity involving substantial investment, sector reforms and regional trade during the 7FYP. The Government, which had been implementing the power sector programmes based on the Power System Master Plan (PSMP) 2010 during the 6th Plan, revised it to PSMP 2016, to help adapt to changing scenarios during the 7FYP. A review of progress suggests that the DRF targets set forth under the 7FYP have broadly been achieved. At present, Bangladesh has generation capacity well above the demand. This growth in generation capacity along with expansion of transmission and distribution networks have helped achieve substantial progress in both the indicators for the power sector: increasing growth of per capita consumption of electricity and improving the access of the population to electricity.

In FY 2019 total installed capacity, inclusive of public, IPP, captive and renewable energy reached 22, 787 MW higher than the target. Electricity coverage has been increased to 92.23%, which was 72% in the baseline FY2015. This has resulted in increasing per capita generation of 510 kwh (including captive) from 371 kWh in FY2015. During this period about 3.27 crore consumers got connected to the national grid with 5.02 lakh km. of distribution system. The system loss of electricity decreased substantially to 10.90 present in FY2019 (up to December 2018) from 15.73 percent in FY2010. During the seventh plan period, progress has been made in diversifying primary energy source through LNG imports, and progress in construction of large sized coal fired power plant. There have also been several price adjustments in all segments of the energy sector.

Despite this progress there are two areas of concern. First, the use of renewable energy in power supply has not grown. Thus, the share of renewable energy to the total electricity generation (% including hydro) declined from 3.6% in FY2015 to 3.25% in FY2019. This continued overwhelming reliance on fossil fuel needs to be reduced to keep pace with the progress made globally in the use of clean fuel. Second, despite price increases, progress with improving the energy sector finances has been limited. The 8FYP will put stronger focus on these aspects of power and energy sector development.

1.6.2 Transport Sector

GDP growth targets of the 7FYP and goals of improved living standards called for a vibrant and effective transport network. Securing improvement in the transport system was, therefore, a major strategic objective of the 7FYP. The transport sector vision for the 7FYP was to develop an efficient, sustainable, safe and regionally balanced transportation system in which various modes complement each other, interface appropriately and, where possible, provide healthy competition to each other. Special emphasis was placed on the introduction of modern technology for increasing capacity and improving quality and productivity of the system, development of the two seaports with smooth transport links to Dhaka, establishment of effective railway linkages between the east and west zones of the country, integration of road, rail and inland water transport, and participation in global and regional transport connectivity initiatives that help develop the land route links between South Asia and East Asia through Bangladesh.

On the investment side, a conscious decision was taken to prioritize transformational transport infrastructure projects that helps modernize the Bangladesh transport network so as to improve the mobility of goods and services across the nation, facilitate international trade, reduce cost and improve competitiveness. These transformational projects are highly capital intensive, are multi-year in nature, and require strong supervision to avoid cost over-runs and delays. Recognizing the special challenge posed by growing urbanization and urban traffic congestion, the 7FYP sought to introduce mass transit starting with the capital city Dhaka, with a targeted completion of MRT Line-6 (the first elevated Metro Rail of Bangladesh) in December 2021. Mindful of the resource constraints and high investment costs, the 7FYP strategy was to combine ADP allocations with a strong public-private-partnership (PPP) effort. The plan also intended to improve the inter-modal transport balance with greater emphasis on rail and inland waterways that are low-cost in nature and are environmentally friendly. The importance of transport, especially air transport, for tourism was recognized with a focus on improving inter-district airline connectivity. Efforts were also to be made to improve resource mobilization through the introduction of user charges and fees for a range of public transport services including road user charges, port fees, inland water and rail fares.

The objectives and strategies of the 7FYP for the transport sector were sound. The emphasis on intermodal transport coordination, development of the national highways, inter-city connectivity, regional connectivity, lowering the cost of trade logistics and improving transport network asset maintenance are all well placed. The idea of instituting road user charges and sensitivity to environmental sustainability is also appropriate. Similarly, the strategy to improve incentives for private sector participation in both transport sector service and infrastructure development is well placed.

Consistent with the 7FYP strategy, the transport sector received high priority in budget allocation. The annual ADP allocated resources for all major projects in line with the 7FYP strategy and priority. Significant new transport infrastructure has been added over the plan period for roads and bridges. Services have expanded for all modes of transport. Private participation in air transport has grown significantly and most large cities are now connected with air services. These are major achievements that laid a strong foundation for consolidation under the 8FYP.

Despite progress, important gap remains. Notwithstanding the strong focus on transformational project and trying to complete them on time, important projects, such as the Padma Bridge, have been delayed. Many road projects were initiated but completion rates have been slow. Investments in inland water transport have lagged behind. Notwithstanding the completion of a number of projects, the urban transport issues in terms of congestion and traffic management remain overwhelming in the capital city of Dhaka. Importantly, the PPP initiative for infrastructure did not take off as expected.

The lessons of implementation of the Sixth and Seventh Plans suggest that the Government may need to rethink strategy for to the implementation of the large, complex and capital-intensive projects through turnkey contracts to reputed international firms using multilateral development partner funding of PPP contracts. These turnkey projects should be negotiated through a transparent ICB process and should involve performance clause on timeliness and cost over-runs.

1.7 PROGRESS WITH HUMAN RESOURCE DEVELOPMENT

1.7.1 Health, Population and Nutrition (HPN)

The Seventh Plan set ambitious targets for human development, as a way to ensure that the PP2021 targets are met. On the population health and nutrition side, it emphasized a further reduction in the rate of growth of population, sought to increase life expectancy and improve child nutrition. On the education and training front, it sought to sharply increase the literacy rates and basic education of the young and growing labour force that had low literacy and education skills. The human development targets sought to set up Bangladesh to move to an upper-middle-income country.

Evidence shows considerable progress was made in the HPN area. The adoption of modern birth control practices has continued to increase, and the total fertility rate has continued to decline. As a result, the population growth rate has fallen further to around 1.2% and it is likely that the 1% population growth rate target for 7FYP will be achieved. The increase in life expectancy to 72 years in 2018, ahead of the target of 70 years set for FY2021, suggests that basic health care and nutrition standards required for survival have exceeded the expectations of the policymakers. Infant mortality rate further declined to 21/1000, in FY2019. Regarding maternal mortality rate, the progress up to 2019 is a reduction from 216/ 100,000 in

FY2010 to 165/100,000. This reduction is low compared to the target of 105/100,000 by FY2020, which will not be achieved. The inadequate progress with tackling maternal mortality is a major weakness of an otherwise good HPN delivery system. This requires urgent policy action. Progress with improving child nutrition is reflected in the reduction of wasting from 16% in 2011 to 9.8% in 2019. This is good progress and is indicative of improved nutrition policy and governance adopted by the government during PP2021.

However, in spite of the achievements, major inequities in health and nutrition services still exist and need to be addressed. There are challenges in addressing mortality rates due to non-communicable diseases (NCDs); reducing out-of-pocket expenditure; improving coverage and quality of essential nutrition services; improving facility readiness including establishment and strengthening Electronic Logistic Management Information system (E-LMIS); improving service quality and coverage; regulating and managing the private sector; and quality of health care. Public expenditure on HPN has remained virtually stagnant at 0.7% of GDP for a fairly long time which need immediate attention to increase. While it is credit to the government that it has achieved such positive HPN outcomes with a low public budget, this may not be sustainable moving forward as the incidence of mass communicable diseases (cholera, malaria, TB, polio) falls and low-cost preventive and curative solutions for these diseases are replaced by a more complex and expensive pattern of epidemiology found in higher-income countries. While private expenditure will be the main source of HPN expenses as the country moves up the income stream, public spending on research and health insurance subsidies for the poor and the elderly will emerge as major expenditure items to enable HPN service access for the poor in both rural and urban areas. Additionally, integration of Growth Monitoring and Promotion into EPI platform to increase quality and coverage on nutrition services (which is also a MTR recommendation) and the whole system of health insurance is a big missing item in the Bangladesh HPN strategy that needs urgent attention.

Most importantly, COVID-19 caught the health system completely unaware and unprepared. While COVID-19 has challenged globally some of the best health care systems in the world, the Bangladesh experience showed the lack of readiness in terms of basic facilities like PPEs, masks, oxygen supply, trained health care professionals and health care beds and basic supplies. This is partly the outcome of low public health spending, but also reflect institutional weaknesses relating to planning, regulations, and accountability of health providers. The experience shows that the Bangladesh healthcare system was set up to tackle simple bacterial type mass communicable diseases with low-cost solutions. Tackling the complex pandemic of COVID-19 requires large resources, strong planning and rapid response capabilities. It also calls for a substantial beefing up of health care facilities, supplies and quality staffing. Strengthening the health care system of Bangladesh in the post-COVID-19 world is the top most development priority of the 8FYP.

1.7.2 Education and Training

On the education and training front, the main highlight of the 7FYP strategy is to achieve Education for All (EFA) by FY2020. Related to this, the two specific targets were: (1) achieve 100% adult (15 plus) literacy; (2) achieve 100% net primary enrolment rate. Other objectives included increasing enrolments in secondary and tertiary education; improving education quality at all levels; improving the equity of education; improving labour force training and skills through a concerted skills development strategy; and increasing the spread of science and technology education.

Bangladesh has continued to make progress in improving adult literacy rates, growing from 58.6% in FY2010 to 73.9% in FY2018. Both male and female literacy rates have improved and the gap in female literacy rate over the male has continued to narrow. At the present trend rate, however, it is unlikely that 100% adult literacy rate will be achieved by FY2020. Bangladesh has made good progress in primary level enrolment and eliminated the gender gap. So, the target of universal primary education is substantially achieved. An important component of the government's EFA is the coverage of non-formal education (NFE). Progress with increasing the coverage of NFE continued under the 7FYP, but it is unlikely that NFE will achieve 100% coverage by FY2020. There are important institutional constraints that need to be addressed to improve effectiveness.

The expansion of secondary and tertiary education continued steadily under the 7FYP. Net secondary enrolment expanded from 46% in FY2010 to 67% in FY2017. Tertiary education expanded from 11% to 18% over the same period. This good progress has been greatly facilitated by the government's liberal policy to allow the private supply of education, especially tertiary education. This is a major policy success for the education policy, particularly given the still low coverage of tertiary education and the financial constraint on the government budget. To further accelerate the expansion of tertiary education, the government in 2017 adopted the Strategic Plan for Higher Education in Bangladesh: 2017- 2031.

For labour training, the main strategy has been to strengthen the system of technical and vocational education and training (TVET). Formal TVET consists of SSC, HSC, and Diploma courses, HSC (VOC), SSC (VOC) and HSC (BM). The programmes include time-bound, institution-based, and graded training with formal certification. The courses are offered by Engineering Colleges, Polytechnic Institutes, Technical School and Colleges (TSCs), Technical Teachers' Training College (TTTC), Vocational Teachers' Training Institute (VTTI), Business Management Colleges and other technical and vocational institutes. The enrolment rate in TVET increased from 1% in 2009 to 16.1% in 2018. The number of private sector institutions is increasing, especially in the ICT sector and in response to opportunity for work abroad as skilled and semi-skilled workers in various trades.

The Government expressed its commitment to improving the TVET system through the implementation of the National Education policy-2010 and the National Skills Development Policy-2011. These policies envisaged the expansion, diversification, extension and development of technical and vocational education programmes. Under the National Skills Development Policy, National Technical and Vocational Qualifications Framework (NTVQF) has been designed to improve the quality and consistency of nationally recognized qualifications. Another significant initiative is the Skills for Employment Investment Program (SEIP) under the Ministry of Finance (funded by ADB and the government) which has partnered with a number of industry associations such as BASIS, BTMA, BGMEA, AEOSIB and others to impart vocational training with globally recognized skills certifications where appropriate. The Technical and Madrassa Education Division (TMED) has developed an integrated TVET development action plan to promote and strengthen TVET activities for the madrassa students.

These policies have enabled a steady expansion in the number of graduates from the TVET system. A major gap, however, is the mismatch between skills available and the job market. Manufacturing firms and high-end service enterprises continue to face a skill constraint and have resorted to hiring these skills from abroad.

Notwithstanding the greater emphasis on education and substantial progress, Bangladesh continues to face a number of challenges, pertaining to both quantity and quality. From a quantitative point of view, the issue of access and drop out, particularly at secondary and tertiary levels, are major challenges. Even at the primary level, the dropout rate was 18.8% in FY2018. As for higher education, the issues of inadequate funding and the lack of infrastructure and capacity (both physical as well as other infrastructural) are very important, which have limited the higher education enrolment rate to only 18% despite massive private investment. At all stages of education, quality is a critical area of concern, which is particularly acute at the primary education level that then spills over to the next stages of education.

The issue of quality in terms of cognitive skill and innovative and analytical capacity has become a matter of concern as the students are often found to lack basic technical skills even after completion of tertiary level of education. Owing to this, university/college graduates often find it difficult to compete in the job market. Additionally, lower student participation and low level of capacity at technical and vocational education along with a lesser focus on science and technology have also contributed to a skill gap in the employment market. The skills demanded at the workplace are not always provided by the education and training system. Resolving this skills gap will require careful and timely intervention.

One of the underlying reasons behind the quantitative as well as qualitative challenges is the low budgetary allocation for the education sector, fluctuating around 2% of GDP in recent years. Despite government's intentions to increase allocation in the annual budget, revenue constraints have prevented this to materialize in practice. The low budget allocation is often considered as the most important constraint underlying the weak quality of education and training in public institutions, thereby limiting the successful implementation of the education and training strategies and policies.

There are also concerns about the equity of education spending and the remaining gender gaps. From an equity point of view, the gross enrolment rate for the poor at the secondary level is only 24%, which is significantly lower than that of non-poor (76%). On the gender front, although there has been substantial progress in closing the gender gap at the primary and secondary levels, the picture is quite different when it comes to tertiary education. One of the reasons for the low participation of females in the labour market of Bangladesh (36.3% according to the FY2017 Labor Force Survey) and high concentration on low paying, low productive jobs is the low level of participation of females at tertiary level of education. Female students at public and private universities on average account for only around 26% of university students.

1.8 PROGRESS WITH ENVIRONMENT, CLIMATE CHANGE AND DISASTER MANAGEMENT

1.8.1 Environment and Climate Change

The Government has integrated environmental degradation and climate change in the medium-term planning process and identified specific objectives and strategies for environmental protection and climate change. The global attention to climate change and the risks presented to Bangladesh have caught the imagination of the policymakers at the highest level and there is a much more serious effort now underway to come to grips with this long-term challenge. Bangladesh participates actively in all global discussions on climate change and is a signatory to all related global action programmes.

Many laws and regulations have been enacted over the years to protect the environment and programmes and policies are in place to adapt and mitigate the adverse effects of climate change. This progress continued under the 7FYP, with special emphasis on air and water pollution control. In addition to the legal framework, the focus on implementation was strengthened with significant progress in managing the air pollution from brick kilns and reducing water pollution from the leather industry. Important steps were also taken to improve biodiversity.

An important breakthrough on the strategy and policy front happened recently with the adoption of the Bangladesh Delta Plan 2100 in September 2018. This is a comprehensive strategy for managing the risks posed by the deltaic formation of the country along with the incidence of natural disasters and climate change. Speedy implementation of the Delta Plan will be a major input to the reduction of climate-related vulnerabilities and will vastly improve the prospects for sustained development and poverty reduction.

When it comes to mitigation initiatives, Bangladesh has expressed her intention in the NDC (Nationally Determined Contributions) to take action on mitigation in order to reduce GHGs emissions by following a low carbon development pathway. The country has committed voluntarily to reduce 12 Mt CO_2 equivalent in Power, Transport and Industry sectors by 2030 or 5% below business-as-usual (BAU) emission for those sectors. It has also committed an additional 24 Mt CO_2 equivalent in those three sectors by 2030 or 10% below BAU emissions if International support is received.

Bangladesh remains a forerunner in its adaptation endeavours. Bangladesh has prepared a NAP Roadmap towards formulating a comprehensive National Adaptation Plan (NAP) with a view to reducing vulnerability to the impacts of climate change by building adaptive capacity and resilience. Building on NAPA (National Adaptation Programme of Action) and BCCSAP (Bangladesh Climate Change Strategy and Action Plan), the NAP will also facilitate the integration of climate change adaptation, into relevant new and existing policies, programmes and activities in a coherent manner, in particular, development planning processes and strategies, within all relevant sectors and at different levels, as appropriate. Bangladesh is also under the process of updating the BCCSAP.

Nevertheless, the overall implementation of existing environmental laws and regulations remains a difficult challenge. Capacity constraints at the lead Ministry of Environment, Forest and Climate Change in terms of human resources as well as financial resources lead to limited implementation progress. Water quality is deteriorating; so is the situation of air quality. Cross country comparison shows that in terms of air quality, Bangladesh is the fourth most polluted country in the world. Similarly, performances in forest coverage and protection of the natural habitats put Bangladesh at the low end of comparator countries. Indicators of overall environmental performance place Bangladesh at the bottom 5% of the 180 countries compared. These suggest that the challenges moving forward are immense.

1.8.2 Natural Disasters

Bangladesh has a good track record in disaster management and the progress continued during the 7FYP. The progress with disaster readiness and disaster response continued to improve as reflected in well-functioning early warning systems and sharp reductions in loss of life and injuries from natural disasters. This progress was defined by the government's implementation of the National Disaster Management Plan 2010-15, the enactment of the National Disaster Act in 2012, preparation of Disaster Management Rules in

2015 and the establishment of the new Ministry of Disaster Management and Relief in 2012. These important strategic and institutional reforms brought in a major strategic change in disaster management away from the emphasis on relief distribution to disaster readiness. This strategic shift has enabled much better preparedness, early warning system and swift on-time response to disasters.

Nevertheless, the continued substantial loss of crops, housing, assets and livelihoods, especially from flooding and riverbank erosion, suggests that in addition to continued progress with strengthening disaster preparedness increasingly the government's attention has to shift to better management of the environmental and climate change risks by taking long term investments in water management. The implementation of the Delta Plan during the 8FYP will play a major role in implementing the government's strategic shift towards better management and reduction of natural disaster incidence, especially from flooding, sea-level rise, salinity and water logging.

1.9 PROGRESS WITH GOVERNANCE AND INSTITUTIONS

Noting the importance of good governance and institutions for the long-term development of Bangladesh and for the timely delivery of results, the Seventh Plan continued the effort initiated in the 6FYP to strengthen institutions and encourage the practice of good governance throughout the entire public system. The Plan emphasized strengthening of judiciary, law enforcing agencies, democratic institutions, economic policy making institutions, decentralization and reform of public administration. Important progress has been made in a number of areas. On the political front elections were successfully conducted at the national and local levels in 2018 on a timely basis. The Parliamentary Standing Committees have been strengthened to provide checks and balance on the government through stronger parliamentary oversight. The judiciary was beefed up through allocation of higher resources. Law and order have been improved to protect human lives and property.

On the economic front the planning process was strengthened through the preparation of many national strategic documents including the National Social Security Strategy (NSSS), the Bangladesh Delta Plan BDP2100, the National SDG Action Plan, the LDC Graduation Study, and the Perspective Plan 2041. These strategic documents take a careful look at the risks, challenges and opportunities faced by Bangladesh with a view to making sustained progress with national development and improving people's lives and livelihood. Progress has also been made to improve the budgetary process by linking it to the medium-tern national development plans. The Medium-term Budgetary Framework (MTBF) is now an integral part of budget formulation.

The Government has adopted a policy of zero tolerance to corruption. To implement this policy, the Government approved a National Integrity Strategy (NIS) in 2012 which identifies the contexts and challenges faced by different state and non-state institutions and it sets goals for a large array of intuitions to ensure integrity in their respective operations. In addition, given that corruption is largely held responsible for underperformance of the state, NIS document pinpoints a coordination strategy on prevention of corruption and promotion of integrity based on the constitutional spirit, electoral commitments of the government, UN Convention against Corruption and the experiences of the different countries. To reduce wasteful use of public resources, utmost attention is being given to public procurement and public financial management. Internal financial controls and external audit capacities are being enhanced in all line ministries and in the Comptroller General's Office. The government has established

the system of Annual Performance Agreements (APA) to enhance the state of accountability in line Ministries and make them more accountable to the Cabinet.

An important instrument of governance improvement has been the adoption of ICT-based solutions to public business and transactions. Increasingly procurements, licensing, permits and other government functions and services are relying on e-transactions. Instruments of e-governance are also being transferred to local governments for greater transparency and efficiency of services. The implementation of Rights to Information (RTI) along with a robust print and video media is also helping provide better checks and balances on the functioning of the government and the political system.

PFM reforms have been initiated. The PFM Action Plan, 2018-23 has been prepared and implementation is ongoing. Under PFM reforms, E-challan system and a new budget and accounting system (Ibas++) have been introduced, new accounting BACS has been completed, and automation of National Savings Certificate sales has been introduced.

Notwithstanding this progress in the 7FYP, the government understands that institutional strengthening and governance improvements are a continuous process that evolves and creates new demands for changes as Bangladesh moves forward. Consistent with the long-term goal of PP2041 to attain upper middle-income status in FY2031 and high- income status in FY2041, the government's institutional and governance improvement goals will target a time path to attain the institutional arrangements found in present upper middle income and high-income countries. Consequently, the institutional and governance improvement targets of the 8FYP will be set up as a step towards these long-term goals defined in PP2041.

1.10 PERFORMANCE DURING FY2020: THE COVID-19 ECONOMIC IMPACT AND GOVERNMENT RESPONSE

The global COVID-19 pandemic has terrorized the world, unleashing huge number of infections and sad loss of lives. The government took swift actions to control the COVID-related damage to life and livelihoods. As an immediate first step to contain the spread of the virus, the government imposed a lockdown on March 23 that was extended to May 30, 2020. The economy has opened up since then, but the government has adopted a cautious approach balancing the risks of virus spread with the need to restore economic activities. On the economic front, the adverse economic effects of the pandemic are still evolving. In the very short term, many economic activities, especially in the urban areas, came to a grinding halt, tax revenues, the earnings from exports and investments have fallen considerably over the March-June 2020 months. The government has taken a series of measures to reduce the spread of the infection and announced several stimulus packages, estimated at Taka 1196.4 billion (4.3% of GDP), to help the needy and stem the downward spiral of economic activities.

1.10.1 Government Policy Response

To mitigate the adverse socioeconomic impact of 'global pandemic' from COVID-19, the Government of Bangladesh has adopted a Work Plan with four major strategic programmes to be implemented in immediate, short-term and medium-term span. The four major strategies the government has adopted are as follows:

- **Increased public expenditure** with a target to create jobs in both formal and informal sectors. Funding of foreign tour and luxury expenditures from the government budget will be discouraged.
- **Introducing fiscal stimulus package** to retain workers in the manufacturing sector, to maintain competitiveness of the enterprises especially in the export-oriented manufacturing sector and to revitalize the economic activities and business environment. The major policy interventions in this regard are to provide several credit facilities at low interest rate from the banking system for the businesses including MSMEs.
- **Expansion of social safety net programmes** to meet the basic needs of people living below poverty line, day labourers and for workers in the informal sector. The major interventions are: a) Free food distribution; b) sale of rice under Open Market Sale (OMS) program with a highly subsidized price (Taka 10 per kg); c) cash transfer to the targeted vulnerable population; d) expansion of allowance programmes (Old Age Allowance and Allowance for Widow/husband Deserted Women) to all eligible person (100 percent) of the 100 most-poverty stricken Upazilas; and e) expedite construction of house for the homeless people.
- **Increase money supply** to maintain liquidity of the economy so that the financial shock from the pandemic can be absorbed and day to day businesses can be operated smoothly. Bangladesh Bank (BB) has already lowered CRR (cash reserve ratio) and Repo rate to increase money supply and it will continue if needed. However, special attention will be given so that inflation does not increase as a result of increased money supply.

The detailed programmes are summarized in Table 1.14, while the fiscal cost of these programmes is provided in Table 1.15.

Table 1.14: COVID-19 Stimulus Package (taka billion)

Serial No	Name of the Package	Amount
1.	Special Fund for salary support to export- oriented manufacturing industry workers	50.0
2.	Working Capital loans to affected industries and service sector	400.0
3.	Working Capital loans provided to SMEs, cottage industries	200.0
4.	Expansion of Export Development Fund (EDF)	127.5
5.	Pre-Shipment Credit Refinance Scheme	50.0
6.	Special Honorarium for doctors, nurses, medical workers	1.0
7	Health Insurance and life insurance	7.5
8.	Free Food Distribution	25.0
9.	OMS at 10 taka/kg	2.5
10	Cash Transfer to targeted poor people	12.6
11.	Expansion of Allowance Programmes	8.2
12.	Construction of home for homeless people	21.3
13.	Additional procurement of paddy/rice (2.0 lac ton)	8.6
14.	Support for farm mechanization	32.2
15.	Subsidy for agriculture	95.0
16.	Agriculture Refinance Scheme	50.0
17.	Refinance scheme for professionals, farmers, and small traders	30.0
18.	Employment creation through four State owned financial institutions	20.0
19.	Subsidy for commercial bank's suspended interest of April-May 2020	20.0
20.	Credit risk sharing scheme for SME sector	20.0
21.	Safety net program for Export Oriented Industry's distressed workers	15.0
	Total (taka)	**1196.4**
	In Billion US Dollars	**14.2**
	As % of GDP	**4.3**

Source: Ministry of Finance

Table 1.15: Fiscal Cost of the Stimulus (Million USD)

Serial No	Name of the Package	Implementing Agency	Total Size of Package (US$ Mill)	Fiscal Cost (In Million USD)	
				FY 2019-20	FY 2020-21
1	Special Fund for Salary support to export oriented manufacturing industry workers	BB	588.2	588.2	-
2	Working Capital loans for the affected industries and service sector (Interest Subsidy from fiscal resource)	BB	3,882.4	39.7	158.8
3	Working Capital loans for the SMEs including the cottage industries (Interest Subsidy from fiscal resource)	BB	2,352.9	29.4	117.7
4	Expansion of facility provided through Export Development Fund (EDF) by Bangladesh Bank	BB	1,500.0	10.0	50.0
5	Pre-Shipment Credit Refinance Scheme	BB	588.2	5.0	20.0
6	Special Honorarium for doctors, nurses, medical workers	MoH&FW	11.8	-	11.8
7	Health Insurance and life insurance	MoH&FW	88.2	-	88.2
8	Free Food Distribution	MODMR	294.5	294.5	-
9	OMS of rice at 10 taka/kg	MoFood	29.5	29.5	-
10	Cash Transfer for the targeted poor people	MODMR	147.9	103.6	44.4
11	Expansion of Cash Allowance Programmes	MoSW	95.9	-	130.9
12	Construction of home for homeless people	MODMR	250.6	74.1	176.5
13	Additional procurement of paddy/rice (2.0 lac ton)	MoFood	101.2	-	101.2
14	Support for farm mechanization	MoAgri	378.8	50.0	328.8
15	Subsidy for agriculture	MoAgri	1,117.6	-	1,117.6
16	Agriculture Refinance Scheme	BB	588.2	-	29.4
17	Refinance scheme for professional farmer and small traders	BB	352.9	-	17.6
18	Employment creation through four State owned financial institutions	Banks	235.3	-	235.3
19	Subsidy for commercial bank's suspended interest of April-May, 2020	BB	235.3	-	235.3
20	Credit Risk Sharing Scheme for SME Sector	BB	235.3	-	47.1
21	Social Protection (Cash Transfer) program for the export oriented industry workers	DoL	176.5	-	43.3
Total (Million US$)			**13,251.4**	**1,224.0**	**2,953.9**

Source: Ministry of Finance

Additionally, the government has requested for budget and balance of payments (BoP) support from major development partners including the IMF. The government has received budget support amounting to $1.0 billion from ADB, AIIB and WB in FY2019-20. Balance of Payment Support amounting $732 million is received from IMF. Additional $2.0 billion of budget support is expected in FY2020-21 from Japan, ADB, EU, Germany and EDCF of South Korea.

1.10.2 Macroeconomic Effects of COVID-19

The macroeconomic effects of COVID-19 are still unfolding as the pandemic continues to take its toll on human lives, health and wellbeing. Based on available evidence, the main macroeconomic effects for FY2020 outcomes are summarized in Table 1.16. The effects were severe with substantial losses in GDP growth, exports, investment and tax revenues. In the short-term, unemployment rate and poverty incidence are likely to increase. However, this increase would fall as income transfer measures happen and employment is restored. The measures taken by the government to stem the tide of the downturn in the domestic economy will take time to unfold until such time that the health effects of COVID-19 become manageable, workers return to the work place, and people resume their normal activities so that the demand for service like transport, hotels and restaurants, vacation, tourism, beauty care, education, personal services all return to normal levels. Importantly, the recovery of earnings from exports will depend upon how quickly the global economy gets back to normal. The recovery of both domestic activity and global economy is predicated upon the discovery of cure or vaccine for COVID-19. The best expectations today are that global recovery could happen in early 2021.

Table 1.16: Macroeconomic Effects of COVID-19

Indicators	FY20 Actual Outcome	Pre-COVID FY2020 Expected Outcome
GDP Growth (%)	5.24	8.19
Nominal GDP (taka billion)	27964	28859
Private investment rate (% of GDP)	23.6	24.6
Exports ($ billion)	33.67	45.5
Tax Revenues (Taka billion)	2207	3401
Fiscal Deficit (% of GDP)	5.5	5.0
Inflation Rate (%)	5.65	5.5

Source: BBS, BB, EPB, MoF and 7th Five Year Plan

1.11 IMPLICATIONS FOR THE EIGHTH PLAN

The overall positive record of Seventh Plan implementation and associated progress in development measured in terms of poverty reduction, employment, human development and growth in incomes suggests that the Seventh Plan strategy was on the right track. Important gains have been made in securing many of the targets of Vision 2021. In particular, Bangladesh has attained lower middle- income status earlier than in 2021 while also achieved the MDG targets in most areas, especially poverty reduction. This solid performance suggests that the Eighth Plan should stay the course of the Seventh Plan and focus on areas where there are important performance gaps remain. The approach would be to pursue much of the same strategy in a way that consolidates the gains while addressing the several implementation gaps identified above.

The COVID-19 reinforces the importance of speeding up many of the reforms where a performance gap has emerged. This includes revenue performance, private investment climate, export diversification and domestic job creation. The tax performance of Bangladesh has been slipping over a long period of time and this must be reversed quickly with important tax reforms under the 8FYP. Similarly, export diversification and expansion of a diversified manufacturing base are of utmost importance. This will not be possible without substantial increases in domestic and foreign private investment. The 8FYP will focus utmost

attention to improving the investment climate for domestic and foreign private investment with a view to offsetting the lack-lustre private sector investment performance in the 7FYP. Finally, the short-term unemployment resulting from COVID-19 including retrenchment of overseas workers will present an immense challenge in the very first year of the 8FYP. Job creation accordingly will be a top priority of the 8FYP.

Yet, the COVID-19 effects also bring in new challenges. In addition to the short-term recovery to the COVID-19 losses, strategic changes will be needed in several areas relating to healthcare and social protection. Both systems were heavily tested under the COVID-19 pandemic and the performance was weak with large gaps. The 8FYP will emphasize the need for a complete overhaul of the healthcare system which showed huge performance gaps in physical facilities, access to healthcare and availability of quality healthcare staff. The COVID-19 has also reinforced the need for a universal healthcare system with a combination of public and private health insurance scheme. Regarding the social security system, the slow progress in implementing the NSSS and the inability to increase funding for social protection-related income transfers to the poor and vulnerable will need to be addressed speedily both as a response to offset the negative effects of COVID-19 but also to increase the growth elasticity of poverty as well as economic recovery.

In addition to the above immediate priority reforms, there are four areas where the Eighth Plan would need to probe deeper and take a more focused and comprehensive approach than was possible in the Seventh Plan. The first concerns the need to build stronger institutions. The Seventh plan's efforts to build important institutions like the local government, the urban institutions, land administration, strengthening of the National Board of Revenue and the Public-Private Partnership did not take deep roots. These lowered the capabilities and services provided by these institutions. The strengthening of the judiciary, the Election Commission and other democratic institutions are also long-term challenges that require continued efforts. Secondly, implementation capacity in public agencies and ministries remain limited that adversely affected the implementation of major public investment programmes and public policies in transport and social sectors. Thirdly, stronger policy focus is needed in the area of income inequality. In particular, reform of public finances that increases the equity of tax collection and public spending are of substantial importance. Especially, the equity aspects of public spending on education and health require considerable effort. Finally, despite progress, the programmes in environmental management and climate change remain of low impact because they are not properly incorporated in the mainstream economic policy management. Strong implementation of the Bangladesh Delta Plan (BDP2100) for sound management of water resources, climate change, natural disasters and other environmental hazards will be a major focus for the Eighth Plan. The integration of climate change and environmental management issues in growth and fiscal policy management will be another high priority issue for the Eighth Plan.

In conclusion, adequate progress under the 8FYP is not only necessary to stay on track to achieve the targets of PP2041, but also essential to achieve the SDG targets.

CHAPTER 2

STRATEGIES FOR PROMOTING PRO-POOR AND INCLUSIVE GROWTH

2.1 DEVELOPMENT CONTEXT

The adoption of PP2041 defines the government's long-term development strategy. PP2041 defines three overarching targets: (1) Secure UMIC status by FY2031; (2) Eliminate extreme poverty by FY2031; and (3) Achieve HIC status by FY2041. The yearly average GDP growth targets and the pace of reduction of extreme poverty are defined by these government-set long term goals. The challenge for strategy and policy making is to identify the specific strategies and policies that if adopted and implemented well will take Bangladesh to those development outcomes. The PP2041 has established the broad long-term strategic directions and policy outlines that are associated with these development targets. The task of the 8FYP is to flesh out in greater detail specific strategies, policies, investment programmes and institutional reforms that are implementable and monitorable, and which will lead Bangladesh to stay on track for the achievement of the PP2041 core long-term targets noted above.

The PP2041 rightly identifies growth acceleration as the primary vehicle to achieve UMIC and HIC status. But it also recognizes that this rapid growth must be pro-poor and inclusive to secure the elimination of extreme poverty by FY2031. Bangladesh has considerable positive experience with growth acceleration and poverty reduction. The review and analysis of that experience can provide very helpful guide on the core elements of a pro-poor and inclusive growth strategy. There ae also important lessons emerging from the experiences of countries that have already moved from LMIC to UMIC and have also substantially reduced extreme poverty. The 8FYP can draw on those experiences as relevant to the political economy context of Bangladesh.

The unexpected COVID-19 pandemic has complicated economic planning and policy making with its fast-spreading furious and damaging impact on human health, confidence and economic losses. Planning under these extreme global and national uncertainties is a huge challenge. All countries are struggling and Bangladesh will learn from the good practice experiences as they evolve to manage the COVID-19 damage and move towards restoring the growth momentum. While considerable uncertainties prevail, it is universally expected that the COVID-19, like other historical pandemics, will be tamed eventually with the discovery of a vaccine or a cure or both. As noted in Chapter 1, on the economic front the main implication of COVID-19 for the 8FYP is the slowdown in GDP growth during calendar year 2020 over the March to December period. The current expectations are that global recovery will happen from calendar year 2021 (Table 2.1). What is striking is the huge projected recession in the US, Europe and India in 2020. The projected recovery is in CY21 is modest.

Table 2.1: IMF Projected Short-Term COVID-Linked Global Growth Outlook (%)

Regions/Countries	CY2019	CY2020	CY2021	FY2020	FY2021
World	2.9	-4.9	5.4	-1.0	0.25
US	2.3	-8.0	4.5	-2.9	-1.75
EU	1.3	-10.2	6.0	-1.7	-1.4
China	6.1	1.0	8.2	3.6	4.6
India	4.2	-4.5	6.0	-0.15	0.75

Source: IMF World Economic Outlook June 24, 2020

Like other open economies, the Bangladesh economy is adversely affected by global developments through three major growth drivers: RMG exports; remittance inflows; and inflows of FDI. RMG and remittances are already major growth drivers. Although FDI presently plays a modest role, the macroeconomic framework of the PP2041 assigns FDI a growing and important development role in the hunt for higher economic growth, especially in view of the sluggish performance of domestic private investment in the 7FYP. On a fiscal year basis that is followed in Bangladesh, the projected global downslide continues in Fiscal Year 2021. This will seriously hurt the expected recovery of exports, remittances and FDI for Bangladesh in FY2021.

2.2 DEVELOPMENT APPROACH OF THE 8FYP

The implementation of PP2041 is envisaged in four 5-year phases. The first phase starts with the 8FYP. So, the main task of the 8FYP is to start the implementation of PP2041 in a way that it brings Bangladesh closer to the goals of attaining UMIC status, attaining major SDG targets, and eliminating extreme poverty by FY2031. In the backdrop of these factors, the 8th Plan takes the lead from PP2041 and centres on six core themes:

- Rapid recovery for COVID-19 to restore human health, confidence, employment, income and economic activities.
- GDP growth acceleration, employment generation, productivity acceleration and rapid poverty reduction. Thus, the average GDP growth is targeted to increase from 7.4% in the 7FYP to 8.0%, with annual growth rate reaching 8.5% by FY2025. Average productivity growth rate is targeted at 5.6%. Poverty incidence is projected to fall from 20.5% in FY2019 to 15.6% in FY2025; while extreme poverty is targeted to reduce from 10.5% in FY2019 to 7.4% in FY2025.
- A broad-based strategy of inclusiveness with a view to empowering every citizen to participate in full and benefit from the development process, and helping the poor and vulnerable with social protection-based income transfers.
- A sustainable development pathway that is resilient to disaster and climate change; entails sustainable use of natural resources; and successfully manages the inevitable urbanization transition.
- Development and improvement of critical institutions necessary to lead the economy to UMIC status by FY2031.
- Attaining SDG targets and mitigating the impact of LDC graduation.

These 6 inter-related themes are integrated in the entire 8FYP macroeconomic and sectoral strategies, policies and programmes.

2.3 PRO-POOR AND INCLUSIVE GROWTH AND CONCERNS OVER EQUITY

International experience shows that sustained rapid GDP growth can play a key role in reducing poverty. For example, rapid economic growth has helped greatly to reduce poverty in East Asia, where the proportion of people living in extreme poverty fell from 33% in 1990 to 9.9% in 2004, and in South-East Asia, where the proportion fell from 41% to 29.5% over the same period. China, which experienced double digit growth rates for three decades since 1980, lifted 600 million people out of poverty leaving barely 10 million in poverty today out of its 1.4 billion population. Conversely, in sub-Saharan Africa, where economic growth has been slow overall, the proportion of people living in extreme poverty has fallen only slightly, from 47% in 1990 to 41% in 2004. Bangladesh has a similarly positive experience.

There is also an emerging consensus among the development community that poverty reduction efforts should address poverty in all its dimensions—not only lack of income or consumption, but also the lack of access to health and education, the vulnerability to shocks, and the lack of control over one's own life. The multi-dimensional nature of poverty is now an accepted principle, enshrined in the SDGs and endorsed by the UN member countries including Bangladesh.

Bangladesh has moved well with its comprehensive program of reducing poverty, focused on accelerating GDP growth, improving human development, supporting the vulnerable and bringing equality of opportunities amongst all groups. Although there has been improvement in building social safety nets for the poor and vulnerable under the NSSS, still a large proportion of population is outside the social protection system and remains exposed to various economic and social volatility as illustrated with the COVID-19 experience. Lot more needs to be done to effectively reach the target population.

2.3.1 Implications of Pro-Poor Growth

In order for GDP growth to have a significant poverty alleviation effect, it has to be pro-poor. Therefore, making growth pro-poor has become an important development challenge for Bangladesh. Growth must involve at least two features to be regarded as pro-poor: (a) the income growth rate of the poor must exceed the income growth rate of the non-poor. (b) A second requirement is that the measure should be sensitive to the distribution of incomes among the poor in the sense of giving greater weight to the poorest of the poor.

Research reveals that higher income inequality reduces the poverty impact of growth. Reducing income inequality has the effect of reducing poverty by giving the poor more resources initially such that it will increase the poverty impact of subsequent growth. Inequality is therefore associated with a low elasticity of growth to poverty reduction. This arises when inequality of opportunity is embedded in society, so that the poor are denied the assets by which they might build their livelihoods, and are disadvantaged–indeed, in some cases face outright discrimination – in markets. Not only do the poor suffer, but so too does the economy as a whole, since the working poor are unable to contribute substantially. A particular concern is gender inequality: women receive less education than men in much of Africa and Asia, have to provide the majority of childcare, and often confront barriers in labour markets. Similarly, in many developing countries, significant differences in the provision of education and health services to rural areas compared to the cities mean that rural people are at a disadvantage.

2.3.2 Implications of Inclusive Growth

In the last two decades the concept of inclusive growth replaced pro-poor growth as the dominant focus of a growth strategy in international development discourse. The concept places a particular emphasis on analysing a country's structural transformation based on the premise that no country has been able to achieve significant income growth and poverty reduction without it. It then further argues that the pace of growth should be rapid to ensure substantial reduction in poverty and the pattern should be broad based encompassing all sectors and all parts of the labour force. The focus is on the nature of growth that is also job creating or employment generating, which then becomes the conduit for the poor to come out of poverty.

2.3.3 Equity Concerns

The concern with equity has emerged strongly in recent global debates on economic progress. This has happened partly in recognition of the fact that in spite of great strides made by the world in recent times in promoting growth of incomes and ensuring higher standards of living across the globe, inequality between and within nations has not diminished. In fact, it has increased in many parts of the world, especially in the developed world and in parts of the developing world that have been enjoying the most rapid pace of growth. This global concern with equity finds echo in the local discourse on political economy in Bangladesh as well. As growth has picked up over the last two decades, and brought poverty down in its wake, observers have noted with dismay that inequality has remained high and if anything is getting even higher. For example, in Bangladesh, whereas income Gini coefficient (a standard measure of income inequality) was 0.388 in 1991-92, it has been rising steadily since, to 0.451 (2000), 0.458 (2010), and 0.483 (2016). An alternative measure of income inequality, the Palma ratio tells the same story. The Palma ratio, defined as the ratio of income shares of the top 10% and bottom 40% of the population, rises from 1.73 (1985), to 2.62 (2005), and to 2.93 in 2016. Clearly, this indicates that as growth accelerated in Bangladesh, income inequality has been on the rise.

Before embarking on the analytics of pro-poor and inclusive growth it would be instructive to review the state of play regarding change in the income of the poor relative to the rest of the population in a broad range of countries. One approach that is fairly common is to look at the average income of the bottom 40% of the population. The World Bank, in its 2018 report, *Poverty and Shared Prosperity*, has compiled data on how incomes of the bottom 40% of the population changed relative to income of the average population. Table 2.2 provides a snapshot of selected (mostly) developing countries.

Table 2.2: Income Growth of Bottom 40% versus Average Population

	Growth of income (2010-15) of	
	Bottom 40%	**Average population**
Bottom 40% growing faster than average		
China	9.1%	7.4%
Vietnam	5.2%	3.8%
Malaysia	8.3%	6.0%
Thailand	5%	3%
Brazil	3.8%	2.2%
Egypt	2.6%	0.8%
Bottom 40% growing slower than average		
Bangladesh	1.4%	1.5%
Sri Lanka	4.8%	5.3%
Pakistan	2.7%	4.3%
Indonesia	4.8%	4.8%
United States	1.3%	1.7%
Bottom 40% with declining income share		
Uganda	-2.15	-0.96
Zambia	-0.59	2.93
Greece	-8.35	-6.98
Spain	-2.16	-1.53
South Africa	-1.34	-1.23

Source: World Bank (Poverty and Shared Prosperity 2018)

The evidence points to the successful stories of several East Asian countries (China, Vietnam, Malaysia, Thailand) where income of the bottom 40% has been growing faster than that of the average population. Bangladesh falls in the group of countries where income of the bottom 40% is growing almost equal to that of the average population (1.4% against 1.5%). That is still better than a host of developing countries (e.g. South Africa, Zambia) where income of the bottom 40% has been falling faster than that of the average population. Inequality and poverty must be getting worse in both countries. The data points to the evidence that growth has tended to be more pro-poor and inclusive in the first group of countries than in the second or third group.

The conclusion we can draw from the preceding analysis is that the pursuit of pro-poor and inclusive growth in Bangladesh must also address the challenge of rising inequality that is being experienced with rapid growth of the economy. The growth enhancing strategies of the 8FYP must therefore embrace various measures to arrest the rise of income inequality, by ensuring that average income of the bottom 40% of the population grows faster than that of the average population.

2.4 RAPID GROWTH AND PROGRESS IN POVERTY REDUCTION

Along with growth acceleration, Bangladesh has made great strides in reducing the level of poverty over the last three decades, and especially since the turn of the present century. During the 1990s, the rate of poverty had declined relatively slowly-from 56.7 percent in 1991/92 to 48.9 percent in 2000. The following decade witnessed a sharp acceleration in both the rate of growth and the pace of poverty reduction, when national poverty declined more than twice as fast as in the 1990s-falling to 31.5 percent by 2010. It has

continued to fall since then- reaching 24.2 percent by 2016, projected to be under 20% by 2020. But the pace of poverty reduction has slowed somewhat in the immediate past decade (Table 2.3). Whereas the decade of 2000s witnessed a reduction of 1.7 percentage points per year, in the subsequent six years the rate of decline was down to 1.2 percentage points per year. At the start of the 8FYP, prior to the COVID-19 crisis, some 33 million people were estimated to be living in poverty.

Table 2.3: Poverty Trends: 1991-92 to 2016

(Head-count ratio; percentage)

	1991-92	1995-96	2000	2005	2010	2016
Overall Poverty						
National	56.7	50.1	48.9	40.0	31.5	24.2
Urban	42.8	27.8	35.2	28.4	21.3	18.6
Rural	58.8	54.5	52.3	43.8	35.2	26.4
Extreme Poverty						
National	41.1	35.2	34.3	25.1	17.6	12.8
Urban	24.0	13.7	19.9	14.6	7.7	7.4
Rural	43.8	39.5	37.9	28.6	21.1	14.8

Sources: BBS, Household Income and Expenditure Survey (HIES), 2010, 2016.

The pattern is quite similar for extreme poverty. After falling at a relatively slow rate in the 1990s, it fell sharply in the decade of the 2000s, when it was almost halved – from 34.3 percent in 2000 to 17.6 percent in 2010. Since then, the pace of reduction has slowed, and by 2016 extreme poverty stood at 12.9 percent, projected to be below 10% in FY2020.

Research has established a link between inequality and poverty. Even when growth accelerates, poverty reduction can slow down if distribution becomes more unequal. As discussed below, income inequality in Bangladesh has indeed been on a rising trend. The 8FYP must take this critical factor on board in promoting pro-poor and inclusive growth.

2.5 THE GROWTH-INEQUALITY NEXUS

Following the seminal work of Simon Kuznets, the causal relationship running from growth to inequality has been characterised as an inverted U-relationship, where inequality first rises with growth and subsequently falls as a country becomes richer. Much work has been done since to explain this alleged 'law' of development and to test its empirical validity. The general conclusion is that there is no systematic relationship between growth and inequality - indeed, there are about as many instances of inequality rising as there are instances of inequality falling with growth. Numerous studies of the East Asian 'miracle' economies have shown how policies played a critical role in helping them combine growth with equity in the 1960s and 1970s. Particular importance were policies aimed at promoting broad-based education and massive redistribution policies aimed at building broad-based human capital. The experience of Western Europe also shows how high per capita income and low- income inequality can coexist with re-distributive fiscal policies. Nevertheless, it has been noted, in particular, that inequality has actually worsened in all the Asian countries that have moved on to a higher growth path in recent years - for example, in China, Vietnam, India and Bangladesh.

In order to investigate the forces behind rising inequality, it would be useful to look at it from a slightly different perspective from the one offered by the widely used Gini coefficient. It has been well-known for a long time that one of the limitations of the Gini coefficient is that by construction it attaches more weight to the middle of the distribution than to the tails. This would not be a problem for comparison between distributions if the middle of the distribution behaved in the same way as the tails – e.g., if any widening of the gap between the upper and lower tails was also accompanied by similar widening of the gap in the middle of the distribution. This is indeed the implicit assumption behind the widespread use of the Gini coefficient.

But the path-breaking recent work by Gabriel Palma has seriously questioned the empirical basis of this assumption. In an influential study on income distribution for a large number of countries around the globe, he has demonstrated that the middle of the distribution does not generally behave in the same way as the tails In fact, one of the stylized facts that emerges from his studies is that the middle class – representing 50 per cent of the population belonging to the five deciles from the fifth to the ninth – manages to capture a fairly constant share of roughly 50 per cent of national income in most countries most of the time. It is the changing division of the remaining 50 per cent of national income between the bottom 40 per cent of the population and the top 10 per cent that drives the change in overall income distribution. Thus, when income distribution worsens it is usually because the share of the top 10 per cent goes up at the expense of the bottom 40 per cent, while the middle 50 per cent of the population more or less hold on to their share. The changing pattern of income distribution thus essentially represents a struggle between the two tails of the distribution for sharing the half of national income that is not captured by the middle class.

This finding has a clear implication for how best to measure the degree of income inequality. What one should look for is not a measure of overall distribution, such as the Gini coefficient, because the middle of the distribution doesn't change much anyway, but simply a measure of the gap between the two tails of the distribution because that's where changes mainly occur. The simplest such measure is the ratio between the income shares of the bottom 40 per cent and the top10 per cent of the population, known as the Palma Ratio.

Table 2.4: An Alternative Measure of Income Inequality: The Palma Ratio

	1991-92	1995-96	2005	2016
Income Share of Bottom 40%	29.23	15.54	14.36	13.01
Income Share of Middle 50%	53.36	49.78	48.00	48.83
Income Share of Top 10%	17.41	34.68	37.64	38.16
Total	100.00	100.00	100.00	100.00
Palma ratio	1.68	2.23	2.62	2.93

Source: Calculated from the data on income distribution given in the reports of Household Income and Expenditure Surveys, various years.

The trend of the Palma ratio between 1991-92 and 2016 is shown in Table 2.4. Consistent with the Palma hypothesis, the share of the middle 50 percent of the population has remained unchanged at around 50 percent of national income. But the gap between the top and the bottom has widened. Palma ratio has gone up continuously – from 1.68 in 1991-92 to 2.23 in 1995-96 to 2.62 in 2005 and further to 2.93 in 2016. There is clearly a long-term trend of an increasingly unequal society. While the middle class has held its own, the bottom 40 percent of the population is continuously losing out to the top 10 percent in the perennial

struggle over income distribution. That raises the question: was rapid growth over the past decade inclusive? If not, how do we change the distribution of income as economic growth and income accelerate over the period of the 8FYP. This has been addressed categorically in the 8FYP

2.6 GROWTH AND DISTRIBUTION: THE BANGLADESH EXPERIENCE

GDP growth embarked on a rising trajectory during the 1990s and the trend has continued to date, taking Bangladesh economy to a substantially higher growth path. Growth of GDP accelerated from about 4.8 per cent in the 1990s and further to 5.8 per cent in the 2000s, and 7 per cent in the 2010 decade (Table 2.5). The growth spurt, in combination with continued slowdown in population growth, has resulted in a fairly rapid increase in per capita income. In the 1990s, per capita income grew at the rate of 3 per cent per annum, which amounted to a near doubling of the growth rate of the preceding two decades, and in the 2000s it grew even faster, at 4.4 per cent per annum. While this performance was not nearly as strong as in some of the East and Southeast Asian countries during the same period, it was still a remarkable achievement by historical standards and also quite impressive in comparison with the developing world as a whole.

Table 2.5: Decadal Growth Rates: 1990s to 2019 (per cent per annum)

		1980-89	1990-99	2000-09	2010-19
GDP growth		3.72	4.80	5.82	7.00
Population growth		2.01	1.70	1.32	1.10
Per capita GDP growth		1.68	3.05	4.44	5.90

Source: BBS

Rapid growth helped lower poverty but income inequality increased. The degree of income inequality, as measured by the Gini coefficient, has increased from an average of 0.38 in the 1980s to 0.44 in the 1990s and further to 0.46 in the 2000s (Table 2.6). The Palma Ratio inequality indicator in Table 2.4 conveys a similar message of rising income inequality as growth accelerated. Thus, while the average living standard in Bangladesh is growing, the gap between the rich and the poor is also widening.

Table 2.6: Decadal Average of Income Gini Coefficient: 1980s to 2000s (per cent)

	1980s	1990s	2000s
National	0.377	0.442	0.463
Rural	0.361	0.389	0.430
Urban	0.380	0.471	0.475

Source: Household Income and Expenditure Surveys of the Bangladesh Bureau of Statistics (various rounds).

Although the pace of growth has been rapid enough to bring about a substantial reduction in poverty despite rising inequality, the worsening of income distribution is a matter of concern for at least two reasons: (a) it indicates that the benefits of growth are not being shared equitably, i.e. growth is not inclusive; and (b) higher inequality lowers the growth elasticity of poverty reduction.

2.7 DRAWING FROM CROSS-COUNTRY INITIATIVES ON PRO-POOR AND INCLUSIVE GROWTH

The formulation of policies and strategies for pro-poor inclusive growth during the 8FYP may draw on the good practice experiences of countries that have reconciled high GDP growth rate with lower income inequality. Global research evidence has identified six policy areas that appear to be effective in reducing inequality.

- Early childhood development and nutrition interventions
- Universal health coverage
- Universal access to quality education
- Cash transfers to poor families
- Rural infrastructure -- especially roads and electrification
- Progressive taxation

The best examples of reconciling high per capita income with lower income inequality comes from the experience of Western Europe where a strong redistributive fiscal policy that raises revenues from a progressive system of personal income taxes and uses that money for making income transfers to the poor and the vulnerable through an expansive social protection system. These countries also provide universal healthcare and free college level education for all. In addition to the implementation of a broad-based redistributive fiscal policy, specific policies can be taken to benefit the poor. A few examples of specific measures taken by selected developing nations to promote shared prosperity are illustrated in Box 2.1.

Box 2.1: Specific Examples of Policies to Benefit the Poor

- Since 2015, Ethiopia's entire population benefits from basic social services. It uses block grants to regions and districts for delivering basic social services in health, education, agriculture, and rural roads, water, and sanitation. The support has achieved notable results in ensuring better access to services and contributed to the country's impressive gains in basic services.
- Egypt's reform program focuses on creating opportunities for Egyptians and raising living standards by promoting the private sector and improving government performance. The new program, 'Egypt Takes Off,' has a focus on promoting small businesses while improving the capacities of local governments to deliver services to their citizens and guide local development.
- Chile addressed the challenge of unequal access to quality education by adopting policies to promote equal opportunities in education. As a result, nearly 49,000 students received full scholarships for their tertiary education. And the lowest grade in each school receiving public funding rolled out a centralized, regulated admission system that saw 75 percent of applicants receiving their first preference for school admission.
- In Malaysia, the rapid income growth among the bottom 40 percent from 2011 to 2015 is fundamentally driven by rising real wages and overall income of the bottom 40 grew at an annual rate of 12 percent. The timing of the increase in labor earnings coincides with minimum wage legislation passed in 2012, which introduced minimum wages for the first time, relevant to all workers except domestic employees. In part, the minimum wage was put in place to address the dysfunctional wage-setting practices for low-paid workers. The increase of minimum wages has also been linked to strong reductions in inequality in other countries such as Brazil.
- Almost all of the high performing Asian economies- Hong Kong, Indonesia, Korea, Malaysia, Singapore, Taiwan (China), and Thailand implemented policies based on the theme of 'shared' growth strategies. The elites were held responsible for maintaining higher savings and eventually higher investment, while the non-elites were induced to focus on primary education, basic healthcare and land reform opportunities to bring about a more engaging growth mechanism.
- Indonesia has led the world in its policy of inclusive fossil fuel subsidy removal, introducing direct social welfare policies to support its poorest citizens while pursuing a green energy policy.
- Rwanda has improved the ecotourism revenue-sharing model, directing it to local communities as an inclusive incentive to manage biodiversity.
- South Africa's 12 "Working for Forests, Ecosystems, Coasts, etc." programs combine environmental improvement with job schemes for disadvantaged women and men.
- The Philippines' National Greening Program has shown that a targeted investment of US$650 million in sustainable forestry can deliver effective forest rehabilitation alongside more secure livelihoods for marginalized indigenous communities.

2.8 8FYP STRATEGIES AND POLICIES TO MAKE GROWTH PRO-POOR AND INCLUSIVE

2.8.1 Projected Growth Path for the 8FYP

The pre-COVID-19 growth path for the 8FYP associated with PP2041 is shown in Table 2.7. It called for GDP to grow from 8.13% in FY2019 to 8.19% in FY2020 and rising to 8.51% in FY2025. With the advent of COVID-19, this projected growth path has been disrupted. However, most of the damage has happened in FY2020. GDP is estimated to have fallen to 5.24% in FY 2020 owing to the adverse effects of the domestic lockdown in the 2020 April-May periods as well as the effects of the global downturn in terms of loss of RMG export earnings. Data for the first 6 months of FY2021suggest that recovery is already

underway with strong turn around in exports, a solid agriculture sector performance and a surge in remittance earnings. The government's stimulus package is supporting this recovery and the government now expects to restore the growth momentum back to the PP2041 track. The government will continue to monitor the COVID-9 situation and provide continuous support to protect the recovery of economic activities as already seen in the first six months. Additional policies will be taken as necessary to ensure that the economy remains buoyant and economic recovery and growth momentum remains on track as projected in the PP2041 and reflected in Table 2.7.

Table 2.7: GDP Growth Projections under the 8FYP

	FY20 Actual	FY21	FY22	FY23	FY24	FY25
Pre-COVID-19 GDP growth (as per pp2041)	8.19	8.23	8.29	8.32	8.37	8.51
GDP growth with COVID-19	5.24	7.40	7.70	8.00	8.32	8.51
Population growth	1.39	1.34	1.24	1.22	1.19	1.18
Per capita GDP growth	3.85	6.06	6.46	6.78	7.13	7.33

Source: BBS and GED Projections

2.8.2 Strategy for COVID-19 GDP Growth Recovery

The government has demonstrated its resolve to address the challenges emerging from COVID-19 swiftly and comprehensively with a view to minimizing the loss of lives, restoring the health of those affected, removing fear and building confidence, and putting the economy on a path of economic recovery while taking care this is consistent with the restoration of human health and confidence. In addition to implementing the actions already taken in FY20, the government will take a number of far-reaching steps to improve health care capabilities and facilities in the 8FYP. Funding for healthcare will be increased, public-private cooperation will be strengthened, the capabilities of district-level healthcare facilities will be enhanced, and Universal Health Care will be introduced. The economic activity opening up will be phased and implemented in ways that risks to COVID spread are minimized. Bangladesh will learn from the lessons of other country experience in fine tuning its health response to COVID-19. It will also liaise with the World Health Organization and countries that are well advanced in medical search for vaccine and or cure. All efforts will be made to procure these benefits when available. The capabilities of domestic Pharma and medical research will be enhanced through research grants for research and innovation in the area off COVID-19 cure.

Regarding economic recovery, strong effort will be made to fully implement the stimulus and relief package announced in April-June 2020. The social protection delivery will be strengthened through a more rapid implementation of the NSSS and increase in funding for poverty-focused social protection programmes. Topmost attention will be given to protect the jobs and enhance new jobs in the micro and small enterprise sector that presently employ an estimated 28 million people. This will be done immediately through the provision of low-cost loans through the banking sector. The Bangladesh Bank will work with commercial banks and the non-bank financial institutions how this can be done in a flexible and low-cost manner. All institutional or regulatory barriers will be removed to reach out these enterprises pro-actively.

2.8.3 The Challenge of Job Creation for Inclusive Growth

The pro-poor and inclusive nature of growth depends to a large extent on three important factors: growth in employment; improvement in labour productivity and increase in real wages. The primary channel through which growth contributes to poverty reduction by generating income for the poor is through employment creation. Productive employment is regarded as one of the main instruments for achieving inclusive growth.

Growth to be considered inclusive needs increased job opportunities, access to critical social services, income transfers to the poor and vulnerable through a system of adequate social safety nets. The principal source of poverty is lack of income generating capacity. Growth generates increased demand for labour, and the poor only has labour to sell. As employment opportunity increases, so also the labour share of income increases, which in turn further boosts growth- thus creating a virtuous cycle. But employment is also not only about quantity of jobs created but also about the quality of jobs. There is sufficient empirical evidence which suggests that as jobs increase in the formal sector, that leads to much faster rise in jobs in the informal sector, which are mostly low-paid and insecure jobs. In Bangladesh about 85 percent of jobs are in the informal sector. Most employed in the informal sector would like to get employment in the formal sector but the lack of education and skill remains the principal barrier for these people to transit into the formal sector.

The government's growth strategy so far achieved considerable success in accelerating GDP growth and changing the production structure away from agriculture to industry and services. This growth strategy created many jobs in manufacturing, construction, professional services, transport, trade and other informal services. But there are three major challenges on the employment front. First, employment growth has been much slower than GDP growth implying that the employment elasticity of GDP is falling (Table 2.8). Second, employment in manufacturing and construction actually contracted between 2013 and 2016-17 even as value-added growth in these activities accelerated. Third, the concentration of jobs in the informal sector further increased raising concerns about the shortage of decent jobs. A major policy challenge facing the 8FYP is how to ensure that GDP growth acceleration creates more good jobs in the economy. This calls for a creation of jobs at a faster pace than in recent years in manufacturing, construction, transport, trade and professional services that will also increase the share of jobs in the formal sector and thereby improve the quality of employment. All considered, for growth to be inclusive, job creation effect of growth is a must.

Table 2.8: Employment Elasticity of GDP

Employment Elasticity wrt	2000-2010	2010-2016/17	2013-2016/17	2000--2016/17
Total GDP	0.57	0.25	0.17	0.44
Agriculture	0.76	Negative	Negative	0.38
Manufacturing	0.83	0.39	Negative	0.61
Services	0.46	0.64	0.36	0.51

Source: BBS National Accounts and LFS data

2.8.4 Projected Job Creation Target for the 8FYP

Amidst the downturn of the COVID-19 crisis, the 8th Five Year Plan focuses on strategizing inclusive growth. The acceleration of GDP growth, generation of employment, and reduction of poverty are in the center of focus in the Eighth Plan. The GDP growth acceleration from 7.4% in the Seventh Plan to 8.0% in the 8FYP period provides new employment opportunities. However, if GDP growth rates fall or overseas employment prospects remain tight, the domestic employment situation may face difficulty. The loss of employment owing to COVID-19 in FY2020 will need to reverse rapidly in FY2021 and FY2022. More generally, the acceleration of GDP growth as envisaged in Table 2.7 will be critical to restore and strengthen the employment prospects during the 8FYP. Along with higher GDP growth, efforts will be necessary to increase the job creation potential of growth by making it more pro-poor.

To guard against the downside risks, the 8FYP will seek to take policy measures that increase the employment impact of growth. The main focus of the Plan will be to create more jobs through investment and growth to absorb the new entrants in the labor market and those who lost jobs due to COVID-19 fall out. The Government will also be mindful of reaping the full benefits of the demographic dividend. The critical areas of 8FYP will be to stimulate labor-intensive and export-oriented manufacturing-led growth, promote agricultural diversification, infuse dynamism in CMSMEs, strengthen the modern services sector, promote non-factor services, encourage ICT-based entrepreneurship, and strengthen overseas employment.

The job creation projection during the 8FYP period is shown in Table 2.9. The objective would be to increase the employment elasticity of GDP to 0.30 in the 8FYP period which was 0.57 during the period 2000-2010. The target of employment elasticity of 0.30 is consistent with the Perspective Plan of Bangladesh 2021-2041. The government will also take measures to boost overseas employment once the global recovery from COVID-19 is underway in FY2022. On the supply side, the projections assume that labor force will grow at 2.2% per year, which is faster than observed during 2010-17 (1.6%). This is done to allow for higher female labor force participation rate that is expected from the implementation of the government's women empowerment policy.

Table 2.9: Employment Generation during 8FYP

	FY2021	FY2022	FY2023	FY2024	FY2025
Real GDP growth (%)	7.40	7.70	8.00	8.32	8.51
Additional domestic employment (million)	1.43	1.52	1.61	1.72	1.80
Additional overseas employment (million)	0.58	0.61	0.65	0.69	0.72
Additional total employment (million)	2.01	2.13	2.26	2.41	2.52
Additional labour force (million)	1.49	1.53	1.56	1.60	1.63
Excess employment (million)	0.52	0.60	0.70	0.81	0.89

Source: Eighth Plan Projections

Under these assumptions, the total number of domestic jobs created will be much more encouraging than was possible during the 7FYP. Along with the projected overseas employment, this will allow a surplus job creation of 3.52 million that will be helpful in reducing the youth unemployment and curb the stock of underemployment in Bangladesh.

2.8.5 Strategies for Accelerating Pro-poor and Inclusive Growth

The pro-poor inclusive growth strategy of 8FYP includes seven pivotal themes:

- Promote labour-intensive, export-oriented manufacturing-led growth.
- Promote agricultural diversification.
- Infuse dynamism in the cottage, micro, small and medium enterprises (CMSMEs)
- Strengthen modern services sector
- Push exports of non-factor services
- Promote ICT-based entrepreneurship
- Strengthen overseas employment

The main focus of the 8FYP inclusive growth strategy would be to create much more jobs through growth than was possible in the 7FYP both to absorb those unemployed owing to COVID-19 and to reap the full benefits of the demographic dividend. Structural transformation during 6th and 7th Five Year Plans have already laid the foundations for industry-led growth. Manufacturing sector has taken the lead supported by the expansion of RMG exports. This has increased the GDP growth rate, increased exports and created 4 million jobs in the RMG sector. However, non-RMG exports have not prospered that has constrained export diversification and slowed down manufacturing job creation in recent years, While the RMG sector will continue to play its major role, the 8FYP growth strategy will put top priority to the production and exports of non-RMG manufacturing to diversify the production and export base in areas including processed food, leather and footwear, light engineering, and pharmaceuticals. Many of these activities, like food processing and leather and footwear, are relatively labor intensive like RMG and have huge external market. So, like RMG they will create jobs and contribute to exports while accelerating value added growth. Emphasis will also be placed to promote efficient import substitution activities with high domestic demand, such as a range of consumer goods. Trade policy bias against exports will be removed through trade reforms, the exchange rate will be made more flexible and competitive, and FDI and domestic investment in manufacturing will be promoted through reforms of the investment climate to implement this strategy.

In agriculture, the strategy will be to further increase agriculture diversification while maintaining food security through improvements in productivity, supply of inputs, price policy supports, water supply, farm credit and marketing support. Agriculture exports will be promoted to increase farm income and employment in non-crop activities especially fisheries, fruits and vegetables and dairy products.

The cottage, micro and small enterprises (CMSEs) hold the most promise for creating jobs in both rural and urban areas. Available data show that these enterprises account for 99.8% of all non-farm enterprises and 83% of all non-farm employment (estimated at 34 million in 2019). However, research shows that these enterprises are mostly informal in nature and lack dynamism. They face a variety of constraints that are very specific to CMSEs and very different from medium and large enterprises (MLEs). These include regulatory barriers owing to absence of registration and tax ID, inadequate access to institutional finance, high interest rates, low investments, inadequate technology, weak skills and weak market access. Global experience from Japan, Taiwan and Korea show the powerful and dynamic role of CMSEs for exports, growth and employment. The 8FYP will place strong emphasis in dynamising these CMSEs by making a concerted effort to remove these constraints. In particular, the regulatory barriers will be simplified and the institutional and financial support to CMSEs will be vastly enhanced through the conversion of the SME

Foundation into Small Business Agency (SBA) as in the USA that will serve as a one-stop shop to promote CMSEs, working closely with the Bangladesh Bank on the financing side. Innovative financial solutions involving ICT will be used to improve access to commercial bank credit through low-cost approaches to loan applications, approvals and supervision. Credit Guarantee Schemes will be developed to reduce credit risks and to provide startup capital.

The services sector has already made substantial progress in converting from low-productivity informal services to high-productivity formal services in areas such as banking, finance, urban transport, ICT, health care, education and tourism. This transformation will be further enhanced by creating incentives for domestic and foreign private investment through regulatory reforms and supportive public investment in related infrastructure.

A major growth and employment driver that will be supported is the expansion of services exports. There is a huge trade gap in international shipping services and efforts will be made to capture a larger share of this market. Export prospects are also large in tourism and ICT services. These exports are highly labor intensive and create employment, especially for educated youth. Indeed, the ICT sector has begun to show dynamising in various services activities and holds huge prospects for further job creation for the educated youth. The 8FYP will boost ICT activities through reductions in ICT taxes, through expansion of ICT education and training and through eliminating all regulatory barriers.

The overseas employment and remittances have played a major development role during the 6th and the 7th Plans, creating jobs, providing income and investment. Remittance inflows have not only lowered poverty through direct income transfers, they have contributed to transforming the rural economy by supporting activities and employment in a range of rural services including construction, housing, transport, trading, health, and education. The 8FYP will build on this solid track record and make further efforts to increase overseas employment and remittances. The COVID-19 has adversely affected overseas employment. The COVID-19 has adversely affected overseas employment, but remittances have continued to grow supported by the 2% incentives offered by the government. This adverse overseas employment situation will likely be reversed once the global economy recovers. The 8FYP will make a comprehensive push to expand overseas employment and remittance earnings through G2G negotiations, by lowering the cost of migration through low-cost loans from the Bangladesh Probashi Bank, by increasing training and other services to potential migrants, and by stronger support in the work place against exploitation and abuse in host countries through the local Bangladesh embassies

Gender balance in employment: Another challenge for labour markets is achieving equality in employment opportunities for women. In most developing countries, there's an unequal access to employment opportunities and productive assets for women, and has no voice in any form of decision-making. Providing support to organisations that promote women entrepreneurs in informal and formal economy, giving access to finance schemes such as micro-credit, receiving better education and getting more support from men and other family members are essential factors for a woman to freely indulge themselves in the labour market. Inclusive growth is elusive with hindrances as such being prevalent in the economy.

2.8.6 Policies for Pro-Poor and Inclusive Growth

Empirical evidence from poverty reduction and growth experiences around the globe – particularly from developing countries – have led to a degree of consensus around several critical policies that are instrumental in sustaining growth but also ensuring that its benefits are widely shared by the population. Among these policies are:

Macroeconomic Stability. Macroeconomic stability is the foundation and a pre-requisite for growth. Unstable macroeconomic environment, displayed in internal (fiscal and debt) and external (BOP) imbalances in the economy, refers to a condition that adds a lot of uncertainty to economic decisions affecting resource allocation choices, investment, output and employment levels at the aggregate and firm levels. Exposure to currency fluctuations, large debt burdens, and unmanaged inflation can cause economic crises that stifles GDP growth. Since income of the poor are more volatile and vulnerable to shocks, the adverse effects are worse for them than the non-poor. There is incontrovertible research evidence confirming that high inflation, particularly above 10 percent, disproportionately hurts the poor and that large budget and current account deficits eventually lead to crises in which the poor suffer disproportionately. Taming inflation through sound monetary policy should remain a priority macroeconomic policy to support pro-poor growth objectives.

Fiscal Policy for equitable growth. The general consensus is that governments should try to keep the budget deficit low and sustainable in order to keep inflation low and protect the incomes of the poor. Rather than adopting an approach that involves abrupt cuts in government expenditures, policy makers often have preferred to take on a more gradual approach that involves broadening the tax base and greater toleration of short-term deficits during stabilization. In developing countries like Bangladesh, there is no option but to resort to fiscal deficits for financing development projects. To the extent that fiscal deficits finance investment that raise productivity and growth they will not lead to unsustainable debt in the future. Growth is expected to generate the resources to pay off public debt in the future. Public expenditures in developing countries boost aggregate demand, loosen the supply constraints on long-term growth and help to dedicate resources towards poverty reduction goals.

Once the country has moved from its initial phase of growth and achieved higher income levels, fiscal policy should not remain as tight, rather the government should be willing to spend on human capital investments and other infrastructure investments to make growth sustainable and more pro-poor and inclusive. As for public enterprises, most research finds that loss-making state enterprises distort markets, produce inefficient outcomes, cannot cater to the needs of the poor consumers and divert resources from priority pro-poor investments to less significant business ventures. On the other hand, there are instances where privatization efforts have been captive to political patronage whereby public enterprises have gone to political elites or prominent businessmen in society, have yielded low fiscal benefits to the government, and have increased the costs of services for the poor. There is now clear consensus that the business or industry is not the business of government. In the case where private enterprises operate and provide public utilities policies must ensure that services are unbiased and are available to poor households too, and the process must be managed in a transparent and competitive manner. Tax laws or exemption laws favoring the well-off and undermining the interest of the poor should be avoided.

Savings and capital accumulation driven growth model has been the flavour of the development economists in the 1950s and 1960s. The model identifies the mechanism of economic growth is a very simple function of increasing savings and investment. Bangladesh's growth is still driven by investment (i.e. capital accumulation) which must be financed through domestic savings, fiscal deficits, external resources. Sustaining high growth with adequate domestic and external financing will remain the critical challenge of the Government during the 8th FYP. To sustain 8%+ growth per annum, Bangladesh needs to maintain at least 30%+ gross domestic investment as a percent of GDP. In addition, it would be necessary to maintain solid investment in human capital – public expenditure in health and education – in the order of 5-6% of GDP.

Knowledge based economy presupposes that knowledge and ideas are the key factors of prosperity and economic growth. Capitalization of superior knowledge is considered to be the driving force in stimulating growth in the rapidly spreading digital world and marketplace that can provide a sustainable competitive advantage. Developing countries like Bangladesh have the advantage of leapfrogging in the digital age by importing and adapting the latest technological innovation without making enormous investment in research and development. Nevertheless, the 8th FYP should allocate adequate resources to continue expansion of existing infrastructure for ICT growth, science and technology and research and development.

Trade-led growth can combine both trade and economic policies aiming to speed up the industrialization process of a country. The evolution of globalization and multilateralism created a world economic order that generated vast global markets for goods and services. It created deep elastic markets for goods of developing countries which could then exploit global demand for their growth. What became the new paradigm of export-led growth experienced by East Asian countries in the 1960s through 1980s has now morphed into what can be aptly described as trade-led growth because of the most dynamic phenomenon in 21st century trade – global value chain integration that equally involves import and export. Understandably, this postwar global economic order is now under stress due to rising tendencies of economic nationalism and unilateralism. These anti-globalization forces are still limited to parts of the developed world. Hopefully, there are enough critics of this new trend to stem the tide of deglobalisation bringing in its stead more rational approaches that see the need for reforming the multilateral regime in the 21st century context rather than abandon it to the detriment of the global community. In the Bangladesh context, trade-led growth will remain a window of opportunity during the 8th FYP and beyond. While emphasizing the country's continued participation in the global value chain, e.g. in the RMG sector, efforts should also be geared to enhance intra-regional trade.

Exchange Rate Policy. Another policy consensus that has received wide acceptance in the postwar era is the advantage of flexible over fixed exchange rates. By and large, all economies have essentially abandoned the policy of fixed exchange rate and moved to flexible or floating exchange rates with different degree of flexibility. Evidence is clear that overvalued exchange rates must be discarded by governments at all costs because it destroys the incentive to export, generate a balance of payment crisis over time, and is typically anti-poor because the rich have a much higher propensity to import. Currency overvaluation can dampen domestic production and employment, and can induce consumption and asset bubbles that may be difficult to placate. While the orthodox approach is to manage competitive exchange rates, the more popular policy stance undertaken by governments is to keep exchange rates significantly undervalued in order to make their exports more competitive in the global market. This was the policy stance that supported export-led growth in many East Asian economies and continues to be the policy stance in China. Exports boost

productivity, which exposes domestic producers to competition in the foreign markets. Export growth generates trade surpluses and enables accumulation of foreign currency reserves which can reduce balance of payments vulnerability.

Safety Net and Social Protection Programmes. Strategies in relation to reducing income inequality include safety nets, social funds, microcredit, and targeted cash and in-kind programmes, especially in health and education. The drawback, however, of such safety net programmes are usually related to the extent of influence they have on the poorer population. Not many have access to these programmes, or these programmes are not run in an efficient manner because of a lack of incentive as well as targeting errors. Given how difficult it is to make growth inclusive of all people and the urgent need for a strong and functioning state to implement the pro-poor agenda, emphasis on strengthening state capacity and on expanding its role in selected aspects of the economy should be considered. Further effort in improving governance by strengthening democratic accountability and transparency needs to be put in place by developing nations who are in dire need to eradicate poverty.

Social protection refers to policies and actions which enhance the capacity of poor and vulnerable people to escape from poverty and enable them to better manage risks and shocks. Social protection measures include social insurance, social transfers and minimum labour standards. These labour-facilitating programmes stimulate participation of both men and women in various economic activities and contribute to social cohesion and stability. It helps build human capital, manage risks, promote investment and improve participation in labour markets. Social protection programmes are usually affordable by the masses and the returns from such spending can be made worthwhile if the funds are utilized in providing facilities and opportunities for the less privileged. Employment and social protection are mutually reinforcing. For example, if employment increases in the economy and a larger population has more disposable income to spare, they may spend it on financing social protection. On the other hand, these programmes enhance a workers' employability by increasing their productivity and skills, which in turn will increase the total employment in a region. Relevant strategies and actions are discussed in chapter 14.

Critical role of governance. Considerable research evidence is available on the role of governance in fostering growth. The consensus is that growth is generally pro-poor but it is not always inclusive. The determinants of pro-poor and inclusive growth highlights education, infrastructure improvement, and financial development as the key factors in poverty reduction and inclusive growth. Moreover, to bring forth economic prosperity, economic, political, legal and social institutions play a critical role. All of these institutions need to be backed by sound governance mechanisms so that the spill-over effects of any favourable change is transmitted to the less fortunate as well.

The principal findings and policy recommendations on governance that have strong implications for a developing country like Bangladesh, may be summarized thus:

(i) in general growth is pro-poor: the income of the poorest 20 percent increases with per capita income growth; (ii) globally, growth has not been inclusive; (iii) all features of good governance, especially the control of corruption, are pro-poor, but only two features—government effectiveness and rule of law—promote inclusive growth; (iv) structural factors such as education spending, infrastructure improvement, and financial development are key factors for promoting both poverty reduction and inclusive growth; and

(v) the impact of growth on the income of the poor is nonlinear and declines with the level of corruption, but the impact of growth on the income share of the bottom 20 percent is linear.

Economic growth should be fostered and complemented with reliable and transparent public administration and accountability, better education and labour market laws, so that the distribution of income is non-discriminatory and support a fairer social inclusion. In other words, good governance allows better property rights and business regulations, and ensures effective enforcement of laws by the system. Research also suggests enhancing human capital through health care and education expenditure, infrastructure improvement and financial development were the key factors in bringing down poverty and spurring inclusive growth. Even programmes that deal with infant mortality or HIV/AIDS can render a positive impact on poverty elimination.

2.9 INSTITUTIONAL DIMENSIONS OF PRO-POOR AND INCLUSIVE GROWTH

While the preceding analysis has reviewed some of the key drivers of growth and the approaches to making growth inclusive, setting priorities for Bangladesh economy requires a strengthening of several underlying growth-related institutions. These institutional reforms include:

- Ensuring that the ministries/divisions/institutions responsible for implementing growth strategies (ministries of finance, commerce, planning, NBR and the BB) are organized well, work in coordination and are focused on maintaining macroeconomic stability (i.e. low inflation, low long-term interest rate, internal-external balance, exchange rate stability, low debt/GDP ratio etc.), institutional quality and effective governance, rule of law and favourable investment climate. These will create a level playing field for all economic actors and will foster an enabling environment where all people including the poor, be able to contribute and benefit from the growth process.
- Eliminating corruption and rent seeking behavior through regulatory simplifications, e-procurement, online tax collections and online payments for all government transactions, setting service standards and transparent fee structure for public services and by establishing an online public grievance redressal system with specified response timelines
- Ensuring gender equality by providing women and girls with equal access to education, health care, employment and representation in political and economic decision-making process. Gender equality remains a necessary condition for achieving inclusive growth and to help achieve both equity and efficiency
- Enhancing productivity (TFP) through training and proper technology as the basis for the creation of increased opportunities for employment with special emphasis on the agriculture sector. The emphasis should be on employment in the formal sector to keep pace with the growth of labour force and rural-urban migration. Productivity growth has the potential to lift wages of those employed and the returns to the self- employed;
- Providing increased incentives, opportunities and capabilities for employment generation and self-employment. Self-employment can be a viable alternative to employment. Employment growth generates new jobs and income for the individual from wages and self-employment;
- Enforcing equality of opportunity in terms of access to markets, resources, finance and unbiased regulatory environment for businesses and individuals. Also, increased access to land, labour and capital markets will help encourage new entrepreneurial drives;

- Promoting efficient and renewable energy which will enable increased access to energy creating new business opportunities and employment. Renewable energy impacts on poverty reduction through increased access to energy which will enable the formation of new businesses and job opportunities for the poor supplemented by financial inclusion.
- Reducing asset inequality (i.e. land and education) including redistribution of income through taxation (tax/GDP ratio is one of the lowest in the world) and transfer payments (if considered economically and socially desirable) and the promotion of environmental sustainability (poor heavily depend on natural resources for their livelihood). The poor's lack of asset is both cause and a consequence of poverty. Also, growth and environmental sustainability complement each other;
- Pursuing more equitable spread of education and training, especially in rural areas (the correlation between poverty and education is an acknowledged fact) will help expand human capital base and will also act as a mitigating factor in countering technical unemployment. Human capital as embodied in the accumulation knowledge, skills, talents, experience wisdom and intellectual attributes can spearhead growth through innovation and technological advances. In this context the quality of education is also of utmost importance, in particular the quality of educators;
- Resisting trade protection pressures from vested business groups benefiting from high-cost and inefficient industrialization and ensuring employment-intensive trade-led (export-led) manufacturing growth based on the nation's comparative advantage. Reducing trade barriers and increased openness has positive impact on GDP by promoting competition. Also, trade tends to alter product and factor prices causing wages to rise in labour-intensive export-oriented manufacturing which largely employ unskilled or semi -skilled labour;
- Encouraging and promoting participation in global value chains (GVCs) with supportive policies for improved infrastructure, strengthening human capital (education and training are relevant in this regard) and incentivise research and development as knowledge and technology spill over can enhance growth benefits of trade;
- Bringing about careful flexibility in labour markets with adequate income, working conditions, job training and safety safeguards. These can enhance employment in the formal sector while measures to be adopted to mitigate job insecurity and poor working conditions in the informal sector (through social security and legislative measures). Quite often cheap labour can turn out to be very expensive labour. In the case of job training there is scope for private-public partnership;
- Removing structural, institutional and systemic barriers for wider participation by socially and economically disadvantaged segment of the population to participate in and benefit from growth.

2.10 GOING FORWARD IN THE AGE OF COVID-19

Part of the onslaught emerging from the COVID-19 pandemic crisis is external and beyond our control. Predictably, the COVID-19 crisis will result in weaker demand for exports stemming from the slowdown of developed economies in Europe and North America– Bangladesh's principal export destinations. This will contribute to a weaker outlook for growth and employment exacerbating the existing income inequality. But it is the rising protectionism in some advanced economies like the US and the collapsing multilateralism in trade that pose a much serious long-term challenge to Bangladesh.

As a significant beneficiary of the global multilateral regime, Bangladesh will have to play a much more effective role in the movement for reforms and sustainability of multilateralism and globalization in the years ahead as the world economy gradually recovers from the aftermath of the COVID-19 pandemic. Having attained greater integration with the world economy in the past 25 years, it would not be in Bangladesh's interest to revert to inward-looking policies. Neither growth nor its inclusiveness will be better served by the Bangladesh economy turning more restrictive to trade in the future.

As the Growth Commission asserts, the open world economy offers a deep elastic market for the exports of developing economies, adding further that growth strategies that rely exclusively on domestic demand eventually reach their limits. Success in expanding manufacturing exports based on our comparative advantage in labor-intensive production still promises the way to shared prosperity in the future. Bangladesh would be ill advised to walk away from this boundless opportunity for attaining its long-term vision of becoming an Upper Middle- Income Country by 2031 and a High Income Country by 2041. The COVID-19 crisis may have strengthened our resolve to achieve greater heights in development.

CHAPTER 3

MEDIUM TERM MACROECONOMIC FRAMEWORK

The macroeconomic framework underpinning the Eighth Five Year Plan (8FYP) has been formulated taking into account the development vision embedded in the PP2041 and the lessons learned from the review of progress—in terms of policy implementation and outcomes - under the Seventh Plan. It also incorporates the effects of the global COVID-19 pandemic that has already severely and adversely impacted the global economy and Bangladesh. As noted in Chapter 1, while significant progress has been made in accelerating GDP growth, reducing inflation and improving social indicators including reduction of poverty, long-term macroeconomic challenges remained even in a pre-COVID-19 environment. The adverse effects of COVID-19 have hurt the macro economy, lowered GDP growth and created a spike in short-term poverty. Addressing and reversing this external shock and restoring the growth momentum are among the most important development challenge facing Bangladesh.

Since the COVID-19 pandemic is still ongoing and the end date is not yet known, the full impact of COVID-19 on core macroeconomic variables in the base year of FY2020 and the carryover to FY2021 is beset with considerable uncertainties, making macroeconomic projections in this uncertain environment a tough policy challenge. The 8FYP uses the available evidence of the impact in Bangladesh so far, uses the best available projections of global economic outlook prepared by leading international institutions, and makes best possible assumptions about the likely impact moving forward drawing on the analysis of leading national research institutions. Drawing on these data and assumptions, the 8FYP projections are based on multi-sector Computable General Equilibrium (CGE) model and a consistent macroeconomic framework covering broad sectoral composition of growth, savings and investment, medium-term fiscal strategy and balance of payments projections consistent with debt sustainability and external sector viability. Every effort is made to be consistent with the macroeconomic framework underlying the FY2021 Budget. However, since the 8FYP is based on a CGE model that has detailed production account and it explicitly links the production accounts to the financial accounts, the projected numbers may be different. Additionally, the 8FYP macroeconomic framework is based on actual outcomes data for FY20 that were not available when the FY2021 Budget was prepared.

3.1 PROJECTED GROWTH PATH UNDER THE EIGHTH PLAN

The projected growth path for the 8FYP is shown in Table 3.1. The sectoral composition of GDP is shown in Table 3.2. The strategy for achieving the 8th Plan GDP growth and employment targets along with the underlying policies and reforms and structural transformation of the economy were discussed in Chapter 2. The main point to note is that the projections assume that the government will ensure a strong recovery of GDP growth so as to fully restore the current COVID-19 stricken GDP growth path to the PP2041 growth path by FY24 through implementation of various stimulus packages and policies discussed in chapters 1 and 2. This growth acceleration is led by an export-oriented manufacturing sector and inflow of remittances. Although agriculture and services will continue to play the strong supporting roles as in the 7FYP, the growing of share of manufacturing and industrial sector in total GDP shows its dominant role in spurring growth. This sectoral composition is necessary to create adequate number of good domestic jobs.

Table 3.1: Macroeconomic Scenario of the 8FYP

Macro Indicator	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Growth: Real GDP (%)	8.15	5.24	7.40	7.70	8.00	8.32	8.51
Real GDP (Taka billion)	11058	11637	12,498	13,460	14,537	15,747	17,087
Gross National Income ($ billion)	316	346	376	415	460	510	566
GNI Per Capita ($)	1909	2064	2170	2345	2555	2790	3059
CPI Inflation (%)	5.48	5.65	5.10	4.90	4.80	4.70	4.60
Gross Investment (as % of GDP)	31.57	31.75	32.56	32.73	34.00	34.94	36.59
Private Investment (as % of GDP)	23.54	23.63	24.41	24.53	25.32	26.08	27.35
--of which FDI (% of GDP)	0.87	0.54	0.83	1.35	1.90	2.50	3.00
Public Investment (as % of GDP)	8.03	8.12	8.15	8.20	8.68	8.86	9.24
National Savings (as % of GDP)	29.50	30.11	31.43	31.17	32.29	33.03	34.42
Consumption (as % of GDP)	74.98	74.69	74.31	74.12	72.86	71.97	70.41

Source: BBS and GED Projections

Table 3.2: Sectoral Growth Projection for the 8FYP

Sectors	FY19 (Actual)	FY20 (Actual)	FY21	FY22	FY23	FY24	FY25
	Growth Rate (Percent)						
Agriculture	3.92	3.11	3.47	3.83	4.10	4.00	3.90
Industry	12.67	6.48	10.29	10.59	10.79	11.20	11.90
o/w Manufacturing	14.20	5.84	10.73	10.99	11.24	12.00	12.60
Services	6.78	5.32	6.74	6.95	7.25	7.30	7.35
GDP	8.15	5.24	7.40	7.70	8.00	8.32	8.51
	Share as % of GDP (Constant prices)						
Agriculture	13.65	13.35	12.84	12.36	11.89	11.16	10.56
Industry	35.00	35.36	36.25	37.17	38.07	40.37	41.86
o/w Manufacturing	24.08	24.18	24.89	25.61	26.33	28.75	30.23
Services	51.35	51.30	50.91	50.47	50.04	48.47	47.58
Source: BBS and GED Projections							

The contributions of growing labour force and productivity improvements will be important elements of the growth accounting. National Productivity Organisation under Ministry of Industries has prepared "Bangladesh National Productivity Master plan FY2021- FY2030". It has set an average productivity growth rate of 5.6% for the next ten years. A major challenge on the growth front is to increase the rate of investment from 31.8% of GDP in FY20 to around 37.0 % of GDP by the end of the Plan in FY25. This is a massive policy challenge. As noted in Chapter 1, Bangladesh production structure is undergoing growing capital intensity owing to the adoption of modern production technology. As Bangladesh continues to upgrade its production technology economy wide to increase labour productivity and competitiveness, capital intensity of production will go up requiring higher levels of investment to accelerate growth. This pattern is consistent with the experience of all UMICs like China, Malaysia and Thailand who saw substantial increases in the incremental capital output ratios, and therefore the investment rates, as they transited from lower- middle income to higher middle- income countries

Both public and private investment rate will need to increase. Additionally, the efficiency of investment will be important. For the private sector monetary, fiscal, exchange rate, trade and investment climate reforms are important determinants of the quality and efficiency of private investment. In particular, policies must support the elimination of ant-export bias of trade policy and improve incentives for export-oriented manufacturing. The efficiency of private investment will also depend upon the efficiency of public investment. As in the past, much of the public sector investment will need to be directed to major infrastructure projects in power, energy and transport. Additionally, water investments, as advocated in the BDP2100, and investments in education, training and health care would be critical to strengthen the resilience of agriculture and the rural economy, fight COVID-19 and build up human capital.

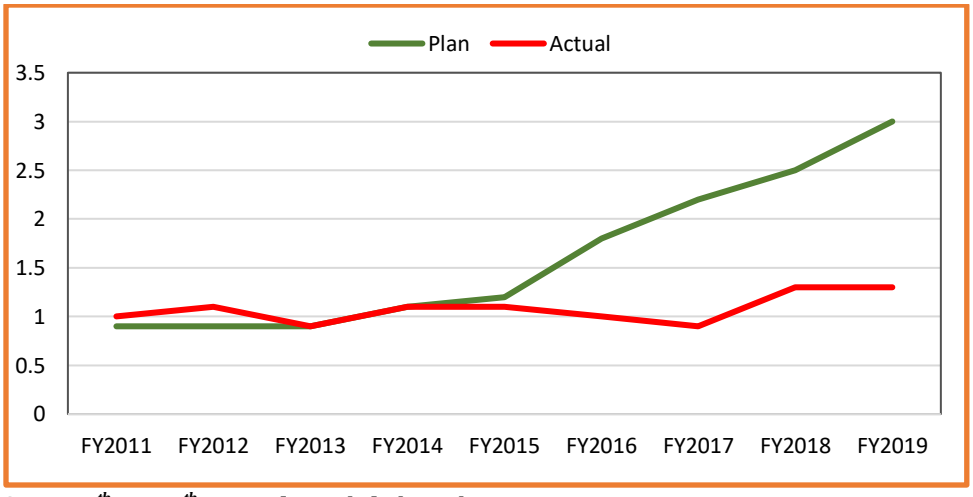
3.2 INVESTMENT, SAVINGS AND FISCAL POLICY

National savings will continue to be the main source of investment financing, although foreign direct investment is projected to play a bigger role in the 8FYP. Some 27% of the projected 9.1 percentage points increase in private investment will come from FDI, since the growth in national savings alone will not be sufficient to meet the required investment level. Increased FDI is also necessary to acquire new technology, improve skills and enhance export markets.

3.2.1 Mobilizing Domestic and Foreign Private Investment

Much of the growth of additional investment in relation to GDP is projected to come from the private sector. The deregulation process that took place in 1980s and 1990s continued during the 6FYP and the 7FYP but at a slower pace. The main focus of these reforms has been to streamline the regulatory environment for FDI and reduce the transaction costs by reforming the Bangladesh Investment Board into a one-stop shop for managing all clearance requirements and facilitating FDI. The establishment of the Free-Trade Zones (FTZ) and Special Economic Zones (SEZs) have sought to address the important constraint emerging from serious land shortage and the associated complex land acquisition process. These institutional reforms have contributed to the increases in FDI flows during FY18 and FY19. Despite this progress, the private investment rate fell short of the 7FYP targets. The shortfall was particularly serious for FDI (Figure 3.1)).

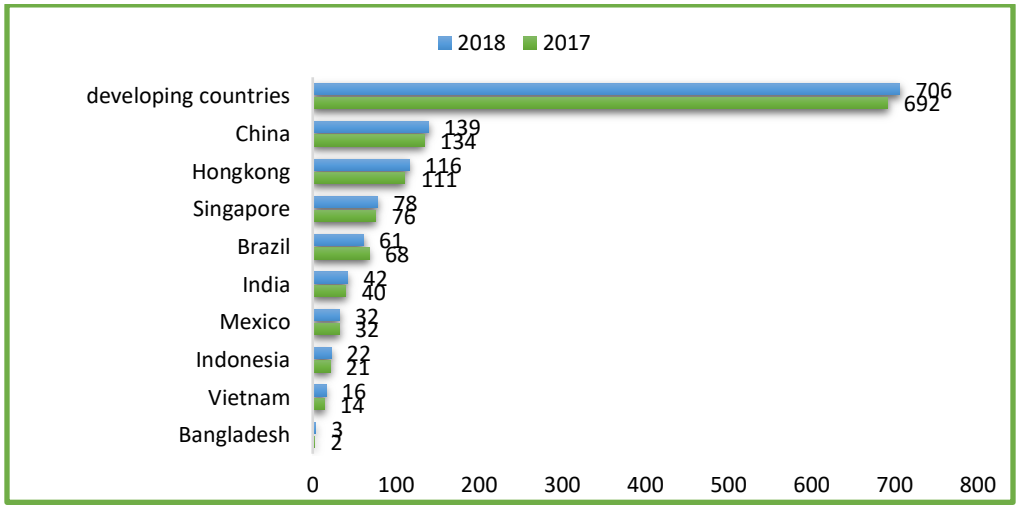
Figure 3.1: Planned Versus Actual FDI Inflows (% of GDP)



Source: 6th FYP, 7thFYP and Bangladesh Bank

Importantly, total FDI flows in Bangladesh are relatively insignificant in relation to total supply to developing countries. In 2018 total global total FDI inflows were estimated at 1.3 trillion US dollars, of which developing countries received $706 billion (54%). The largest recipients among developing countries are shown in Figure 3.2. As compared with $3 billion FDI inflow in Bangladesh in 2018, FDI inflows amounted to $139 billion in China, $42 billion in India, $22 billion in Indonesia and $16 billion in Vietnam. These numbers easily dwarf the $3-4 billion inflow in Bangladesh. The negligible share of FDI inflows in Bangladesh compared to the total inflows into developing countries suggests that the foreign investment potential is huge. With concerted efforts to improve the investment climate, Bangladesh can claim a larger share of the foreign investment pie. This needs to be a major investment financing target for the 8FYP.

Figure 3.2: FDI Inflows in Selected Countries



Source: UNCTAD 2019

The strategy for mobilizing domestic and foreign private investment for the 8FYP will focus on a number of policies including: prudent macroeconomic management to ensure that inflation is contained, the exchange rate is stable but competitive, private sector credit supply is adequate with reasonable cost of borrowing, essential infrastructure such as power, transport services are available through efficient public sector investments, continued emphasis will be placed on the supply of serviced land through the EPZs and SEZs, trade logistic costs are lowered through ICT based and simplified clearance procedures and expansion of port capacities, and most importantly there will be an overhaul in the investment regulatory regime. The aim would be to substantially lower the cost of doing business as reflected in the World Banks Doing Business Indicators. Progress was already made in FY19. This progress will be continued through building up of the capacity of the Bangladesh Investment Development Authority (BIDA) so that it can truly function as one stop shop for all investment approvals. BIDA will also be geared up to do effective investment promotion activities based on sound research. Strong effort will be made to simplify the regulatory regime to minimize the need for clearances and where clearances are necessary these will be streamlined and mostly delivered online using ICT solutions. Service standards will be established for clearances, especially property registration and getting electricity connection, which have been a severe constraint to improved investment climate. Areas where prudent regulations ae needed, such as bankruptcy law and contract enforcement, will be strengthened and made more effective through the appropriate legal measures that are based on good practice business experiences. The foreign currency regime will be made

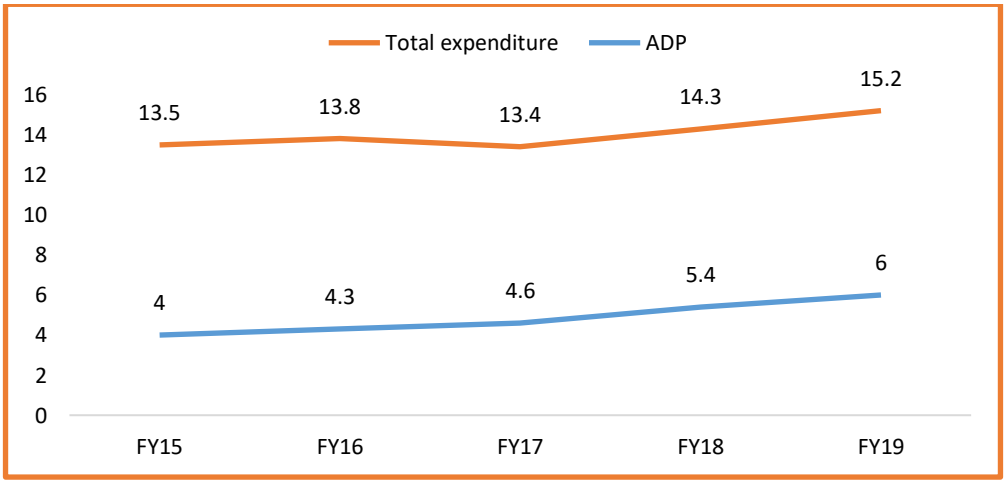
business friendly and supportive of domestic and foreign private investment. The tax payments procedures will be simplified and made less burdensome through a major overhaul of the tax system that is a part of the government's tax modernization plan under the PP2041 fiscal policy framework.

3.2.2 Strengthening Public Investment Effort: Critical Role of Fiscal Policy Reforms

Since the Sixth Plan the government has been successful in reversing the declining trend in public sector investment. This was possible owing the implementation of some important tax reforms that allowed the tax to GDP ratio to grow from 8% of GDP in FY11 to 9.5% in FY2015. Although considerably below the 6FYP target, it was nevertheless an important milestone. This progress in tax revenue mobilization faltered in the 7FYP. Instead of growing, the tax to GDP ratio actually declined to 7.9% of GDP in FY20. The weak tax performance has become a major development constraint. In recognition of this, the Perspective Plan 2041 has developed a long-term fiscal target and associated fiscal policy framework. The 8FYP medium-term fiscal policy framework is based on the implementation of PP2041 fiscal policy framework. Tax and fiscal policy issues are discussed in greater detail in Chapter 5 in the context of the financing of the public investment program of the 8FYP.

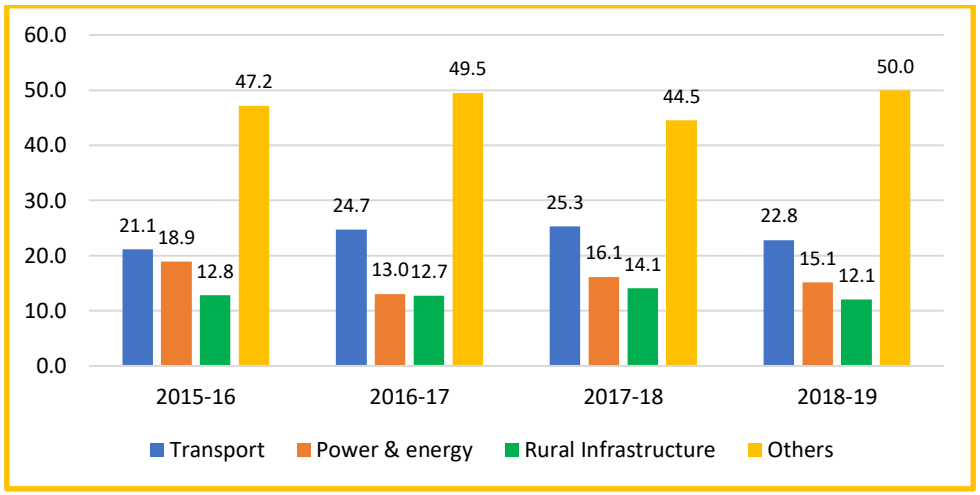
Despite the revenue constraints, the 7FYP continued to provide increasingly greater allocation to the Annual Development Program (ADP) to boost the public investment program (Figure 3.3). Although revenue shortage required some cutbacks, ADP programmes continued to increase as share of GDP. In terms of budget share, ADP allocation increased from 30% of total expenditures in F15 to 39% in FY19. Consistent with the growing demand for infrastructure to support accelerated growth, much of the ADP was focused on the completion of large transformational projects in power, energy and transport infrastructure. Strong emphasis was also placed on rural infrastructure (rural development and water resources). Thus, infrastructure development including implementation of mega projects took up more than 50% of the total ADP during the 7FYP. Most allocation was concentrated on transport with a significant number of transformational projects including the Padma Bridge. This strong focus on infrastructure was aimed at pushing rapid growth and was an important contributor to the acceleration of growth during the first 4 years of the 7FYP.

Figure 3.3: ADP Allocation in Relation to Total Expenditure (% of GDP)



Source: Ministry of Finance

Figure 3.4: Public Investment Priorities in F7FYP



Source: Ministry of Finance

The public investment priority to infrastructure is well placed, but the need to mitigate the adverse impact of COVID-19 will require some important re-prioritization of public investment. The focus will need to shift strongly towards building human capital through much larger investments in health care, education and training, social security and towards increasing the resilience of the rural economy by strengthening the implementation of the BDP2100. As in the case of transport during the 7FYP, the BDP2100 implementation will require a strong focus on several multi-year and transformational water management projects relating to flood control, river erosion management, irrigation, and environmental protection.

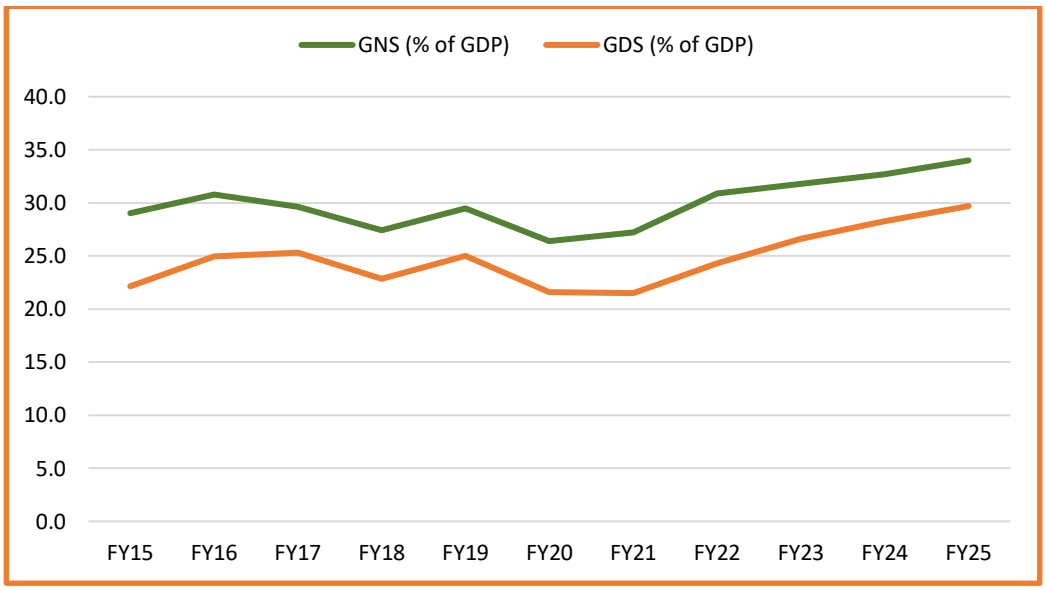
The emphasis on transport and power will continue. But on view of constrained ADP resources and the need to reprioritize ADP to address the COVID-19 related risk mitigation, much stronger effort will be needed to channel PPP-type funding into power and transport. The power sector already has a good track of attracting private investments, the PPP effort will place emphasis on transport network development. This will require a complete overhaul of the PPP institutional arrangements with recruitment of internationally experienced PPP experts who have proven capacity to mobilize foreign private investments in PPP-type infrastructure supply. Direct ADP funding in transport and power and energy will shrink somewhat as percent of total ADP but will continue to grow in real terms. The main emphasis will be the timely completion of all ongoing transformational transport infrastructure projects. Public investment priorities and resource allocations are discussed in detail in Chapter 5.

3.2.3. Preserving the National Savings Effort

Bangladesh traditionally enjoys a respectable level of national savings rate in relation to GDP. The national savings rate was 29.5% of GDP in FY19. This high national savings rate is primarily attributable to high domestic savings rate augmented by generous inflow of workers' remittances averaging more than 5.7% of GDP during the Seventh Plan period. Much of the financing of the projected increase in the national investment rate will come from national savings rate, which is projected to grow from 29.5% in FY19 to 34.4 by FY25.

Even so, it will be a challenging task for national savings to increase by 4.9 percentage points between FY19 and FY25. Remittance inflows as a share of GDP has been falling since FY13. Even after post - COVID-19 recovery, remittances are likely to continue to fall as a share of GDP. So, the main source of increase in projected national savings rate is the domestic savings rate. As far as private savings rate is concerned, higher GDP growth and improved investment climate leading to higher rate of return on domestic investment would help increase domestic savings. Government will encourage financial savings by offering real positive interest rates to the savers. A part of the increased national savings would also come from the public sector through increased revenue mobilization efforts. Based on the implementation of the PP2041 Fiscal Framework, government savings rate is projected to increase from about 0.7% of GDP in FY19 to 2% of GDP by FY25. The critical role of domestic resource mobilization for the successful implementation of the 8FYP investment program is obvious.

Figure 3.5: National Savings Trend and Outlook for 8FYP



Source: BBS and Seventh Plan Projections

3.3 BALANCE OF PAYMENTS AND EXCHANGE RATE MANAGEMENT

Bangladesh's macroeconomic stability is underpinned by its strong external balance of payments position. It recorded external current account surpluses during most of the Sixth Plan period that was also reflected in a rapid build-up of foreign exchange reserves of Bangladesh Bank. Even before COVID-19, the BOP performance weakened somewhat during the 7FYP starting in FY17 as export growth faltered and the rate of expansion of remittances slowed down.

The RMG export revolution brought in tremendous value to Bangladesh in terms of export earnings, income and employment. It brought in stability to the Bangladesh BOP, allowing expansion of imports to finance development without creating undue external indebtedness or destabilizing the exchange rate. The success of RMG however was not repeated in other export activities. So, over time, the share of RMG in export earnings grew and exposed the economy to the vagaries of dependency on a single export basket. Following substantial increase in the total global RMG market, RMG export growths have become much more

competitive. Further market share gains have become difficult and RMG export growth in recent years have fallen. As a result, total exports grew by only 6.3% during the first 4 years of the 7FYP as compared with a target of 10% growth (Table 3.3). COVID-19 brought in further difficulties as exports declining to $33.7 billion in FY20, down from $39.6 billion in FY19.

The COVID-19 related export decline is expected to be recovered as global recover happens. But the disappointment reflected in export performance in Table 3.4 is that even with many difficulties RMG maintained a respectable growth rate of 7.5% in the first four years of the 7FYP but non-RMG export did not grow as expected when the full four years considered. They fluctuated intermittently between positive and negative growth showing no predictability or pattern of performance. This needs to be tackled with a strong export growth strategy based on a diversified export base. The 8FYP export strategy will draw on the findings of the recently completed study on Graduation for LDC that provides a comprehensive diagnosis of what constraints export diversification and policy and institutional reforms needed to diversify the export base and increase exports. The implementation of the policy package of the LDC Graduation Study will also support the faster pace of recovery of the export market lost from COVID-19.

Table 3.3: Export Performance in the Seventh Plan (million US$)

	Jute & Jute Goods	Leather	Footwear	Frozen Food	Others	Non-RMG Total	RMG	Total Exports
FY 15	868.5	397.5	673.3	568	3077.6	5717.5	25491.4	31208.9
FY 16	919.6	277.9	714	535.8	1582.9	6163.0	28094.2	34257.2
FY 17	962.4	232.6	777.8	526.5	1770.5	6685.3	28149.8	34835.1
FY 18	1037.8	173	809.7	483	1277.3	6053.5	30614.7	36668.2
FY 19	906.85	411.9	879.41	500.4	862.3	5672.9	34133.3	39806.2
Growth Rate (%)								
FY 15	5.3	-21.4	22.4	-11	0.9	0.4	4.1	3.4
FY 16	5.9	-30.1	6.0	-5.7	-48.6	7.8	10.2	9.8
FY 17	4.7	-16.3	8.9	-1.7	11.9	8.5	0.2	1.7
FY 18	7.8	-25.6	4.1	-8.3	-27.9	-9.5	8.8	5.3
FY 19	-12.6	138.1	8.6	3.6	-32.5	-6.3	11.5	8.6

Source: Export Promotion Bureau

As in the past, RMG sector will continue to lead the export growth strategy under the 8FYP. The envisaged US$ 23.5 billion increase in exports over the Plan period is underpinned by continued strong performance of RMG exports. This will require massive amounts of investment in this sector along with investment in growth supporting infrastructure like power/electricity, land for setting up industries, transport, port etc. The other potential export activities include leather, footwear, light engineering (bicycle and electronic products), Information Technology (IT), home textiles, agricultural and food processing, pharmaceuticals and shipbuilding have good potentials and are expected to expand rapidly under the 8th Plan. The government will address the anti-export bias of trade policy by reducing trade protection and will provide duty free access to industrial inputs and capital machineries along the lines offered to the RMG sector. FDI in these sectors will be critical for increased investment, greater and easier market access, and transfer of technology and management practices. FDI will also allow Bangladesh to enter into the intermediate goods export market and link Bangladesh with Asian value chain. In order to facilitate FDI in the traditional and new sectors, the government is accelerating the process of setting up Special Economic Zones under both

public and private sector initiatives. It also plans to hand over SEZs to investors exclusively from Japan, China, India and other countries in order to accelerate investment from those countries.

Import payments are projected to rise in line with the growth in real GDP and the envisaged export growth. Overall import elasticity is expected to be about 0.9 with respect to GDP, broadly in line with past pattern, and taking into account the higher imports under back-to-back arrangements in line with continued buoyant RMG and other exports. The massive increase in investment envisaged under the Plan—supported by FDI and public sector infrastructure investment—would also tend to increase import payments. The sharp drop in petroleum prices in FY20, and the softening of non-fuel commodity prices globally would also help contain import payments. The projected import growth will address critical capacity constraints in the power, transport, and water sectors, along with capital machineries and industrial raw materials for industrial sector expansion.

The summary projected BoP account is shown in Table 3.4. Although exports and imports are projected to grow at similar rates on average, because of the higher base for imports (relative to exports) in dollar terms, the external trade balance will continue to widen in dollar terms over the Plan period. However, the trade balance will remain fairly stable in the range of 5-6% of GDP and sustainable given the level of remittance inflows at about 4% of GDP. The services and income account deficits will widen due to growing payments associated with shipping, air travels, health care and educational expenses incurred by Bangladeshis, and debt service and other transfers associated with foreign debt (public and private) and remitting of income from FDI and portfolio investment. Reflecting these developments, the external current account will experience a modest deficit rising to 2.4% of GDP by FY2025 of GDP. This level of current account deficit is justifiable for a developing country like Bangladesh given the growing capital and import intensity of investment and the general import demand associated with the higher real economic growth.

The modest deficit in the current account balance notwithstanding, the overall BOP position should remain comfortable. In terms of financing, in the initial years, MLT loans will remain the most important sources. The composition between the net long-term concessional foreign borrowing (foreign aid) and other long-term borrowing may change depending on government's ability to utilize the new aid commitments and the existing pipeline and its willingness to borrow from the international capital market by issuing sovereign bonds. Bangladesh's current sovereign credit ratings with stable outlook should help the government to access international capital market if it decides to do so. A major structural change in BoP financing is the envisaged role of FDI inflows as an important source of investment financing. FDI inflows will assume a major role over time, growing up to 3% of GDP by FY25. This increase in FDI is a strategic policy objective to boost private investment in support of higher growth and exports. The comfortable balance of payments situation converts into continued build-up of foreign currency reserves that is projected to grow to over 9 months of import cover by FY2025. The reserve cover also gives a cushion for sustained GDP growth and investment should there be any unanticipated shortfall in exports or remittance earnings.

Table 3.4: Summary of Balance of Payments during the 8FYP

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		(Projection)				
BOP Components:	(In Millions of USD)						
Trade balance	**-15835**	**-17017**	**-18005**	**-19693**	**-21782**	**-24361**	**-27545**
Export f.o.b. (including EPZ)	39604	**33674**	37755	41643	45995	50870	56339
Import f.o.b (including EPZ)	-55439	-50691	-55760	-61336	-67776	-75232	-83883
Services	**-3177**	**-2987**	**-3044**	**-3348**	**-3699**	**-4106**	**-4578**
Receipts	7153	6770	7551	8155	8808	9512	10273
Payments	-10330	-9757	-10594	-11503	-12507	-13618	-14852
Income	**-2993**	**-2776**	**-3201**	**-3489**	**-3803**	**-4145**	**-4518**
Receipts	192	172	189	208	230	255	285
Payments	-3185	-2948	-3390	-3739	-4130	-4568	-5059
Current transfers	**16903**	**18775**	**20261**	**20477**	**21944**	**23513**	**25192**
Official transfers	41	19	50	60	70	80	90
Private transfers	16862	18756	20211	20417	21874	23433	25102
Of which: Workers' remittances	16196	18014	19455	20817	22274	23833	25502
Current Account Balance	**-5102**	**-4005**	**-3989**	**-6053**	**-7340**	**-9100**	**-11450**
Financial & Capital Accounts	**6146**	**8208**	**9611**	**10970**	**14503**	**18859**	**23676**
Capital account	**239**	**256**	**250**	**280**	**310**	**340**	**370**
Capital transfers	239	256	250	280	310	340	370
Financial Account	**5907**	**7952**	**9361**	**10690**	**14193**	**18519**	**23306**
Foreign Direct Investment	2628	1804	2948	5239	8141	11859	15808
Portfolio Investment (Net)	171	276	300	340	380	420	460
Net Aid Loans	5061	5739	8474	7582	8223	8871	9748
Loan Disbursements	6263	6996	9886	9100	9971	11005	12120
Debt Amortization	-1202	-1257	-1412	-1517	-1748	-2135	-2371
Other Long-term Loans (net)	302	438	350	320	320	320	320
Other Short-term Loans (net)	272	931	300	300	300	300	300
Trade Credits (net)	-2716	-966	-2211	-2311	-2411	-2511	-2611
Commercial Banks (net)	189	-270	-800	-780	-760	-740	-720
Errors and Omissions	-865	296	0	0	0	0	0
Overall Balance	**179**	**4499**	**5622**	**4917**	**7163**	**9758**	**12226**
	(Growth rate or Otherwise Indicated)						
Export growth	9.15	-14.97	12.12	10.30	10.45	10.60	10.75
Import growth	1.79	-8.56	10.00	10.00	10.50	11.00	11.50
Service receipt growth	57.56	-5.35	14.99	10.30	10.45	10.60	10.75
Service Payment growth	18.18	-5.55	10.00	10.00	10.50	11.00	11.50
Income receipt growth	13.33	-7.25	12.30	9.00	9.00	9.00	9.00
Remittance growth	8.10	11.22	8.00	7.00	7.00	7.00	7.00
Memorandum Items:							
Real GDP growth	8.15	5.24	7.40	7.70	8.00	8.32	8.51
Inflation rate	5.48	5.65	5.10	4.90	4.80	4.70	4.60
Nominal GDP growth	12.98	9.99	12.88	12.98	13.18	13.41	13.50
Reserves (months of imports of goods and services)	6.5	7.4	7.7	7.8	8.2	8.7	9.3

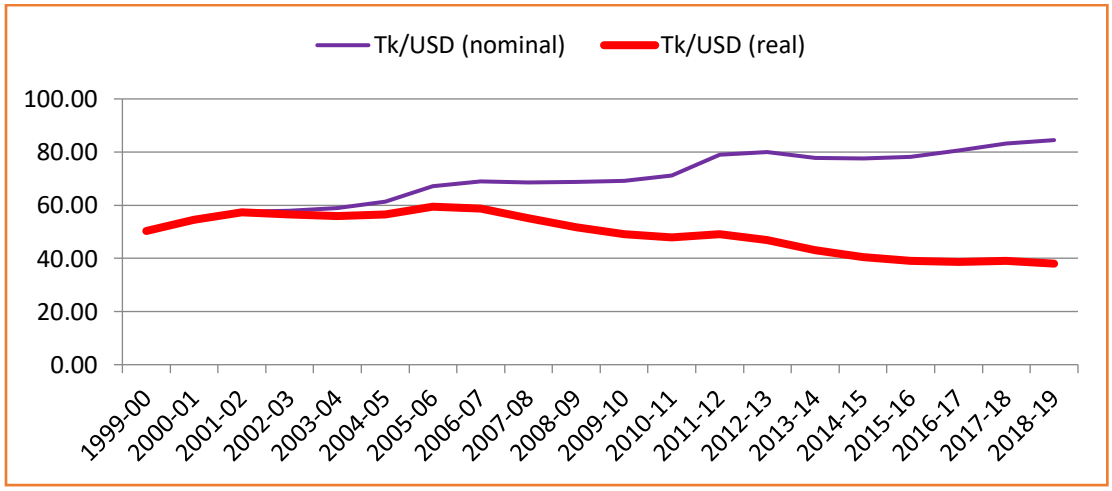
Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		(Projection)				
Nominal GDP (In billion US$)	303	330	353	388	428	474	527
Exchange rate (BDT)	84.00	84.70	89.40	91.90	94.20	96.50	98.60
Inflation (Trading Partners) %	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Export as (%) of GDP	15.45	12.25	12.83	12.83	12.79	12.73	12.64
Import as (%) of GDP	21.73	18.31	18.79	18.77	18.74	18.73	18.74
Remittance as (%) of GDP	5.35	5.46	5.51	5.36	5.20	5.02	4.84
Current Account Balance as (%) of GDP	-1.69	-1.21	-1.13	-1.56	-1.71	-1.92	-2.17
FDI as (%) of GDP	0.87	0.54	0.83	1.35	1.90	2.50	3.00
Gross MLT as (%) of GDP	1.76	2.27	2.80	2.35	2.33	2.32	2.30
Trade credit net % of GDP	-0.9	-0.3	-0.6	-0.6	-0.6	-0.5	-0.5

Source: Bangladesh Bank, and GED Projections

3.4 EXCHANGE RATE POLICY

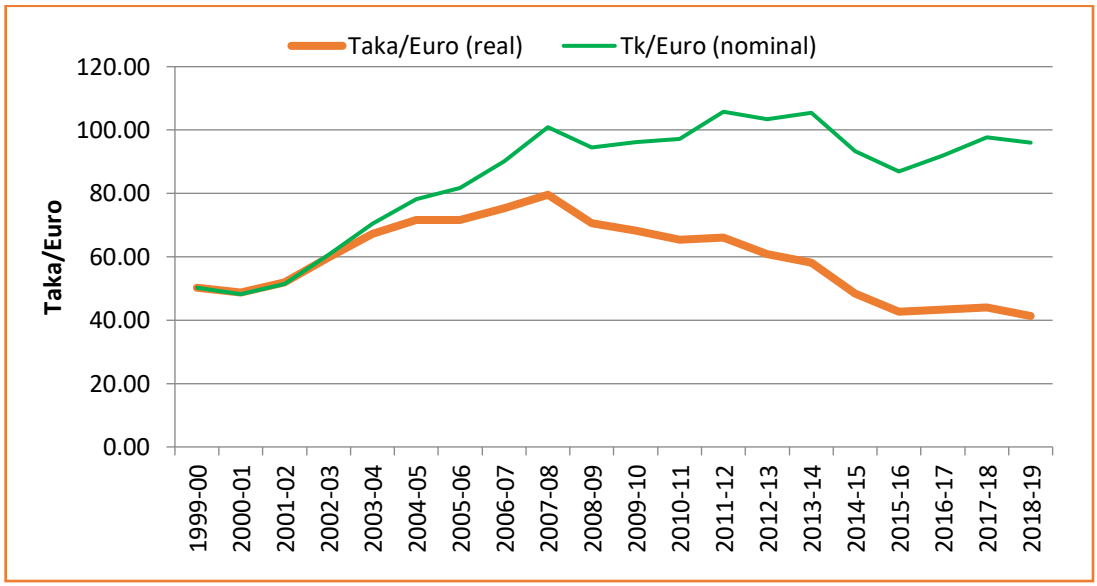
Prudent management of exchange rate and ensuring exchange rate stability are critical for BOP sustainability and macroeconomic stability. Bangladesh has traditionally managed its exchange rate flexibly balancing the need for export incentives with price stability and predictability of investments. Yet, the exchange rate has been appreciating in real terms during most of the 7FYP that has hurt exports (Figures 3.6 and 3.7) The Taka appreciated by 36% in real terms against the US dollar over the periods 2005-06 and 2018-19 (Figure 3.6). The Euro appreciated by 48% in real terms between FY08 and FY19 (Figure 3.7). This extra appreciation against the Euro reflects the fact that Taka is loosely pegged with the US dollar, which has strengthened significantly against Euro. The resultant appreciation of the dollar also transmitted into an additional source of taka appreciation against the Euro. These appreciations of the Taka in real terms against the two dominant global currencies where Bangladesh conducts much of its export trade has hurt export prospects and stemmed the diversification of exports.

Figure 3.6: Bangladesh-US Dollar nominal and real exchange rate trends



Source: GED estimates

Figure 3.7: Bangladesh Taka-Euro Nominal and Real Exchange Rate Trends



Source: GED estimates

The 8FYP is committed to improving the exchange rare management to bring in greater flexibility to correct for the past appreciation of the real exchange rate and then make concerted efforts to avoid real exchange appreciation over the coming years. This flexible management of the exchange rate is essential to support the diversification of exports. Care will be taken that this flexibility is consistent with the inflation targets.

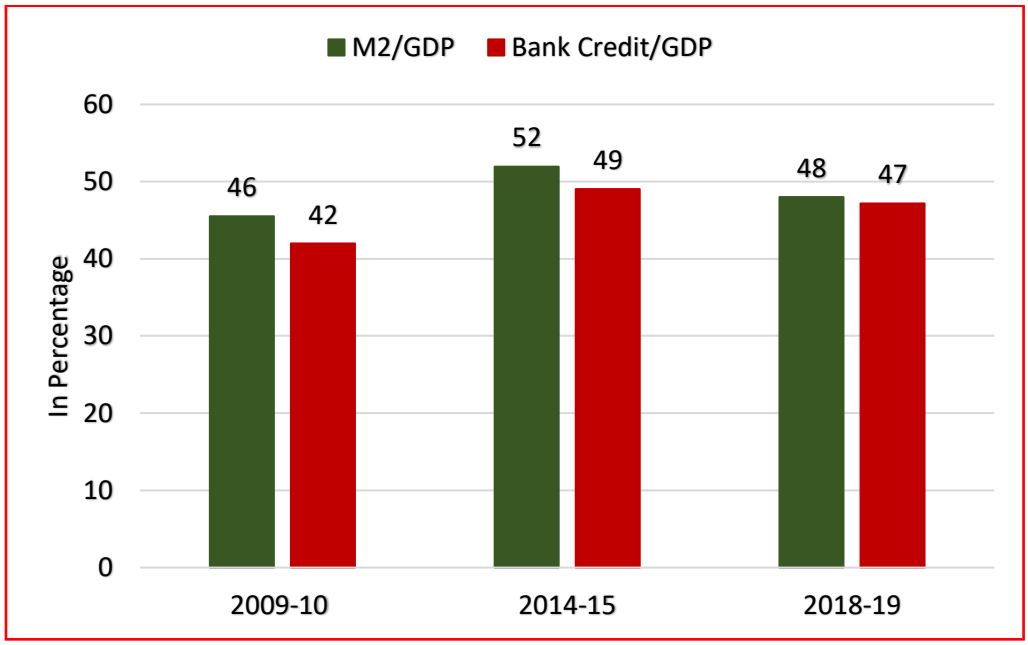
3.5 FINANCIAL SERVICE SECTOR PERFORMANCE AND MONETARY MANAGEMENT BY BANGLADESH BANK

3.5.1 Banking Sector Performance

In terms of its banking sector performance, Bangladesh faced major hurdles and setbacks during the 7FYP. Banking reforms which started in early 1980s, but gathered momentum in the 1990s and 2000s, brought about positive changes in most of the indicators of banking performance. Much of the serious reforms that impacted on the quality and health of the banking sector happened after 1999. Banking sector faced some hurdles in the 6FYP but overall performance in terms financial depth improved. Thus, M2/GDP ratio and Bank credit to GDP ratio, the two commonly used measure of the depth of a banking sector both showed remarkable improvements during the 6FYP (Figure 3.8). In the absence of a well-developed capital market, the growth in private credit has played a major role in supporting the expansion of the private sector in Bangladesh.

The banking performance was less satisfactory during the 7FYP. Both indicators of banking sector depth came down, suggesting a relative slowdown of financial intermediation through the banking sector (Figure 3.8). Bangladesh is still behind most regional comparators, except Pakistan. Bangladesh lags behind India in terms of financial deepening and well behind countries like China and Vietnam (Table 3.5).

Figure 3.8: Indicators of Growth of Banking Activities



Source: Bangladesh Bank

Table 3.5: Indicators of Banking Activities for Selected Countries (2018)

Country	M2/GDP	Bank Credit/ GDP
Bangladesh	64.3	46.8
China	199.1	161.1
India	73.7	50.0
Pakistan	58.0	18.8
Vietnam	158.1	133.1

Source: World Development Indicators, World Bank and Financial Soundness Indicators, IMF

One of the most important indicators of the health of the banking sector is the share of Non-Performing Loan (NPL) in the loan portfolio. Table 3.6 shows that there was a sharp decline in the share of non-performing loans (NPLs) from a high of 41% in 1999 to the lowest point of 6.1% in both state-owned commercial banks (SCBs) and private commercial banks (PCBs) recorded impressive improvements in terms of addressing the NPL problem. In particular, the NPL ratio of private banks declined to less than 3 percent in 2011, compared with more than 27% in 1999 but increasing to 5.7% in 2014. Improvements were also made in meeting capital adequacy requirements with the industry-wide risk-weighted capital adequacy ratio exceeding 11% as of June 2011. The risk weighted capital adequacy ratio of SCBs also increased to 11.7% in 2011 from only 5.3% in 1999, in part supported by recapitalization of these banks by the government to meet the capital adequacy requirement stipulated under the Banking Act. The year 2011 was of significance given the favourable outcomes of the banking sector indicators in the post-reform scenario.

Table 3.6: Indicators of Health of the Banking Sector (Percent)

Indicators	1999 (Pre-Reform Baseline)	2011 (Best Year)	2019 (Latest Available)
Non-Performing Loans: Overall	41.1	6.12	11.99
Non-Performing Loans: Private Banks	27.1	2.95	7.43
Non-Performing Loans: Foreign Banks	3.8	2.96	6.01
Non-Performing Loans: State Commercial Banks	45.6	11.27	31.50
Non-Performing Loans: Public DFIs	65.0	25.55	17.81
Risk-Weighted Capital Ratio: Overall	7.4	11.35	11.70
Risk-Weighted Capital Ratio: Private Banks	11.0	11.49	12.70
Risk-Weighted Capital Ratio: Foreign Banks	15.8	20.97	28.70
Risk-Weighted Capital Ratio: State Commercial Banks	5.3	11.68	8.50
Risk-Weighted Capital Ratio: Public DFIs	5.8	-4.49	-31.20

Source: Bangladesh Bank

The three main factors that contributed to the improvement in the coverage of the banking sector of Bangladesh are greater competition for market share, better regulations and improved supervision. The opening up of the banking sector to private enterprises was perhaps the most determining factor. As a result of this competition the share of private banks in total assets has grown from 37% in 2001 to 78% in 2020; commensurately, its share of total deposit has expanded from 33% to 71% over the same period (Figure 3.8)

Table 3.7: Structural Change in Banking in Bangladesh

Year	Deposits (taka billion)		Deposits (percent share)		Loans (taka billion)		Loans (percent share)	
	Public	Private	Public	Private	Public	Private	Public	Private
1997	342	168	67	33	231	137	63	37
2000	400	213	65	35	282	166	63	37
2004	544	515	51	49	387	420	48	52
2008	414	1902	18	82	573	1243	32	68
2010	599	2768	16	84	737	1837	29	71
2015	1757	5967	23	77	1291	4070	24	76
2018	3139	6796	32	68	1802	6356	22	78
2019	3290	7594	30	70	2014	7152	22	78
2020	3546	8509	29	71	2269	7858	22	78

Source: Bangladesh Bank.

Banking regulations have been progressively tightened in the context of implementation of BASEL I and II guidelines. Efforts have also been made to improve the supervision capacity of the regulator, the Bangladesh Bank, through a range of technical assistance. Bangladesh started implementation the BASEL-III framework in the 7FYP but progress has been halting.

Unfortunately, the financial health of the banking sector has come under severe strain during the 7FYP. As indicated in Table 3.6, the share of NPLs has sharply increased from 6% in 2011 to 12%. Much of the deterioration has happened with the loan portfolio of the state-owned commercial banks, where the NPL ratio has accelerated from 11% to 32% over the same period. The loan portfolio of private commercial

banks has also weakened markedly with NPLs rising from only 3% to 7% plus. The risk weighted capital of state-owned banks has also fallen, while public DFIs have become basically insolvent.

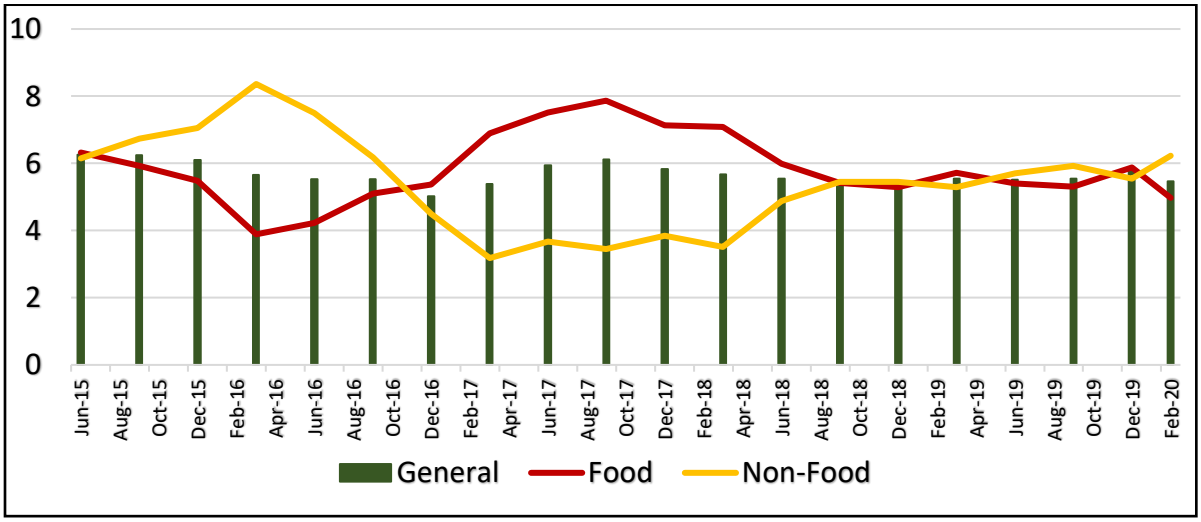
The government is committed to improve banking sector performance during the 8FYP. A series of policy reforms are envisaged during the 8FYP including greater autonomy to the Bangladesh Bank for implementing its regulatory and supervision responsibilities including for public banks, full implementation of Basel III regulations, improving the performance of public banks through corporatization and requiring them to earn a profit, reducing the exposure to high-risk borrowers, and implementing a well-thought out policy for recovery of loans from wilful defaulters. Monetary projections and credit allocation assumptions of the 8FYP are based on the implementation of these prudential banking reforms.

3.5.2 Monetary Policy Management and Inflation Control

BB recognizes the imperative for prudent monetary policy and accordingly established quantitative targets for key monetary aggregates in each and every MPS in recent years. Accordingly, a cautious and restrained monetary stance was pursued in FY12 to curb inflationary and external sector pressures. This policy of prudent monetary management has been implemented successfully through a bi-annual monetary policy statement (MPS). Care has been taken that the monetary growth target is consistent with inflation as well as the credit needs of the private sector. The BB has set realistic goals for the growth of money supply (M2) and the growth of private sector credit. It has also closely monitored implementation. Performance has been broadly on track. Tight control over fiscal deficit by the government has helped reconcile these objectives.

Overall, the inflation rate has been on a steady path of 5-6% rate, with a slight tendency to go down (Figure 3.9). This is fully on track as projected in the 7FYP. Inflation control and monetary policy management are two major strengths of macroeconomic management under the 7FYP. The 8FYP will build on these successes and projects a further decline in inflation. The associated monetary and credit targets are fully consistent with GDP growth, inflation and the BOP targets (Table 3.8)

Figure 3.9: Inflation Performance of the 7FYP



Source: Bangladesh Bureau of Statistics (BBS)

Table 3.8: Bangladesh: Monetary Survey, FY19-25

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projection				
Components:	(In Billion Taka)						
Broad Money	**12196**	**13737**	**15622**	**17803**	**20265**	**22983**	**26086**
Net Foreign Assets	**2724**	**3015**	**3517**	**3969**	**4644**	**5586**	**6791**
Net Domestic Assets	**9472**	**10723**	**12105**	**13834**	**15621**	**17397**	**19295**
Domestic Credit (a+b+c)	11469	13026	14795	16839	19154	21725	24664
a. Claims on Govt. (net)	1133	1762	1940	2140	2364	2614	2895
b. Claims on Other Public	234	292	321	354	389	428	471
c. Claims on Private Sector	10103	10973	12533	14345	16401	18683	21298
Net Other Assets	-1997	-2304	-2690	-3005	-3532	-4327	-5369
	(Percentage Change)						
Broad Money	**9.88**	**12.64**	**13.72**	**13.96**	**13.83**	**13.41**	**13.50**
Net Foreign Assets	**2.92**	**10.67**	**16.67**	**12.85**	**17.00**	**20.28**	**21.58**
Net Domestic Assets	**12.06**	**13.20**	**12.89**	**14.28**	**12.92**	**11.37**	**10.91**
Domestic Credit (a+b+c)	12.26	13.58	13.57	13.82	13.75	13.42	13.53
a. Claims on Govt. (net)	19.37	10.00	10.15	10.30	10.45	10.60	10.75
b. Claims on Other Public	21.64	10.00	10.00	10.00	10.00	10.00	10.00
c. Claims on Private Sector	11.32	13.14	14.22	14.46	14.33	14.17	14.00
Memorandum Items:							
Velocity of Money	2.08	2.04	2.02	2.00	1.99	1.99	1.99
Real GDP growth	8.15	5.24	7.40	7.70	8.00	8.32	8.51
Inflation rate (%)	5.48	5.65	5.10	4.90	4.80	4.70	4.60
Nominal GDP Growth	12.98	9.99	12.88	12.98	13.18	13.41	13.50
Overall Balance (Million USD)	179.0	4499.0	5621.7	4917.1	7162.7	9758.2	12225.7
Overall Balance (billion $)	0.18	4.50	5.62	4.92	7.16	9.76	12.23
Nominal Exchange rate (TK/us$)	84.00	84.70	89.40	91.90	94.20	96.50	98.60
Overall BOP Balance (In Billion, TK)	15.04	381.07	502.58	451.88	674.72	941.67	1205.45
Nominal GDP (In Billion, TK)	25425	27964	31565	35661	40363	45776	51956

Source: Bangladesh Bank, and GED Projections

3.5.3 Interest Rates Policy

Monetary development since January 2011 has been moving in the right direction to achieve quantitative limits established under the MPS. In its monetary policy operations Bangladesh Bank is committed to focus primarily on the quantitative targets and not on policy instruments like interest rates. Bangladesh Bank realizes that it is beyond the capacity of any central bank to influence or target both. Like most developing countries, transmission of monetary policy is considered inefficient in Bangladesh. The development of the treasury bills and bond market will be keys to enhancing the transmission mechanism and effectiveness of monetary policy.

The government has supported the reduction of interest rates to 9% on loans to boost economic activity, especially in the face of COVID-19 downturn. For the medium-term, the government will look careful at interest rate management based on research and evidence.

Two inter-connected issues will guide interest rate management in the 8FYP. First is the need to mobilize financial savings to support the need to increase the domestic saving rate. And second is the importance of lowering the cost of finance for production and investment. Evidence shows that the effort to lower interest rate has caused the real deposit rate to be negative for past several years, which has reduced deposit mobilization and the rate of growth of bank deposits has been falling significantly (Figure 3.10). A slow-growing deposit base in the face of rising NPLs could create serious liquidity and profitability problems for banks that could lead to financial disintermediation and hurt growth. It could also hurt the stability of the banking sector that must be avoided. To reduce lending rates without driving the real deposit rates into the negative zone and thereby causing financial disintermediation, the structural constraints in the banking sector will need to be addressed.

Figure 3.10: Recent Trend in Deposit to GDP Ratio (Percent)

Source: Bangladesh Bank

The structural issues impacting the interest rate structure generally include: efficiency of the banking system (administrative cost, efficiency in managing loan/investment portfolio with proper balance between risk and return, return on capital etc.); openness of the financial market (capital account openness); state of development of the financial system including bond market; etc.

In a well-managed and relatively efficient banking system the level of spread could be as low as 2% to 3%, compared to more than 5% for Bangladesh. The higher spread in Bangladesh is thus a manifestation of structural weaknesses or inefficiencies of the banking system as a whole. The spread could be explained by developments in three major components:

1. Administrative costs of banks such as operating expenses, excluding interest cost. Although not very high, when compared with countries with more efficient financial system and lower spread, there is scope for some improvement in this area.
2. Provisioning requirements associated with classified/bad loans always significantly affect the interest rate spread. Bangladesh's Gross and Net NPL ratios have always been quite high relative comparator countries.

3. Corporate tax rate applied on pre-tax profits of commercial banks also impact interest rates. Bangladesh's corporate tax rate on banks at 42.5% is the highest in the region and adds to the wider spread.

For healthy growth in domestic savings and the deposit base during the 8FYP, banks will continue to offer at least marginally positive real interest rates to the depositors. Bangladesh bank will continue its efforts to reduce inflation further to ensure a sustained lowering of the structure of deposit and lending rates. At the same time Bangladesh's very high NPL--at more than 12% compared with only 1%-3% for countries like China, Malaysia, Indonesia and Thailand points to the fact that inefficiencies in our financial intermediation must be firmly addressed to reduce the spread between the deposit and lending rates. Bangladesh Bank and the government will strengthen significantly banking sector governance and supervision in order to reduce the lending rate without creating market distortions.

A rough rule of thumb could be to target real average deposit rates at 2-3 percent and real average lending rates in the range of 6-7 percent, which is similar or even lower thsan the marginal productivity of capital. Interest rates offered on specific products would be market determined based on supply and demand for such loans and associated risks.

Over the longer term, since Bangladesh is aspiring to move to UMIC and HIC in the next 20 years or so, it is appropriate that instead of pursuing a control-oriented and administratively determined interest rate policy, Bangladesh will adopt a proper market-driven interest rate policy. As in other UMIC, Bangladesh can influence interest rate level through a proper use of monetary policy instruments. Presently, the link between monetary policy instruments (reserve requirements, BB discount rate and open market operations involving sale and purchase of Tresury bills) is weakened by the absence of a well-developedond market. The government can spur the development of the bond market by opening up the market for Treasury bills (T-bills) for private trading. This will then set a benchmark for other interest rates. The BB can then influence interest rates more effectivelythrough the supply of T-bills as a key monetary policy instrument. This would modernize interest rate management and offer savers a major secured financial asset. It would also facilitate deposit mobilization as banks compete with each other through attractive financial products as substitutes for T-bills.

3.5.4 Strategies to Improve the Capital Market

In last two and half decades, capital market witnessed a number of institutional and regulatory advancements which have resulted diversified capital market intermediaries. At present, capital market institutions and intermediaries are of following types: Stock Exchanges, Stock Dealer/Sock Brokers, Merchant Bankers and Portfolio Managers, Asset Management Companies, Credit Rating Companies, Trustees/Custodians and the Investment Corporation of Bangladesh (ICB). The primary segment of capital market is operated through private and public offering of equity and bond instruments. The secondary segment of capital market is institutionalized by two stock exchanges--Dhaka Stock Exchange and Chittagong Stock Exchange. The instruments in these exchanges are equity securities (shares), debentures, corporate bonds and treasury bonds. The capital market in Bangladesh is regulated by Bangladesh the Securities Exchange Commission (BSEC).

Indicators of capital market development: During 2007-10 the capital market in Bangladesh grew much faster than the other segments of the financial market. This growth in the capital market was initially fueled by stronger economic fundamentals compared to valuation of stocks. Afterwards, speculative forces had taken various key market indicators like the market capitalization, price earnings ratio and market turnover to unprecedented levels. This was further fueled by an expansionary monetary policy and lax management of the stock exchange. The stock market bubble finally burst in early 2011. Series of reforms since then have made progress in stabilizing the stock market, but it still remains fragile and faces considerable uncertainty.

Table 3.9 shows some selected indicators of capital market developments referring to three choice of years, FY07 representing the pre-bubble era, FY10 representing the peak bubble year and finally FY19 showing the current year scenario. It can be observed that market capitalization and the DSE General price index increased dramatically during 2007-10 reaching a peak in 2010.

Table 3.9: Indicators of Capital Market Developments (DSE)

	FY 2007 Pre-Bubble	FY 2010 Peak of Bubble	FY 2019
Number of Listed Securities	281	279	363
Issued Equity and Debt (Billion Taka)	84	213	720
Market Capitalization (Billion Taka)	412	2,277	3,437
Turnover (Billion Taka)	0.2	2.7	4.0
General Price Index	2,149	6,154	N/A
DSE Broad Index	N/A	N/A	5,422
DSE-30 Index	N/A	N/A	1,929

Source: Bangladesh Bank.

Key stock market reforms: Against this background, the government undertook a substantial capital market development program –CMDPII--with support from the ADB. The major objectives of CMDP II were to:

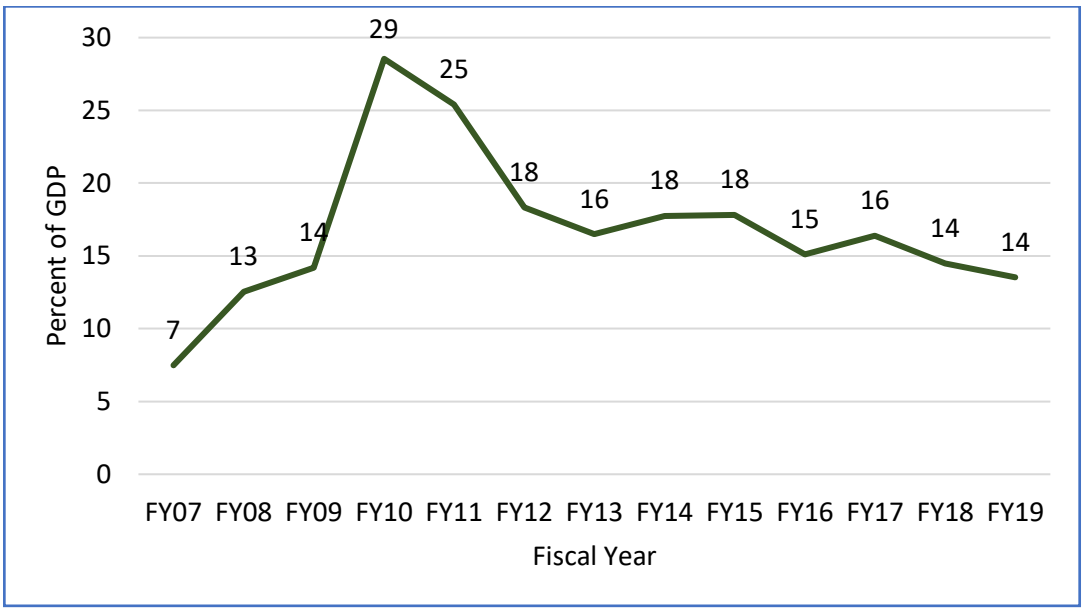
(a) strengthen market stability by enhancing the role and capacity of the Bangladesh Securities and Exchange Commission (BSEC);
(b) enhance market facilitation by developing a long-term vision for capital markets, upgrading accounting and auditing standards, expediting adjudication of enforcement actions, improving governance of listed companies, and pursuing demutualization of the stock exchanges; and
(c) incentivize the issuance of equities and bonds, develop liquid capital markets, and catalyze institutional investors.

Important progress was made in implementing many of the reform programmes including legal and regulatory reforms aimed at minimizing risks, improving the transparency of stock market trading and information, streamlining tax incentives and improving the capacity of the Bangladesh Securities and Exchange Commission (BSEC)**.** Overall progress was positive, as discussed below, but several constraints remained. First, the overall performance of BSEC has not been up to the expectation. Irregularities, long and complex IPO process, approval of substandard companies for IPO in recent years, inadequate and lack

of timely surveillance leading to questionable movement of stock prices have raised serious governance issues regarding the stock market regulator BSEC. No good national and international companies have listed in the stock exchanges after the listing of Grameen Phone. Second**,** economic fundamentals have also weakened over time, particularly for the major sectors like banking and other financial sectors, textiles, and many others. Profitability of institutions in these sectors has gone down with consequent negative impact on stock prices. Foreign investors are also cashing out and staying in the sideline in anticipation of a major depreciation of Bangladesh Taka which is perceived by the market as overvalued. Third, the market also suffers from shortage of liquidity as a result of liquidity shortage in the banking system. Recently Bangladesh Bank has introduced a special rediscount window for every bank to borrow up to Tk. 2 billion from the central bank at a subsidized interest rate for on-lending to institutional investors in the stock market.

Recovery of market capitalization: The market capitalization as a percentage of GDP increased from 5.5% in 2005 to more than 29% at its peak, before falling to 14% at the end of June 2019. Although market capitalization is yet to recover, it has basically stabilized at around 14-16 percent thereby arresting the downward trend. This is a positive development that lowers the volatility and unpredictability of the stock market, thereby minimizing speculative bouts.

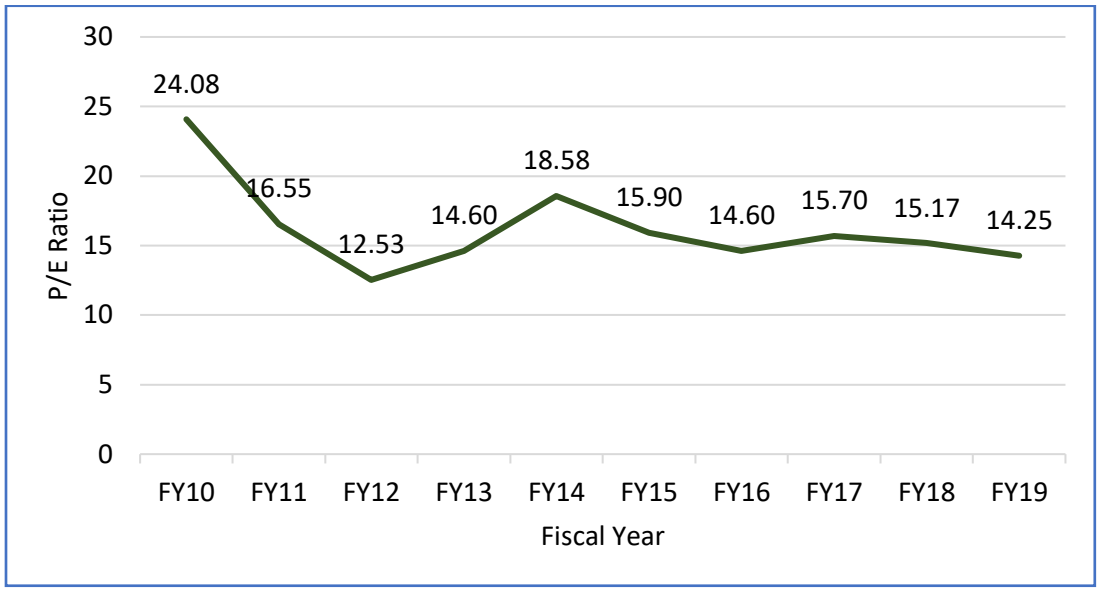
Figure 3.11: Market Capitalization to GDP Ratio from FY07 to FY19



Source: Bangladesh Bank Monthly Economic Trends

Price-earnings ratio: As regard valuation, certainly the current Price-Earning (P/E) Ratio of 14.25 as of June 2019 is much more attractive from investors' perspective compared with the average P/E Ratio of 24.08 at its recent peak in June 2010 (Figure 3.12). Accordingly, investors' interests have returned. The P/E ratio has remained broadly stable at around 14-16 range, which is healthy.

Figure 3.12: P/E Ratio at the Dhaka Stock Exchange from FY10 to FY19

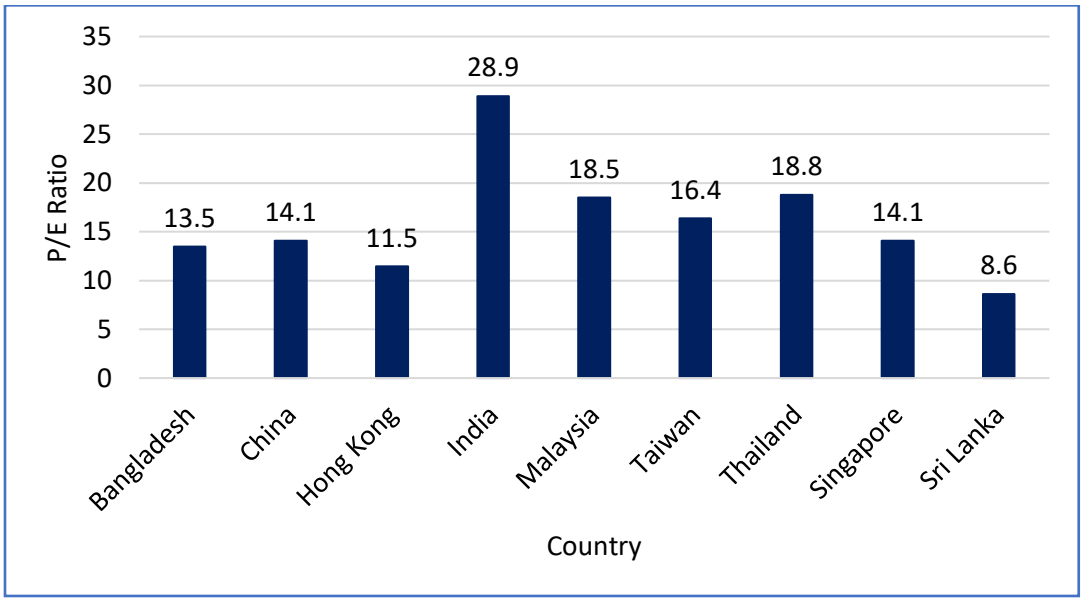


Source: Dhaka Stock Exchange Monthly Review

A review of DSE's past performance and a comparison with regional comparators indicates that:

- Average P/E Ratio of 13.5 for the DSE in July 2019 was in line with the levels observed in most countries such as Thailand, Malaysia, Sri Lanka and Hong Kong. The only outlier is India, which is considered to be over-valued and many are predicting that the Indian market valuations are out of line with market fundamentals.
- Bangladesh's dividend yield at close to 4% also compares very favorably with all other regional comparators.

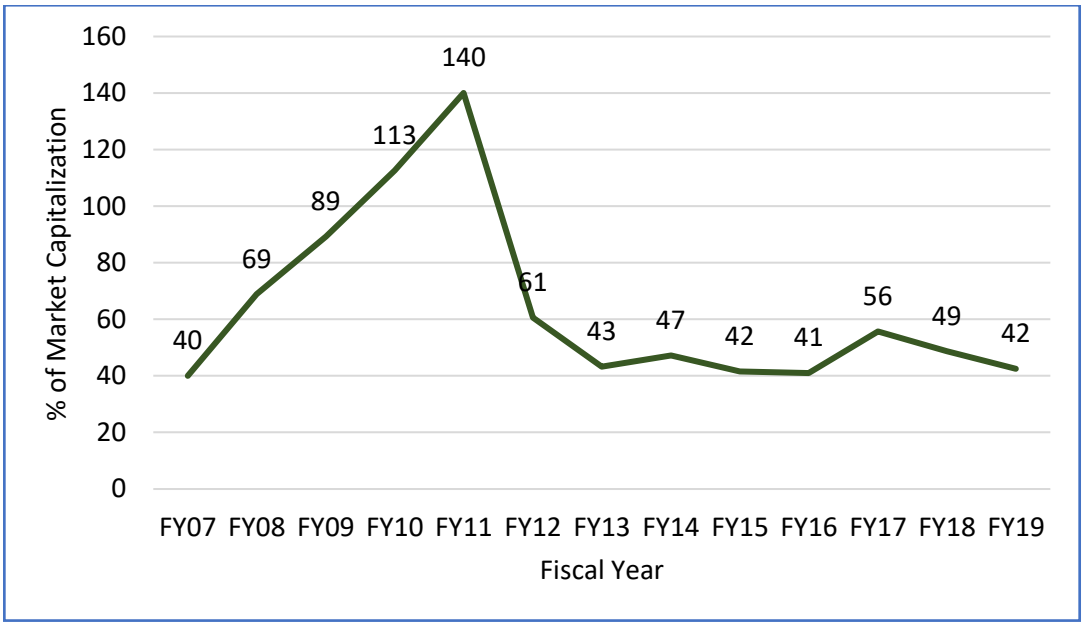
Figure 3.13: P/E Ratio in Bangladesh and Some Asian Markets as of July 2019



Source: CEIC

Turnover as a percentage of market capitalization: Market dynamism is generally measured in terms of market activities like the value of daily turnovers or volume of buys/sales. In order to filter the volatility in daily turnover, 20-day moving average for DSE daily turnover as percent of market capitalization is measured. What is important is that despite the steady decline, the turnover ratios were still comparable with its levels recorded during 2004-06 and before when the market was functioning in a stable environment. This stability is an important indicator of normalcy in the functioning of the stock exchange that provides a basis for increases based on marker fundamentals instead of speculative episodes.

Figure 3.14: Turnover as a Percentage of Market Capitalization, FY07-FY19



Source: Bangladesh Bank

Capital Market Reforms during the 8FYP

Despite challenges, there are positive signs that are indicative of future market stability. Foreign portfolio investment has been increasingly noticeably, attracted by proper valuation, macroeconomic stability and growth potential of the economy. Increasing the number of IPOs of large and financially sound companies and attracting foreign investment will help support the market stability and growth.

In the case of the 8FYP, the reform agenda has largely been identified, and despite some delays much of the reform agenda have been implemented. In particular, the demutualization of stock exchanges to segregate ownership, management and trading rights of members will help convert the two major exchanges (Dhaka and Chittagong) into commercially and professionally run organizations. Improved governance structure should also help develop the market and attract new investors.

In order to enhance supply and demand for equities over the 8FYP, effort will be made to restore confidence through the following reforms:

- Upgrading of accounting and auditing standards to enhance market confidence. The newly established Financial Reporting Council (FRC) will adopt and monitor the implementation of

International Accounting Standards (IAS) and International Standards of Auditing as well as license accountants and auditors

- Establish an Audit Committee to supervise companies' internal controls, accounting policies, and compliance with IAS

In addition to these actions, developing an organized investor base through a robust mutual fund industry will require going beyond what has been done so far and observe how the sector responds to the steps already taken. For longer-term growth of the stock market, making the playing field even by requiring ICB funds to be fully compliant with all mutual fund regulations will be important.

3.5.5 Strategies for Insurance Sector

Insurance sector is a significant part of the financial sector in all countries of the world. This sector protects life and asset of mass people and also contributes to the economic growth of developed and underdeveloped countries. There is great scope for the development of insurance industry in Bangladesh. The strategies for the insurance sector during the 8th Five Year plan will be as follows:

a) All the insurers will open actuarial department in their companies and to give financial assistance to the actuarial students. IDRA and Bangladesh Insurance Association will create a fund to provide financial assistance to meritorious students of actuarial science.

b) IDRA will develop a framework to store all the policy related data in a digital policy repository called Unified Messaging Platform. It will not only digitalize the information but also help IDRA to analyze insurance related data. It will also develop a communication system between the policy-holders and IDRA by sending SMS and e-mail. Through this platform, e-KYC, payment gateway, e-receipt service will be provided in phases. Thus it will help to reduce money laundering and fraudulent activity by fake insurance agents. It will also help to control illegal commission business of insurance companies.

c) Government will introduce public health insurance to ensure health care for all the citizens. With the proceeds from the health insurance premium, the government will be able to develop hospitals in the public-private sector to provide quality health care service to the general public.

d) Both the Government and the employer will take measures to introduce the insurance for workers to cover accidental injuries and deaths at workplace.

e) Public and private high rise buildings which are being commercially used or rented need to be brought under mandatory insurance coverage.

f) Measures will be taken to strengthen capacity of IDRA and other insurance related institutions.

3.6 RISKS AND UNCERTAINITIES

The macroeconomic outlook presented in this Chapter has significant downside risks associated with developments and factors of domestic and external origins. The adverse effects of COVID-19 reinforce the importance of managing these risks deftly and on time.

On the domestic front, the key challenge is realization of the investment target and mobilizing public sector resources for implementing the important health and social protection projects to improve human health and resilience and to build infrastructure and Delta Plan related water projects to strengthen growth and resilience from natural disasters. Bangladesh has huge potentials to attract FDI from a wide range of countries. Bangladesh must also diversify its export base and improve labour skills and productivity to sustain growth momentum and provide good jobs. Private investment enhancement in manufacturing, in a balanced mix of domestic and FDI-based investments will be key. Along with prudent macroeconomic management that keeps inflation low, maintains a competitive real exchange rate, and keeps real interest rate in line with the marginal productivity of capital, a big push to improving the investment climate will be essential. Without these reforms, the ability to mobilize domestic investment and FDI in the projected amount will not materialize. On the domestic financing side, the banking and capital market reforms are also essential. Banking reforms are critical to lower the spread between deposit and lending rates and enable the maintenance of positive real interest rates for deposit mobilization while keeping real lending rates in line with marginal productivity of capital.

While the size of public investment is planned to expand further, ensuring the efficiency gains through quality of investment will be a major challenge in the face of continuing governance problems. Transparency in tendering process and ensuring quality at different phases of project implementation, and making contractors responsible even after the delivery of projects will be key to ensuring quality of project implementation. Resource mobilization by the public sector will continue to remain a major challenge and will require steadfast implementation of tax policy reforms (in both VAT and direct tax fronts), modernization of tax administration, and reform of the NBR tax administration. There are also exogenous risks like a resurgence of a COVID-19 type pandemic, cyclone and flood, which may set back the progress on the Plan by diverting resources and attention of the policymakers away from Plan implementation. Management of these risks requires active policy responses including a major increase in public healthcare and implementation of the BDP2100.

As in the past, external factors will also continue to influence the overall macroeconomic outlook in Bangladesh over the Plan period. Some relevant external risk factors include:

- The pace of global recovery to the COVID-19 pandemic.
- Uncertainties about petroleum prices in the global economy.
- Uncertainties about non-oil commodity prices, which are currently at their relatively low levels.
- The US-China trade war and generally weak relations that could escalate into a disruption of global trade reforms, capital flows and economic cooperation
- Slowdown of the RMG global market

The Government will remain vigilant about the emerging external and domestic risks, and will continue to pursue prudent macroeconomic management and accelerate the pace of economic reforms as envisaged under the Plan. The Government is also committed to undertake corrective actions and policy adjustments to mitigate the adverse effect of any unforeseen developments such as the COVID-19 pandemic.

The macroeconomic framework outlined above is appropriately challenging but at the same time attainable. Actual outcomes will depend on various developments of economic and noneconomic nature, and not all future developments are within the control of the Government. Important lessons have been learned through

the implementation of the Sixth and the Seventh Plans, including the fact that growing revenue constraints and risks in the banking sector need urgent resolution. The COVID-19 pandemic reinforced the importance of human health and well-being as the source of all development achievements. It also exposed the underlying shortcomings in the Bangladesh health care and social security systems. The 8FYP will put topmost priority in allocating adequate resources to healthcare and social protection and to address the related planning and program implementation constraints. Renewed efforts will be made to strengthen implementation of the NSSS. As the size of the public investment grows, the importance of quality of spending will become all the more important for economic efficiency. Mobilization of resources, particularly with greater focus on sustainable increase in NBR tax revenue, will be essential for financing the Plan as discussed in Chapter 5 of this part of the plan document. Overall, the 8.5% growth target by the end of the 8th Plan should be attainable, provided necessary supportive reforms and policies are put in place for the private sector to come forward and invest in the future of Bangladesh.

CHAPTER 3: ANNEX TABLES

Table A3.1: Bangladesh: Real Sector Performance, FY2019 -FY2025

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projection				
Real Sector Indicators	(As % of GDP)						
Gross National Savings	29.50	30.11	31.43	31.17	32.29	33.03	34.42
Gross Domestic Savings	25.02	25.31	25.69	25.88	27.14	28.03	29.59
Gross Investment	31.57	31.75	32.56	32.73	34.00	34.94	36.59
Public Investment	8.03	8.12	8.15	8.20	8.68	8.86	9.24
Private Investment	23.54	23.63	24.41	24.53	25.32	26.08	27.35
Foreign Direct Investment (FDI)	0.87	0.54	0.83	1.35	1.90	2.50	3.00
Domestic Investment	22.67	23.09	23.58	23.18	23.42	23.58	24.35
Net exports of goods and services	-6.12	-6.06	-5.96	-5.94	-5.95	-6.00	-6.10
Exports of goods and services	15.32	12.25	12.83	12.83	12.79	12.73	12.64
Imports of goods and services	21.44	18.31	18.79	18.77	18.74	18.73	18.74
Current account balance	-1.64	-1.21	-1.13	-1.56	-1.71	-1.92	-2.17
Consumption	74.98	74.69	74.31	74.12	72.86	71.97	70.41
Government consumption	6.27	6.24	6.08	5.98	5.88	5.78	5.68
Private Consumption	68.71	68.45	68.23	68.14	66.98	66.19	64.73
Total Resources	106.11	106.06	106.87	106.85	106.86	106.91	107.00
Net Factor Income	4.47	4.85	5.74	5.28	5.12	4.96	4.78
Gross national income	104.47	104.85	105.74	105.28	105.12	104.96	104.78
Gross National Income Per Capita (in USD)	1909	2064	2170	2345	2555	2790	3059
Memorandum Items:	(Growth Rate as % Change or Otherwise Indicated)						
Real GDP growth	8.15	5.24	7.40	7.70	8.00	8.32	8.51
CPI Inflation	5.48	5.65	5.10	4.90	4.80	4.70	4.60
GDP Deflator	4.44	4.51	5.10	4.90	4.80	4.70	4.60
Nominal GDP growth	12.98	9.99	12.88	12.98	13.18	13.41	13.50
ICOR	3.87	4.00	4.40	4.25	4.25	4.20	4.30
Net Factor Income (Taka Billion)	1136	1355	1811	1882	2067	2269	2484
Gross National Income (Taka Billion)	26561	29319	33376	37543	42430	48045	54440
Consumption (Taka Billion)	19063	20780	23455	26433	29407	32943	36582
Government	1594	1728	1919	2133	2373	2646	2951
Private	17468	19052	21536	24300	27034	30297	33631
Investment (Taka Billion)	8027	8879	10278	11670	13723	15996	19012
Public	2041	2271	2573	2924	3503	4056	4801
Private	5986	6608	7705	8746	10220	11940	14212
Current Account Balance (Taka Billion)	-416	-339	-357	-556	-691	-878	-1129
Net exports of goods and services (Taka Billion)	-1554	-1694	-2168	-2442	-2768	-3163	-3638
Total Resources (Taka Billion)	26979	29658	33733	38103	43130	48939	55594
Gross National Savings (Taka Billion)	7500	8539	9921	11114	13032	15118	17883

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projection				
Gross Domestic Savings (Taka Billion)	6362	7184	8110	9228	10956	12833	15374
Real Consumption (Taka Billion)	8291	8648	9288	9978	10592	11333	12031
Real Private Consumption (Taka Billion)	7598	7929	8528	9173	9737	10423	11061
Real Private Consumption Growth Rate	4.96	4.36	7.56	7.57	6.15	7.04	6.12
GDP Deflator Index	229.9	240.3	252.5	264.9	277.6	290.7	304.1
Exchange Rate	84.00	84.70	89.40	91.90	94.20	96.50	98.60
Index of real per capita consumption	127.90	131.57	139.44	147.96	155.18	164.08	172.16
Per Capita Real Consumption (Taka)	49511	50933	53978	57279	60072	63519	66647
Population (In Million)	167.46	169.79	172.06	174.19	176.32	178.42	180.52
Population Growth Rate	1.41	1.39	1.34	1.24	1.22	1.19	1.18
Real GDP (Taka Billion, 2005-06)	11058	11637	12498	13460	14537	15747	17087
Nominal GDP (Taka Billion)	25425	27964	31565	35661	40363	45776	51956

Source: BBS and GED Projections

Table A3.2: Bangladesh: Central Government Operations, FY19-25

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Variables / Items	**Actual**		**Projection**				
	(In Billion, Taka)						
Revenue and Grants	**2535**	**2650**	**3238**	**3980**	**4864**	**5907**	**7325**
Total Revenue	**2518**	**2630**	**3213**	**3958**	**4844**	**5887**	**7305**
Tax Revenue	2259	2207	2847	3495	4278	5154	6370
NBR Tax Revenue	2186	2148	2699	3352	4077	4880	6006
Non-NBR Tax Revenue	73	59	148	143	202	275	364
Non-Tax Revenue	259	423	366	464	565	732	935
Grants	17	20	25	22	20	20	20
	(In Billion, Taka)						
Total Expenditure	**3919**	**4156**	**5385**	**6031**	**7092**	**8196**	**9923**
Operating Expenditure including net lending	**2408**	**2549**	**3512**	**3844**	**4432**	**5115**	**6246**
Operating Expenditure	**2383**	**2514**	**3470**	**3837**	**4420**	**5090**	**6206**
Recurrent Expenditure	2180	2330	3112	3542	4080	4698	5756
Capital Expenditure	203	184	358	295	340	392	450
Net Lending	25	35	42	7	12	25	40
Development Expenditure	**1511**	**1607**	**1873**	**2227**	**2726**	**3166**	**3784**
ADP Expenditure	1473	1543	1800	2133	2622	3060	3675
Non-ADP Development Spending	38	64	73	94	104	106	109
Overall Balance (excl. grants)	**-1401**	**-1526**	**-2171**	**-2073**	**-2248**	**-2309**	**-2618**
Overall Balance (Incl. grants)	**-1384**	**-1506**	**-2146**	**-2051**	**-2228**	**-2289**	**-2598**
Primary Balance	**-889**	**-932**	**-1508**	**-1302**	**-1358**	**-1266**	**-1436**
	(In Billion, Taka)						
Financing	**1384**	**1506**	**2146**	**2051**	**2228**	**2289**	**2598**
Externa l(Net)	**313**	**527**	**758**	**697**	**775**	**856**	**961**
Loans	448	636	884	836	939	1062	1195
Amortization	-135	-110	-126	-139	-165	-206	-234
Domestic	**1071**	**979**	**1389**	**1354**	**1453**	**1433**	**1637**
Bank (CrPbs: Money))	305	928	1042	692	480	298	327
Non-Bank	766	51	347	496	763	865	982

Source: Ministry of Finance and GED Projections

Table A3.3: Bangladesh: Central Government Operations, FY2019 -2025

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projections				
Fiscal Indicators:	(As % of GDP)						
Revenue and Grants	**9.97**	**9.48**	**10.26**	**11.16**	**12.05**	**12.90**	**14.10**
Total Revenue	**9.90**	**9.40**	**10.18**	**11.10**	**12.00**	**12.86**	**14.06**
Tax Revenue	8.89	7.89	9.02	9.80	10.60	11.26	12.26
NBR Tax Revenue	8.60	7.68	8.55	9.40	10.10	10.66	11.56
Non-NBR Tax Revenue	0.29	0.21	0.47	0.40	0.50	0.60	0.70
Non-Tax Revenue	1.02	1.51	1.16	1.30	1.40	1.60	1.80
Grants	**0.07**	**0.07**	**0.08**	**0.06**	**0.05**	**0.04**	**0.04**
	(As % of GDP)						
Total Expenditure	**15.41**	**14.86**	**17.06**	**16.91**	**17.57**	**17.90**	**19.10**
Non-Development Expenditure including net lending	**9.47**	**9.11**	**11.13**	**10.90**	**11.08**	**11.25**	**12.07**
Non-Development Expenditure	**9.37**	**8.99**	**10.99**	**10.75**	**10.93**	**11.10**	**11.92**
Revenue Expenditure	8.57	8.33	9.86	9.93	10.11	10.26	11.08
Capital Expenditure	0.80	0.66	1.13	0.82	0.83	0.84	0.85
Net Lending	**0.10**	**0.13**	**0.13**	**0.15**	**0.15**	**0.15**	**0.15**
Development Expenditure	**5.94**	**5.75**	**5.93**	**6.02**	**6.49**	**6.66**	**7.03**
ADP Expenditure	5.79	5.52	5.70	5.89	6.36	6.53	6.90
Non-ADP Development Spending	0.15	0.23	0.23	0.13	0.13	0.13	0.13
Overall Balance (excl. grants)	**-5.51**	**-5.46**	**-6.88**	**-5.81**	**-5.57**	**-5.04**	**-5.04**
Overall Balance (Incl. grants)	**-5.44**	**-5.39**	**-6.80**	**-5.75**	**-5.52**	**-5.00**	**-5.00**
Primary Balance	**-3.50**	**-3.33**	**-4.78**	**-3.65**	**-3.36**	**-2.77**	**-2.76**
	(As % of GDP)						
Financing	**5.44**	**5.39**	**6.80**	**5.75**	**5.52**	**5.00**	**5.00**
External (Net) [including market borrowing]	**1.23**	**1.88**	**2.40**	**2.42**	**2.44**	**2.46**	**2.48**
Loans	1.76	2.3	2.8	2.35	2.33	2.32	2.30
Amortization	-0.53	-0.39	-0.40	-0.39	-0.41	-0.45	-0.45
Domestic	**4.21**	**3.50**	**4.40**	**3.33**	**3.08**	**2.54**	**2.52**
Bank (CrPbs: Money)	1.20	3.32	3.30	1.94	1.19	0.65	0.63
Non-Bank	3.01	0.18	1.10	1.39	1.89	1.89	1.89
Memorandum Item:							
Nominal GDP (in Billion Taka)	**25425**	**27964**	**31565**	**35661**	**40363**	**45776**	**51956**

Source: Ministry of Finance and GED Projection

Table A3.4: Bangladesh: Revenue Performances, FY2019-FY2025

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projection				
Variables / Items	(In Billion Taka)						
NBR Tax Revenue	**2186**	**2148**	**2699**	**3352**	**4077**	**4880**	**6006**
Taxes on Income and Profit	673	753	780	1139	1403	1750	2344
Value Added Tax	851	799	1136	1355	1731	2093	2522
Custom Duty	243	237	284	314	347	385	426
Supplementary Duty	383	325	447	484	525	569	617
Export Duty	1	1	1	2	2	2	2
Excise Duty	23	23	29	34	38	44	50
Other Taxes and Duties	12	9	21	25	30	37	44
	(As % of GDP)						
NBR Tax Revenue	**8.6**	**7.7**	**8.6**	**9.4**	**10.1**	**10.7**	**11.6**
Taxes on Income and Profit	2.6	2.7	2.5	3.2	3.5	3.8	4.5
Value Added Tax	3.3	2.9	3.6	3.8	4.3	4.6	4.9
Custom Duty	1.0	0.8	0.9	0.9	0.9	0.8	0.8
Supplementary Duty	1.5	1.2	1.4	1.4	1.3	1.2	1.2
Export Duty	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excise Duty	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Taxes and Duties	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Nominal GDP (In Billion Taka)	**25425**	**27964**	**31565**	**35661**	**40363**	**45776**	**51956**

Source: Ministry of Finance and GED Projections

Table A3.5: Economic Classification of Non-Development Government Expenditures, FY19-25

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		(Projection)				
Variables / Items	(In Billion, Taka)						
Total Operating Expenditure	**2383**	**2514**	**3470**	**3798**	**4337**	**5081**	**6195**
Operating Recurrent Expenditure	**2180**	**2330**	**3112**	**3303**	**3770**	**4698**	**5756**
Pay and Allowance	534	555	659	745	870	1040	1299
Goods and Services	286	284	347	401	465	573	702
Interest payments	495	574	638	749	870	1023	1162
Domestic	461	531	583	681	789	916	1032
Foreign	34	43	55	68	81	107	130
Subsidy and net transfers	865	916	1423	1390	1537	2040	2567
Block allocations	0.0	0.0	45.0	18.0	28.0	22.9	26.0
Operating Capital Expenditure	**203.0**	**184.0**	**358.0**	**494.8**	**567.4**	**382.2**	**439.0**
Acquisition of Assets and Works	202.0	180.0	320.0	448.0	510.0	318.1	366.3
Investment in Share and Equities	1.0	4.0	38.0	46.8	57.4	64.1	72.7

Source: Ministry of Finance and GED Projections

Table A3.6: Economic Classification of Non-Development Government Expenditures, FY2019-FY2025

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projections				
Variables / Items	(As % of GDP)						
Total Operating Expenditure	**9.37**	**8.99**	**10.99**	**10.75**	**10.93**	**11.10**	**11.92**
Operating Recurrent Expenditure	**8.57**	**8.33**	**9.86**	**9.93**	**10.11**	**10.26**	**11.08**
Pay and Allowance	2.10	1.99	2.09	2.09	2.16	2.27	2.50
Goods and Services	1.12	1.02	1.10	1.12	1.15	1.25	1.35
Interest payments	1.95	2.05	2.02	2.10	2.16	2.23	2.24
Domestic	1.81	1.90	1.85	1.91	1.95	2.00	1.99
Foreign	0.13	0.15	0.17	0.19	0.20	0.23	0.25
Subsidy and net transfers	3.40	3.28	4.51	3.90	3.81	4.46	4.94
Block allocations	0.00	0.00	0.14	0.05	0.07	0.05	0.05
Operating Capital Expenditure	**0.80**	**0.66**	**1.13**	**0.82**	**0.83**	**0.84**	**0.85**
Acquisition of Assets and Works	0.79	0.64	1.01	1.26	1.26	0.70	0.71
Investment in Share and Equities	0.00	0.01	0.12	0.13	0.14	0.14	0.14
Memorandum Item:							
Nominal GDP	**25425**	**27964**	**31565**	**35661**	**40363**	**45776**	**51956**

Source: Ministry of Finance and GED Projections

Table A3.7: Bangladesh: Debt Sustainability Indicators, FY19-25

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projection				
Debt Indicators:	(As % of GDP)						
Total Debt outstanding	**33.6**	**35.98**	**37.1**	**38.6**	**39.6**	**39.9**	**40.2**
External Debt	12.6	13.4	13.8	14.2	14.4	14.6	14.7
Domestic Debt	21.0	22.6	23.3	24.4	25.2	25.3	25.5
	(In Billion Taka)						
External Debt	**3198**	**3748**	**4356**	**5053**	**5827**	**6683**	**7645**
Gross borrowing	**448**	**571**	**884**	**836**	**939**	**1062**	**1195**
Amortization/Repayment	135	120	126	139	165	206	234
Net borrowing	**313**	**451**	**758**	**697**	**775**	**856**	**961**
Interest payment on foreign debt	34	43	55	68	81	107	130
Domestic Debt	**5338**	**6314**	**7355**	**8708**	**10162**	**11595**	**13231**
Gross financing	1071	979	1389	1354	1453	1433	1637
Interest Payment on domestic debt	461	528	583	681	789	916	1032
Effective interest rate on domestic debt	9.4	9.1	8.2	8.1	8.0	7.9	7.8
Total Government Debt Outstanding	**8536**	**10062**	**11711**	**13761**	**15989**	**18278**	**20876**
Total Debt Services (in billion taka)	**586**	**665**	**764**	**888**	**1035**	**1229**	**1396**
External	134	145	181	207	246	313	364
Domestic	452	520	583	681	789	916	1032
	(In Billion, USD)						
External Debt	**36.2**	**44.2**	**48.7**	**55.0**	**61.9**	**69.3**	**77.5**
Gross borrowing	5.3	6.7	9.9	9.1	10.0	11.0	12.1
Amortization/Repayment	-1.6	-1.4	-1.4	-1.5	-1.7	-2.1	-2.4
Net borrowing	**3.7**	**5.3**	**8.5**	**7.6**	**8.2**	**8.9**	**9.7**
Interest payment on foreign debt	0.5	0.5	0.7	0.8	0.9	1.1	1.3
Effective interest rate on foreign debt	1.3						
Total Debt Services	**2.5**	**2.4**	**2.4**	**2.5**	**2.6**	**2.7**	**2.7**
External	0.7	0.5	0.6	0.6	0.6	0.7	0.7
Domestic	1.8	1.9	1.8	1.9	2.0	2.0	2.0
Debt Sustainability Indicators	(As % of GDP or Otherwise Indicated)						
External Debt as % of Export & Remittance	**67.4**	**85.3**	**85.2**	**88.0**	**90.6**	**92.7**	**94.7**
External Debt Services as % Export & Remittance	**2.8**	**3.3**	**3.5**	**3.6**	**3.8**	**4.3**	**4.5**
Total Debt to Revenue (%)	**338.9**	**382.5**	**364.4**	**347.6**	**330.1**	**310.5**	**285.8**
Total Debt Service, as % of total revenue	**23.3**	**25.3**	**23.8**	**22.4**	**21.4**	**20.9**	**19.1**
Memorandum Items:							
Government Budget Deficit, as % of GDP	-5.4	-5.4	-6.8	-5.8	-5.5	-5.0	-5.0
Real GDP Growth (%)	8.2	5.2	7.4	7.7	8.0	8.3	8.5
Nominal GDP Growth (%)	13.0	10.0	12.9	13.0	13.2	13.4	13.5
CPI Inflation (Average, %)	5.5	5.7	5.1	4.9	4.8	4.7	4.6
Inflation Rate (Trading Partners), %	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Exchange rate (Taka per US$)	84.0	84.7	89.4	91.9	94.2	96.5	98.6
Government Budget Deficit including grant (In Billion TK)	1384	1506	2146	2051	2228	2289	2598
Exports & Remittances (In Billion TK)	4744	4395	5115	5740	6431	7209	8069

Source: Ministry of Finance and GED Projections

CHAPTER 4

POVERTY AND INEQUALITY REDUCTION STRATEGY

4.1 INTRODUCTION

Along with rising per capita incomes, Bangladesh has made tremendous progress in reducing poverty. This progress has accelerated since 2000. In the 1970s, the poverty incidence was hovering in the 80% range. By 2016, the poverty incidence had fallen to 24.3%. Although new Household Income and Expenditure Survey (HIES) data since 2016 is not available, the acceleration of GDP growth and other indicators of development progress suggest that poverty has fallen further over the first 4 years of the 7FYP period. Poverty is estimated to have been reduced to 20.5% in FY2019. Progress with the reduction of extreme poverty is similarly encouraging. The incidence of extreme poverty is estimated to have fallen from 12.9% in 2016 to 10.5% in FY2019. This result lays the basis for the target in the PP2041 to eliminate extreme poverty by FY2031. The progress in poverty reduction is similarly fully consistent with the SDG target of eliminating extreme poverty by 2030.

The onset of COVID-19 in March 2020 has temporarily disrupted the poverty reduction progress by creating considerable unemployment and loss of income. While the government has responded by increasing safety net transfers including free and subsidized food distribution during the lockdown, the short-term adverse effects of COVID-19 and the associated disruption of economic activity has hurt severely the employments and incomes of the urban poor and the near-poor, many of whom may have slipped into poverty. The COVID-19 short-term poverty spike is temporary development and should not take away the progress made in poverty reduction during the 7FYP prior to COVID-19. The underlying strategy should also be relevant for poverty reduction during the 8FYP and beyond, although some elements of the poverty reduction strategy relating to health care, social protection, reduction of vulnerability to climate change and natural disasters, and non-farm job creation may need to be further strengthened.

Along with poverty reduction, the Government is also mindful of the need to pay attention to income inequality, consistent with its commitment to reduce income inequality as laid down in SDG goal 10 and emphasized in PP2041.To protect the incomes of the poor and vulnerable, the Government is placing greater attention on inclusive development and social protection. In addition to personal income inequality, the Government is also concerned about the disparity in the distribution of poverty and income across the regions and districts of Bangladesh. The HIES 2016 shows that there is a wide disparity in the distribution of poverty across regions and districts. The analysis shows that these disparities prevail because of unequal opportunities to access high income and employment options. Public policy interventions are required to reduce both personal income inequality and disparities across regions and districts.

This chapter reviews the progress with poverty reduction at the national level as well as at the district level. To distinguish between the medium-to-long term poverty reduction strategy from the COVID-19 induced short-term poverty challenges, the analysis looks at the 7FYP poverty performance based on the progress made in the first four years of the 7FYP (FY2016-FY2019) before COVID-19 struck. The poverty implications of COVID-19 and required policy response to address this spike are discussed separately.

The chapter also looks at the issue of income inequality at the national level. Income data at the district level is not available to talk meaningfully about income inequality by districts. However, disparities in poverty reduction and the location of extreme poverty give a good sense of which are the poorest districts and the concentration of pockets of poverty that require public policy attention, especially to achieve the target for eliminating extreme poverty by FY2031 as envisaged under SDG-1 and PP2041.

The analysis in this chapter provides a review of the progress made on poverty reduction and income inequality during the Seventh Plan, looks at the impact of COVID-19, and sets the stage for developing the respective targets and strategies for the Eighth Plan keeping in view the targets set in the SDG -1, SDG 10 and PP2041 and the special short-term challenges posed by COVID-19. Issues relating to social protection and social inclusion that are also key elements of the poverty reduction and income inequality strategy are discussed in detail in chapter 14, part 2 of the 8FYP document. However, parts of that analysis that are relevant to the exposition of this chapter are brought in where necessary.

The focus of this chapter is on income/ consumption dimensions of poverty and inequality. The government understands that poverty is multi-dimensional and progress with other indicators of well-being related to health, education, nutrition, social security, water supply, sanitation, housing, etc. are also very important. SDG- 1 places emphasis on the multi-dimensional nature of poverty and deprivations and the need to end those deprivations. Progress on these aspects of national wellbeing are a part of the government's broader approach to poverty reduction and improved national welfare. These issues are analysed in detail in Part 2 of the report (e.g. chapter 9 deals with health and nutrition issues; chapter 10 on education and training aspects; chapter 11 on water supply, sanitation and housing issues; and chapter 14 on social inclusion, social protection, women empowerment, food security and disaster management).

4.2 PROGRESS WITH POVERTY REDUCTION

4.2.1 Past Progress with Poverty Reduction

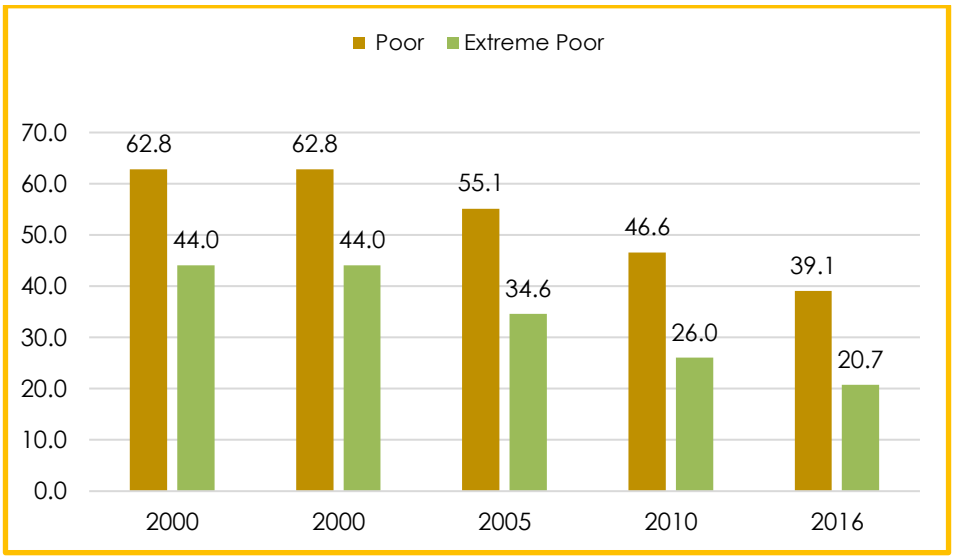
Bangladesh experienced a uniform and steady decline in poverty rates from 2000 to 2016. The incidence of poverty rate halved, falling from 48.9% in 2000 to 24.3% in 2016, which constitutes an impressive average decline of 1.54 percentage points per year. Extreme poverty came down from 34.3% to 12.9% over the same periods, thereby registering an annual average reduction of 1.34 percentage points over the same periods (Table 4.1). As a result of these achievements, the number of poor fell from 62.8 million in 2000 to 39.1 million in 2016, while the number of extreme poor fell from 44 million to 20.7 million over the same periods (Figure 4.1).

Table 4.1: Past Progress with Poverty Reduction 2000-2016 (%)

	Poverty (upper poverty line)				Extreme Poverty (lower poverty line)			
	2000	**2005**	**2010**	**2016**	**2000**	**2005**	**2010**	**2016**
National	48.9	40.0	31.5	24.3	34.3	25.1	17.6	12.9
Urban	35.2	28.4	21.3	18.9	19.9	14.6	7.7	7.6
Rural	52.3	43.8	35.2	26.4	37.9	28.8	21.1	14.9

Source: BBS, HIES (2000, 2005, 2010, 2016)

Figure 4.1: Number of Poor People (millions)



Source: Table 4.1 and Population Data from BBS

While poverty declined in both rural and urban areas, the pace of decline was faster for rural poverty. As a result, the gap between rural and urban poverty rates has narrowed substantially over time. Thus, the rural poverty rate was 52.3% in 2000, while the urban poverty rate was 35.1%, yielding a poverty gap of 17.2 percentage points. This gap was reduced to only 7.5 percentage points by 2016, with rural poverty falling to 26.4% and urban poverty to 18.9%. There was a similar reduction for extreme poverty.

4.2.2 Factors That Helped Achieve Poverty Results Outcome

Detailed research and analysis of the poverty outcomes over the 2000-2016 periods yield some very useful insights about the determinants of poverty reduction in Bangladesh. For analytical purposes, it is useful to break down the experience into two distinct phases: poverty reduction during 2000-2010 and poverty reduction during 2010-2016.

Growth, sectoral transformation, and employment creation: First and foremost, there is consensus that GDP growth and its composition are the two most important drivers of poverty reduction for both phases. Per capita GDP grew rapidly and the structure of the economy improved in both periods (Table 4.2). But there is a major difference in employment outcomes over the two periods. On average, the Bangladesh economy created many more jobs during 2000-2010 as compared with 2010-16. This was true for all sectors, including agriculture. So, even as agriculture's GDP and employment shares were falling, agriculture continued to create new jobs during 2000-2010, whereas during 2010-2016, agriculture employment fell. Most importantly, industrial and services employment surged during 2000-2010, yielding total job creation by an average of 2.5 million jobs as compared with only 0.9 million during 2010-16.

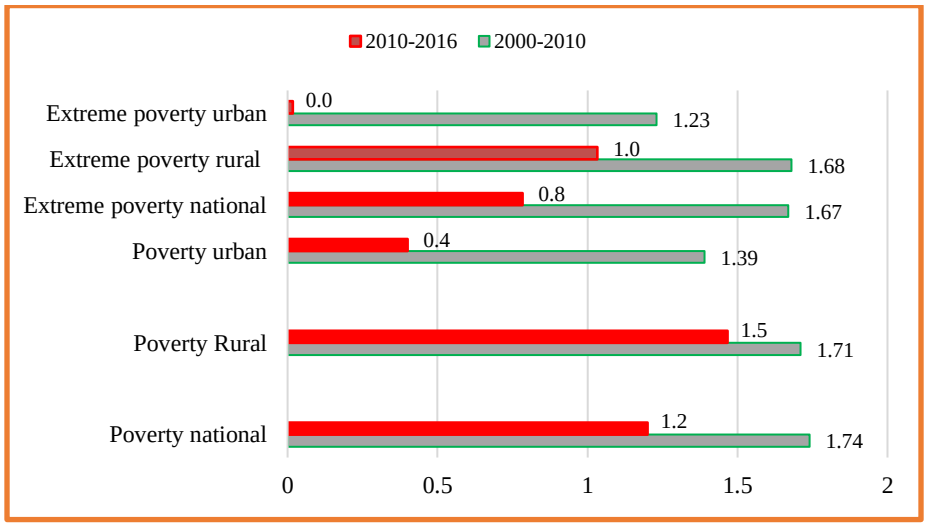
Table 4.2: Growth, Structural Change and Employment 2000-2016

Time period	Per capita GDP (%)	GDP share of agriculture (%)	GDP share of industry (%)	GDP share of services (%)	Job creation in agriculture (million)	Job Creation in industry (million)	Job creation in services (million)	Job creation per year (million)
2000		25	25	50				
2000-2010	4.4	18	27	55	5.9	4.4	4.8	2.5
2010-2016	5.1	15	30	55	-0.3	2.7	3.1	0.9

Source: GED estimates based on BBS data on National Accounts and LFS various years

Because of these differential effects, the poverty rate fell faster during 2000-2010 than during 2010-2016. Thus, the average yearly reduction in moderate poverty was 1.74 percentage points per year during the years 2000-2010, while it fell to 1.2 percentage points in 2010-2016. The differential poverty response is even more striking for extreme poverty. The average yearly reduction in extreme poverty was 1.67 percentage points during 2000-2010 and only 0.78 in 2010-2016 (Figure 4.2). Regarding rural versus urban, rural poverty reduced at a faster pace than urban poverty in both periods. However, rural poverty fell faster during 2000-2010. Importantly, urban poverty reduction stagnated in 2010-2016.

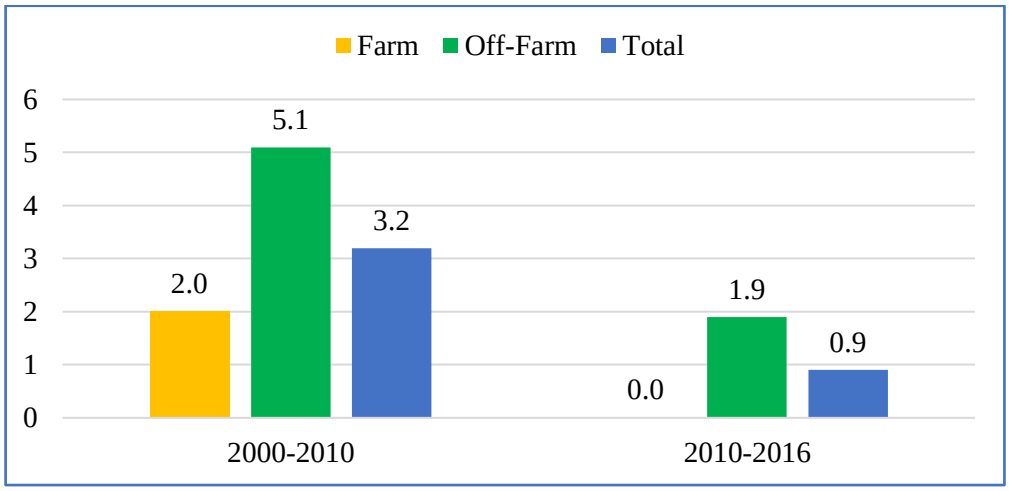
Figure 4.2: Annual Percentage Point Decline in Poverty



Source: GED estimates Using HIES data

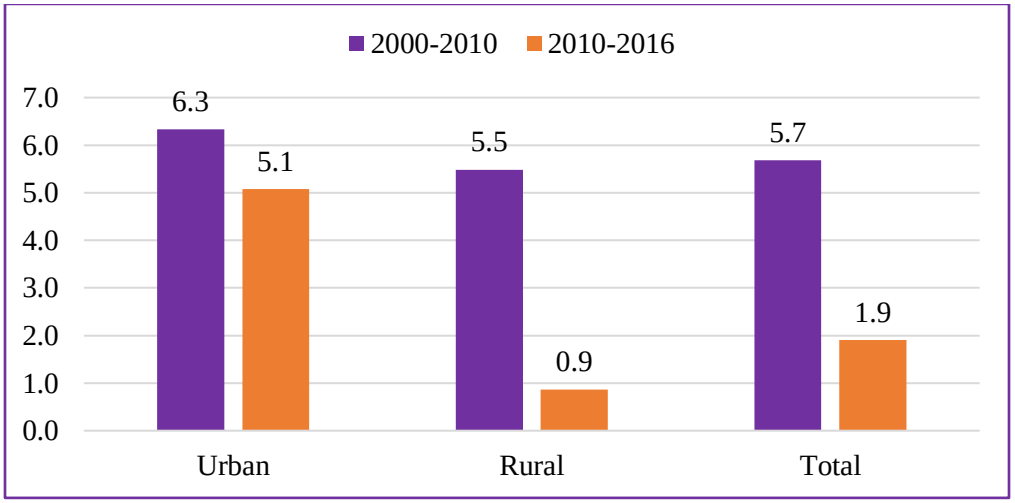
Decomposition analysis shows that agriculture benefitted from steady growth in farm income as well as an increase in non-farm employment. The growth in non-farm employment was particularly rapid in 2000-2010 (Figure 4.3). Farm income benefitted from both a healthy agricultural sector GDP growth as well as an increase in rice prices. Along with the creation of many non-farm jobs, it tightened the agricultural labour market and increased real wages in agriculture. Non-farm employment expansion and real wage increases benefitted the rural poor considerably, causing a sharp decline in poverty. Although the pace of rural non-farm employment slowed in 2010-2016, it was mainly due to a sharp reduction in rural labour supply (Figure 4.3). Rural employment growth kept pace with the growth in labour supply.

Figure 4.3: Rate of Growth of Rural Employment 2000-2016 (% per year)



Source: Labour Force Surveys, Various Years

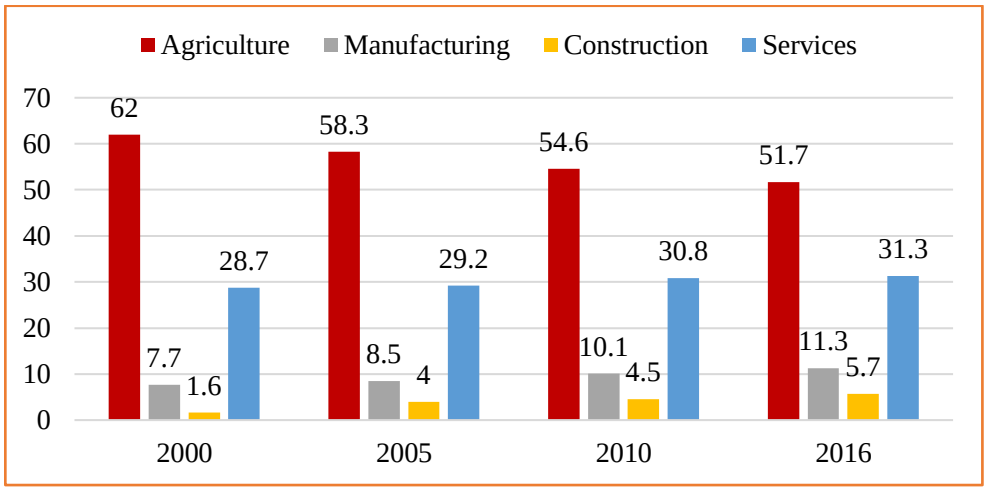
Figure 4.4: Growth Rate of Labour Force (% per year)



Source: Labour Force Surveys Various Years

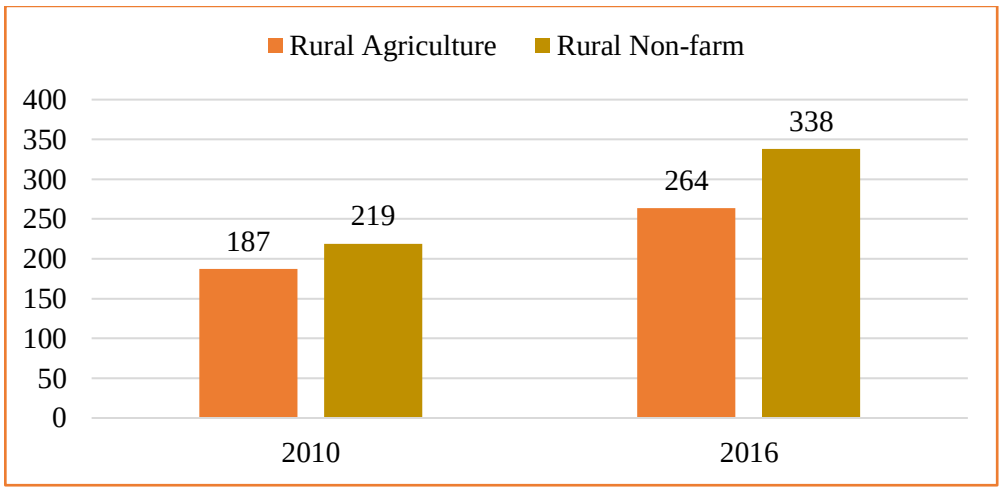
The substantial change in the employment structure of the rural economy, which also reflects the major reduction in the GDP share of agriculture, is illustrated in Figure 4.4. This is a major indication of the ongoing rural transformation where agriculture value-added and employment are shrinking and giving way to a growing non-farm economy. This rural transformation has played a major role in poverty reduction. Withdrawal of labour from agriculture, which is often regarded as infested with surplus labour and therefore suffering from disguised unemployment, has been a major positive development in the rural transformation of Bangladesh. This has raised average labour productivity in agriculture and increased farm wages. Employment in nonfarm activities has created welcome opportunities for higher-income jobs for rural non-farm workers since wages and income typically tend to be higher in non-farm activities (Figure 4.5).

Figure 4.5: Rural Employment Structure 2000-2016 (%)



Source: Labour Force Surveys Various Years

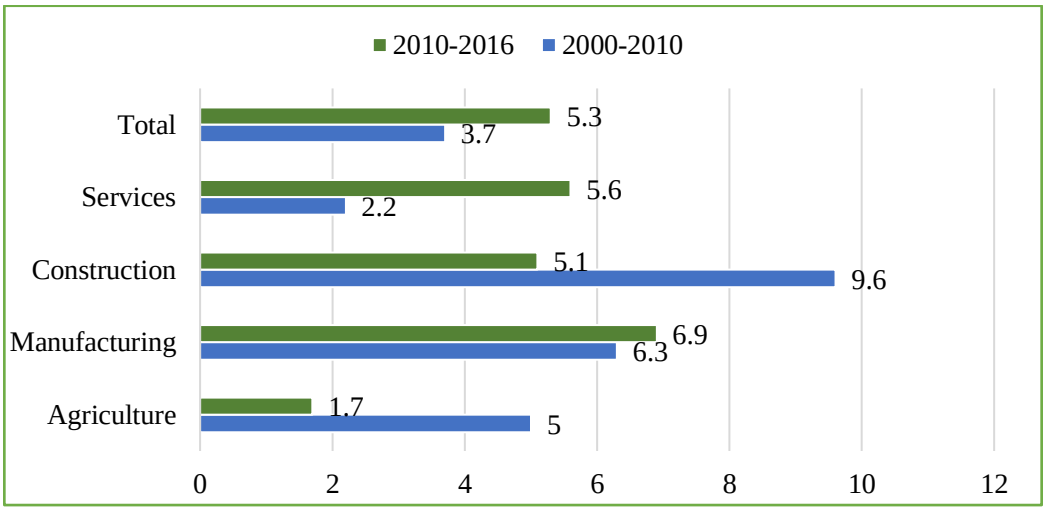
Figure 4.6: Real Wages in Rural Areas (Taka/day 2016 prices)



Source: HIES 2010 and 2016

The pace of job expansion in urban areas was much faster than in rural areas, which was instrumental in helping absorb the rapid increase in the urban labour force owing to internal migration. This was true for both 2000-2010 and 2010-2016. The urban poor benefitted most from the expansion of manufacturing jobs, especially in RMG, and in construction. This was the most important determinant of the reduction in urban poverty. Between 2000 and 2016, the RMG sector created some 2.4 million jobs, mostly low-skilled female workers. The construction sector also created another 1.1 million jobs, in urban areas. This rapid growth of industrial employment was the most important determinant of urban poverty reduction during 2000-2016. The services sector, which is the largest source of urban employment, created an additional 4.2 million jobs. However, these are mostly informal in nature and the earnings vary considerably depending upon the particular service.

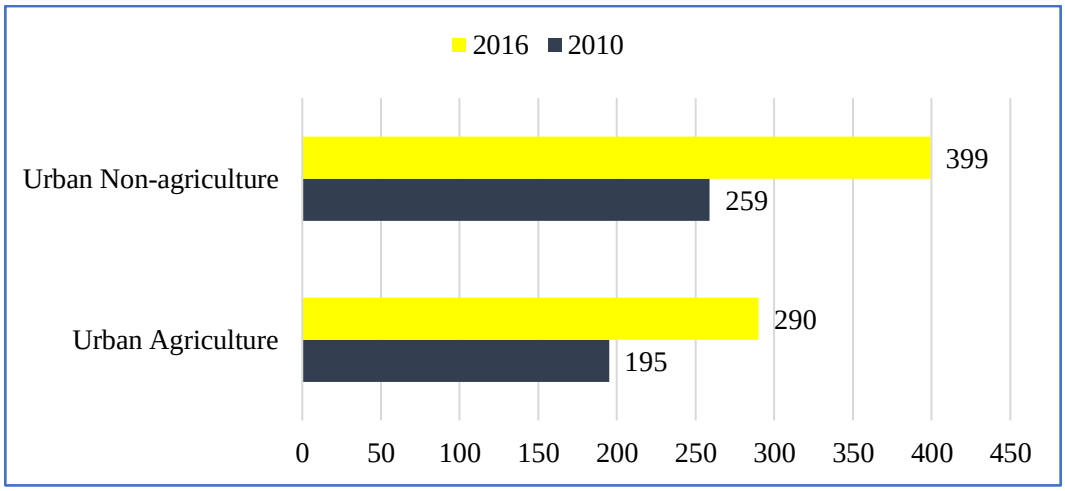
Figure 4.7: Employment Growth in Urban, 2000-2016



Source: Labour Force Surveys 2000, 2010, 2016-17

Despite the surge in the urban labour force, the urban labour market generally remained favourable for most of the urban poor. This is indicated by the growth in urban wages over 2010-2016 (Figure 4.8). The non-agricultural average wage rate also maintained a healthy premium (18%) over the rural non-agricultural wage rate to justify continued rural-urban migration.

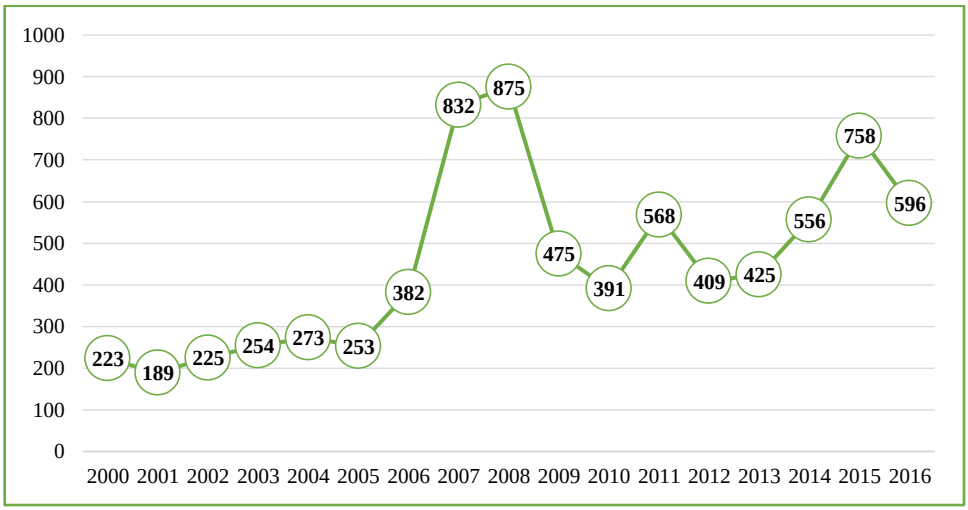
Figure 4.8: Urban Sector Wage Rate (Taka/day, 2016 prices)



Source: HIES 2010, HIES 2016-17

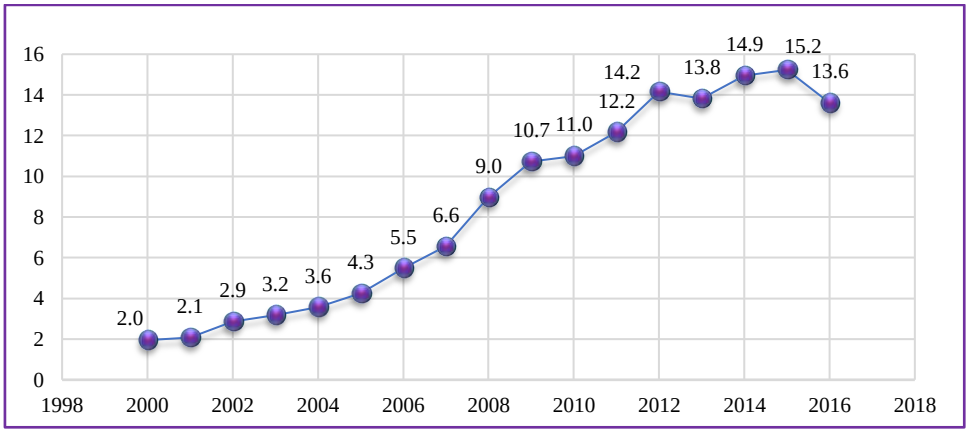
External employment and remittances: Income transfers from internal and external migration are another important source of poverty reduction, especially in rural areas. External migration has provided a major source of employment for both urban and rural workers, but especially rural workers. The trend of outward migrant worker outflows and inflows of remittances are illustrated in Figures 4.9-4.10. Both show considerable growth.

Figure 4.9: Number of Migrant Workers (000) 2000-2016



Source: Bangladesh Bank

Figure 4.10: Inflow of Remittances 2000-2016 ($ billion)



Source: Bangladesh Bank

Much of the remittances flow out to rural areas. This has radically changed the rural landscape through the injection of large income transfers. This has not only supported the growth of rural transport but also health and education services. A part of the outflow of agricultural labour has fed into the migrant labour market, although the bulk has gone to non-farm employment in rural and urban areas. HIES data suggest that the distribution of remittances favours more the non-poor households. Additionally, the percentage of households in the bottom 40% benefiting from remittances has fallen from 4.1% in 2010 to 2.3% in 2016. Yet, remittance inflows have contributed substantially to poverty reduction by financing consumption increases for this bottom 40% of households that have access to international remittances and more importantly by contributing to the growth of non-farm rural employment. The slowdown in remittance inflows during 2013-16 (Figure 4.10) and the reduction in the bottom 40% households' access to remittances in 2016 are likely to have contributed to the slower pace of poverty reduction in 2016 compared with 2010.

Access to microcredits: The government's programme to expand access to microcredits is another factor that has helped reduce poverty. The scale and outreach of microcredits have continued to expand with a positive impact on poverty reduction through the financing of micro enterprises that support off-farm job creation, smoothing of consumption and the build-up of assets (Table 4.3). The high cost of microcredit however remains a concern and efforts are needed to lower the cost. While interest costs are on average much lower than what private money-lenders charge in rural areas, they range between 20-24%, which are much higher than charged by commercial banks. Interest costs can be lowered by improving competition in the supply of microcredit, providing more funding to suppliers from public sources, and increasing the saving of the rural community that are members of the microcredit suppliers. Better use of technology can also help to reduce delivery cost of microcredits. On the demand side, the productivity of the use of microcredit can be enhanced through better training, knowledge, and technology transfer to the borrowers. Already, the use of ICT through smartphones is improving market information and lowering transaction costs. These solutions will be further strengthened in the 8FYP.

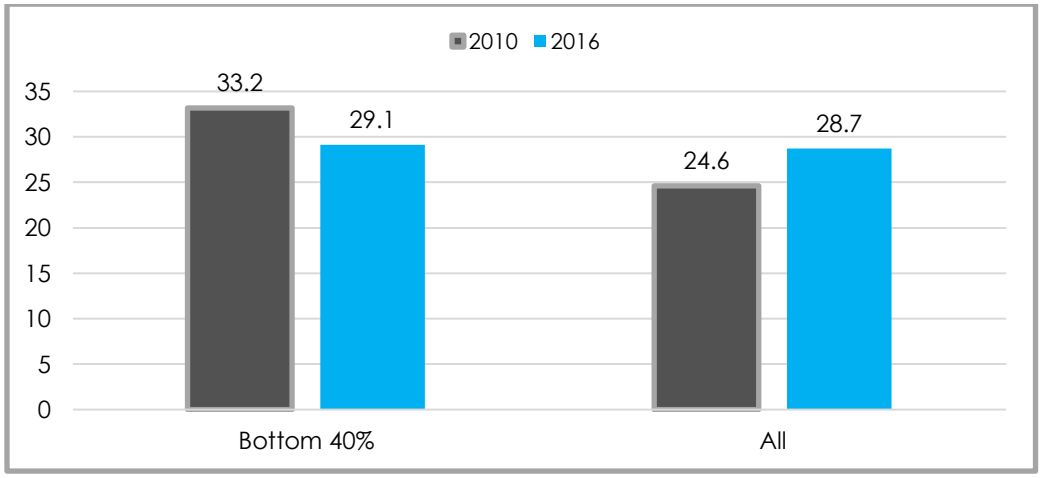
Table 4.3: Access to Microcredit

Disbursement of Microcredit	2005	2010	2016
Microcredit disbursement (Tk billion)	132	372	787
Microcredit disbursement (Tk billion) (2005 prices)	132	263	358
Number of borrowers (million)	13.9	27.2	23.2
Number of poor households (million)	11.5	10.4	9.7
Real microcredit/ poor household (000)	12	25	37

Source: GED estimates based on microcredit data from Microcredit Regulatory Authority

Access to social protection schemes: Bangladesh has an elaborate system of social protection schemes, mostly targeted to the rural poor. These poverty schemes have played an important role in reducing poverty in recent years. The HIES 2016 shows that the percent of households benefitting from social protection schemes has increased to 28.7% as compared with 24.6% in 2010 (Figure 4.11). This is a positive development. Instituting a better system of transferring social protection spending to the poor in order to increase its poverty reduction impact is a major challenge that will need to be addressed in the 8FYP. Targeting issues are discussed in detail in Chapter 14, Part 2.

Figure 4.11: Percentage of Households Receiving Social Protection Transfers



Source: HIES 2010 and 2016

Special Initiatives of Hon'ble Prime Minister: The Hon'ble Prime Minister has designed 10 special initiatives with effort to building a middle income country free of poverty and hunger by 2021 and a developed country by 2041. These initiatives are now in different stages of implementation and have been significantly contributing to the upliftment of the socio-economic status of the people particularly the poor and the helpless (Box 4.1).

Box 4.1: Honorable Prime Minister Sheikh Hasina's 10 Special Initiatives

Amar Bari Amar Khamar project has been taken to accelerate poverty alleviation and sustainable development by increasing agricultural production and livelihoods by forming and investing its own capital in the rural economy. The part of the project till July 1, 2016 has started its journey as 'Palli Sanchay Bank' and even after the completion of the current running part, the members and assets of the rest of the project will be transferred to the said bank. Beneficiaries of the project are the owners of the 49% of the bank. As a result of this initiative, the number of low income families in the project area has been reduced from 15% to 3%. The aim of this project is to reduce the poverty rate to 8 percent by 2021 by enrolling 10 million families living below the current poverty line into the project.

Ashrayan Project with the government allocation of Tk. 1160 Crore in the first phase aims to provide 65,726unit house along with 2 decimal land to the landless and homeless families, on the occasion of Mujib centenary. Another 128,000 houses will be built in the next one year. So far, 3,57,590 beneficiaries have been rehabilitated by constructing new houses/barracks with government funding. Houses will be constructed for 8,85,622 families from all districts of the country in phases.

Digital Bangladesh initiative aims to bring government services to the doorsteps of the people and ensuring transparency and accountability in every sector. About 540 million services of 272 types have been ensured from 6,686 digital centers, so far.

Education Assistance Trust aims to ensure 100% enrollment of the school going children, distribute free books up to secondary level, provide stipends including free education to girls. Education stipend and tuition fee assistance of Tk 661.06 crore has been provided to 14,29,776 students, so far.

Women Empowerment Programme aims to eliminate discrimination against women in all forms, increase women's participation in social and family decision-making, ensure participation in education and work, and prevent violence. In order to implement this, various initiatives have been taken including enactment of various laws and regulations, establishment of 12,956 rural maternal health centers, extension of maternity leave from 4 months to 6 months.

Electricity for All initiative aims to provide electricity to every household in order to increase national growth, alleviating poverty and developing the country's socio-economic and human resources. The number of power plants has been increased from 27 to 138, the power generation from 4,942 MW to 23,548 MW and access to electricity from 47% to 97%, in the last 10 (ten) years.

Community Clinics and Mental Health Programme has been taken to ensure primary health care for the rural poor. So far, 13,000 community clinics have been established under this initiative with the aim of setting up one community clinic for every 6,000 people.

Social Safety Net Programme aims to protect and promote the welfare of individual beneficiaries as well as society as a whole. Bangladesh has been spending about 2.2 per cent of GDP on social protection. Number of beneficiary coverage as percentage of total population has hovered between 32 and 34 percent during FY2015 and FY2018.

Investment Development initiative has been adopted to increase foreign direct investment (FDI) and local investment by creating an investment-friendly environment through extensive infrastructure development, including power, ICT and communication. The mega projects like construction of Padma Bridge, Metrorail, Elevated Expressway, Karnaphuli Tunnel, Matarbari Thermal Power Station, Payra Seaport, 100 Special Private Economic Zones etc. will create necessary physical infrastructure conducive to fostering both local and foreign investment.

The Environment Protection initiative aims to conserving the environment and biodiversity, controlling environmental pollution, and addressing the risks of global climate change. As a result of this initiative, the extent of government controlled forest coverage has been increased from 7-8% in 2005-06 to 15.58% at present. The Honorable Prime Minister was awarded the "Champions of the Earth" by UNEP in 2015 for her contribution to the environment and sustainable development.

4.2.3 Emerging Issues on the Poverty Front

While the long-term progress with poverty and extreme poverty reduction is very encouraging, several concerns have emerged from the poverty dynamics that need attention. First, while GDP growth accelerated during 2010-2016, the rate of reduction of poverty slowed down for both poverty and extreme poverty. This suggests that the growth elasticity of poverty (GEP) has fallen. The results are shown in Table 4.4. The GEP has been relatively stable between 2000 and 2010 but has fallen significantly during 2010-2016. The reduction in elasticity is large for extreme poverty for 2010-16.

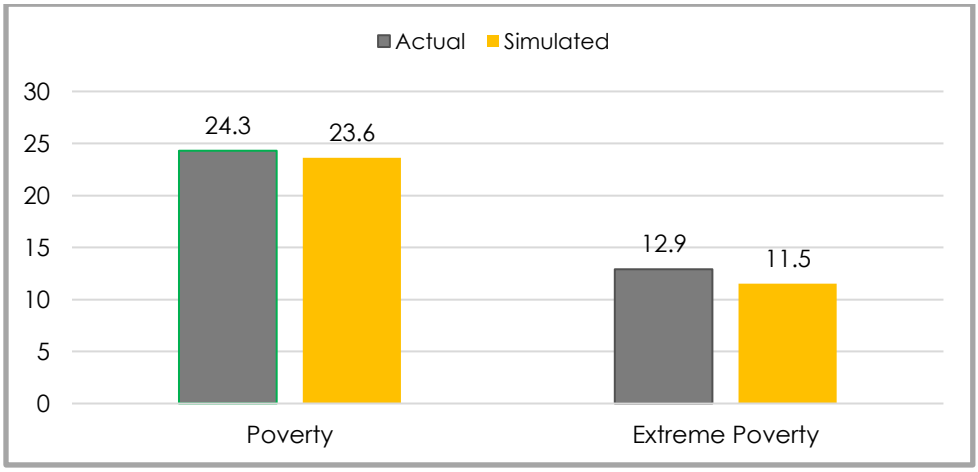
Table 4.4: Growth Elasticity of Poverty

Percentage per annum	2000-2005	2005-2010	2010-16
Average per capita GDP growth	4	4.8	5.1
Average reduction in poverty	(-) 3.94	(-) 4.67	(-) 4.11
Average reduction in extreme poverty	(-) 6.05	(-) 6.85	(-) 5.06
Growth elasticity of poverty	(-) 0.985	(-) 0.973	(-) 0.806
Growth elasticity of extreme poverty	(-)1.51	(-)1.43	(-) 0.992

Source: GED estimates using BBS HIES and National Accounts Data

The policy implication of this low progress in the poverty reduction strategy can be gauged by looking at the potential poverty reduction if growth elasticity had remained at the 2005-2010 level (Figure 4.12). Thus, potential poverty incidence would have been 0.9 percentage points lower for moderate poverty and 1.4 percentage points lower for extreme poverty. This suggests that securing higher per capita income growth alone will not be enough. The policy must also be directed to ensure that growth is much more pro-poor and inclusive. From the analysis above, this requires greater attention to higher farm incomes through farm diversification and productivity improvements. Rural non-farm and urban job creation focused on the industrial sector, improving access of poor households to international migration opportunities, and higher public spending on social protection along with better access of poor households to these transfers are needed.

Figure 4.12: 2016 Poverty Incidence with Unchanged Poverty Elasticity



Source: GED estimates

Secondly, after falling dramatically during 2000-2010, urban poverty progress stagnated in 2016. This is possibly partly explained by the explicit inclusion of the slum population in the 2016 HIES. This may also reflect the relative absence of social security programmes in urban areas. The government's emphasis on rural poverty is well placed given the continued concentration of the poor in rural areas. Yet, because of continued strong outmigration from rural areas into urban areas, there is a need to give greater attention to urban poverty. The importance of job creation in manufacturing and construction is particularly important for urban poverty reduction. Additionally, income transfers through better access to social protection benefits for the urban poor are very important.

Thirdly, there has been an increasing concentration of population just above the moderate poverty line suggesting an increase in vulnerability to shocks. The experience with COVID-19 illustrates this. Even before COVID-19 emerged, the vulnerable population defined as population whose consumption basket falls within 1.25 times the poverty line increased sharply and was much higher than in 2010. This happened because consumption growth became more unequal. From 2005 to 2010, consumption growth was highest among the poorer households. Thus, the average consumption growth of the bottom 40% was 1.8% between 2005 and 2010 as compared with average consumption growth of 1.4% for all households. This reversed in 2016 when poorer households (bottom 40%) experienced an average consumption growth of only 1.2% as compared with 1.6% for all household.

4.2.4 Poverty Reduction Progress during the Seventh Plan

The Seventh Plan sought to reduce moderate poverty from 24.8% in 2015 to 18.6% by 2020 and extreme poverty from 12.9% to 8.9% over the same periods. The last Household Income and Expenditure Survey (HIES) was done in 2016. No further survey was done since then. However, BBS estimated poverty incidence for 2017 and 2018. For 2019, poverty is estimated by using the growth elasticity of poverty for 2010-16. This assumes an unchanged consumption-GDP relationship and unchanged income distribution. The projected decline in poverty over the last 4 years of the 7FYP is shown in Table 4.5. The incidence of poverty and extreme poverty both exhibit considerable reduction. The results also track the 7FYP target for poverty reduction fairly well. So, on the whole, the poverty performance of the 7FYP during the first four years was commendable.

Table 4.5: Reduction in Poverty during the Seventh Plan Period

Year	Moderate Poor (%)		Extreme Poor (%)	
	7FYP	Actual /Estimated	7FYP	Actual/ Estimated
2016	23.5	24.3	12.1	12.9
2017	22.3	23.1	11.2	12.1
2018	21.0	21.8	10.4	11.3
2019	19.8	20.5	9.7	10.5

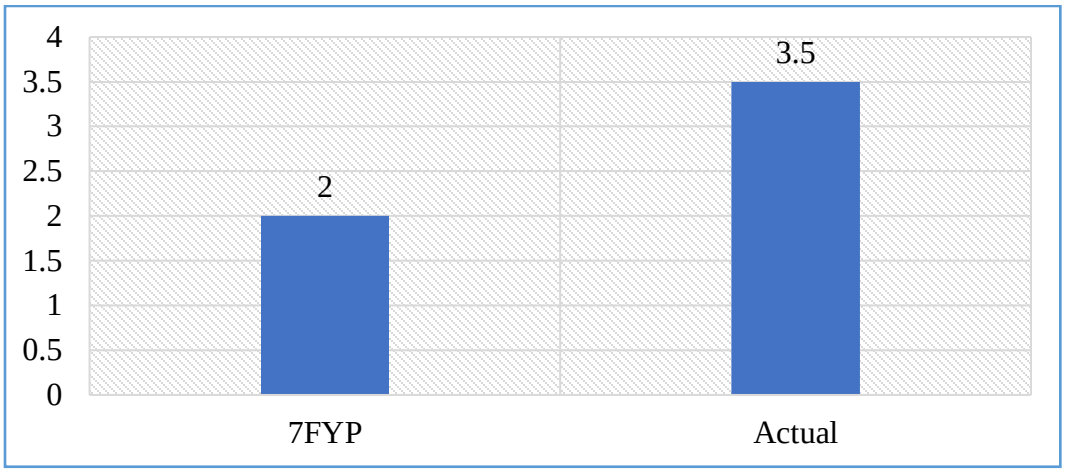
Source: BBS for 2016-2018. Estimates for 2019 derived using growth elasticity of poverty for 2010-16

As in the past, GDP growth was the main driver of poverty reduction. But the ongoing structural change whereby the share of manufacturing and other industrial activities, especially construction, increased while the GDP share of agriculture fell, did not benefit poverty reduction as much as was expected owing to the slowdown in employment in manufacturing. As evidenced from the past experience with poverty reduction described above (Section 4.2.2), non-farm job creation in rural areas and job creation in manufacturing and

construction were the major sources of poverty reduction. This slowdown during the 7FYP hurt the urban poor particularly because the employment in the RMG sector, which has been a driver of urban poverty reduction in the 2000-2013 periods, stagnated since 2013 with almost zero growth since then. Low-skilled urban female workers were the main beneficiary of this boom in urban employment between 2000 and 2013. Employment also slowed in construction, which has been an important source of poverty reduction for both urban and rural poor. The slow-down in employment in both RMG and construction despite rapid growth in respective value-added is largely explained by the greater adoption of better technology and high capital-intensive means of production. The low skill base of the urban and rural poor puts them at a great disadvantage in benefitting from GDP growth in the urban areas owing to the onset of the Fourth Industrial Revolution (4IR). This is an issue that will require large policy attention during the 8FYP.

As against the slower growth of domestic employment, a positive factor for poverty reduction in the 7FYP was the growth in external migrant employment and remittances (Figure 4.13). Along with the expansion of the higher-than-planned uptake of migrant workers, the growth of remittance inflows that showed a downward trend in FY2013-FY2016, turn-around sharply during FY2017-FY2020 providing a very strong impulse to income flows to the beneficiaries of remittance income. This was supported by government policies to increase the outflow of migrant labour through diplomacy and policy dialogue with governments of receiving countries, better information at the district level on migration opportunities, training to potential migrants, and a special incentive to attract remittance through the banking system.

Figure 4.13: Migrant Labour Outflows during 7FYP (million workers)



Source 7FYP and Bangladesh Bank

The 7FYP poverty reduction strategy continued to expand access to microcredits. Both the volume of credit and the number of borrowers expanded rapidly. The real value of microcredit disbursements grew at an impressive annual pace of 14%, which is substantially faster than during 2005-2016 (9.5%). The number of borrowers also grew at a faster pace (8% as compared with 5%). This was supported by the Microcredit Regulatory Authority (MRA) efforts to facilitate as well as regulate microcredit flows through new licenses, regulations to strengthen supervision, and weeding out inefficient or non-compliant suppliers. As of June 2019, some 724 licensed MFIs were in action. Greater competition access, service delivery, and some reduction in cost. On the whole, progress on the microcredit front was a major positive development for poverty reduction during the 7FYP.

Table 4.6: Expansion of Microcredit during 7FYP

Disbursement of Micro-credit	FY2015	FY2019
Microcredit disbursement (Tk billion)	634	1403
Microcredit disbursement (Tk billion) (2005 prices)	306	542
Number of borrowers (million)	20.4	28.4
Number of poor households (million)	9.5	8.2
Real microcredit/ poor household (000)	32	63

Source: GED estimates based on microcredit data from Microcredit Regulatory Authority

Regarding social protection, the government's emphasis remained in place. In 2015, the Government adopted the National Social Security Strategy (NSSS) to improve the efficiency and effectiveness of the social protection system in Bangladesh. Several reforms have been initiated to implement the NSSS. The most important one that has been completed and is now functioning is the establishment of the G2P System led by the Finance Ministry. This reform is enabling direct payments from the government to the beneficiaries through online transfers. Other reforms are in the process to consolidate and convert multiple programmes into the Life Cycle Framework suggested by the NSSS. Steps are also being taken to convert in-kind programmes to cash transfers to reduce leakages. Additionally, the amount of resources allocated for NSSS programmes as a percent of GDP has been falling owing to severe fiscal constraints. The government is taking stock of the progress with the implementation of the NSSS and intends to strengthen implementation during the 8FYP.

4.2.5 Eighth Plan Strategy for Poverty Reduction

The solid progress in poverty reduction achieved during the Seventh Plan before COVID-19 happened suggests that the underlying poverty reduction strategy is broadly on the right track. But some of the concerns about the pre-COVID-19 outcomes noted in section 4.2.3 combined with the effects of COVID-19 suggest that several important changes will be necessary to strengthen the robustness of the poverty reduction strategy.

First, the reduction in poverty elasticity and the stagnation in poverty reduction in urban areas observed in 2016 suggests that stronger efforts are needed to make the growth much more pro-poor and inclusive as discussed in chapter 2. This requires attention to the composition of GDP growth and its job creation potential.

Second, the high concentration of near-poor close to the poverty line means that a large population is heavily exposed to shocks like COVID-19. The resilience and stability of income need to be strengthened through efforts to increase the real incomes of both the wage-employed workforce and the self-employed workforce, and through a stronger system of income transfers to the poor and vulnerable based on a vastly strengthened social protection system.

Third, in the very short term, a large number of jobs will need to be created in the first year of the 8FYP to absorb the many domestic unemployed in the informal sector and those who are returning from overseas from loss of jobs owing to COVID-19. Additionally, social protection spending will need to be increased to offset the short-term increase in poverty.

Finally, the PP2041 and SDG-01 objective of securing the target of elimination of extreme poverty by FY2031 requires special attention to social protection, health, education, and training focussed on the extreme poor. The introduction of a Universal Health Care system financed through a combination of public and private health insurance schemes is of utmost importance in this regard.

8FYP Targets for Poverty Reduction

The poverty reduction targets for the Eighth Plan are shown in Table 4.7. The poverty reduction targets depend upon both the growth rate of GDP and the pattern of consumption/income distribution. It also depends upon how quickly the short-term spike in poverty acceleration owing to COVID-19 is reversed and the poverty path is restored to the pre-COVID trend. The average growth rate projected for the Eighth Plan is 8.0 percent per year. The projections assume that the government will adopt all policies including job creation and income transfers to restore the COVID-19 infected poverty situation to the long-term poverty reduction path of PP2041 by FY2022. This is the only way that Bangladesh would be able to eliminate extreme poverty by FY2031. The sharp improvement in poverty elasticity of per capita GDP growth shown in Table 4.7 assumes that significant efforts will be made to improve consumption distribution in favour of the poorest 40th percentile of the population to lift them at a faster pace out of poverty and vulnerability than was possible during the 2010-2020 periods. The associated poverty reduction strategy and the underlying policies to achieve these targets are discussed below. These policies are drawn from the lessons of experience with poverty reduction during the past two decades and especially during 2010-2020.

Table 4.7: Poverty Targets for the Eighth Plan

Indicators	FY2021	FY2022	FY2023	FY2024	FY2025
Incidence of Poverty	23.0	20.0	18.5	17.0	15.6
Poverty elasticity of growth			1.2	1.2	1.2
Per capita GDP growth	6.1	6.5	6.8	7.1	7.3
Incidence of Extreme Poverty	12.0	10.0	9.1	8.3	7.4
Poverty elasticity of growth			1.4	1.4	1.4

Source: GED Projection

Main Elements of the Poverty Reduction Strategy

The main elements of the Eighth Plan poverty reduction strategy are as follows:

Reversal of COVID-19 induced poverty: The highest and most immediate priority would be to reverse the COVID-19 shock-induced spike in poverty in Q2 of 2020 within the first two years of the 8FYP. Given the large shock and the persistence of COVID-19 effects in the first half of FY2021, an 18-month recovery period seems reasonable. The poverty reduction support package will include sharply improving COVID-19 prevention and COVID-19 related healthcare spending to ensure the health safety of all workers and families to allow a return to normalcy; accelerating income transfers through the social protection programme to those who remain affected by COVID-19, loss of income and/ or face COVID-19 related health care spending shocks, providing jobs to those who became unemployed from COVID-19 by accelerating efforts to revive the Cottage, Micro, Small and Medium Enterprises (CMSMEs) through low-cost credit schemes, protecting jobs in the formal sector through the speedy implementation of the various

stimulus packages announced by the government; supporting agriculture production and diversification through a range of policies including access to inputs including mechanized inputs, farm credit, marketing support, price support through public procurement, and implementing rural works programme as needed.

Job creation through growth and structural change. The analysis of poverty progress over 2000-2016 provided strong supportive evidence that the fundamental determinant of poverty reduction over the long term is the acceleration of GDP growth that is combined with efforts to create jobs in manufacturing, construction, and services. Growth projections for the 8FYP reviewed in chapter 2 shows that the recovery of GDP growth will be swift based on short-term stimulus-based policy responses and the implementation of the government's long-term growth strategy of PP2041. Thus, GDP growth is projected to recover to the long-term PP2041 postulated GDP growth path of 8 percent, reaching 8.5% by FY2025. The GDP share of agriculture will continue to fall, while the GDP shares of industry, especially manufacturing, and services will grow. The manufacturing sector in particular is projected to grow in double digits, thereby increasing its GDP share from 25% in FY2020 to 31% in FY2025. This changing composition of production is conducive to poverty reduction through better job creation in manufacturing. However, the recently observed slow-down in employment in manufacturing in both urban and rural areas will have to be reversed during the 8FYP. The suggested strategy in Chapter 2 to boost the role of CMSMEs will be critical in creating manufacturing as well as other off-farm jobs.

Even as both the GDP and employment shares of agriculture fall, agriculture will remain important for food security and income of self-employed farmers, many of whom are poor. However, the creation of non-farm jobs in rural areas will be the main source of poverty reduction for rural wage workers since agriculture will continue to shed labour. Within agriculture, productivity improvements to raise yields, reduce vulnerability to climate change, and greater diversification to non-crop agriculture, fishing, livestock, and dairy products will play important role in increasing income for the self-employed farmers and workers that remain in farming. Therefore, the 8FYP will undertake investments in research and extension to increase crop productivity, especially rice, to support climate-resistant seed and production technology, invest in water resources to support farm production in drought-prone areas of the Barind region in the North-western Districts of Bangladesh and the CHT, ensure flood control and water-logging prevention investments, and take steps to prevent river-bank erosions and salinity inroads. These actions are all discussed in detail in the Bangladesh Delta Plan 2100 (BDP2100) and further elaborated in chapter 5 of part 2 dealing with agriculture and water issues. Implementation of the BDP2100 is critical for lowering the vulnerability of the poorest districts of Bangladesh noted in Section 4.4 below.

The most fundamental challenge for job creation in the 8FYP that will have a telling effect on both rural and urban poverty, but especially for urban poverty, is the pace and pattern of the manufacturing sector growth. The observed slow-down of job creation in manufacturing and the sharp fall in the short-term employment elasticity in manufacturing during 2013-2016-17 will be addressed comprehensively during the 8FYP to secure the poverty reduction targets. The main elements of the policy framework to spur the growth of manufacturing value-added and employment is to promote the diversification of labour-intensive export-oriented manufacturing beyond RMG. Drawing on the lessons from the RMG success, policy supports for other labour-intensive manufacturing exports include a competitive real exchange rate, reduction in trade protection to remove the anti-export bias of trade policy, improve infrastructure services, and reduce the cost of trade logistics through deregulation, automation and transport links between the ports and the factory-gate. Details of the manufacturing and trade policy reforms that will be pursued during the 8FYP are provided in chapter 2 of part 2 of the Plan document.

Outside agriculture, the CMSEs are the largest sources of employment in a wide variety of urban and rural enterprises in manufacturing and services. Employment in CMSEs is a mixed bag of self-employed, wage employed, and family labour. These enterprises are mostly informal in nature, have low capital intensity, use low-level technology, and involve small scale production. The manufacturing CMSEs have little or no linkage to formal medium and large-scale manufacturing. Progress was made in sub-contracting arrangement with the formal RMG sector but over the years automation and consolidation in the formal RMG have weakened this linkage. Lack of dynamism in the CMSEs is a major constraint to job creation that has been further hit hard by COVID-19. A major strategic shift in the 8FYP employment strategy is to boost the CMSE sector through better access to bank financing and through one-stop support for technology, training, marketing, and regulatory improvements based on converting the SME Foundation into an institution like the Small Business Association (SBA) of the USA. Additionally, bank and non-bank financial institutions are reluctant to lend to CMSEs owing to higher risk perception, especially in terms of start-up financing. Adoption of a Credit Guarantee Scheme (CGS) can be very helpful to address this constraint.

The services sector has historically provided a strong value-added and employment cushion as the production structure changed over the years. Initially, the workers migrating from agriculture were mostly absorbed in a range of informal rural and urban services. Over the years, the emergence of RMG and construction as major economic activities slowed this influx in low-productivity and low-income informal services. Within services, there is a visible transformation with the growth of a variety of modern services in transport, trade, finance, housing, tourism, education, and health. Much of this transformation has happened in the urban areas but with improved transport connectivity, electricity, and the spread of internet, the services activities are also getting modernized in services. The 8FYP will accelerate this transformation of the services sector through support for access to credit, through the strengthening of ICT, and promotion of ICT exports and skills upgrading through training.

Strengthening education and training focused on the poor: Development of human capital will be essential to implement the government's inclusive growth strategy. As noted in chapter 1, despite progress the skills constraint is serious and requires further coordinated efforts focused on increasing education enrolments at the secondary level and above, improving the quality of education, and strengthening training programmes for employable skills. As discussed in detail in chapter 10, Part 2, much greater efforts are needed to improve the equity of education and training services to enable the poor to participate better in the growth process. Education and training are also the best means to reduce income inequality over the longer term. The 8FYP will focus strongly on the development of education and training, with emphasis on secondary and tertiary enrolments, emphasis on quality, and special attention to improve the access of the poor to education and training. The details of education and training strategy are contained in chapter 10, Part 2.

Implementation of the Bangladesh Delta Plan 2100 (BDP2100): It is well-known that the poverty and vulnerability to natural hazards and climate change are inter-linked. So, sustainable reduction in poverty that is related to natural hazards and climate change will require addressing these vulnerabilities at source. The BDP2100 was prepared with this as one core objective, in addition to others. The adoption of BDP2100 in September 2018 is a major milestone in strategy making in Bangladesh that explicitly addresses the natural hazard and climate change risks to development prospects for Bangladesh. The 8FYP is the first phase of implementing the BDP2100.

Promote job creation and income earnings from external migration: The potential strong positive role of external migration in reducing poverty will be better harnessed in the 8FYP, learning from the experiences of the 6th and 7th Plans. The adverse effect of COVID-19 on overseas employment is expected to be temporary and global recovery is expected by the end of FY2021. The external migration strategy for poverty reduction during the 8FYP consists of a number of inter-related policy actions: (i) strengthen government efforts to negotiate with existing and new potential labour- shortage host countries to export Bangladeshi workers; (ii) upgrade skill base of potential migrants through training; (iii) support outmigration from the poorest districts of the Northwest part of Bangladesh that are not well served by access to external migration through better information flow and training; (iv) find ways to reduce the cost of out-migration through partnerships with job agencies that provide low-cost services; (v) provide access to one-time credit to defray the cost of migration secured against future earnings based on a government programme administered by commercial banks; (vi) provide information and anti-exploitation services through the embassies; (vii) ensure that the exchange rate for remittance through the banking system is competitive with the curb market rates; and (viii) offer solid banking services to the migrant workers to enable the use of formal banking channels for sending remittances.

Continued growth of microcredit services: As noted earlier, progress with microcredit services has been a major policy success in reducing poverty and supporting rural transformation. This progress will be strengthened in the 8FYP. The research will be done to find ways that the cost of microcredit can be brought down, especially through the use of digital technology that could help reduce the transaction cost of borrowing, supervision, and repayments. An effort will also be made to bring some of the microcredit borrowers into the fold of the normal banking channel.

Towards a Universal Health Care System for Bangladesh: The onslaught of the COVID-19 epidemic strongly brought home the importance of instituting a universal health care system (UHC) as a major policy intervention for reducing poverty, especially extreme poverty. The extreme poor are particularly prone to shocks, particularly heath shocks. Time has come for Bangladesh to start on a pilot basis some type of a health insurance scheme. The Ministry of Health has already developed a long-term strategy for health financing that includes health insurance. The implementation of this health financing strategy will be a major priority during the Eighth Plan.

Strengthening the implementation of NSSS: A well thought out social protection strategy is extremely important for supporting poverty reduction based on the above strategies and policies. While Bangladesh has a strong commitment and rich experience with implementing a wide range of social safety nets, there are many concerns with the effectiveness and poverty focus of the safety net system. The experience of COVID-19 also exposed some of the inherent limitations of the present social protection system. For the 8FYP, two major initiatives will be taken. First, the implementation of the NSSS will be fast-tracked. All efforts will be made to consolidate the multiple schemes into the core Life-Cycle risk-based programmes suggested in the NSSS, move away from in-kind to cash-based transfers on-line transfers, establish Single Registry MIS of beneficiaries based on eligibility criteria identified in the NSSS, and establish an on-line Grievance Redressal System. Second, the financing of a reformed social protection system will be given a high priority. This is built in the Fiscal Policy Framework of the 8FYP described in chapter 5 that allows for the increase in social protection spending (excluding civil service pensions that are not poverty-targeted) as a share of GDP from 1.2% in FY2019 to 2.0% by FY2025.

4.2.6 Strategies to Address Extreme Poverty – Additional Measures

Replication of the Micro Programme Successes in Eradicating Extreme Poverty: Micro programme successes have been many and they are marked by diversity in approaches. There have been quite a few targeted livelihood programmes (e.g., EEP, CLP, TUP, etc.) that have been quite effective in combating a more difficult case of extreme poverty. A defining marker of many of these programmes is that they are aimed to provide consequential transfer of resources (assets or financial) to extremely poor clients. These interventions help develop/support asset management, savings habit, organizational, financial, and marketing skills, which are "non-tradable" and cannot be overnight developed by transfer of money alone. The aim should now be to replicate on a wider scale - and suitably modified where applicable - these programmes to cover most extreme poor groups in the country to reduce extreme poverty significantly in the 8FYP.

Undertaking Measures for Preventing and Mitigating Shocks: The onslaught of COVID-19 is a stark reminder of how shocks play a decisive role in shaping the pace of extreme poverty reduction. Most of the poor and near-poor population have limited assets and other forms of saving instruments to cope with shocks. A devastating and prolonged shock like COVID-19 can easily derail poverty progress. So, efforts need to be made to build up asset generation for the poor as well as preventing asset erosion. As evidenced by COVID-19, shocks make poor people poorer and turn the extreme poor into destitute. Although COVID-19 is in the form of an unprecedented once-in-a-lifetime global shock, more regular socks through natural disasters and healthcare shocks are a regular phenomenon in Bangladesh. Indeed, had there been no slippages into poverty due to preventable shocks, Bangladesh would have experienced a much faster decline in poverty and extreme poverty. So, shock prevention and risk reduction for the poor and the poorest in particular will, therefore, be given top policy priority in the Eighth Plan. As noted, two important risk mitigation strategies that will be adopted in the 8FYP to minimize the effects of anticipated shocks include the reduction in climate change and natural disaster-related shocks by the implementation of the Bangladesh Delta Plan BDP2100 and the introduction of Universal Health Care system.

Improving the Regional Balance in Development

The evidence from successive HIES surveys shows that the distribution of poverty is highly uneven by zillas and upazillas. There are some perennially poor zillas and upazillas that continue to suffer from poverty and deprivation over a long period. Addressing the poverty challenges in these backward regions will help secure the extreme poverty eradication challenge much more fruitfully than most other interventions. This is a major task for the 8FYP. The details are discussed in the following section.

4.2.7 Multidimensional Poverty Index (MPI)

The Sustainable Development Goals (SDGs) call for eradicating poverty in all its dimensions from the men, women and children. Recognizing this multifarious nature of human poverty and deprivations, the government, during the 7th FYP, has taken initiative to develop the National Multidimensional Poverty Index (MPI) and linked Child Multidimensional Poverty Index (C-MPI) as a prelude to preparing a national MPI for Bangladesh. The MPI analysis will help the government to establish a robust baseline for tracking progress in non- monetary poverty reduction over time and to identify and target the poorest areas or the poorest sub-groups within those areas. Focusing on what is causing high levels of poverty, the indices will

be used to develop interventions for specific areas or sub-groups to ensure they receive adequate and appropriate social services to reduce their deprivations. It is expected that the fruitful realization of national MPI and Child MPI during the 8th FYP would enable the government to fight against non-monetary deprivations, which will reduce regional inequality and mainstream marginalized groups into the development process. It is worth mentioning that MPI for Bangladesh has been decreased from 0.175 in 2014 to 0.101 in 2019, driven by decreases in both incidence (headcount) and intensity of poverty, according to the Global Multidimensional Poverty Index (MPI) Report 2020. Whereas 37.6% of the total population (58.0 million) was MPI poor in 2014, this proportion has been reduced to 24.1% of people (39.2 million) in 2019, meaning that 18.8 million people moved out of poverty during those years.

4.3 PROGRESS WITH REDUCING REGIONAL DISPARITIES

Bangladesh puts a strong emphasis on establishing a just and equitable society where there are opportunities for all irrespective of race, religion, culture gender, or location. This is a tough challenge as inequalities are known to prevail across these various dimensions owing to differing initial conditions, factor endowments, factor mobility, and administrative weaknesses. Nevertheless, the government is committed to addressing these inequalities and ensure the equity of development through its various policies and development initiatives.

In the context of spatial administrative setup, Bangladesh is comprised of 8 divisions and 64 districts. Districts are further sub-divided into sub-divisions (upazillas) and thanas. Unfortunately, updated income data is not available either by divisions or districts. As a result, it is not possible to see if there is progress in achieving per capita income convergence among districts and regions. However, HIES data provide a unique opportunity to find out the location of the poor by district and regions, thereby providing a picture of the lagging regions in terms of poverty progress at the regional and district levels. This is very useful to guide policy, especially in the allocation of public spending to reduce regional and district-level disparities.

4.3.1 Regional Distribution of Poverty

An important objective of the Government is to ensure that poverty progress happens throughout the country so that no region/district is left behind. This also has important implications for income inequality. The most fundamental result is that all regions have benefitted from development efforts with sharp reductions in poverty and extreme poverty (Table 4.8). The sharp reductions in poverty between 2000 and 2016 in the traditionally lagging regions of Khulna, Rangpur, Mymensingh, and Barisal are heartening news. Rangpur in particular used to suffer from episodes of hunger and deprivation during the lean agricultural months. This is now a matter of past and Rangpur secured more than 60% reduction in the incidence of extreme poverty. Similar impressive reductions in extreme poverty have happened in Mymensingh, Barisal, and Khulna. These lagging regions are typically much more heavily reliant on agriculture and informal activities and also tend to suffer from a much more severe incidence of natural disasters and climate change impact.

Table 4.8: Regional Poverty Incidence (%)

Division	Poverty Rate				Extreme Poverty Rates			
	2000	2005	2010	2016	2000	2005	2010	2016
Barisal	53.1	52.0	39.4	26.4	34.7	35.6	26.7	14.4
Chattogram	45.7	34.0	26.2	18.3	27.5	16.1	13.1	9.0
Dhaka	42.3	27.7	25.8	16.7	30.6	16.1	11.3	7.4
Khulna	45.1	45.7	32.1	27.7	32.2	31.6	15.4	12.1
Mymensingh	60.6	48.5	48.3	32.9	47.0	35.0	31.9	18.0
Rajshahi	45.1	45.7	32.1	27.7	32.2	31.6	15.4	12.1
Rangpur	60.6	48.5	48.3	32.9	47.0	35.0	31.9	18.0
Sylhet	42.4	33.8	28.1	16.2	26.7	20.8	20.7	11.5

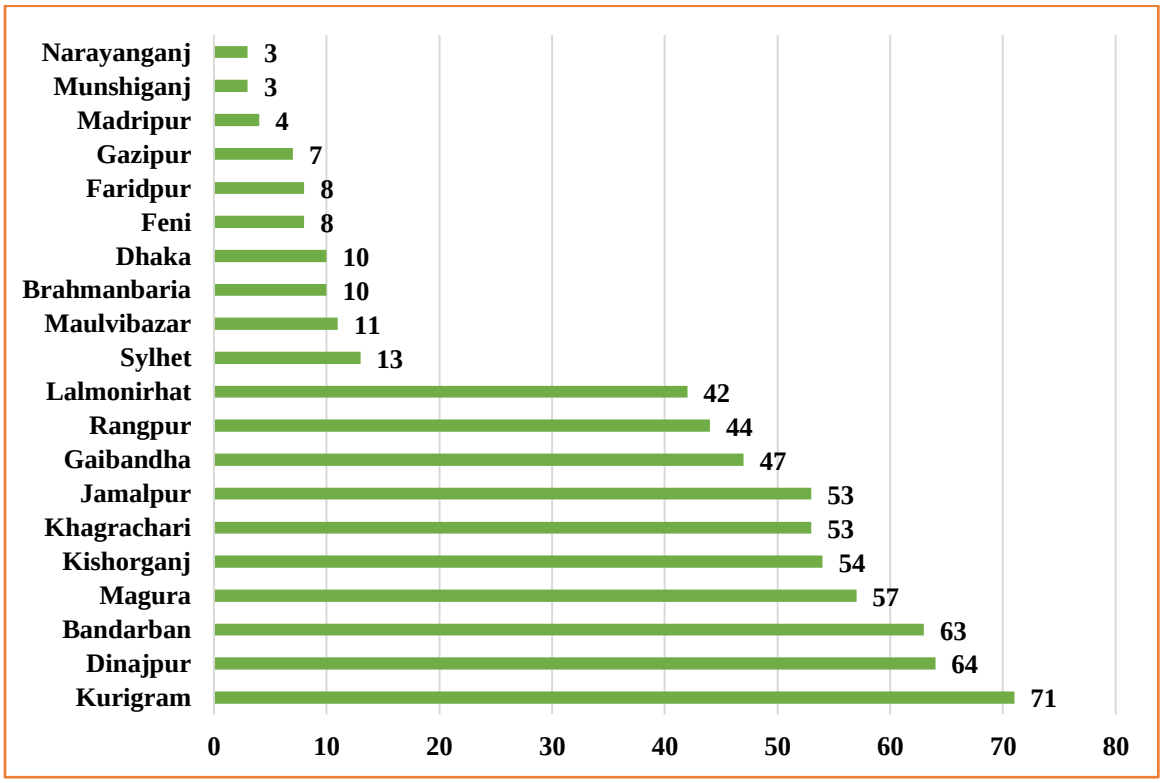
Source: World Bank Poverty Assessment 2019, Volume 2. Estimates based on HIES 2016.

Although the sustained progress with regional poverty reduction is a very welcome news, one important concern is the regional disparities in poverty progress (Table 4.8). The eastern regions of Bangladesh (Dhaka, Chattogram, and Sylhet divisions) tend to have a lower incidence of poverty than the western regions (Khulna, Barisal, and Rajshahi). Since there are differences in poverty outcomes within a Region, the spatial disparities are much better reflected in the disaggregation of the poverty profile by districts. This is illustrated by comparing the poverty progress amongst the poorest 10 districts with the progress in the top 10 districts exhibiting the lowest poverty rate. This comparison would yield some useful insights about what contributes to disparities in poverty outcomes by districts.

Figure 4.14 shows the 10 poorest and the 10 least-poor districts as reflected in the results of the 2016 HIES. Several remarkable findings might be highlighted.

- The disparity in district-level poverty is large. The gap between the least poor district (Narayanganj) and the poorest district (Kurigram) is a phenomenal 68 percentage points.
- All the top 10 least poor districts belong to the Eastern Regions of Bangladesh: 6 in Dhaka Division (Narayanganj, Munshiganj, Gazipur, Madripur, Faridpur, and Dhaka); 2 in Chittagong Division (Bhramanbaria, Feni); and 2 in Sylhet Division (Maulvibazar and Sylhet).
- The distribution of the poorest districts is more disparate, spreading all over the country, although there is a large concentration of these districts in the Western Division of Rangpur (Kurigram, Dinajpur, Gaibandha, Rangpur, and Lalmonirhat).
- The Chittagong Hill Tracts Area (CHT) exhibits a large concentration of poor people, with two of the three districts of CHT showing poverty in the 53-63 percent range, which is more than twice the national average.

Figure 4.14: Top 10 Least Poor and Top 10 Poorest Districts 2016



Source: HIES 2016, BBS

An important policy question is why are these 10 districts so poor and exhibit poverty rates that are substantially above the national poverty rate. This requires a detailed investigation of poverty pockets at the district level. Some limited analysis done by putting together fragmented data from different sources suggests that by and large, these districts have the following characteristics:

- Tend to be dominated by agricultural activities with a dominance of landless labours, limited manufacturing and construction activities relative to the more prosperous districts. In particular, non-farm rural employment opportunities are much more limited in these districts as compared with the least poor districts.
- Suffer from more intense episodes of natural disasters and climate change, especially flooding and riverbank erosions.
- Have weaker infrastructure facilities relative to the more prosperous districts.
- Have much weaker access to international migration and income transfers relative to the more prosperous districts.
- Have weaker urban centres than in the least poor districts.

4.3.2 8FYP Strategy for Addressing the Poverty Problems for the Lagging Regions

The above findings provide a very important basis for policy interventions in the 8FYP to alleviate poverty in the poorest districts. The main interventions include:

- Refocusing ADP spending to improve the health, education, and infrastructure needs of the lagging districts.
- Giving higher priority and greater beneficiary coverage of social protection programmes to the lagging districts.
- Prioritizing BDP2100 PIP in favour of addressing irrigation, flood control, waterlogging and salinity problems in the lagging districts.
- Establishment of Char Development Board to address the vulnerabilities of Char area.
- Focussing agriculture research and extension services to help farm productivity and incomes in the lagging districts.
- Supporting the growth of non-farm rural enterprises in the lagging districts through focussed support programmes including credit, technology, and marketing services.
- Provide greater access to labour training to lagging districts.
- Improve access of lagging districts to international migration through better information, training, and credit support to meet the cost of overseas employment.
- Enhance access to ICT services through the education system and special training programmes to the lagging districts.
- Strengthen the LGIs working in the lagging districts through a higher share of block grants and training.
- Strengthen partnership with NGOs and CBOs in delivering all relevant local services including social security programmes.
- Conduct in-depth district-level poverty assessments for the top 10 poorest districts to do a more detailed and specific diagnostics of the fundamental constraints faced by these districts and tailoring public programme support to address those constraints.
- Require BBS to re-introduce district level GDP estimates to help understand the pattern of district level income paths and whether convergence is happening.

4.4 PROGRESS WITH INCOME INEQUALITY REDUCTION

Implementation of the above poverty reduction strategy will be the most important element for containing and eventually reducing income inequality. As noted in Chapter 2, Bangladesh has already stabilized consumption inequality at around a Gini coefficient value 0.32, but income inequality has increased, measured in terms of both the Gini coefficient and the Palma ratio. The reduction of income inequality is a tough challenge and a long -term endeavour. Growing economies like China and India are all experiencing rising income inequality. Since assets and human capabilities are unequally distributed historically, the benefits of growth in the context of a market economy tend to favour those who have a better endowment of assets and human capabilities to start with. The long-term income inequality reduction strategy must, therefore, focus on reducing this initial gap. Human development strategy with an emphasis on alleviating the access gap for the poor is one powerful instrument. Facilitating asset accumulation through better access to credit for the poor can help reduce income inequality. A better strategy for social inclusion by eliminating

physical and social barriers is another important instrument. The experience of Western Europe suggests that fiscal policy can be a very powerful instrument for the reduction of income inequality. This calls for both increased public spending on social sectors (health, education, sanitation, water supply, and social protection) and very importantly a well-designed personal income tax system that taxes all sources of income at a progressive rate.

4.4.1 Strategy for Better Income Distribution

a. Strengthening Land Management

The poor usually have very little physical or financial assets. Those who are amongst the fortunate few have small landholdings in the rural areas. Land disputes and land grabbing by powerful elites often with small compensation are frequent events in Bangladesh. Land speculation is similarly rampant, especially in urban areas. Inequitable access to land often through subsidized land distribution by Rajuk (the Dhaka Development Agency) to the rich elites and also through illegal land grabbing of public land in collusion with corrupt public officials have tended to create huge inequality in wealth and income. Proper land management can be very helpful to correct this source of inequality. The 8FYP will strengthen the land administration regime and related land market through a range of institutional, regulatory, and fiscal policy reforms. These reforms include computerization of land records; simplification of land transactions and land registration. The market price of land/real estate should be the basis of determining registration fees and property taxes. This will increase revenues of the government substantially. Such reforms will also protect the poor farmers from the clutches of the predatory land grabbers. A proper capital gain tax on land transactions will be another important way to reduce windfall capital gains; it will also help to stabilize land prices by discouraging land speculation and provide important revenue earnings to the government for spending on social services.

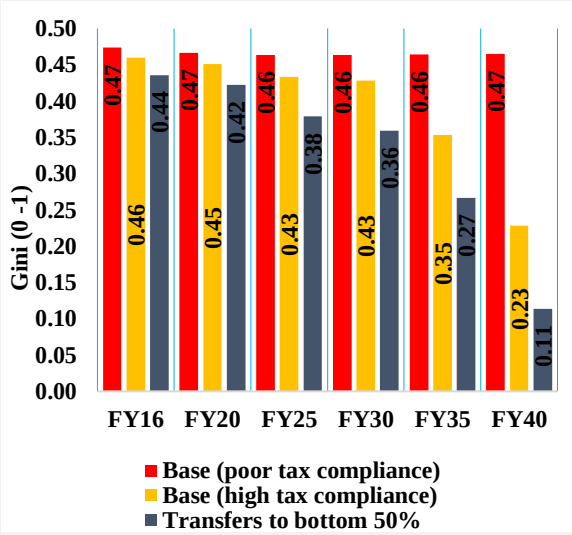
b. Redistributive Fiscal Policies

Research from Bangladesh shows that a combination of better tax compliance with greater focus on personal income taxation and redistribution of these resources through public expenditures targeted to the poor can improve income distribution. Results of simulations are illustrated in Box 4.2.

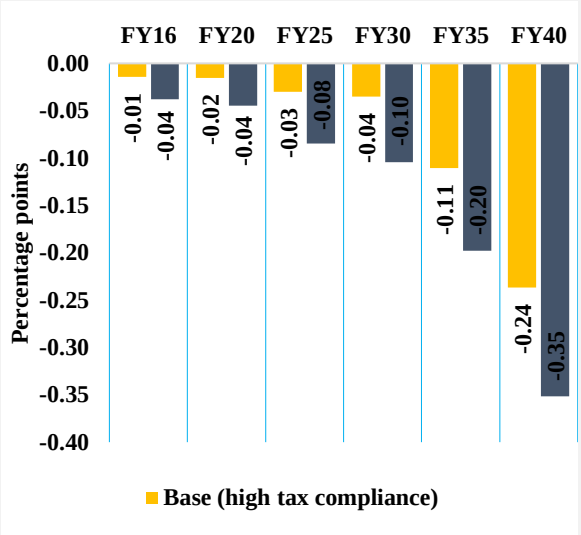
Box 4.2: Simulated Impacts on Inequality with Fiscal Transfer in Bangladesh

The importance of a strong fiscal re-distributive system epitomized by better tax compliance/administration, higher direct tax revenue, and cash transfers on improving equity is shown with an illustration from Bangladesh. The gain in inequality (measured by Gini coefficient) via better compliance of personal income tax system and subsequent transfer of additional revenue through better compliance to bottom 50 percent of the population is presented below. The simulation outcomes are derived from a micro-simulation model based on the latest household income and expenditure survey (HIES 2016) linked to the macro projections of the Bangladesh perspective plan (2021 to 2041). Three simulations are carried out. (i) Base (poor compliance) simulation suggests high growth rates of 8 to 9 percent with poor fiscal distribution (as observed currently) may likely to have negligible effects on Gini. (ii) Base high compliance of the personal income tax (all eligible taxpayers are paying according to their marginal rates) may significantly improve the inequality situation in Bangladesh. (iii) Reduction in Gini is dramatic when the revenue gains through better tax compliance are effectively transferred to the bottom 50 percent of the population.

Panel A: Impacts on Gini



Panel B: Percentage point reduction in Gini (over base)



Source: Khondker et al (2020)

The introduction of a redistributive fiscal policy is a core fiscal policy reform in the PP2041. The 8FYP will initiate the first phase implementation of this fiscal policy. The combination of taxes and social spending that will be introduced to implement a redistributive fiscal policy is illustrated in Table 4.9.

Table 4.9: 8FYP Fiscal Reforms for Lowering Income Inequality (% of GDP)

Reform measures	FY2019 (base year)	5-year Increase	FY2025
Increase spending on education	2.0	1.0	3.0
Increase spending on health	0.7	1.3	2.0
Increase spending on social protection (excluding civil service pension)	1.2	0.8	2.0
Increase spending on rural infrastructure & water	1.9	1.1	3.0
Total increase in social spending		4.2	
Financed by: Cutback on subsidies & SOE transfers	1.4	(-1.0)	0.4
: increase in income tax	2.6	1.9	4.5
: increase in value added tax	3.3	1.6	4.9
: increase in local government revenues	0.2	0.5	0.7
Total financing		5.0	

Source: Eighth Plan Strategy

The first and topmost policy priority is to raise the share of public spending on education and health to at least 3 and 2 percent of GDP respectively. This will also require major improvements in the delivery of public education and health services through education policies, governance, and institutional reforms.

Second, another area where public spending has to increase concerns rural infrastructure--rural roads, rural electricity, irrigation, and flood control. Government spending in this area has helped increase farm productivity and food production. The near food self-sufficiency of Bangladesh despite rapid population growth is a testimony to the success of this policy. Yet, much of the labour force remains engaged in low productivity and low earnings agriculture. There is a further need to diversify agriculture into higher value-added activities and to help transfer surplus labour from agriculture to non-farm activities in rural and urban areas. This transformation will support both growth and income distribution by helping increase average labour productivity in the economy. Furthermore, the implementation of the water investments in BDP2100 will greatly benefit farm productivity and reduce the loss of rural livelihoods and property from flooding and riverbank erosion. Additional spending of 1 percent of GDP on rural infrastructure will be helpful and provided for in the ADP of the 8FYP (chapter 5).

The availability of rural credit is another important determinant of this transformation. The micro-credit revolution has helped the poor to build up assets and also protect their consumption, thereby contributing to lower poverty. Nevertheless, the scaling up of formal credit to the rural economy remains a challenge. The 8FYP will take steps to improve this.

A third area where public spending has to grow concerns about social protection. Presently the government spends 1.2 % of GDP on social protection excluding civil service pensions. The 8FYP projects this to grow to 2.0 percent of GDP over the next 5 years.

Higher public spending on education, health, rural infrastructure and social protection by an estimated additional 4.2 percent of GDP is a seemingly tall order in the present environment of public resource constraint. A closer look will suggest that a strategy to mobilize this additional funding is certainly within the reach of public policy and is incorporated in the 8FYP fiscal policy discussed in greater detail in chapter 5.

In the first place, the government spends some 3.4 percent of GDP on subsidies and transfers, of which 1.4 percent of GDP is on subsidies and transfers to power and other SOEs including public banks. A core fiscal reform of the 8FYP is to convert the SOEs including the power sector and public banks to profit-making enterprises. These subsidies will, therefore, be drastically reduced and re-channelled to priority social spending as noted above.

Secondly, a major reason for the resource constraint is low tax collection, especially from personal income taxes. The effective income tax rate at present is about only 4 percent, which is very low. Increasing the effective income tax rate to even 10 percent in the next 3-5 years to the top 10 percentile who own 35 percent of the national income will yield 3.5 percent of GDP instead of 1.4 percent of GDP now. This will require the closing of loopholes that let capital gains escape the tax net, treating all sources of personal income equally for taxation purpose, and improving tax administration and compliance. So, along with corporate income taxation, the total tax on income and profit is projected to grow from 2.6% in FY2019 to 4.5% by FY2025. The modernization of VAT and improving its productivity can yield an additional 1.8% of GDP. Moreover, the introduction of a modern property tax and assigning this to the local governments can be a substantial boost for their fiscal autonomy while providing fiscal resources.

This combination of expenditure reallocation (1% of GDP) and additional tax effort focused on personal income, VAT and local government revenues (4.0% of GDP) can finance the additional 4% of GDP required to fund critical social programmes, while also leaving a surplus of 1% of GDP for additional investment in infrastructure. This fiscal policy package can be a powerful instrument for improving income distribution as the incidence of this tax and expenditure package is likely to be highly progressive. In addition to a more effective fiscal policy, the government can also help improve income distribution through better governance.

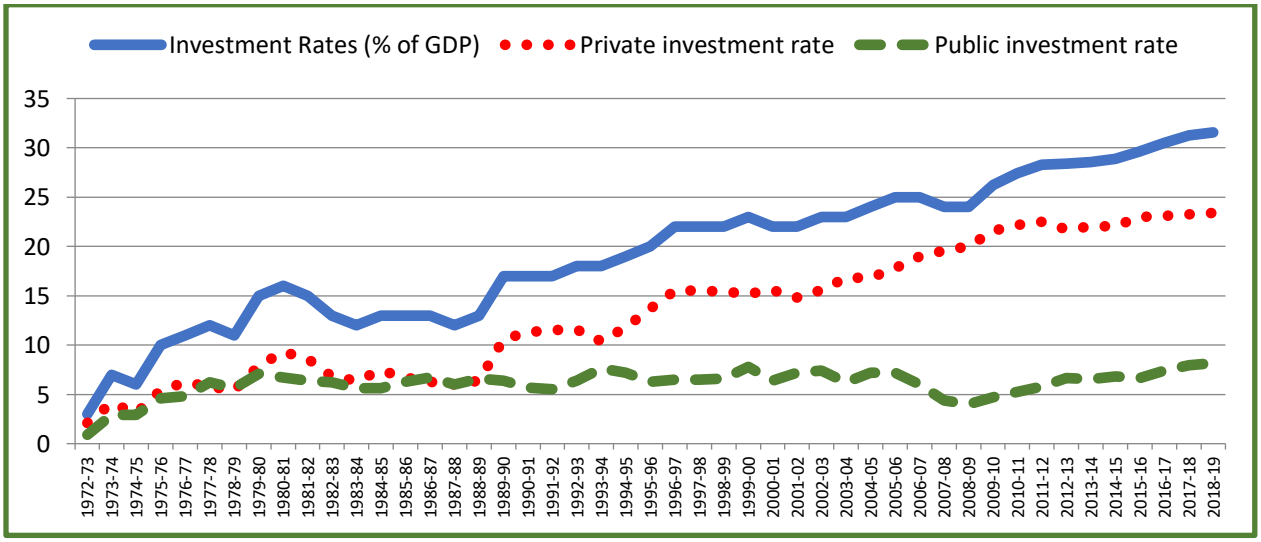
CHAPTER 5

PUBLIC INVESTMENT PROGRAMME AND ITS FINANCING

5.1 OVERVIEW

Historically, the private sector has led the way in driving GDP growth through private investment (Figure 5.1). Public investment has made a strong recovery since FY2011. Yet, the role of private investment will continue to dominate. Accordingly, the indicative Financing Plan for the 8FYP is estimated on the assumption that the private sector would continue to play this dominant role. Nevertheless, the realization of the 8FYP objectives would require a good balance and complementarity between private and public investment efforts. Thus, while, accelerated private sector investment-both domestic and foreign-will be the key to the success of the Plan, the government's role will be to create the investment-friendly environment, restore and strengthen human health and welfare in the post COVID-19 world, and ease infrastructure constraints. As in the past and consistent with the social objectives of the 8FYP, the public sector will continue to play the crucial role of making the growth more inclusive through fiscal and other interventions by making the tax system more equitable and undertaking expenditure programmes aimed at strengthening social protection by improving quality of living for the underprivileged segments of the society. The Government has initiated the implementation of a Joint Programme called Integrated National Financing Framework for Accelerating Achievement of SDGs in Bangladesh. This will support the government to put in place an integrated financing framework to mobilise required resources more effectively from public and private sources for attaining SDGs by 2030. The programme will facilitate revisiting the existing Development Finance Assessment (DFA) and SDG Financing Strategy to make them more focused on the priorities arising from Bangladesh's LDC graduation and the COVID-19 pandemic recovery.

Figure 5.1: Investment Trends (% of GDP)



Source: BBS and Ministry of Finance

The main focus of annual development expenditure will be to sharply improve health infrastructure, re-build the social protection system, infrastructure constraints and strengthen water management. Topmost priority will be given to rebuild the healthcare system through increased budgetary allocations, sharply stronger management of the public healthcare system and partnership with private healthcare. Budgetary allocations to the education sector will be increased to create better human capital through universal general education, skill development programmes, and training and greater access to ICT solutions. Implementation of the National Social Security Strategy (NSSS) will be fast-tracked to provide comprehensive social protection to all poor and vulnerable citizens based on a modern Life Cycle based approach. In the area of infrastructure, in addition to completing the ongoing transformational infrastructure projects, major initiatives will be taken to broaden and accelerate the implementation of other major highways and bridges, power sector projects, and providing access to serviced land to foreign and domestic investors in the context of the Special Economic Zones (SEZ) initiative. Finally, strong efforts will be made to implement the first phase of the BDP 2100.

Taking these considerations into account, Annual Budgets will be formulated in a manner consistent with the realization of the Eighth Plan objectives. Annual Budget and ADP will be synchronized to use them as tools for achieving the objectives of the 8FYP. Financing of this National Plan will require increased private and public sector savings, rapid income growth for the private sector and increased revenue mobilization through reform and modernization of tax policy and tax administration. Prudent spending of public sector resources for better public service delivery and incentive, subsidy and transfer programmes, and improved efficiency of public sector enterprises will be important for public sector resource efficiency and productivity.

5.2 OVERALL RESOURCE ENVELOPE FOR THE INVESTMENT PROGRAMME

5.2.1 Total investment and Financing

Total investment under the Plan will amount to Tk.63.6 trillion in constant FY2021 prices (the first year of the Plan). As in the past, domestic resources in the form of national savings will continue to play a dominant role in the financing of the Eighth Plan (94.9%). Foreign savings will provide the remaining 5.1% of the financing requirements for the 8FYP. This is a modest recourse to foreign resources consistent with the government strategy to minimize external borrowing. This cautious external borrowing strategy has been a core positive aspect of the Bangladesh macroeconomic management that has contributed substantially to maintain the stability of the external account.

Table 5.1: Financing of Eighth Five Year Plan Investment (FY 2021 prices)

Item: BDT in Billions	Total	Share (%)
Total Investment	63574	100.0
--Public	16058	25.3
--Private	47516	74.7
Financed By:		
Domestic Resources	60358	94.9
External Resources	3216	5.1

Source: GED Projections

5.2.2 Private Investment and Financing

The investment role of the private sector will be enhanced under the 8FYP based on an expanding role of FDI, with private investment accounting for 75% of the total investment. As underscored in Chapter 3 on Medium Term Macroeconomic Framework, increasing the inflow of FDI in Bangladesh to 3% of GDP from current levels of about 1% would be critical for achieving the investment target under the 8FYP. Thus, the share of FDI in private investment Bangladesh and some limited external borrowing in foreign currency by the private sector, will increase markedly to 7%, compared with 3% in the 7FYP. This is a major strategic shift in the 8FYP that will play a key role in boosting private investments and exports, and thereby offset the lack lustre performance of private investment during the 7FYP. The rapid growth in FDI will also play a major role in upgrading technology and strengthening knowledge transfer and skill development.

5.2.3 Public Sector Investment and Financing

The Annual Development Programme (ADP) constituting much of the public sector investment in Bangladesh has increased by 2 percentage points in relation to GDP to 6% during FY15-FY19. The increase in ADP reversed the declining trend observed in the past decade and is attributable to government's efforts to reduce the wide infrastructure gap in Bangladesh through accelerated ADP implementation. This increase in ADP spending happened despite slower than expected progress in implementing some major public sector and PPP-based projects during the Seventh Plan.

The Eighth Plan will build on the gains made so far with a view to allocating Tk.16.1 trillion in constant FY21 prices of public investment, accounting for 25.3% of total investment in the economy. Of the total public sector investment, Tk. 12.8 trillion will be funded by domestic resources (80%), comprising of public savings (36%) and domestic bank and non-bank borrowings (44%) External financing, primarily in the form of concessional loans from official multilateral and bilateral sources will continue to supplement the public sector development spending, contributing on a net basis to 20% of the public investment financing. Access to international capital market to finance large infrastructure projects by issuing sovereign bonds may also be considered as a source of external financing for domestic public investment. As noted, the public sector investment financing plan based on the projected fiscal deficit is fully consistent with debt sustainability. Resort to bank borrowings for financing the fiscal deficits is also built in the monetary projections of the 8FYP contained in Chapter 3, and therefore are fully consistent with inflation targets and targets for credit allocation to the private sector.

5.3 FISCAL POLICY FRAMEWORK FOR THE EIGHTH PLAN

The fiscal policy framework for the 8FYP is summarized in Table 5.2. This is basically drawn from the fiscal policy framework of PP2041 but adjusted to reflect the impact of COVID-19. The three main highlights of the 8FYP fiscal framework are: First, that a concerted fiscal policy reform effort will be undertaken to arrest the downward trend of revenue and allow for a substantial expansion in the tax to GDP ratio. Second, the higher revenue mobilization will provide a basis for restoring the public expenditure programme to address the key development priorities of the 8FYP. And third, there will be an initial surge in fiscal deficit away from the medium-to-long term target of 5% of GDP level owing to COVID-19, but this will be overcome swiftly and restored to the 5% of GDP level based on tax revenue mobilization and continued commitment to prudent fiscal policy management.

Table 5.2: 8FYP Fiscal Framework (Percent of GDP)

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24	FY25
	Actual		Projections				
Fiscal Indicators:	(As % of GDP)						
Revenue and Grants	**9.97**	**9.48**	**10.26**	**11.16**	**12.05**	**12.90**	**14.10**
Total Revenue	**9.90**	**9.40**	**10.18**	**11.10**	**12.00**	**12.86**	**14.06**
Tax Revenue	8.89	7.89	9.02	9.80	10.60	11.26	12.26
NBR Tax Revenue	8.60	7.68	8.55	9.40	10.10	10.66	11.56
Non-NBR Tax Revenue	0.29	0.21	0.47	0.40	0.50	0.60	0.70
Non-Tax Revenue	1.02	1.51	1.16	1.30	1.40	1.60	1.80
Grants	**0.07**	**0.07**	**0.08**	**0.06**	**0.05**	**0.04**	**0.04**
	(As % of GDP)						
Total Expenditure	**15.41**	**14.86**	**17.06**	**16.91**	**17.57**	**17.90**	**19.10**
Non-Development Expenditure including net lending	**9.47**	**9.11**	**11.13**	**10.90**	**11.08**	**11.25**	**12.07**
Non-Development Expenditure	**9.37**	**8.99**	**10.99**	**10.75**	**10.93**	**11.10**	**11.92**
Revenue Expenditure	8.57	8.33	9.86	9.93	10.11	10.26	11.08
Capital Expenditure	0.80	0.66	1.13	0.82	0.83	0.84	0.85
Net Lending	**0.10**	**0.13**	**0.13**	**0.15**	**0.15**	**0.15**	**0.15**
Development Expenditure	**5.94**	**5.75**	**5.93**	**6.02**	**6.49**	**6.66**	**7.03**
ADP Expenditure	5.79	5.52	5.70	5.89	6.36	6.53	6.90
Non-ADP Development Spending	0.15	0.23	0.23	0.13	0.13	0.13	0.13
Overall Balance (excl. grants)	**-5.51**	**-5.46**	**-6.88**	**-5.81**	**-5.57**	**-5.04**	**-5.04**
Overall Balance (Incl. grants)	**-5.44**	**-5.39**	**-6.80**	**-5.75**	**-5.52**	**-5.00**	**-5.00**
Primary Balance	**-3.50**	**-3.33**	**-4.78**	**-3.65**	**-3.36**	**-2.77**	**-2.76**
	(As % of GDP)						
Financing	**5.44**	**5.39**	**6.80**	**5.75**	**5.52**	**5.00**	**5.00**
External (Net) [including market borrowing]	**1.23**	**1.88**	**2.40**	**2.42**	**2.44**	**2.46**	**2.48**
Loans	1.76	2.30	2.8	2.35	2.33	2.32	2.30
Amortization	-0.53	-0.39	-0.40	-0.39	-0.41	-0.45	-0.45
Domestic	**4.21**	**3.50**	**4.40**	**3.33**	**3.08**	**2.54**	**2.52**
Bank (CrPbs: Money)	1.20	3.32	3.30	1.94	1.19	0.65	0.63
Non-Bank	3.01	0.18	1.10	1.39	1.89	1.89	1.89
Memorandum Item:							
Nominal GDP, In Billion, Taka	**25425**	**27964**	**31565**	**35661**	**40363**	**45776**	**51956**

Source: Ministry of Finance, Bangladesh, and GED Projection

5.3.1 The Need for Higher Public Spending

Bangladesh traditionally has a small public administration and overall public spending is modest for a country the size of Bangladesh with immense development needs. The size of public spending as a share of GDP has grown significantly in the 7FYP. This has allowed the government to increase public investment and finance infrastructure investments. Yet revenue shortages and implementation constraints have limited the ability to spend adequate resources in human development and social protection (Table 5.3). The onslaught of COVID-19 has exposed the huge social vulnerabilities and the need for scaling up spending on human development, especially healthcare and social protection. With the present low level of resource mobilization and the need for maintaining fiscal prudence, the only way for increasing spending on core development priorities is to increase revenue mobilization.

Table 5.3: Public Spending Priorities (% of GDP)

Expenditure Item	FY10	FY15	FY19	FY25
Total spending	13.9	13.5	15.4	19.1
Non-development spending	10.3	9.1	9.5	12.1
Development Spending	3.6	4.0	6.0	7.0
Education	1.6	1.7	2.0	3.0
Health	0.6	0.6	0.7	2.0
Social Protection (w/o civil service pension)	1.4	1.4	1.2	2.0
Power, Energy and Transport	1.5	1.8	2.4	2.0
Agriculture and Rural infrastructure	0.6	0.8	0.9	1.0
Integrated Water Resource Management	0.5	0.7	1.0	2.0

Source Ministry of Finance and GED Projections

The fiscal framework for the 8FYP projects to increase tax to GDP ratio to grow from 8.9% of GDP in FY19 to 12.3 in FY25. Some increase in non-tax revenue is also projected that grows total revenues as a percentage of GDP from 9.9% in FY19 to 14.1% in FY25. This 4.2 percentage points increase in total revenues as a share of GDP is critical to build up public spending to a minimal level that is necessary to achieve the 8FYP growth and poverty objectives while addressing the human health challenges posed by COVID-19.

The spending response to COVID-19 requires some important shifts in public spending priorities in 8FYP. These are:

- ***Rebuilding the healthcare system:*** The most important task is to overhaul and build up the healthcare system of Bangladesh. Accordingly, public spending on healthcare will sharply increase from 0.7% of GDP in FY19 to 2.0% of GDP by FY25.
- ***Social protection:*** Spending on social protection also needs to go up to provide income support to the large number of near-poor who tripped over to the poverty group owing to income loses from COVID-19. More generally, social protection will move to the NSSS recommended Life Cycle risk mitigation approach along with progress towards employment-based social insurance and Universal Health Care. Spending on social protection excluding civil service pension, which are not targeted to the poor and vulnerable, will grow from 1.2% of GDP in FY19 to 2.0% of GDP by FY25.
- ***Risk Mitigation:*** For increasing penetration of insurance in our economy, insurance sector is planning to diversify insurance products both in life and non-life sub-sectors like Bhaban Bima, Bangabandhu School Bima, Insurance for all Passengers, Neuro-developmental Insurance, Agriculture Enterprise Insurance etc. These Insurance products will be distributed by diversified distribution channels such as Banc assurance, Corporate Agents, Brokers etc.
- ***Education and training:*** Human capital buildup will require strengthening of education and training programmes along with the spread of ICT education. Therefore, spending on education will grow from 2.0% of GDP in FY19 to 3.0% by FY25.
- ***Power, energy and transport:*** The emphasis on infrastructure will remain. The top priority will be to complete all ongoing transformational project. Other power, energy and transport projects needed to support growth acceleration will be pursued. However, a strategic shift in financing will happen with a stronger reliance on PPP-type financing. Accordingly, ADP allocations in power, energy and infrastructure sector will decline marginally as a share of GDP to 2% but allocations will still grow healthily in real terms. Importantly, an additional 1-1.5% of GDP infrastructure financing will be mobilized through PPP funding. So, combining ADP and PPP spending, the public investment share of infrastructure will also grow significantly as a share of GDP.

- ***Agriculture and rural infrastructure:*** The priority to agriculture and rural infrastructure will be preserved and strengthened with a further increase to 1% of GDP by FY25.
- ***BDP2100 implementation:*** A major priority of 8FYP is to initiate the implementation of the Bangladesh Delta Plan (BDP2100). The first phase BDP2100 investment programme during the 8FYP calls for integrated water resource management to improve flood control, lower salinity, reduce water logging, reduce the incidence of river bank erosion, enhance the availability of fresh water for irrigation, industrial supply and for human consumption, improve land and forest management and strengthen the eco-system. The projected allocation for BDP2100 investment program will increase from 1% of GDP in FY19 to 2% of GDP by FY25.

5.4 REVENUE MOBILIZATION UNDER THE 7FYP: LESSONS FOR 8FYP

The 7FYP set up the target for a strong tax performance but actual performance was much lower despite higher average GDP growth in the first 4 years of the 7FYP. The tax to GDP ratio fell further due to COVID-19 impact but on a trend basis the tax performance was already off track in the first 8 months of FY20 before COVID-19. The yearly tax targets and actual performance are shown in Table 5.4. The 7FYP sought to increase the tax to GDP ratio from 9.4% in FY15 to 12.3% in FY20 and non-tax revenue to grow from 1.2% to 2.0% over the same period. This was predicated on the implementation of major tax reforms as well as reforms of state-owned enterprises and local government entities. In the event, none of the reforms were implemented and actual revenue performance for both taxes and non-taxes fell much short of target. Non-tax revenues increased marginally 1.5% of GDP, while tax performance actually declined to 7.9% of GDP in FY20

Table 5.4: Revenue- 7FYP Targets and Actual Collection

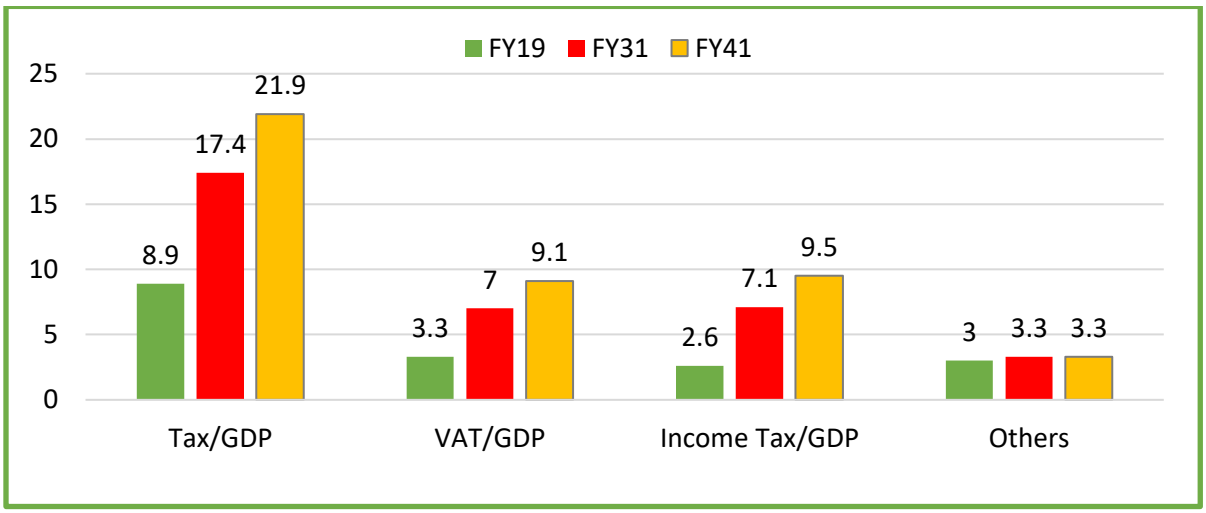
Fiscal year	FY16	FY17	FY18	FY19	FY20	Average (FY16-20)
	(7FYP Target, In Billions of Taka)					
Total Revenue	2084	2634	3172	3808	4627	3265
Tax Revenue	1822	2244	2728	3304	4052	2830
NBR Tax Revenue	1764	2166	2639	3203	3937	2742
Non-Tax Revenue	262	390	444	504	575	435
	(Actual, In Billions of Taka)					
Total Revenue	1730	2012	2166	2518	2630	2211
Tax Revenue	1519	1781	1943	2259	2207	1942
NBR Tax Revenue	1462	1716	1871	2186	2148	1877
Non-Tax Revenue	211	231	222	259	423	269
Indicators:	(7FYP Target, As % of GDP)					
Total Revenue	12.1	13.5	14.3	15.1	16.1	14.2
Tax Revenue	10.6	11.5	12.3	13.1	14.1	12.3
NBR Tax Revenue	10.3	11.1	11.9	12.7	13.7	11.9
Non-Tax Revenue	1.5	2.0	2.0	2.0	2.0	1.9
	(Actual Revenue, As % of GDP)					
Total Revenue	10.0	10.2	9.6	9.9	9.4	9.8
Tax Revenue	8.8	9.0	8.6	8.9	7.9	8.6
NBR Tax Revenue	8.4	8.7	8.3	8.6	7.7	8.3
Non-Tax Revenue	1.2	1.2	1.0	1.0	1.5	1.2
Memo items:						
Nominal GDP, 7FYP	17176	19517	22177	25223	28739	22566
Actual Nominal GDP	17329	19758	22505	25425	27964	22596

Source: Ministry of Finance, Bangladesh, and 7FYP Projections

The main reason for tax revenue shortfall was the inability to implement major tax reforms envisaged during the 7FYP. The most important planned tax reform was the implementation of the VAT Law of 2012. This is a fundamental reform that seeks to modernize the VAT system and enhance tax collection by improving the productivity of VAT. The reform efforts progressed considerably including improvement in the technical capacity of the NBR through technical assistance and adoption of digital technology to facilitate implementation. But actual implementation of the original VAT Law of 2012 did not happen. Reform of the income tax law, policies and procedures have also not happened. The planned administrative reform of the NBR articulated in the Tax Modernization Plan of 2011 is yet to be fully implemented.

The Government recognizes these challenges and aims to speed up tax reforms in the 8FYP. The Government gave this signal in approving the Fiscal Framework of the PP2041 that envisages attaining a tax to GDP ratio of 17% by FY2031 and 22% by FY2041, which are comparable to average tax to GDP ratios in upper middle income and high-income countries (Figure 5.2). This will be achieved on the basis of an overhaul of tax laws and tax administration focussed specifically on modernizing the system of income and VAT taxes with a view to achieving tax collection and tax structure found in UMIC and HIC. The main feature of this modernization is the introduction of a universal and progressive system of income taxes that becomes the primary source of tax collection as found in UMIC and HIC.

Figure 5.2: PP2041 Tax Structure



Source: PP2041 Macroeconomic Framework

The 8FYP fiscal framework postulated in Table 5.5 above is based on the Fiscal Framework for PP2041 summarized in Figure 5.2. The details of the sources of total revenues and the associated tax structure for the 8FYP are provided in Tables 5.5 and 5.6.

Table 5.5: Revenue Structure in the 8FYP

Fiscal Year	FY20	FY21	FY22	FY23	FY24	FY25
	Actual	Projection				
Indicators (As % of GDP):						
Total Revenue	9.4	10.2	11.1	12.0	12.9	14.1
of Which:						
Tax Revenue	7.9	9.0	9.8	10.6	11.3	12.3
of Which:						
NBR Tax Revenue	7.7	8.6	9.4	10.1	10.7	11.6
Non-NBR Tax Revenue	0.2	0.5	0.4	0.5	0.6	0.7
Non-tax Revenue	1.5	1.2	1.3	1.4	1.6	1.8

Source: Ministry of Finance and GED Projections

Table 5.6: Major Components of Revenue in the 8FYP Period

Fiscal Year	FY20	FY21	FY22	FY23	FY24	FY25
	Actual	Projection				
Components:	(As % Of GDP)					
NBR Tax Revenue	7.7	8.6	9.4	10.1	10.7	11.6
Taxes on Income and Profit	2.7	2.5	3.2	3.5	3.8	4.5
Value Added Tax	2.9	3.6	3.8	4.3	4.6	4.9
Custom Duty	0.8	0.9	0.9	0.9	0.8	0.8
Supplementary Duty	1.2	1.4	1.4	1.3	1.2	1.2
Export Duty	0.0	0.0	0.0	0.0	0.0	0.0
Excise Duty	0.1	0.1	0.1	0.1	0.1	0.1
Other Taxes and Duties	0.0	0.1	0.1	0.1	0.1	0.1

Source: Ministry of Finance and GED Projections

The PP2041 Tax System signals a fundamental shift in the tax system of Bangladesh away from the outdated tax system that depends on indirect instruments and seeks to tax consumption rather than income. It is also outdated in terms of tax laws, tax collection, tax audits and tax policing. The PP2041 tax system modernizes this to a tax system that is focused on income as the primary source of tax revenues, relies on self-assessment and on-line filing and tax payments, uses a simplified filing system for most taxes except for complicated cases, and relies on selective and productive audits that are criteria based. There is a separation of tax policy from tax collection. Tax collection is automated with no interface between tax collector and tax payer, thereby eliminating the risks of bribery and negotiated tax settlements. This is a vastly different system than presently. So, full implementation will take time. But an important start will be made in the 8FYP.

The specific tax reform strategies that are possible under the 8FYP are summarized in Box 5.1. It is the first step towards implementing the full FY2041 Long-Term Fiscal Policy Framework for the next 20 years to FY2041. The 8FYP is the first medium-term programme for its implementation. In this first phase important legal and procedural reforms relating to the VAT, income tax and custom duties are introduced. Trade reforms ae discussed separately in Chapter 2 Part 2, but they have implications for tax revenues. The main implication is the reduction in reliance on trade taxes for revenue purposes and instead using trade

policy for growth, export promotion and industrialization. The revenue consequences are peripheral and are recouped by income and VAT taxes, as is the case with UMIC and HIC tax structures. The proposed tax reforms in Box 5.1 are extremely important and cannot be delayed further in order to restore tax revenue collections and support the needs for essential public spending as summarized in Table 5.3.

Box 5.1: NBR Tax Reform Required for Attaining Tax Targets in Eighth Plan

Tax Policy Reforms

- Full adoption and effective implementation of the original VAT and Supplementary Duty Act 2012strating in FY2022
- Incorporating Alternative Dispute Resolution (ADR) in Income Tax, VAT and Custom Acts
- A thorough overhaul and simplification of Income Taxes with implementation in FY2023
- Adoption and implementation of the new Customs Act in FY2022.
- By end of FY2022, introduce a proper system of property taxes with revenues earmarked for local governments
- Starting FY2024, separate tax planning from tax collection.
- Starting FY2024, selection of NBR Chair and the new Chair of the Tax Policy Unit should be done on a professional basis with a 5-year fixed term appointment.
- Provide adequate resources and autonomy to NBR Chair and the Chair of Tax Policy Unit to modernize their respective offices with modern technology, professional staffing and policy and research capabilities.

Tax Administration Reforms: Income Tax

- **Broadening of the taxpayers' base-** This will require monitoring of the ownership of all sizable physical and financial assets of taxpayers and determining the income generation out of those assets.
- **Broadening of the tax revenue sources-** Traditionally there has been an excess dependency on taxing financial institutions and a few large non-financial corporations. The tax department should explore other smaller organizations in the formal sector as well various corporations.
- **Focusing on income from service providers and self-employed (who are difficult to tax)**
- **Treating all sources of income equally for the tax purpose without discrimination for the households.** This would imply taxation of capital gains from land, real estate/housing, and stock market. Wealth accumulation in Bangladesh is primarily happening through accumulation of urban land and real estate, untaxed/low tax income of the rapidly growing RMG sector, and relatively low tax incidence on income through financial instruments. This must change.
- **Automation of TIN registration and linking TIN with National I.D.**
- **Integrated Revenue Management Programme: Business Process** an integrated revenue management programme seeks to connect the three departments at transactional level by linking the taxpayer identification numbers i.e. TIN and BIN in the database. The methodology for setting up such an integrated system is to first centralize the database and transaction processing of the three departments at one location and then to build an information system that can mine data in the three databases and thereafter process the same for exception reports. The integrated revenue management programme will enable the desired flow of information and consequent synergy among the three tax wings of the NBR.
- **Integrated Revenue Management Programme: Digitalization Programme** This programme will seek to set up a country-wide integrated ICT platform to capture all tax payment information from tax returns, banks, TDS detectors, third party collection agencies etc. The integrated revenue management system will also receive third party returns i.e. TDS returns, Annual Information Returns (AIR) etc. and generate MIS reports, exception reports etc. Under this programme, a Central Processing Centre is to be set up for processing all Income-tax and VAT returns, whether e-filed or paper filed at one integrated processing centre.

- **E-Filing of income tax returns and online payments.** To enable this, the tax form will be simplified and the wealth statement requirement will be deleted for certain income threshold. NBR tax account will be opened up with selected banks to send online payments.
- **Aggressive imposition and expansion of withholding taxes**, particularly on individual taxes which could potentially improve tax compliance, expand the income tax base and address administrative issues pertaining to tax collection efforts through increased transparency and efficiency.
- **Strategic Communication and Taxpayer Outreach, Education and Assistance** Bangladesh has a very narrow tax base and a very small percentage of the population bears the burden of taxation. Most of the direct tax revenues come from tax deduction at source (TDS) whereas a large percentage should be coming from corporate tax as well as from businesses and professions through advance tax (PAYE). The logical inference is gross under reporting or non-reporting from various eligible categories. The taxpayer education programme will make available a menu of offerings through remote outlets like websites, internet etc. as well as through customers facing one to one or group interface with the NBR Customer Service Wing.
- **Selective and productive audits:** Institute an audit system where only a limited number of tax cases will be audited based on computer- based criteria. The system will be designed to be highly productive in terms of revenue collection and low-cost of collection in terms of staff time.

Tax Administration Reforms: VAT and Custom

- Implementation of the new VAT Act.
- Expanding VAT base especially on businesses and organization.
- Incentivizing VAT payment with benefits for small businesses to bring them into the VAT coverage as well as promoting increased formalization of businesses currently operating in the informal sector.
- Reform of the VAT administration along functional lines
- Automation of the whole tax administration through Central Data base including Central VAT Registration; electronic submission and return processing
- Comprehensive taxpayers' education and information campaign about the new VAT law and Rules.
- Selective and productive audits as in the case of income taxes.

Box 5.1 also discusses immediate institutional reforms, some of which have been left hanging since the 6FYP as articulated in the Tax Modernization Plan of 2011. The need for strengthening of the tax administration, its computerization and improvement in efficiency is integral to achieving 8FYP tax targets. This is mainly because the crux of the tax growth would be derived from domestic sources, mainly income tax and VAT. Expansion of the income tax base and bringing more individuals and companies under the tax net and under the withholding mechanism would be necessary to drive the revenue growth and to achieve levels enjoyed by our neighbouring countries. Since a major section of the Bangladesh economy still falls under the informal sector it is one of the main reasons behind the slow increase in the number of income taxpayers as well as limiting the potential VAT collection. Initiatives and incentives by the government to formalize these activities would greatly enhance the tax potential on the domestic side while making it possible to achieve the targets set under the 8FYP.

There is also rampant tax evasion which is manifested through the very low number of registered direct tax payers, transfer pricing and money laundering. This needs to be addressed by strengthening tax evasion detecting unit like the Central Intelligence Cell (CIC) and other intelligence units of the NBR. The NBR should work together with the Bangladesh Bank and the Anti-Corruption Commission for combating tax evasion. There is also a huge backlog of revenue cases pending with courts. More than 20,000 cases are lying with different courts involving about 20 billion Taka. Following the South African model, the NBR

has introduced the Alternative Dispute Resolution (ADR) mechanism to settle disputes out of the court system. The ADR mechanism will be further popularized and strengthened to collect arrear revenue.

With more manufacturing facilities in EPZs and particularly with growing number of SEZs coming into operation, Bond Administration under the NBR will need to be refocused keeping in mind the different goals behavioural orientations of Tax Officials and Bond Administration. In this regard the government will consider bond administration can be separated from full customs administration and also lined its performance with investment, industrialization and trade.

In order to increase revenue collection, efforts will be made to strengthen the link between better statistical and research analysis and policy formulation and tax administration. NBR has already completed the diagnostics for strengthening the Statistics and Research Department and efforts will be made to implement the recommendations of the diagnostic report. Efforts will also be made to enhance tax compliance through social recognition programme. Researchers suggest that exposing information about all firms' tax payment behaviour to their peers can increase tax compliance and payment. It may also induce additional incentives for firms to become tax compliant since publicly available information about tax compliance may affect consumer behaviour, perhaps steering customers towards tax compliant businesses.

5.4.1 Fiscal Deficit and Financing

The government's fiscal deficit level would initially increase owing to the adverse effects of COVID-19 on tax revenues but would stabilize at around the long-term fiscal deficit target of 5% of GDP as envisaged in PP2041 Fiscal Framework. With the projected GDP growth rate of 8% plus and the initial low Debt to GDP ratios, there would be no question about debt sustainability. However, the government would need to diversify its sources of financing with proper mix of domestic and external financing, and on both fronts identify market based additional sources of financing. On the domestic borrowing front, dependence on National Savings Schemes and short-term treasury bills should give way to long-term treasury bills and bonds, infrastructure bonds, etc. with proper secondary market and a well-developed yield curve.

On the external front, the access to traditional concessional borrowing from official bilateral and multilateral sources should be increased and at the same time complemented with additional borrowings in the form of sovereign bonds of various maturities and other sources of financing. Even with increased access to concessional finance, its relative importance will decline over time as Bangladesh becomes a UMIC. In addition to the traditional access to multilateral institutions like the World Bank and ADB, the new Asian Infrastructure Bank is also expected to help mobilize concessional external financing for infrastructure investment in Bangladesh. The government should try to establish its relations with the international capital market by launching its first sovereign bond soon because external and domestic conditions are favourable for such a launch. These strategic transformations should be done on the basis of a comprehensive Government Financing and Debt Management Strategy to be prepared by the Debt Management Wing of the Ministry of Finance. This budget financing scenario for the 8FYP is shown in Table 5.7.

Table 5.7: 8FYP Budget Deficit and Its Financing

Fiscal Year	FY20	FY21	FY22	FY23	FY24	FY25
	Actual	Projections				
Components:	(As % of GDP)					
Fiscal Deficit (Including Grant)	5.39	6.80	5.75	5.52	5.00	5.00
Deficit Financing	5.39	6.80	5.75	5.52	5.00	5.00
of Which:						
Net External Financing	1.88	2.40	2.42	2.44	2.46	2.48
Net Domestic Financing	3.50	4.40	3.33	3.08	2.54	2.52
of Which:						
Bank Borrowing	3.32	3.30	1.94	1.19	0.65	0.63
Non-Bank Borrowing	0.18	1.10	1.39	1.89	1.89	1.89

Source: Ministry of Finance and the GED Projections

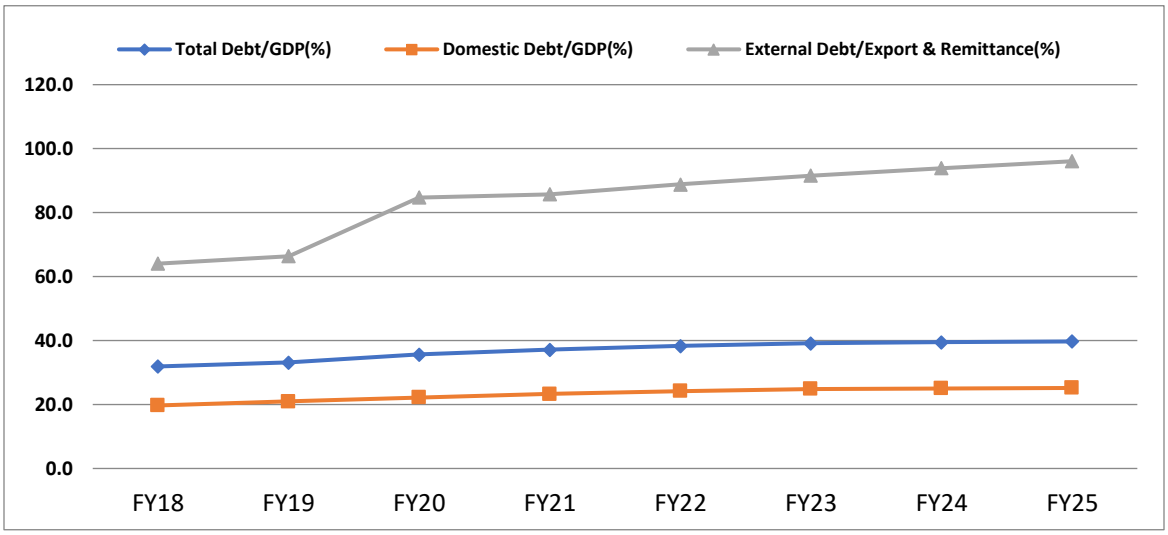
5.5 DEBT MANAGEMENT STRATEGY UNDER T HE EIGHTH PLAN

5.5.1 Overall Debt management

Bangladesh has the solid track record of managing prudently its public debt and debt service payments. At about 36% of GDP, the level of government debt is not high by any international standards. During Seventh Plan period the debt/GDP ratio has basically remained stable but its composition changed with external debt to GDP ratio falling and domestic debt to GDP ratio rising. For the 8FYP, the debt strategy consists of maintaining fiscal prudence, with fiscal deficit stabilizing at around 5% of GDP after the initial rise to finance COVID-19 related expenses in the face of falling tax revenues. Public borrowing will actively pursue reliance on low-cost options, use borrowed resources wisely on high-priority investments. At the same time, efforts will be made to strengthen debt servicing capacity by expanding tax revenue and exports, and focus on accelerating GDP growth. So, the debt strategy involving a combination of keeping real interest rates of public debt very low, achieving high GDP growth rate, and expansion of tax revenues and exports all interact to ensure that the overall debt situation is highly comfortable with no sustainability concerns.

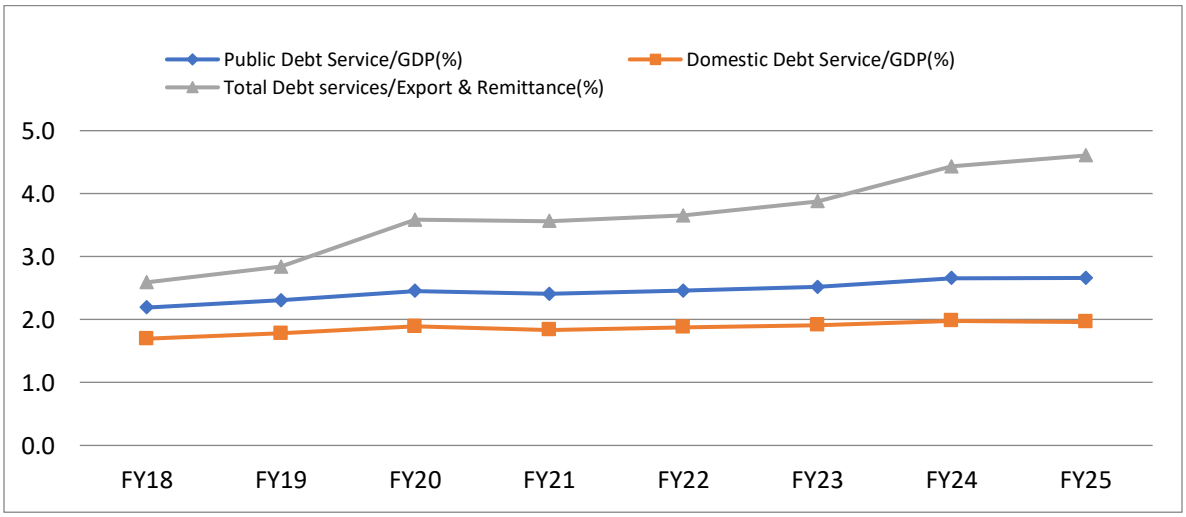
Under the fiscal framework of Table 5.3, the total debt to GDP ratio rises by about 4 percentage points from its level in FY20 to 40% of GDP by FY25. Much of the increase is in external debt ratio as the financing of the budget deficit moves away from high-cost domestic saving certificates and bank borrowing towards lower-cost MLT borrowings. Some of the increase is to enable external financing of essential COVID-19 related expenditures in health and social protection in FY21 and FY22, followed by MLT financing of key infrastructure in transport, energy and power and BDP2100 investments. These are all high-productivity investments and support growth and human development. Domestic Debt/GDP ratio also rises slightly. But the overall increase is manageable and fully consistent with debt sustainability.

Figure 5.3: Total Debt and Its Components as % of GDP



Source: Ministry of Finance and GED Projections

Figure 5.4: Indicators of Debt Service Payments, FY2018-FY2025



Source: Ministry of Finance and GED Projections

The projected increase in external and domestic debt is small and the associated debt servicing is very manageable, pointing to Bangladesh's strengthened capacity to service its debt service obligations (Figure 5.4). Total debt service as percent of GDP increases slightly but stabilizes at around at around 2.7% of GDP. The most important result is the rapid decline in debt service payments as a share total government revenue from a high of 26% in FY20 to 19% in FY25. This dramatic improvement emerges from the implementation of the 8FYP fiscal framework that calls for a 3.4 percentage points increase in the tax to GDP ratio over the tax rate in FY2019 and a substitution of high cost domestic borrowing from national saving certificate lower-cost domestic borrowings and greater reliance on low-cost foreign MLT loans External debt service as percent of exports and remittances remained increases owing to COVID-19 related loses in export earnings and slowdown of remittance growth as well as an increase in foreign MLT loans. However, the increase is fairly modest, from 3.5% in FY20 to 4.25% in FY25. Overall, all debt indicators are comfortable and fully consistent with debt sustainability considerations.

External Debt Management

The external financing strategy under the Plan will essentially maintain the current strategy of prudent external borrowing on best possible terms with maximum utilization of concessional official bilateral and multilateral borrowing. Many of the infrastructure projects in the transport and energy sector (like Matarbari Power Hub; Dhaka Metro Rail; Karnaphuli River Tunnel etc.) can be financed from concessional borrowing. There is also scope for accelerating the pace of donor funded project implementation and reduce the large aid pipeline which currently stands at more than $29 billion (about 6 years of aid utilization).

The external financing strategy under the Plan would also entail broadening of the sources of external financing, creating greater scope for private investors to secure external financing on better terms through reduced country/sovereign risk, and continued reliance on official bilateral and multilateral sources for financing large public sector projects or achieving social sector objectives under the Plan. As shown in Figures 5.3 and 5.4 above, continued reliance on this strategy would keep external debt and debt service burden at highly manageable levels throughout the Plan period. Sustaining this strategy will also help reduce Bangladesh's vulnerability to external shocks and help broaden access to international capital market by domestic borrowers and also reduce financing cost for domestic borrowers.

Domestic Debt Management

As in the past, along with fiscal discipline and tax revenue mobilization, the domestic debt strategy for the 8FYP will continue to ensure that the government's borrowing requirements are consistent with inflation targets and allocation of credit to private sector. There is an initial bank borrowing hump for the budget in FY20 and FY21, partly COVID-19 related, but this is corrected through the tax reform process in FY22 onwards. Efforts will also be made to reduce the high cost of domestic public borrowing in Bangladesh. The excessive dependence on non-bank borrowing in the form of issuing non-tradable old-fashioned national Savings Certificates at very high cost would give way to market-based instruments and interest rate savings. Interest payments on domestic debt is already the largest single budgetary expenditure item and it is also the fastest growing budgetary component. While domestic debt was at 62% of total public debt in FY20, the interest payments on domestic debt accounted for more than 92% of the estimated total interest payments in FY20. This trend is not healthy and would be reversed. Efforts will be made under the Eighth Plan to slow down the growth of domestic interest payments by reducing dependence on high cost borrowing.

Although the high cost of domestic debt servicing does not pose any major debt sustainability issue over the medium term, it limits budgetary discretionary spending or primary (non-interest) budgetary spending and thereby constrains the fiscal space for undertaking priority programmes in the public sector. Accordingly, debt management reforms will be undertaken to make public borrowing cheaper and to help develop domestic bond market. The Government will also continue to keep rationalizing the interest rate structure of national savings instruments in line with interest rate developments in the money/bond market.

5.6 PUBLIC INVESTMENT PRIORITIES

The Government has a strong track record of expenditure control and prioritization, given the limited public sector resource mobilization and the need to maintain macroeconomic stability. Using the available resources effectively to ensure realization of the Eighth Plan social and economic objectives will be most important. Ensuring quality of public spending will be the key to ensure appropriate economic and social return on investment and also to invigorate private sector investment in the economy. Accordingly, the Government will be paying enhanced attention to implementation capacity, governance and result-based monitoring and evaluation (M&E) under the Plan.

Public investment priorities will be determined on the basis of recovery form COVID-19 and the realization of key Eighth Plan targets with respect to real GDP growth, poverty reduction and social protection for the poor and vulnerable, human resource development, enhancing social equity through inclusive growth and ensuring the sustainability of growth through continued macroeconomic stability. In addition, increasing amount of resources will be allocated to the investment programmes related to Bangladesh Delta Plan 2100. The detail of total public investment and the amount of ADP in current prices and constant prices are summarized in Table 5.8. A sector wise summary of the proposed sectoral allocations of planned public investment in constant (FY21) and in current prices are shown in Tables 5.9 and 5.10, respectively. The ministry wide mapping of these allocations in current and constant prices is shown in Annex Tables 5.1 and 5.2. These are indicative allocations and will be reviewed in the context of annual budget cycles after taking into account actual availability of resources, programme implementation by the line ministries, and changing national priorities. Detailed sectoral objectives, Plan targets, strategies and policies to achieve the targets are discussed in sectoral chapters in Part 2 of the Eighth Plan document.

Table 5.8: Public Investment Breakdown

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Total Public Investment to GDP (%)	8.2	8.2	8.7	8.9	9.2
Nominal Values	**(In Billions of Taka, Current Market Price)**				
Total Public Investment	2573	2924	3503	4056	4801
of Which:					
ADP investment	1800	2133	2622	3060	3675
Real Values	**(In Billions of Taka, FY21 Market Price)**				
Total Public Investment	2573	2788	3187	3524	3987
of Which:					
ADP investment	1800	2033	2386	2659	3052
Memo Item:					
Nominal GDP, In Billions, Taka	**31565**	**35661**	**40363**	**45776**	**51956**
GDP Deflator Index (FY21 Base)	100.0	104.9	109.9	115.1	120.4

Source: GED Projections

Table 5.9: 8FYP Sectoral ADP Allocations in Current Prices

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Sector	**(In Billion Taka, Current Market Price)**	120.6	139.2	161.3	192.9
General Public Services	96.1	283.8	332.0	368.8	423.9
Local Government and Rural Development	259.9	6.9	8.0	9.3	11.2
Defense	5.6	51.8	59.7	69.8	83.8
Public Order and Safety	42.1	336.8	407.0	506.0	625.7
Education and Technology	267.4	218.4	278.8	340.8	408.9
Health	170.1	84.6	92.2	107.5	121.7
Social Security and Welfare	72.4	52.7	60.8	70.9	85.1
Housing and Public Works	42.8	24.1	27.8	32.3	38.8
Recreation, Culture and Religion	19.6	289.2	390.8	452.2	542.6
Power and Energy	265.1	222.9	299.5	352.7	438.2
Agriculture	165.9	11.5	13.3	15.5	18.6
Environment	9.4	29.1	33.5	39.1	46.9
Industrial and Economic Services	23.6	400.3	479.8	533.9	637.0
Transport and Communication	360.0	**2132.7**	**2622.4**	**3060.1**	**3675.3**
Total ADP Expenditure	**1800.0**				
Memorandum:		**35661**	**40363**	**45776**	**51956**
Nominal GDP	**31565**				

Source: GED Projections

Table 5.10: 8FYP Sectoral ADP Allocations in FY2021 Prices

Sector	FY21	FY22	FY23	FY24	FY25
	(In Billion Taka, FY2021 Market Price)				
General Public Services	96.1	114.7	125.5	139.9	160.1
Local Government and Rural Development	259.9	269.4	299.9	317.4	348.4
Defense	5.6	6.6	7.2	8	9.2
Public Order and Safety	42.1	49.3	53.9	59.9	68.7
Education and Technology	267.4	319.7	367.5	435.6	514.2
Health	170.1	207.5	251.8	293.4	336.1
Social Security and Welfare	72.4	80.3	83.3	92.7	100
Housing and Public Works	42.8	50	54.9	61	69.9
Recreation, Culture and Religion	19.6	22.9	25	27.9	31.9
Power and Energy	265.1	274.4	353.1	389.3	445.9
Agriculture	165.9	211.7	270.5	303.7	360.0
Environment	9.4	11.0	12.0	13.4	15.3
Industrial and Economic Services	23.6	27.6	30.3	33.7	38.4
Transport and Communication	360.0	387.8	451.5	482.6	553.6
Total ADP Expenditure	**1800.0**	**2031.9**	**2386.4**	**2658.5**	**3051.7**

Source: GED Projections

Table 5.11: 8FYP Sectoral ADP Allocations, As % of Total Development Expenditure

Sector	FY21	FY22	FY23	FY24	FY25
	(As % of Current Price Total ADP Expenditure)				
General Public Services	5.3	5.7	5.3	5.3	5.2
Local Government and Rural Development	14.4	13.3	12.7	12.1	11.5
Defense	0.3	0.3	0.3	0.3	0.3
Public Order and Safety	2.3	2.4	2.3	2.3	2.3
Education and Technology	14.9	15.8	15.5	16.5	17.0
Health	9.5	10.2	10.6	11.1	11.1
Social Security and Welfare	4.0	4.0	3.5	3.5	3.3
Housing and Public Works	2.4	2.5	2.3	2.3	2.3
Recreation, Culture and Religion	1.1	1.1	1.1	1.1	1.1
Power and Energy	14.7	13.6	14.9	14.8	14.8
Agriculture	9.2	10.5	11.4	11.5	11.9
Environment	0.5	0.5	0.5	0.5	0.5
Industrial and Economic Services	1.3	1.4	1.3	1.3	1.3
Transport and Communication	20.0	18.8	18.3	17.4	17.3

Source: GED Projections

5.7 TOWARDS A SYNERGISTIC DEVELOPMENT PARTNERSHIP

Bangladesh's target of becoming an UMIC calls for huge investments that needs to be financed from both internal and external sources. The recovery challenge from COVID-19 complicates this task and calls for swift responses to restore human health and safety and enable a rapid resumption of normal economic activities. Assistance from different development partners in the form of loan and grant is one of the major sources of the country's resource base. Though foreign assistance as percentage of GDP is declining, the volume is on steady rise in absolute terms. Thus, one of the key strategies of the 8FYP will be to ensure effective partnership with development partners, especially multilateral development finance institutions to mobilize swift COVID-19 assistance and to ensure better use and results of existing pipeline and new loans.

Different internal and international assessments and studies have shown that despite global commitments and local measures, challenges to development effectiveness continue in Bangladesh. The major challenges include: (1) continued proliferation of stand-alone projects and aid fragmentation, (2) continued coordination challenges resulting in less alignment with sectoral plans (3) low harmonization and low use of country systems, (4) despite improvements, low aid predictability, and (5) weak coordination between government agencies resulting in less coherent understanding of key issues of development cooperation and inadequate leadership in policy dialogues.

In order to ensure that foreign assistance delivers result, Bangladesh has established a formal mechanism of partnership with development partners working in Bangladesh through the signing of a Joint Cooperation Strategy (JCS) in 2010. Premised on the Paris Principles of aid effectiveness, the JCS primarily aims to translate the international commitments on aid effectiveness at the country level. Anchored in the JCS, Local Consultative Group (LCG) is the main platform for coordination between the government and DPs is Bangladesh.

Bangladesh holds its dialogue with its DPs through the Bangladesh Development Forum (BDF) and the Local Consultative Group (LCG) Mechanism. The BDF is a high-level political forum that takes places every few years and includes not only the government and the DPs, but also parliament, civil society, academia and private sector. The LCGs under different thematic areas are co-chaired by the Secretary/Member of the Ministries/Division/Planning Commission and one DP. Government and DP high level leadership in strengthening the coordination mechanism has allowed to firmly institutionalize the coordination system over the past years. The LCG now includes 18 working groups, each comprised of a government chair and a DP co-chair and focused on a specific national development priority. Each group is a forum to facilitate discussion and collaboration, to take decisions and move results in the priority sectors. The regular LCG meetings have led to a more regular constructive development dialogue and have significantly improved the relations between DPs and the government. During the 8th Five Year Plan period, government will continue its efforts to strengthen the JCS and the LCG, keeping up with the evolving partnership needs.

The 8FYP aims at more vibrant and synergistic partnership by addressing the current challenges that inhibit the effectiveness of development cooperation. However, a synergistic partnership requires a number of things to be implemented by the government. A top priority is speed up the use of existing pipeline, focusing specifically on slow-moving problem projects to restructure and speed up implementation. The 8FYP envisages that all DPs will align their country assistance strategies with the goals and sectoral targets of the Government. Leadership of government line ministries in the LCG sectoral working group is key to ensure DP policy alignment and system harmonization. The ERD as development assistance coordinator should map comprehensive work plan to reach out to all government line ministries to ensure that they all are on the same wave length when dealing with foreign assistance.

The government is proactively creating enabling environment for disclosure of public documents with the enactment of Right to Information Act and establishment of the independent Information Commission. It is important that the public has the access to aid data and project documents to ensure aid transparency and accountability. The 8FYP stipulates that all aid data be made public and the Aid Information Management System (AIMS) should be the principal means of data sharing by DPs in Bangladesh.

5.8 RISK AND CHALLENGES

Public sector resource mobilization has always been the most important constraint to expanding the investment programme to meet the growing infrastructure demand, and to finance the needs of public spending in education, health and social protection. The revenue targets established for the national Board of Revenue are ambitious, but supported by proper policy and administrative reforms and automation of tax administration the targets are certainly attainable. The major challenge will be in changing the culture of outdated practices associated with NBR revenue administration and steadily moving toward a modern IT-based administration of the VAT and income tax systems. Effective implementation of the NBR modernization Plan including automation of the VAT and direct tax administration will be preconditions for the success of the domestic revenue mobilization strategy.

Projections for external financing are reasonable and broadly in line with the borrowing pattern observed in recent years. While the size of external borrowing will continue to rise in dollar terms, in relative terms there will be a significant further reduction in the reliance on external financing of the budget during the

Plan period, broadly in line with the pattern observed in recent years under the Seventh Plan. The sustained reduction of external debt and debt service payments in relation to GDP and exports of goods and remittances, respectively, would certainly reduce Bangladesh's vulnerability to external shocks. Such an improvement in the external debt and debt service outlook would also enhance Bangladesh's capacity to service its external obligations and would allow it to access international capital market if the Government desires to do so.

There should not be any major problem with the financing of the Plan from the domestic bank and nonbank sources. The projected domestic borrowing under the Plan is consistent with credit needs of the private sector and inflation targets. Nevertheless, because the planned domestic borrowing from these two sources will be sizable, it will require better coordination between monetary and fiscal policy in order to avoid any potential scope for crowding out of private sector credit. The sources of domestic financing and the interest rates paid on non-bank borrowing would need to be rationalized with the developments in the market-based interest rate structure and the sources of domestic borrowing should also be widened with a view to reducing the rapidly growing domestic debt servicing burden. Development of domestic bond market with proper development of the regulatory regime and the demand and supply side of the domestic bond market will be important for diversifying the domestic financing sources.

CHAPTER 5: ANNEX TABLES

Table A5.1: Ministry-Wise 8FYP Annual Development Programme Allocation (Taka Billion)

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Ministry/Divisions	**ADP in Current Prices**				
Sub-total = General Public Services	**96.1**	**120.6**	**139.2**	**161.3**	**192.9**
Parliament	0.2	0.2	0.3	0.3	0.4
Prime Minister's Office	39.3	50.9	58.7	67.5	80.1
Cabinet Division	0.2	0.2	0.3	0.3	0.4
Election Commission	7.5	9.2	10.6	12.4	14.9
Ministry of Public Administration	2.4	2.9	3.4	3.9	4.7
Public Service Commission	0.3	0.3	0.4	0.4	0.5
Finance Division	15.4	18.9	21.8	25.4	30.5
Internal Resources Division (IRD)	0.8	1.0	1.2	1.4	1.6
Financial Institutions Division	18.9	23.3	26.8	31.3	37.6
Economic Relations Division	0.4	0.5	0.6	0.7	0.9
Planning Division	3.7	4.6	5.3	6.2	7.4
Implementation Monitoring and Evaluation Division	0.8	1.0	1.1	1.3	1.6
Statistics and Informatics Division	5.6	6.9	7.9	9.2	11.1
Ministry of Foreign Affairs	0.6	0.7	0.8	1.0	1.2
Sub-total = Local Government & Rural Development	**259.9**	**283.8**	**332.0**	**368.8**	**423.9**
Local Government Division	224.7	240.4	281.9	310.4	353.8
Rural Development and Co-operatives Division	23.4	28.9	33.3	38.8	46.6
Ministry of Chittagong Hill Tracts Affairs	11.8	14.5	16.8	19.6	23.5
Sub-total = Defense	**5.6**	**6.9**	**8.0**	**9.3**	**11.2**
Ministry of Defense – Defense Services	5.6	6.9	8.0	9.3	11.2
Sub-total=Pblic Order and Safety	**42.1**	**51.8**	**59.7**	**69.8**	**83.8**
Law and Justice Division	5.3	6.5	7.5	8.7	10.5
Public Security Division	17.3	21.3	24.6	28.7	34.5
Legislative and Parliamentary Affairs Division	0.9	1.2	1.3	1.6	1.9
Anti-Corruption Commission	0.2	0.2	0.2	0.3	0.3
Security Services Division	18.4	22.6	26.1	30.5	36.6
Sub-total = Education and Technology	**267.4**	**336.8**	**407.0**	**506.0**	**625.7**
Ministry of Primary and Mass Education	89.5	113.0	133.0	158.3	193.7
Secondary and Higher Education Division	61.4	92.3	106.4	136.6	171.3
Ministry of Science and Technology	91.0	92.3	106.4	124.2	149.0
Information and Communication Technology Division	17.0	25.4	39.9	55.9	74.5
Technical and Madrasah Education Division	8.5	13.8	21.3	31.0	37.2
Sub-total = Health	**170.1**	**218.4**	**278.8**	**340.8**	**408.9**
Health Services Division	151.7	195.8	252.7	310.4	372.4
Medical Education and Family Welfare Division	18.4	22.6	26.1	30.4	36.5
Sub-total = Social Security and Welfare	**72.4**	**84.6**	**92.2**	**107.5**	**121.7**
Ministry of Social Welfare	2.7	3.4	3.9	4.5	5.4
Ministry of Women and Children Affairs	4.1	5.1	5.9	6.8	8.2
Ministry of Food	6.1	7.5	8.7	10.1	12.2
Ministry of Disaster Management and Relief	56.2	64.6	69.1	80.7	89.4

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Ministry/Divisions	**ADP in Current Prices**				
Ministry of Liberation Affairs	3.3	4.0	4.6	5.4	6.5
Sub-total = Housing and Community Amenities	**42.8**	**52.7**	**60.8**	**70.9**	**85.1**
Ministry of Housing and Public Works	42.8	52.7	60.8	70.9	85.1
Sub-total = Recreation, Culture and Religion	**19.6**	**24.1**	**27.8**	**32.3**	**38.8**
Ministry of Information	2.4	2.9	3.4	3.9	4.7
Ministry of Cultural Affairs	2.7	3.3	3.8	4.4	5.3
Ministry of Religious Affairs	10.9	13.5	15.5	18.1	21.7
Ministry of Youth and Sports	3.6	4.4	5.1	5.9	7.1
Sub-total = Power & Energy	**265.1**	**289.2**	**390.8**	**452.2**	**542.6**
Energy and Mineral Resources Division	20.0	24.7	28.4	33.2	39.8
Power Division	245.1	264.5	362.4	419.0	502.8
Sub-total = Agriculture	**165.9**	**222.9**	**299.5**	**352.7**	**438.2**
Ministry of Agriculture	41.2	46.1	47.9	49.7	59.6
Ministry of Fisheries and Livestock	9.0	11.1	12.8	15.0	18.0
Ministry of Land	7.1	8.8	10.1	11.8	14.2
Ministry of Water Resources	108.6	156.9	228.7	276.2	346.4
Sub-total = Environment & Climate Change	**9.4**	**11.5**	**13.3**	**15.5**	**18.6**
Ministry of Environment, Forest and Climate Change	9.4	11.5	13.3	15.5	18.6
Sub-total = Industrial and Economic Services	**23.6**	**29.1**	**33.5**	**39.1**	**46.9**
Ministry of Commerce	1.6	2.0	2.3	2.7	3.2
Ministry of Labour and Employment	1.2	1.5	1.7	2.0	2.3
Ministry of Industries	12.8	15.7	18.1	21.1	25.4
Ministry of Expatriates' Welfare and Overseas Employment	2.7	3.3	3.8	4.5	5.4
Ministry of Textiles and Jute	5.3	6.6	7.6	8.8	10.6
Sub-total = Transport & Communication	**360.0**	**400.3**	**479.8**	**533.9**	**637.0**
Road Transport and Highways Division	177.9	190.0	215.0	233.8	279.1
Ministry of Railways	65.6	75.0	100.0	115.4	140.3
Ministry of Shipping	40.6	50.1	57.7	62.1	74.5
Ministry of Civil Aviation and Tourism	8.3	10.3	11.8	13.8	16.6
Posts and Telecommunications Division	12.1	14.9	17.2	20.0	24.0
Bridges Division	55.5	60.0	78.1	88.8	102.5
Total Development Expenditure	**1800.0**	**2132.7**	**2622.4**	**3060.1**	**3675.3**

Source: GED Projections

Table A5.2: Ministry-Wise 8FYP Annual Development Programme Allocation

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Ministry/Divisions	**ADP Taka Billion in FY2021 Prices**				
Sub-total = General Public Services	**96.1**	**114.7**	**125.5**	**139.9**	**160.1**
Parliament	0.2	0.2	0.2	0.3	0.3
Prime Minister's Office	39.3	48.3	53.0	58.9	67.5
Cabinet Division	0.2	0.2	0.2	0.3	0.3
Election Commission	7.5	8.8	9.6	10.7	12.2
Ministry of Public Administration	2.4	2.8	3.0	3.4	3.9
Public Service Commission	0.3	0.3	0.3	0.4	0.4
Finance Division	15.4	18.0	19.7	21.9	25.1
Internal Resources Division (IRD)	0.8	1.0	1.1	1.2	1.3
Financial Institutions Division	18.9	22.1	24.2	27.0	30.9
Economic Relations Division	0.4	0.5	0.6	0.6	0.7
Planning Division	3.7	4.4	4.8	5.3	6.1
Implementation Monitoring and Evaluation Division	0.8	0.9	1.0	1.2	1.3
Statistics and Informatics Division	5.6	6.5	7.1	7.9	9.1
Ministry of Foreign Affairs	0.6	0.7	0.7	0.8	1.0
Sub-total = Local Government & Rural Development	**259.9**	**269.4**	**299.9**	**317.4**	**348.4**
Local Government Division	224.7	228.2	254.7	267.2	290.8
Rural Development and Co-operatives Division	23.4	27.4	30.1	33.4	38.3
Ministry of Chittagong Hill Tracts Affairs	11.8	13.8	15.1	16.8	19.3
Sub-total = Defense	**5.6**	**6.6**	**7.2**	**8.0**	**9.2**
Ministry of Defense – Defense Services	5.6	6.6	7.2	8.0	9.2
Sub-total=Public Order and Safety	**42.1**	**49.3**	**53.9**	**59.9**	**68.7**
Law and Justice Division	5.3	6.2	6.7	7.5	8.6
Public Security Division	17.3	20.3	22.2	24.7	28.3
Legislative and Parliamentary Affairs Division	0.9	1.1	1.2	1.3	1.5
Anti-Corruption Commission	0.2	0.2	0.2	0.2	0.3
Security Services Division	18.4	21.5	23.6	26.2	30.0
Sub-total = Education and Technology	**267.4**	**319.7**	**367.5**	**435.6**	**514.2**
Ministry of Primary and Mass Education	89.5	107.3	120.1	136.3	159.2
Secondary and Higher Education Division	61.4	87.6	96.1	117.6	140.8
Ministry of Science and Technology	91.0	87.6	96.1	106.9	122.4
Information and Communication Technology Division	17.0	24.1	36.0	48.1	61.2
Technical and Madrasah Education Division	8.5	13.1	19.2	26.7	30.6
Sub-total = Health	**170.1**	**207.5**	**251.8**	**293.4**	**336.1**
Health Services Division	151.7	186 0	228.3	267.2	306.1
Medical Education and Family Welfare Division	18.4	21.5	23.5	26.2	30.0
Sub-total = Social Security and Welfare	**72.4**	**80.3**	**83.3**	**92.7**	**100.0**
Ministry of Social Welfare	2.7	3.2	3.5	3.9	4.5
Ministry of Women and Children Affairs	4.1	4.8	5.3	5.9	6.7
Ministry of Food	6.1	7.2	7.8	8.7	10.0
Ministry of Disaster Management and Relief	56.2	61.3	62.5	69.5	73.5
Ministry of Liberation Affairs	3.3	3.8	4.2	4.7	5.3
Sub-total = Housing and Community Amenities	**42.8**	**50.0**	**54.9**	**61.0**	**69.9**

Fiscal Year	FY21	FY22	FY23	FY24	FY25
Ministry/Divisions	**ADP Taka Billion in FY2021 Prices**				
Ministry of Housing and Public Works	42.8	50.0	54.9	61.0	69.9
Sub-total = Recreation, Culture and Religion	**19.6**	**22.9**	**25.0**	**27.9**	**31.9**
Ministry of Information	2.4	2.8	3.0	3.4	3.9
Ministry of Cultural Affairs	2.7	3.1	3.4	3.8	4.3
Ministry of Religious Affairs	10.9	12.8	14.0	15.6	17.9
Ministry of Youth and Sports	3.6	4.2	4.6	5.1	5.8
Sub-total = Power and Energy	**265.1**	**274.4**	**353.1**	**389.3**	**445.9**
Energy and Mineral Resources Division	20.0	23.4	25.7	28.6	32.7
Power Division	245.1	251.0	327.4	360.7	413.2
Sub-total = Agriculture	**165.9**	**211.7**	**270.5**	**303.7**	**360.0**
Ministry of Agriculture	41.2	43.8	43.2	42.8	49.0
Ministry of Fisheries and Livestock	9.0	10.6	11.6	12.9	14.8
Ministry of Land	7.1	8.3	9.1	10.2	11.6
Ministry of Water Resources	108.6	149.0	206.6	237.8	284.6
Sub-total = Environment and Climate Change	**9.4**	**11.0**	**12.0**	**13.4**	**15.3**
Ministry of Environment, Forest and Climate Change	9.4	11.0	12.0	13.4	15.3
Sub-total = Industrial and Economic Services	**23.6**	**27.6**	**30.3**	**33.7**	**38.4**
Ministry of Commerce	1.6	1.9	2.1	2.3	2.6
Ministry of Labour and Employment	1.2	1.4	1.5	1.7	1.9
Ministry of Industries	12.8	14.9	16.4	18.2	20.8
Ministry of Expatriates' Welfare and Overseas Employment	2.7	3.2	3.5	3.9	4.4
Ministry of Textiles and Jute	5.3	6.2	6.8	7.6	8.7
Sub-total = Transport and Communication	**360.0**	**387.8**	**451.5**	**483.6**	**553.6**
Road Transport and Highways Division	177.9	185.0	203.7	217.6	252.8
Ministry of Railways	65.6	73.4	94.1	99.5	115.0
Ministry of Shipping	40.6	47.5	53.1	56.4	61.2
Ministry of Civil Aviation and Tourism	8.3	9.7	11.7	12.9	13.6
Posts and Telecommunications Division	12.1	14.1	16.5	17.2	19.7
Bridges Division	55.5	58.1	72.4	80.0	91.3
Total Development Revenue Expenditure	**1800.0**	**2032.9**	**2386.4**	**2658.5**	**3051.7**

Source: GED Projections

CHAPTER 6

MONITORING AND EVALUATION

6.1 OVERVIEW

The 6th Five Year Plan Document first introduced the concept of Results-Based Monitoring and Evaluation (RBM&E) instead of assessing completion of financial or physical targets as indicators of progress. This results-based M&E system has been incorporated to flexibly use as an instrument of securing mid-term corrections. This RBM&E is also used to link the successive five year plans to each other by looking at the results achieved in each medium-term plan and identifying the gaps. The gaps will then inform the agenda, policies and strategies of the next five-year plan. The 8FYP covers the development aspiration of the country incorporating the targets of the Sustainable Development Goals (SDGs). Although the unexpected and unprecedented onslaught of the COVID-19 global pandemic has disrupted the upward and accelerating pattern of the development progress, the flexible use of the planning instrument will seek to contain the damage and restore the development momentum as indicated by the Development Results Framework (DRF) of the 8FYP.

The experience of developing DRF of the 6FYP and the 7FYP gave opportunity to develop more rigorous DRF for the 8FYP emphasizing on aligning SDGs indicators as well. The findings of the implementation review of 6th Five Year Plan and Mid Term Review of 7th Five Year Plan has been considered in formulating the government policies as well as the formulation of the 8FYP. The objective of this brief chapter is to discuss the strategy underlying the DRF for the 8FYP, its strategic role in planning, the institutional arrangements for results-based monitoring, data mobilization arrangements, mid-term and end evaluation of the plan.

6.2 TOWARDS A RESULTS-BASED M&E SYSTEM: 8FYP STRATEGY

Based on the progress made with results-based monitoring in the 6FYP and the 7FYP, the strategic content and relevance of the DRF in the planning process has gained significance. In the specific context of Vision 2041 and the 8FYP, a results-based M&E is recognized as critical to helping the Government track and monitor progress and take corrective measures when major gaps or divergences emerge.

The importance of generating the relevant database to do proper results-based monitoring and evaluation has also gained recognition. This has enabled the development of a detailed DRF, which includes the following:

- Identifies core macroeconomic and sectoral development objectives linked to PP2041 and the SDGs;
- Indicates the different monitorable indicators;
- Identifies the data source;
- Indicates the responsible line ministry/ agency that should prepare the data;
- Defines a baseline and sets targets for the end-year as well as the intermediate years of the 8FYP.

A total of 15 top priority areas have been defined, of which 4 are macroeconomic in nature and the other 11 are sectoral. Each of these development goals are linked to the SDG and fully consistent with the development vision and target set by the government in PP2041. Table 6.1 contains national priority areas and the number of indicators used for measuring performance. Performance of the 8FYP will be assessed against progress towards these developments using 104 measurable indicators. The detailed listing of indicators, base-line data and the yearly targets are contained in the attachment to this chapter shown as Annex 1.

Table 6.1: National Priority Areas of the 8FYP

National Priority	Outcome Statement	Indicators	No. of Indictors
A. MACROECONOMIC GOALS AND INDICATORS			
Inclusive economic growth through macroeconomic stability (SDG-8)	Conducive macroeconomic environment to promote inclusive growth, supported by trade and private sector development	Real sector indicators	4
		Fiscal indicators	3
		External sector indicators	3
		Monetary and Financial Sector	2
		Price level / Inflation	1
Reducing Poverty and Inequality (SDG-1 & 10)	Reduction in poverty and inequality across all groups and regions	Poverty	2
		Social protection	1
		Income/consumption inequality	1
Employment (SDG-8)	Increased productive and decent employment opportunities for sustainable and inclusive growth	Employment quantity, quality and safety	5
International Cooperation and Partnership (SDG-17)	Strengthen International cooperation and partnership for sustainable development	Foreign aid quantity and quality	2
B. SECTORAL DEVELOPMENT GOALS AND INDICATORS			
Health and Well Being (SDG-3)	Sustainable improvements in health sector including reproductive health and family planning, particularly of vulnerable group	Mortality / Life expectancy	4
		Female reproductive health	3
		Fertility management	2
		Prevention of mass communicable disease	3
		Child nutrition	3
Quality Education (SDG-4)	Quality education for all to reduce poverty and increase economic growth	Education quantity	3
		Education quality	2
		Education finance	2
Agriculture and Food Security (SDG-2)	Achieving food security and promoting sustainable agriculture for becoming a prosperous country	Agriculture value-added, and composition	1
		Agriculture finance	1
		Food security	1
Clean Water & Sanitation (SDG-6)	Ensure availability of safe drinking water and sanitation for all	Drinking water	1
		Sanitation	1
		Transboundary Water	1
Transport and Communications (SDG-9)	Improved transport infrastructure for higher economic growth	Transport network quantity	7
		Inter-modal transport balance	1

National Priority	Outcome Statement	Indicators	No. of Indictors
Power, Energy and Mineral Resources (SDG-7)	Ensure sustainability in production, consumption and use of energy and mineral resources	Electricity production and access	3
		Renewable energy	2
Gender and Social Inequality (SDG-5 & SDG-9)	Achieve gender equality and empower all women and girls	Gender equality	9
		Social equity	1
Environment, Climate Change and Disaster Management (SDG-13, 14 & 15)	The natural environment is preserved and prevented from degradation, and a disaster management strategy exists, as well ensuring climate change adaptation and mitigation	Climate change	2
		Environmental protection	4
		Air quality	1
		Disaster management	4
Information and Communications Technology (ICT)	Increased access to digital communications through telephone and broadband services	Service quantity	4
Urban Development (SDG-11)	Reduced urban poverty and improved living conditions through better city governance and service improvements	Urban Services and access	4
Governance (SDG-16)	Promoting inclusive, transparent, accountable and effective democratic governance system and ensuring justice for all	Access to justice	3
		E-procurement	1
		Right to information	1
		Alternative Dispute Resolution	1
		Child protection	1
		Human trafficking	2
		Quality of public service	1

Source: DRF, Annex Table A6.1

The summary table clearly shows the comprehensive nature of the DRF and captures the core focus of the 8FYP in terms of securing rapid inclusive growth that promotes employment, lowers poverty and supports economic and social equity. The balance between economic and social justice and strategic linkages between the macroeconomic and sectoral goals are clearly articulated. It gives a summary snapshot of the main features of the 8FYP and identifies the performance indicators that, if achieved, will give confidence that the plan well implemented.

6.3 INSTITUTIONAL FRAMEWORK FOR M&E

The M&E framework in the 6FYP was postulated as a dynamic process. It was understood that the lessons from international experience on good practices, while certainly helpful in starting the process in the right direction, would need to be tailored to the Bangladesh context.

6.3.1 M&E Role of General Economics Division (GED) of the Planning Commission

GED is the focal point for monitoring and evaluation of mid and long-term plans. The focus on M&E has helped in converting the development plans from once-in-a-five-year document to more of a living strategy that gets updated in the context of a mid-term review and then links up with the next plan through the final plan completion review.

In addition to this, the GED will review the "National Action Plan of Ministries/Divisions by Targets in the Implementation of Sustainable Development Goals (SDGs)" that was developed in alignment with the 7FYP. Based on the review of the National SDG Action Plan and feedbacks from the consultation with the ministries/divisions/agencies, revised National SDG Action Plan will be prepared by identifying projects and programmes that would be undertaken during FY2021-FY2025 to achieve the development aspiration of the 8FYP. Along with the DRF of the 8FYP, the National SDG Action Plan will also be used as an M&E tool to review the progress of implementation of this mid-term plan document (8FYP).

The training of government officials on the 7FYP provided by the GED was a milestone work that not only enhanced the capacity of the public officials but also strengthened the M&E system within ministries, divisions and agencies. The GED will continue such training even for a larger audience on the 8FYP for effective understanding and operationalization of the result-based M&E system. Moreover, the GED will help develop M&E framework for the sector strategies to line ministries so that each ministry knows its commitments and the benchmark against which performance will be evaluated.

The adoption of the medium-term budgetary framework (MTBF) and assigning this role the Ministry of Finance has strengthened the link between the budget and the national plan on the one hand and between macroeconomic and sectoral programmes on the other through the involvement of sectoral line ministries. The Planning Commission rightly focuses on developing a nation-wide M&E framework in coordination with the Ministry of Finance and the line ministries. The main M&E focus is on high level outcomes related to the implementation of the national plans and major policies. This aggregate-level M&E effort needs to be complemented with two other levels of results-based M&E: sectoral M&Es conducted by line Ministries and M&E of individual investment projects done by the Implementation Monitoring and Evaluation Division (IMED) under the Ministry of Planning.

6.3.2 Implementation Monitoring and Evaluation Division (IMED)

The IMED has made some progress in doing systematic review of the entire project portfolio to distil the key lessons of project selection and management and strengthen the development impact of the public investment program. Nevertheless, there is substantial scope for further progress. The importance of doing a through portfolio of the ADP and find ways how to maximize the development impact of public investment has gained momentum in an environment of resource constraint, that has been further aggravated by the COVID-19.

IMED will undertake an increased number of impact assessments of projects with the help of both experimental and non-experimental data so that M&E at the micro-level moves beyond simply tracking the financial and physical completion of the projects. The IMED will develop its capacity and learning through a process of research and collaboration with the national think tanks and the universities.

6.3.3 Line Ministries/Divisions

The line Ministries/divisions are critical actors in revamping the M&E system. The Planning Wing of the line ministries is responsible to carry out the job. Some progress has been made during the 7FYP in this regard, but internal capacities need considerable strengthening. While line ministries/divisions participate actively in the plan development and implementation process, a systematic effort is not fully in place. The

required database is often not in place and the input to the planning process is often not strategic or based on a solid analysis of progress made in the previous plan, emerging gaps and how they will be filled. The line ministries have made better progress in developing medium-term budgetary framework, but the link of the budget requests to sectoral strategies in the medium-term plan or the perspective plans has to be strengthened.

To ensure that line Ministries become an important agent for the M&E exercise, the following steps will be undertaken under the 8FYP. First, a capacity building plan will be developed which will pinpoint how line ministries will design an M&E strategy. Second, revision of existing good practice for a results-based M&E from relevant international experience so that some lessons can be drawn to improve the existing results-based M&E system of line Ministries. Third, the planning wings of line ministries will be strengthened with trained officials and technology to prepare project performance reports and results data. Finally, line ministries will be encouraged to mobilize the relevant sectoral data and put that into the respective websites.

6.3.4 Bangladesh Bureau of Statistics (BBS)

At the national level, the Bangladesh Bureau of Statistics (BBS) is the official data institution in Bangladesh according to the Statistical Act 2013. The role of the BBS has evolved and over time the BBS has developed substantial experience and competence in providing a range of data at a national, district, and sectoral level. Yet, it is well-known that the BBS needs substantial strengthening. Indeed, given the importance of information as a public good, the strengthening of the BBS is probably the topmost priority for improving policy making, for improving research, and for instituting a results-based M&E. Under the 8FYP, the BBS will be greatly strengthened to generate high quality data in a timely fashion. To overcome such constraints, the GoB will undertake the following initiatives:

First, BBS produced and published an actionable National Strategy for the Development of the Statistics (NSDS) report with strategic directions, policies and institutional reforms for strengthening the BBS. Some progress was made in the implementation of the NSDS under the Seventh Plan, but progress was constrained by the slowdown in the procurement of the required technical assistance to strengthen BBS capacity.

Second, the BBS will undertake small scale surveys for enabling regular and frequent monitoring and evaluation exercise. Given financial as well as capacity constraint, it is difficult to conduct annual surveys in a large scale. The alternative therefore is to conduct interim surveys at much smaller scale both in terms of coverage of the sample as well as numbers of areas covered. These surveys will typically serve the purpose of adding interim data points to the existing large- scale surveys and thereby enabling regular monitoring of selected indicators. Given the required cost of annual surveys, biannual surveys will be conducted which will enable much better tracking of performance given the cost constrain.

Third, the government will dedicate substantial resources to improving the system of national accounts. Additionally, the BBS needs to focus on producing GDP data on a quarterly basis. This will allow policymakers to evaluate the effects of changes in fiscal and monetary policies on a real time basis. Statistics and Informatics Division is mandated for preparing National Population Register (NPR) according to the Allocation of Business, 1996 (revised up to April 2017), Statistics Act 2013 and National Strategy for the Development of Statistics (NSDS). As a National Statistics Office, Bangladesh Bureau of Statistics (BBS)

will prepare and update the NPR to provide information of each and every individual of the country with a unique identification number for ensuring effective service delivery.

Fourth, as Bangladesh moves towards a more decentralized approach to public administration and service delivery, there is need to have much better understanding of production and financial capacities at the district level. Long time ago, BBS used to prepare district level GDP. It also used to prepare fiscal accounts of local government institutions (LGIs). BBS will take initiative to start compiling district level production and fiscal accounts of LGIs.

Finally, strong emphasis will be given to strengthening the quality of BBS data. Surveys are done on a range of subjects including household incomes and wages.

Implementation Reviews of Eighth Five Year Plan

- Two M&E reviews will be conducted during the 8FYP to assess the degree of achievement against targets set in the plan document. The first review would be a Mid-Term Review and the second review would be the Final/End Review of the 8FYP.
- The Mid Term Review will be conducted in FY2023. This will allow the government to take stock of achievements at midpoint, review the risks and assumptions, and to make any necessary adjustment to the remaining years' strategies.
- The findings of Final/End Review of the 8FYP will be disseminated through workshops with stakeholders. The dissemination effort will include sending the reports to all the stakeholders.

Sustainability of Results-based M&E System

The sustainability of the results-based M&E system depends on a number of factors. First, the public policy arena must harness a genuine demand and appreciation for an effective results-based M&E system. Second, official channels for collecting information should be maintained and their dissemination must occur in a user-friendly manner. Third, there is inherent need to ensure accountability of the government to own the M&E effort. By ensuring accountability of all the ministries/division, autonomous bodies, central and local government bodies, government can ensure both the demand and the incentives for a results-based M&E. Finally, continuous capacity building efforts are necessary.

CHAPTER 6: ANNEX TABLES

Table A6.1: Development Results Framework (DRF) of the 8th Five Year Plan

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	National Priority: Inclusive Economic Growth through Macroeconomic Stability (SDG-8)									
	Outcome Statement: Conducive macroeconomic environment to promote inclusive growth, supported by trade and private sector development									
	Real Sector									
1	Per Capita GDP Growth (%)	BBS, SID	FD	3.85 (2020)	6.06	6.46	6.78	7.13	7.33	SDG 8.1.1
2	Gross National Savings (as % of GDP)	BBS, SID	IRD, BB	30.11 (2020)	31.43	31.17	32.29	33.03	34.42	
3	Gross Investment (as % of GDP) (a) Private Investment (as % of GDP) (b) Public Investment (as % of GDP) (c) Foreign Direct Investment (FDI) (as % of GDP)	BBS, SID	MoI, BIDA, FD, BB	31.75 (a) 23.63 (b) 8.12 (c) 0.54 BBS (2019)	32.56 (a) 24.41 (b) 8.15 (c) 0.83	32.73 (a) 24.53 (b) 8.20 (c) 1.35	34.00 (a) 25.32 (b) 8.68 (c) 1.90	34.94 (a) 26.08 (b) 8.86 (c) 2.50	36.59 (a) 27.35 (b) 9.24 (c) 3.00	
4	Gross National Income Per Capita (In USD)	BBS, SID		2064 (BBS 2020)	2170	2345	2555	2790	3059	
	Fiscal Sector									
5	Total Revenue (as % of GDP) (a) Tax Revenue (as % of GDP)	NBR, BB	NBR, IRD	9.4 (a) 7.89 (FD 2020)	10.18 (a) 9.02	11.10 (a) 9.80	12.00 (a) 10.60	12.86 (a) 11.26	14.06 (a) 12.26	
6	Government Expenditure (as % of GDP)	BB, FD	BB, FD	14.86 (2020)	17.06	16.91	17.57	17.90	19.10	
7	Government Budget Deficit (including grants) (as % of GDP)	BB, FD	FD	5.39 (2020)	6.80	5.75	5.52	5.00	5.00	
	External Sector									
8	Export (as % of GDP)	Import (as % of GDP)	BBS, SID	12.25 (2020)	12.83	12.83	12.79	12.73	12.64	
9			MoC	18.31 (2020)	18.79	18.77	18.74	18.73	18.74	
10	Remittance (as % of GDP)	BB	BB, MoEWOE	5.46 (2020)	5.51	5.36	5.20	5.02	4.84	

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	Monetary/Financial Sector									
11	Broad Money (M2) growth (% change)	BB, FD BBS, SID	BB, FD	12.64 (2020)	13.72	13.96	13.83	13.41	13.50	
12	Private Sector Credit growth (% change)	BB, FD BBS, SID	BB, FD	13.14 (2020)	14.22	14.46	14.33	14.17	14.18	
	Price									
13	CPI Inflation Rate (Annual Average)	BB, FD BBS, SID	BB, SID	5.65 (2020)	5.10	4.90	4.80	4.70	4.60	
	National Priority: Reducing Poverty and Inequality (SDG-1 &10)									
	Outcome Statement: Reduction in poverty and inequality across all groups and regions									
14	Proportion of population living below the national poverty line	BBS, SID	CD, GED	UPL: 20.5% LPL: 10.5% (2019, BBS)	UPL: 23.00% LPL: 12.0%	UPL: 20.00% LPL: 10.0%	UPL: 18.50% LPL: 9.1%	UPL: 17.00% LPL: 8.3%	UPL: 15.60% LPL: 7.4%	SDG: 1.2.1
15	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	BBS, SID GED	GED	MPI: 0.168 Headcount Ratio: 36.10 Intensity: 46.5						SDG: 1.2.2
16	Proportion of population covered by social protection	BBS, SID	CD, GED	27.8% (HIES, 2016)	32.12%	32.84%	33.56%	34.28%	35.00%	SDG: 1.3.1
17	Degree of inequality (Gini coefficient) (a) income inequality (b) consumption inequality	BBS	GED; SID	(a) 0.48 (b) 0.32 (HIES, 2016)	(a) 0.462 (b) 0.302	(a) 0.459 (b) 0.299	(a) 0.456 (b) 0.296	(a) 0.453 (b) 0.293	(a) 0.450 (b) 0.290	
	National Priority: Health and Well-Being (SDG-3)									
	Outcome Statement: Sustainable improvements in health sector including reproductive health, family planning, particularly of vulnerable group									
18	Maternal mortality ratio	BBS	HSD	165 (SVRS, 2019)	139	129	120	110	100	SDG: 3.1.1
19	Proportion of births attended by skilled health personnel (%)	BBS	HSD	59 (MICS, 2019)	62.50	64.87	67.25	69.62	72.00	SDG: 3.1.2
20	Under-5 mortality rate	BBS	HSD	28.00 (SVRS, 2019)	27.80	27.60	27.40	27.20	27.00	SDG: 3.1.3

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
21	Neonatal mortality rate	BBS	HSD	15.00 (SVRS, 2019)	14.80	14.60	14.40	14.20	14.00	SDG: 3.1.4
21	Prevalence of stunting among children under 5 years of age (%)	BBS	HSD	28.0 (MICS 2019)	24.57	23.43	22.28	21.14	20.0	SDG: 2.2.1
23	Prevalence of undernourishment (%)	BBS	HSD	13.0 (FAO 2019)	12.5	12	11.5	11	10.5	SDG: 2.1.1
24	Prevalence of malnutrition (wasting and overweight) among children under 5 years of age	BBS	HSD	Wasting: 9.8% Overweight:2.4% (MICS 2019)	8.6 1.8	8.2 1.6	7.8 1.4	7.4 1.2	7.0% 1.0%	SDG: 2.2.2
25	Life Expectancy at Birth	BBS	HSD	72.6 (SVRS, 2019)	73.03	73.27	73.51	73.75	74.00	
26	Total Fertility Rate (TFR)	BBS	HSD	2.04 (SVRS, 2019)	2.03	2.02	2.01	2.01	2.00	
27	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	BBS	HSD	77.4% (MICS 2019)	78%	78.5%	79%	79.5%	80%	SDG 3.7.1
28	Contraceptive Prevalence Rate (%)	BBS	HSD	63.4 (SVRS, 2019)	68.2	69.9	71.6	73.3	75.0	
29	Proportion of the target population (≤12 months old children) covered by all vaccines included in national programme	NIPORT	HSD	85.60% (BDHS 2017-18)	91.80%	93.35%	94.90%	96.45%	98.00%	SDG: 3. b.1
30	Proportion of births in health facilities by wealth quintiles (ratio of lowest and highest quintiles)	NIPORT	HSD	1:3.00 (BDHS 2017-18)	1:2.36	1:2.14	1:1.99	1:1.71	1:1.50	
31	Tuberculosis incidence per 100,000 population	WHO	HSD	221 (WHO 2019)	155	150	143	128	112	SDG: 3.3.2
32	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	WHO	HSD	21.6% (WHO, 2019)	19.2%	18.6%	18.0%	17.4%	16.8%	SDG: 3.4.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	National Priority: Clean Water & Sanitation (SDG-6)									
	Outcome Statement: Ensure availability of safe drinking water and sanitation for all									
33	Proportion of population using safely managed drinking water services	BBS, SID	LGD	National: 42.6% Urban: 37.9% Rural: 44.0% (MICS 2019)	48%	55%	62%	68%	75%	SDG: 6.1.1
34	Proportion of population using safely managed sanitation services	BBS, SID	LGD	National: 64.4 Urban: 64.7 Rural: 64.3 (MICS 2019)	67%	70%	74%	77%	80%	SDG: 6.2.1
35	Proportion of transboundary basin area with an operational arrangement for water cooperation	a) MoWR b) MoFA	MoWR, MoFA	38% (JRC, 2018)	40%	40%	41%	41%	41%	SDG: 6.5.2
	National Priority: Quality Education (SDG-4)									
	Outcome Statement: Quality education for all to reduce poverty and increase economic growth									
36	Completion rate (primary education, lower secondary education, upper secondary education)	BANBEIS	MoPME SHED	a) 82.1 (APSC 2019) b) 64.98 c) 81.45 (BES 2019)	a) 84.00 b) 65.35 c) 82.13	a) 90.00 b) 65.75 c) 82.61	a) 90.00 b) 66.53 c) 83.08	a) 91.00 b) 67.31 c) 83.55	a) 92.00 b) 70 c) 85	SDG: 4.1.2
37	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being	BBS, SID	MoPME	National: 74.50% (MICS, 2019)	76.30%	77.25%	78.17%	79.08%	80.00%	SDG: 4.2.1
38	Number of enrolled children with disabilities (by gender)	DPE	MoPME	Boys: 54442 Girls: 43869 Total: 98311 (APSC-2019)	55000 45000 100000	56000 49000 105000	56000 50000 106000	56000 50000 106000	56500 50000 106500	

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
39	Proportion of schools with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic hand washing facilities (as per the WASH indicator definitions)	a) BANBEIS, MoE b) DPE, MoPME c) DPE, MoPME	MoPME, SHED	Primary (a) 87.73% (b) 76.83% (c) 79.83% (d) 61.44% (**IMD, DPE -2019)** (e) 97% schools (f) 76.24% schools (g) 26% (APSC, 2019) Secondary a)93.25 b)37.64 c)76.72 d)18.48 e)97.07 f)95.93 g)28.66 (2019)	Primary: a) 90% (b) 80% (c) 82% (d) 65% (e) 98% (f) 80% (g) 42% Secondary (a) 95.92 (b)39.59 (c) 79.63 (d) 21.14 (e)97.60 (f) 96.36 (g)36.33	Primary: (a) 92% (b) 83% (c) 84% (d) 70% (e) 98% (f) 84% (g) 58% Secondary (a) 96.00 (b)40.76 (c) 78.80 (d) 22.23 (e)97.83 (f) 96.55 (g)40.82	Primary: (a) 94% (b) 90% (c) 90% (d) 75% (e) 99% (f) 86% (g) 77% Secondary (a) 97.08 (b)42.08 (c) 77.97 (d) 23.31 (e)98.06 (f) 69.74 (g)45.31	Primary: (a) 95% (b) 95% (c) 95% (d) 80% (e) 100% (f) 90% (g) 91% Secondary (a) 97.90 (b)43.37 (c) 77.14 (d) 24.39 (e)98.29 (f) 96.93 (g)49.80	Primary (a) 100% (b) 100% (c) 100% (d) 80% (e) 95% schools (f) 85% schools (g) 100% Secondary (a) 100% (b) 50% (c) 100% (d) 80% (e) 100% (f) 100% (g) 70%	SDG: 4. a.1
40	Proportion of teachers with the minimum required qualifications, by education level	a) BANBEIS, MoE b) DPE,(MoPME	MoPME, SHED	(a) Pre-Primary: (b) Primary: 80.06% (APSC, 2015) (c) Lower Secondary: 62.01% (d) Upper Secondary: 59.01% (2019)	(a)Lower secondary (71.15%) (b) Upper Secondary:69.92 %	(a)Lower secondary 74.26% (b) Upper Secondary :73.26%	(a)Lower secondary 79.38% (b) Upper Secondary:7 6.34%	(a)Lower secondary 82.2% (b) Upper Secondary :78.56%	(a)Lower secondary 85% (b) Upper Secondary: 80.00%	SDG: 4. c.1
41	Public education expenditure as % of GDP	MoE, FD	MoE, FD	2.2	2.3	2.5	2.6	2.8	3.0	
42	Volume of official development assistance flows for scholarships by sector and type of study	ERD	ERD	8.76 MUS$ (2015, ERD)	15.50 MUS$	16.60 MUS$	17.80 MUS$	18.90 MUS$	20.00 MUS$	SDG: 4. b.1
	National Priority: Employment (SDG-8)									
	Outcome Statement: Increased productive and decent employment opportunities for sustainable and inclusive growth									
43	Annual growth rate of real GDP per employed person	BBS, SID		5.85% (BBS 2018-19)	-	-	-	-	5.5%	SDG: 8.2.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
44	Proportion of informal employment in total employment, by sector and sex	BBS , SID		Both: 78.0% (M: 76.0%, F: 85.5%) (LFS 2016-17)	77.5	77.0	76.5	76	Both: 75%	SDG: 8.3.1
45	Unemployment rate, by sex, age and persons with disabilities	BBS , SID		By sex Male: 3.1% Female: 6.7%	-	-	-	-	By sex Male: 0.8% Female: 2.1%	SDG: 8.5.2
				By Age 15-24 years: 12.3% 25-34 years: 5.7% 35-44 years: 1.2% 45-54 years: 0.8% 55+ years: 0.6% (LFS 2016-17)	-	-	-	-	By Age 15-17 years: 5.4% 18-24 years: 4.4% 25-29 years: 3.0% 30-64 years:1.0% 65+ years: 0.24%	
46	Proportion of youth (aged 15–24 years) not in education, employment or training	BBS , SID		Total: 26.8% (M: 9.2%, F: 43.9%) (LFS 2016-17)	-	-	-	-	12%	SDG: 8.6.1
47	Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status	a) DIFE, MoLE b) BBS , SID c) BMET, MoEWOE		a) Fatal injuries: 228 (M: 220; F: 8) b) Non-fatal injuries: 111 (M: 94; F: 17) (DIFE, 2019)	a) Fatal injuries: 163 (M:155; F: 8) b) Non-fatal injuries: 100 (M: 85; F: 15)	a) Fatal injuries: 147 (M:140; F: 7) b) Non-fatal injuries: 90 (M: 76; F: 14)	a) Fatal injuries: 130 (M:124; F: 6) b) Non-fatal injuries: 80 (M: 68; F: 12)	a) Fatal injuries: 114 (M:108; F: 6) b) Non-fatal injuries: 70 (M: 60; F: 10)	a) Fatal injuries: 98 (M:93; F: 5) b) Non-fatal injuries: 60 (M: 51; F: 9)	SDG: 8.8.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	National Priority: Agriculture & Food Security (SDG-2)									
	Outcome Statement: Achieving food security and promoting sustainable agriculture for becoming a prosperous country									
48	Agricultural sector GDP growth rate (%)	BBS, DAE, DLS, DoF, BFD	MoA	3.11 (BBS 2020)	3.47	3.83	4.10	4.00	3.90	
49	% of agriculture budget allocated in the agricultural research	MoA	MoA	8.35 (2020)	9.19	10.10	11.11	12.23	13.45	
50	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	BBS	MoFood	Moderate: 30.5% Severe: 10.2% (FAO, 2019)	Moderate: 28% Severe 10%	Moderate: 27% Severe 9%	Moderate: 26% Severe 8%	Moderate: 25% Severe 7%	Moderate: 24.2% Severe 6%	SDG 2.1.2
	National Priority: Transport and Communication (SDG-9)									
	Outcome Statement: Improved infrastructure for higher economic growth									
51	Length of targeted four-lane road (km)	RHD	MoRTB	30 (2019)	50	50	150	100	200	
52	Share of RHD highway road network in good and fair condition (% of network)	RHD	MoRTB	81.4% (2020)	84%	87%	90%	92.5%	95%	
53	Length of Metro Rail Transit (MRT) network (km)	DTCA	MoRTB	0 (2015)	0	20	22	30	45	
54	Upazila, Union and Village Road network in good and fair condition	LGED	LGD, MoLGRDC	38 % (2019)	43%	48%	52%	55%	57%	
55	Length of targeted new railway network (km)	BR	MoR	2955 (2018)	3400	3500	3600	3700	3800	
56	Length of targeted new double railway network (km)	BR	MoR	110.5	150	182	540	901	1110.5	
57	Proportion of the rural population who live within 2 km of an all-season road	a) LGED, LGD b) BBS, SID	LGD	83.45% (LGED, 2016)	86%	87%	88%	89%	90%	SDG 9.1.1
58	Passenger and freight volumes, by mode of transport	a) BRTC, RTHD b) BIWTC, MoS c) BIWTA, MoS d) BR, MoR e) CAAB, MoCAT		Passenger: 130.99 Lac Freight: 4.12 Lac M. tonne (CAAB, 2019) Passenger (by bus) 480 Lac	Passenger: 109.28 Lac Freight: 3.71Lac M. tonne Passenger (by bus)	Passenger: 121.48 Lac Freight: 4.12 Lac M. tonne Passenger (by bus)	Passenger: 130.13 Lac Freight: 439084 M. tonne Passenger (by bus)	Passenger: 137.78Lac Freight: 4.68 Lac M. tonne Passenger (by bus)	Passenger: 146.34 Lac Freight: 4.98 Lac M. tonne Passenger (by bus)	SDG 9.1.2

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
				Freight (by truck) 4.85 Lac Tonne (RTHD) Passenger: 31.47 Crore Freight: 55.94 MT (BIWTA) Passenger: 1.97 Lac Container: 6678 TEUS Vehicle by Ferry: 30.72 (BIWTC)	500 Lac Freight (by truck) 5.00 Lac MT Passenger: 31.88 Crore Freight: 63.13 MT Passenger: 2.07 Lac Container: 7678 TEUS Vehicle by Ferry: 32.26	550 Lac Freight (by truck) 5.50 Lac MT Passenger: 34.03 Crore Freight: 68.18 MT Passenger: 2.17 Lac Container: 8678 TEUS Vehicle by Ferry: 32.41	600Lac Freight (by truck) 6.00 Lac MT Passenger: 36.58 Crore Freight: 74.32 MT Passenger: 2.28 Lac Container: 9678 TEUS Vehicle by Ferry: 25.93	650 Lac Freight (by truck) 6.50 Lac MT Passenger: 39.51 Crore Freight: 81.38 MT Passenger: 2.40 Lac Container: 10678 TEUS Vehicle by Ferry: 18.15	700 Lac Freight (by truck) 7.00 Lac MT Passenger: 43.06 Crore Freight: 89.52 MT Passenger: 2.52 Lac Container: 11678 TEUS Vehicle by Ferry: 9.07	
	National Priority: Power, Energy and Mineral Resources (SDG-7)									
	Outcome Statement: Ensure sustainability in production, consumption and use of energy and mineral resources									
59	Electricity Installed Generation Capacity (MW)	PD	PD	23548 (FY 2020)	24000	26000	28000	29000	30000	
60	Access to electricity (% of households)	PD, BBS	PD	97% (PD 2019)	100%	100%	100%	100%	100%	SDG. 7.1.1
61	Per capita generation of electricity (kWh)	PD	PD	512 (PD 2019)	552	592	632	674	720	
62	Share of renewable energy to the total electricity generation (%) (including hydro)	PD	PD	3.25 (FY 2019)	4.50	5.75	7.00	8.5	10.00	SDG. 7.2.1
63	Proportion of population with primary reliance on clean fuels and technology	BBS	EMRD	26.3% (FY 2019)	21%	23%	25%	27%	30%	SDG 7.1.2
	National Priority: Gender (SDG-5) and inequality (SDG-10)									
	Outcome Statement: Achieve gender equality and empower all women and girls									
64	Percentage of seats held by women at National Parliament	**PS**	BP	20.86 (2020)	23	26	29	32	35	SDG. 5.5.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
65	Percentage of women aged 20-24 who were married before age 18	BBS	MoWCA	51.4 (MICS, BBS 2019)	50	42	34	32	30	SDG. 5.3.1
66	Ratio of girls to boys in tertiary education	BANBEIS	MoE	0.7	0.76	0.82	0.88	0.94	1.0	SDG. 4.3 & 4.5.1
67	Gender budget as percentage of total budget	FD, MoWCA	FD, MoWCA	30.82 (FD 2019)	31	32	33	34	35	5.c.1
68	Percentage of female teachers at (a) primary, (b) secondary (c) tertiary education	BANBEIS	MoE	a) b)25.60 c)27.23 (2019)	66 30 28	67 31 28.5	68 32 29	69 33 29.5	a)70 b)35 c)30	SDG. 4.5.1
69	Proportion of women in managerial positions	BBS	MoWCA, MoPA	11.4 (LFS 2016)	19	20	21	22	23	SDG. 5.5.2
70	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age	BBS	MoWCA	54.7 (FY 2015)	48	41	34	27	20	SDG. 5.2.1
71	Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence	BBS	MoWCA	6.2 (FY 2015)	5.4	4.8	4.2	3.6	3.0	SDG. 5.2.2
72	Proportion of time spent on unpaid domestic and care work, by sex	BBS	MoWCA	F: 23.6 M: 6.9 (FY 2017) LFS, BBS	F: 23% M:7.5%	F: 22.5% M: 8%	F:22% M: 8.5%	F: 21% M: 9%	F: 20% M: 10%	SDG 5.4.1
73	Growth rates of household expenditure or income per capita among a) the bottom 40 per cent of the population and b) the total population	BBS	GED	a)7.7 b) 9.1 (2016)	-	-	-	-	a) 9.5 b) 9.3	SDG. 10.1.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	National Priority: Environment, Climate Change and Disaster Management (SDG-13, 14 & 15)									
	Outcome Statement: The environment is preserved and prevented from degradation, and a disaster management strategy exists as well as ensuring climate change adaptation and mitigation									
74	Consumption of ozone depleting H-CFCs (Ozone Depleting Potential (ODP))	DoE	MoEFCC	65.35 (2016)	47.22	47.22	30.5	26.5	23.61	SDG. 13.2.2
75	Forest area as a proportion of total land area (based on periodic survey)	BFD	MoEFCC	14.1 (2015)	14.4	14.6	14.8	15.0	15.2	SDG. 15.1.1
76	CO2 emissions (tonnes per capita)	DoE	MoEFCC	0.91 (2011)	-	-	-	-	1.38	SDG. 13.2.2
77	Coverage of protected areas in relation to marine areas	DoF	MoEFCC	2.05 (2016-17)	4.73	-	-	-	7.94	SDG. 14.5.1
78	Percentage of wetland and natural sanctuaries maintained	MoFL	MoFL	1.51 (2014-15)	1.70	1.85	2.0	2.10	2.20	SDG. 15.1.2
79	Percentage of forests that are protected	BFD	MoEFCC	3.06 (2020)	3.20	3.25	3.30	3.35	3.40	
80	Mean urban air pollution of particulate matter (a) PM10 in $\mu g/m^3$ (b) PM2.5 in $\mu g/m^3$	DoE	MoEFCC	(a)145 (2017) b) 85 (2017)	140 83	135 81	130 78	125 75	120 73	
81	No. of usable cyclone shelters	DDM	MoDMR	4014 (2019)	4,047	4,247	4,447	4,647	4,847	
82	Developing Guidelines for Risk Reduction as Mentioned in revised SoD	DDM/ MoDMR	MoDMR	04 (2020)	07	10	13	16	19	SDG 1.5
83	Number of housing with disaster resilient habitats and communities assets	DDM	MoDMR	70,000 (2020)	1,50,000	2,30,000	2,90,000	3,40,000	3,80,000	SDG 11.b
84	Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	BBS	MoDMR	Affected Persons: 12,881per 100,000 people (BDRS, BBS, 2015) Death person: 0.2045 (MoDMR, 2016)	6000	5000	4000	3000	2000	SDG. 13.1.1

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
	National Priority: Information and Communication Technology (ICT)									
	Outcome Statement: Increased access to digital communication through telephone and broadband services									
85	Proportion of individuals who own a mobile telephone, by sex	BTRC	BTRC, PTD	96.28 (2020)	100	105	110	115	120	SDG. 5.b.1
86	Proportion of population covered by a mobile network, by technology	BTCL	BTCL	2G: 99.6% 3G: 95.40% 4G: 82% (BTRC, June 2019)	100	100	100	100	100	SDG. 9.c.1
87	Fixed Internet broadband subscriptions per 100 inhabitants, by speed	BTRC	BTRC	4.80 (Dec, 2019)	6	8	10	12	15	SDG. 17.6.1
88	Internet users per 100 people population	BTRC	PTD	60.34 (Mar 2020)	70	75	80	85	90	SDG. 17.8.1
	National Priority: Urban Development (SDG-11)									
	Outcome Statement: Reduced urban poverty and improved living conditions through better city governance and service improvements									
89	Proportion of urban population living in slums, informal settlements or inadequate housing	PHC, BBS	MoLGRD&C	33%	31.4	29.8	28.2	26.6	25%	SDG. 11.1.1
90	Percentage of urban population having access to (a)public health service (b) safe drinking water (c) sanitation facilities	a) DGHS b) MICS, BBS c) MICS BBS	MoHFW	a) 87 b) 47.9 c) 55.9	89.6 82.4 84	92.2 86.8 88	94.8 91.2 92	97.4 95.6 96	a) 100 b)100 c) 100	SDG. 1.4.1
91	Percentage of urban solid waste regularly collected	LGD, MoLGRD&C	MoLGRD&C	63.2%	65.5	68	70.2	72.6	75	SDG. 11.6.1
92	Number of a) Upazilas, b) municipalities having an approved Upazila Master Plan	LGED, UDD	LGD, MoHPW	a) 14 b) 324 (2019)	a) 14 b) 330	a) 29 b) 350	a) 70 b) 384	a) 120 b) -	a) 250 b) -	
	National Priority: Governance (SDG-16)									
	Outcome Statement: Promoting inclusive, transparent, accountable and effective democratic governance system & ensuring justice for all									
93	Weighted average national case disposal rate	MoLJPA, Supreme Court Registry	MoLJPA, Supreme Court Registry	32.24 (2012)	35.8	39.3	42.8	46.5	50	

SL	Performance Indicators	Data Source (Institutions & Reports)	Lead Ministry/Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)	Remarks
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
94	Number of access and usage of legal aid services by the poor and disadvantaged group compared to total litigants	Law and Justice Division,	Law and Justice Division	22000	110000	120000	150000	175000	200000	
95	Percentage of public institutions using e- procurement	CPTU	IMED	0 % (2014)	16	41	65	89	100	SDG. 12.7.1
96	Number of queries attended to by the government institutions under right to information act	Information commission	Information Commission	12852 (2019)	8000	9000	10000	11000	12500	SDG 16.10.2
97	Number of cases settled per year under Alternative Dispute Resolution (ADR) compared to total cases	Law and Justice Division	Law and Justice Division	14,000 (2014)	17,000	19,000	21,000	23,000	25,000	
98	Proportion of children aged 1–14years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	BBS	MoWCA	88.8 (2019)	87.0	85.0	83.0	82.0	80.0	SDG. 16.2.1
99	Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation	BP	MoHA	Total-0.92 Male-1.14 Female-0.64 (BP 2015)	0.7	0.6	0.5	0.4	0.3	SDG. 16.2.2
100	Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18	BBS	MoWCA/PSD	Female: 3.45% (VAW Survey, 2015)	Female: 3.00%	Female: 2.50%	Female: 2.25%	Female: 2.00%	Female: 1.50%	SDG. 16.2.3
101	Unsentenced detainees as a proportion of overall prison population	MoHA	MoHA	77 (DoP, SSD, 2020, MoHA)	75	72	70	65	60	SDG. 16.3.2
102	Proportion of population satisfied with their last experience of public services	BBS	Cabinet Division, MoPA	39.69 (CPHS, 2018, BBS)	45	49	53	57	60	SDG. 16.6.2
	National Priority: International Cooperation and Partnership (SDG-17)									
	Outcome Statement: Strengthen international cooperation and partnership for sustainable development									
103	Foreign assistance as percentage of ADP and budget support	ERD, MoF	ERD, MoF	35.42 % (2019-20)	35.87	31.10	28.15	25.17	27.24	
104	Percentage of (a) concessional loan and (b) grants to total foreign assistance	ERD, MoF	ERD, MoF	(a) 55 % (b) 45 % (2019-20)	(a) 54.5 (b) 45.5	(a) 54 (b) 46	(a) 53 (b) 47	(a) 52.5 (b) 47.5	(a) 52 (b) 48	

Part 2

SECTOR DEVELOPMENT STRATEGIES

SECTOR 1:
GENERAL PUBLIC SERVICES
&
SECTOR 2:
PUBLIC ORDER AND SAFETY

CHAPTER 1

STRENGTHENING PUBLIC ADMINISTRATION, PUBLIC INSTITUTIONS AND GOVERNANCE

1.1 INTRODUCTION

The transformative aspiration articulated in PP2041 has become more challenging due to the economic realities associated with the Covid-19 global pandemic. Yet the objective to accelerate growth and maintain its momentum for the next two decades necessitates that the policymakers maintain macroeconomic stability, mobilize sufficient resources for high quality human capital and critical infrastructure and develop necessary manufacturing and service sectors that could cater to the world market. Alongside, as emphasized in PP2041, important gains will need to be made on the institutional and governance fronts. The government understands that the governance and the institutional structures of UMIC and HIC are vastly different from those found in low income and LMIC countries.

Historical and comparative development experiences suggest that long-term developmental transformation from low income and LMIC status to UMIC and HIC status has only been possible when the policymakers formulated and invested in effective institutions within the economic and political space that allowed markets to function efficiently and allowed the state to mobilize resources for delivering necessary public goods, while operating within a broad environment of political accountability and rule of law. In particular, the broad evidence emerging from the literature on institutional economics pinpoints that some aspects of economic and political institutions are extremely important for maintaining long-term growth, as they play a critical role in shaping the incentives of economic actors by rewarding greater efficiency, competitiveness, stability and innovation in the overall economy.

Consequently, the Government has recognized this instrumental relevance of effective institutions to attain long-run rapid economic transformation and has accordingly targeted key institutional and governance improvements under the Sixth and Seventh Plans so that the policymakers can mobilize the required investments in physical and human capital, foster innovation and technological advances, and promote the organization of production systems. The Seventh Plan, in particular, articulated a focused intervention to navigate contemporary challenges and identified key areas that will be targeted for key institutional reforms. This included reforms in: (a) the capacity of the public administration; (b) judiciary; (c) financial sector; and (d) local government. More specifically, the 7th Plan placed empowerment of citizens at the centre of its development strategy as reflected in the subtitle (tag line) of the document: 'Accelerating Growth, Empowering Citizens.' Seemingly, the 'theory of change' implied by the governance paradigm of the 7th Plan may be described along the following lines: improving and strengthening institutions would accelerate economic growth and poverty reduction which in turn would create assets and capabilities, thus empowering the poor, which would feed back to demand for better living standards and good governance.

The Eighth Plan will maintain this focused approach to improve institutional performance – which has also emerged as priority area within the political manifesto of the Government. In particular, the Government recognizes that while approaching the 8th Plan's governance priorities, it is important to keep in view that there is a large body of evidence to suggest that reform and change in these areas is a complex process involving deep structural and behavioural changes, and hence, are difficult to achieve without strong and consistent political support at all levels sustained over long periods of time. Finally, to address the deficiencies in other relevant areas relating to governance, the 8th Plan will also prioritize the strategies and policies that were identified in the 7th Plan and are still considered for attaining the developmental transformation that are envisioned in the Perspective Plan 2041.

1.2 GOVERNANACE PERFORMANCES DURING THE SEVENTH PLAN

1.2.1 Institutional Performance under the 6th and 7th Plans

The cross-country comparison of progress in institutional performance and governance is usually measured by numerous international composite indicators, but prominent among those are the "World Governance Indicators", which compare institutional performances across six key dimensions. These are: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. Moreover, in the standard governance literature, these indicators are frequently used to assess how institutional performance is changing over both time and space. Bangladesh's performance, evaluated through these indicators remains mixed over the last decade as moderate improvements in some dimensions have coexisted with continued weakness in others. In fact, if we examine the institutional performance as illustrated in Table 1.1, we can see Bangladesh relative position has only moderately improved in three indicators – namely, 'Control of Corruption', 'Rule of Law' and 'Political Stability and Absence of Violence/Terrorism' – while remaining less than par in other key areas such as 'Voice and Accountability', 'Government Effectiveness' and 'Regulatory Quality'.

Furthermore, even when we assess objective indicators that measures specific institutional performance associated with the fiscal capacity to mobilize recourses, the judicial capacity to maintain a tolerable backlog of cases and the central bank's regulatory capacity to contain nonperforming loans in both state-owned commercial banks and the overall banking sector, the trend between 2010 and 2019 appears less than encouraging. For instance, the total backlog of cases between 2010 and 2019 has been doubled and it is approximately 3.6 million (Table 1.2). This is higher than the target that was decided under the 7FYP to limit case backlog to 3.3 million in 2020. This is also indicative of limited change in the case disposal rate, which was a priority area of improvement in both the 6FYP and the 7FYP. Likewise, if we observe the trend in Tax-to-GDP ratio, both the 6FYP and 7FYP aimed to increase the Tax-to-GDP to more than 15% during their respective tenures. Yet, it actually decreased from 9.21% in FY2010 to 8.9% in FY2019, which underscores the urgent need to prioritize major fiscal reforms to enhance the Government's capacity to mobilize resources and meet its developmental needs.

Table 1.1: The Worldwide Governance Indicators (WGI): Bangladesh

Indicator Name Percentile Rank	2010 Rank	2018 Rank
Control of Corruption	14.76	16.83
Government Effectiveness	26.32	21.63
Political Stability and Absence of Violence/Terrorism	9.95	13.81
Regulatory Quality	22.01	19.23
Rule of Law	25.59	28.37
Voice and Accountability	36.97	27.59

Source: WGI, World Bank, 2019.

Table 1.2: Domestic Indicators of Institutional Performance

	2010	2019
1. Total Case Backlog (Million)	1.8	3.6
2. Tax to GDP Ratio (%)	9.21	8.9
3. Non-Performing Loan: All Banks	7.3	11.7
: SCB	14.1	31.6

Source: BBS, Bangladesh Bank, Supreme Court, 2020

Additionally, the challenges of governance in the financial sector have remained a major concern for the policymakers. Between FY2012 and FY2018, the Government had to invest approximately 129 trillion Taka to recapitalize State-Owned Banks, as Non-Performing Loans (NPL) witnessed a secular increase in both the State-Owned Commercial Banks and in the overall banking sector. In fact, the NPL targets for the entire banking sector were only met in FY2020 after the Bangladesh Bank accommodated a restructuring of more than 300 trillion Taka worth of credit by allowing the large borrowers to reschedule their loans. This, however, does not address the underlying challenges of governance in the banking sector. As a result, the Government has a strong political determination to reduce Non-Performing Loans in the banking sector under the 8FYP and initiate noticeable governance related reforms to improve management in the financial sector. Reform efforts will also be prioritized for the capital market, which has also experienced some turbulence during the 7FYP and there is a growing lack of confidence in the capital market. Policymakers recognize that an efficient capital market is an instrumental mechanism for mobilizing long-term investments for the private sector, which makes them committed towards strong institutional reforms in the financial sector to improve the state of economic governance under the 8FYP.

The general track record of Bangladesh in offering a sound economic environment – as measured by the Doing Business Indicators - has also been less than satisfactory. Bangladesh has generally received low position in the ease of doing business index. However, this issue received significant attention by the government in 2016, which motivated to form the Bangladesh Investment Development Authority (BIDA) under the Bangladesh Investment Development Authority (BIDA) Act 2016. The sole objective of this public body is to promote institutional and policy reforms across the board that can facilitate private investment and improve the ease of doing business. The 'Doing Business Indicators' constitute numerous essential dimensions of the regulatory environment as it applies to local firms. It offers quantitative means to assess regulation for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing

contracts and resolving insolvency. Thus, the 'Doing Business' framework offers a multi-dimensional assessment of the economic environment by assessing the quality of the institutional framework.

Furthermore, in 2019, Bangladesh gained an eight-notch jump in the global rankings due to the measures identified by BIDA as an obstacle for businesses (See: Table 1.3). This is a positive but moderate achievement, especially if we compare Bangladesh to the improvements that were experienced by China and India. Bangladesh, in particular, performs poorly in offering better legal arrangements for registering properties and enforcing contracts, which highlights weakness of the legal framework for the commercial space – and it remains an avenue where more concentrated efforts are necessary. The rankings, on the whole, highlight that the room for improvement is still large.

Table 1.3: Performance in Ease of Doing Business Index

	2017	2018	2019
1. Bangladesh	177	176	168
2. India	100	77	63
3. China	78	46	31
4. Vietnam	68	69	70

Source: World Bank, 2020

Collectively, the cross-country comparisons and trends in the domestic indicators of institutional performance underscore the need to address both the short and long-term challenges of governance across a large spectrum of issues. In addition, empirical literature on the determinants of long-run growth and economic prosperity has offered a robust body of evidence indicating that institutional reforms which improve macroeconomic and political stability, the mobilization of resources and investments in public good and human capital are the fundamental determinants of long-run development. Consequently, if Bangladesh aims to fulfil the targets which it has laid out in the Perspective Plan 2021-2041, then effective institutional reforms are mandatory under the 8FYP.

In terms of democratic governance, Bangladesh experienced a peaceful execution of the 11th Parliamentary Election in 2018 and the Election Commission is routinely performing both local and city elections in a timely fashion. The recent introduction of Electronic Voting Machines (EVM) in the Dhaka South City Corporation, Dhaka North City Corporation and Chattogram City Corporation elections has also improved transparency in the electoral process substantially as it has helped improving the management of the electoral process. Additionally, Bangladesh also witnessed a large improvement in the direct representation of women in the Parliament – as the 11th National Election witnessed twenty-two directly elected female members – the highest in the country's history. Besides, direct representation was a mere 2% in the 8th Parliament and 6% in both 9th and 10th Parliaments, but it is more than 7% in the 11th Parliament. This should ideally improve the state of voice of women in policy making. The National Parliament has also seen a decrease in the tendency to boycott the Parliament in both the 10th and 11th National Parliament as various Parliamentary Committees are routinely debating and scrutinizing the policy issues-improving the overall state of effectiveness of the National Parliament. The good performance of Bangladesh in ensuring better female participation in the political arena has received global recognition. For example, in the Global Gender Gap Report 2020 prepared by the World Economic Forum, Bangladesh ranked 7 out of 153 countries in political empowerment.

1.2.2 Specific Achievement under the Seventh Plan

Access to Justice: The Government of Bangladesh is committed to improve access to justice for the poor and marginalized people. Moreover, one of the key instruments through which access to justice is ensured is by offering legal aid; and to provide legal aid for those who are incapable of seeking justice due to financial insolvency, destitution, helplessness, etc. District Legal Aid Offices, Supreme Court Legal Aid Office, two Labour Court Legal Aid Cells and National Helpline Call Centre are established to ensure access to government legal aid services under the National Legal Aid Services Organization (NLASO). In FY2019, a total number of 100,806 beneficiaries have received government legal aid services through the NLASO. This is much higher than the target that was laid down in the 7FYP, which aimed to provide legal aid to at least 37,000 victims annually by 2020. In fact, between 2009 and 2019, nearly half a million people received legal aid service and it highlights the government's commitment to improve the state of access to justice in Bangladesh. More precisely, the total number of legal aid recipients was 82,000 and 100,806 in FY2017-18 and FY2018-19, respectively (NLASO Annual Report 2018-19). The opening up of a national hotline played a crucial role reaching the large numbers. The village courts are currently operational in 27 districts and their case disposal rate is high. The National Legal Aid Services Organisation (NLASO) is providing services in 64 districts through the District Legal Aid Offices along with a national hotline. The Government has also prioritized improving the capacity of judicial institutions to undertake Alternate Dispute Resolution (ADR) along with enhancing public awareness of such mechanism. The 7th Plan target was to settle at least 25000 disputes annually through ADR by 2020–a milestone that has been attained prior to 2020.

Access to Law: To ensure proper implementation, all law implementing agencies and people in general must have knowledge about concerned laws. To facilitate this, all updated laws are provided in the website (laws of Bangladesh) of the Legislative and Parliamentary Affairs Division. About 300 important laws have been translated from Bengali to English and vice versa and are available in the website

Capacity strengthening of the Judiciary: The capacity strengthening of judicial institutions has been an area of key concern for the Government as it recognizes the increasing need for well-trained judges and judicial officials for enhancing the performance of the judiciary. To this end, under the 7th Plan period, more than 700 judges were trained in foreign destinations: 253 judges were trained in Australia; 60 in Japan; and 250 in India. Furthermore, to ensure the judiciary benefits from effective planning, critical data was generated though a detailed audit of the national justice system in 2018.[1] The first of its kind audit constitutes a data-driven account of the country's entire criminal justice system ranging from crime and policing through court adjudication and finally to sentencing and prison custody. It spans the activities and operation, as well as resources and governance, of numerous institutions across several ministries. This is a critical accomplishment which will considerably enhance the Government's monitoring and evaluation capacity at the sectoral level. Lastly, the Government has also upgraded the physical infrastructure of judicial institutions by planning to add 42 new Magistrates Courts, of which 30 were completed as of 2019. Moreover, 27 Judge Courts were vertically expanded, 23 new land sub-Registry office buildings have already been completed. Construction of Annex Build-2 of Bangladesh Supreme Court also commenced in 2019, which will add 32 new court rooms to existing facilities.

[1] See: https://bangladesh.justiceaudit.org/

Annual Performance Agreement (APA): Under the 7th Plan period, the Government has remained committed to the regular use of an effective "Governance Performance Management System (GPMS)" by formulating and annually using the "Annual Performance Agreement- (APA)", which helps ensure a systematic performance review of all ministries/divisions. The government introduced APA in FY2015 to enhance efficiency and accountability in government organizations. The issue of evaluating the performance of employees and public organizations was also emphasized in the Civil Service Act, 2018. During the 7FYP period APA has been expanded up to Upazila level and covered more than 17000 government offices. APAMS software has been upgraded to facilitate APA preparation, monitoring and evaluation. In FY2019 the average score of the ministries/divisions in APA implementation was 86.5%. Based on the performance in APA implementation, reward system has been introduced at all level of the public organizations. This has created a healthy competition among the public organizations regarding performance. During this period, APA has been able to increase the transparency and accountability of public organizations. It also supported in improving financial management of the public organizations. Moreover, the implementation of the vision of the government including SDGs has been accelerated through APA. This system has been flourished and started to create impact in case of organizational performance management under the effective coordination and supervision of the Cabinet Division. Moreover, the Cabinet Secretary is steering the National Committee on Government Performance (NCGP) and annually signs Ministry/Division-specific APA and monitors the completion rate of the agreed upon annual work plan. On the whole, under 7th Plan, APA has been sufficiently operationalized to meet its desired objective.

Reducing Violence Against Women: The Multi-Sectoral Program on Violence Against Women (MSP-VAW) under the Ministry of Women and Children Affairs (MoWCA) runs eight One-stop Crisis Centres (OCCs) at the division levels and 60 One-stop Crisis Cells (OCCs) to provide information and referral services to the victims of VAW. This initiative is carried out in order to provide all required services to the women and child victim of violence at one place. The data show that since its formation, 16,804 victims have been treated at the OCCs, of which only 3,747 victims took legal action against the responsible offenders, which implies that 78% opted not to take legal action. Importantly, it seems the OCCs function mainly as medical centres since legal and counselling services are mostly absent.

Improved Village Court Performance: The village courts in the project areas received 176,122 cases, of which 144,125 cases were resolved from July 2017 to February 2020. This informal institution is proving to be quite effective in delivering justice even though there is still a long way to go. A survey by BRAC Institute of Governance and Development in 2019 found that beneficiaries who seek legal services, are not fully aware of the jurisdiction of the village court. The survey also found that a large number of disputes in the rural community are related to land but many of these cannot be resolved in village courts because land values are typically higher than the limit of Tk. 75,000, above which they have no authority to arbitration. Enforcement is generally weak.

Improved Case Coordination Committee Performance: The introduction of Case Coordination Committees (CCC) at district level has succeeded in bringing together key justice system actors on a regular basis to address local problems related to prison overcrowding and case congestion. Along with Police and Magistrates, the CCCs play an important role in joining up the justice system to ensure each service provider talks to the others and avoid operating in siloes.

Improved Performance of the Public Accounts Committee in the Parliament: There have been improvements in the functioning of Public Accounts Committee. Notably, the Public Accounts Committee held the highest number of times to discuss the matters of concern.

Increased Use of Medium-Term Budgetary Framework (MTBF): The Government rolled out the budget based on the Medium-Term Budgetary Framework (MTBF) to strengthen institutionalization of a strategic and policy-based approach to budgeting. The MTBF contributed to the further development of Forward Baseline Estimates (FBEs) of ministry-wise expenditure. This enabled the government to keep fiscal deficit within 5 percent of GDP.

Improved Transparency in Fiscal Data: During the 7th Plan, the Integrated Budget and Accounting System (IBAS++) was installed to enhance the accuracy of financial data. To ensure transparency of the government's fiscal position, public debt statistics were published on a regular basis. The Ministry of Finance introduced the Integrated Financial Management Information System (IFMIS) to produce accurate estimates of its financial statement in due time. The Office of the Comptroller and Auditor General of Bangladesh (OCAG) and the World Bank were involved in the implementation of the IFMIS. In keeping with 'Digital Bangladesh' initiative, the Government also digitalized aid and debt management to ensure greater transparency and mutual accountability. This digital system is embedded in Debt Management and Financial Analysis System (DMFAS), Assistance Information Management System (AIMS) and Foreign Assistance Management System (FAMS) platforms maintained by the Economic Relations Division.

Implementation of the Public Investment Management (PIM) Agenda: Under the 7FYP period, the Planning Commission developed and validated a set of new Public Investment Management (PIM) tools. These PIM tools include: i) Ministry Assessment Format (MAF), ii) Sector Appraisal Format (SAF), iii) Sector Strategy Paper (SSP) and iv) Multi-Year Public Investment Programme (MYPIP). The MAF and SAF contribute to the PIM reform agenda by ensuring that the Development Project Proposal (DPP) is comprehensively assessed by relevant Ministries/Divisions and appraised by Sector Divisions of the Planning Commission before any project is approved. The SSP, which provided a comprehensive overview of sector goals, performance, opportunities and challenges, was developed and validated for two sectors, namely: (i) Local Government and Rural Development Sector, and (ii) Power and Energy Sector. The PC also developed and validated a Multi-Year Public Investment Programme (MYPIP) in the two pilot sectors. The MYPIP is aimed to improve allocation of development budget among sectors and projects. In addition, the Government established the PIM Reform Wing (PIMRW) within the Programming Division in 2018 to coordinate the PIM reform. Furthermore, the Programming Division has completed the development of the new database management system for ADP in 2019 and will make the system fully operational from 2020 onward.

Progress with E-Governance: E-governance allows citizens to communicate effectively with the government and allows them to experience public services digitally. It also facilitates a citizen's capacity to participate in the government's policymaking process. Furthermore, the Government has already laid down comprehensive e-Administration goals in both the 6FYP and 7FYP. And acting upon those plans, the Government has made all necessary information of the Ministries available through various websites which are completely accessible to the public. In addition, the Government has trained more than 50,000 public officials to maintain these websites and update data and information regularly. The Government has also introduced a national portal containing information from all the Ministries, while e-Service centres were

introduced at the District level enabling the Districts to share information online. Moreover, a National Data Centre facilitating the dissemination of National Identification (NID) Cards and voter lists has been established and made operational. The Government has also established the National ICT Infra-Network for Bangladesh Government Phase II, and has implemented 800 video conferencing systems at different Ministries, Departments and Upazila offices. Due to its observed success, the project has now received an extension for its third phase, where it will be more citizens centric and deliver higher bandwidth. Additionally, successful implementation of the project will ensure 10Gbps capacity network at the Upazila levels and 100 Gbps capacity networks at the District levels. In key institutions such as the former Board of Investment (BoI) now renamed as the Bangladesh Investment Development Authority (BIDA), the Government has introduced the system of online registration and work permits for foreign nationals and investors, while the National Board of Revenue (NBR) has introduced a system allowing the filing of tax returns online, using an online tax calculator. The Government has also launched "Shebakunjo" – a single access point that will provide about 400 services from 36 directories

The digitization of government services expanded and improved significantly. The government's e-governance initiative comprises 5 components i.e., Service Process Simplification (SPS), 'less paper office,' government services portal, land information services, and government forms portal. The SPS aims to simplify processes involved in public service delivery and reduce the time required to deliver them. The government has introduced e-filing mechanism at public offices to expedite the digitization process. A total of 424 public services were included in this programme till early 2020. 'Seba Kunjo', a government services portal initiated in 2014, to provide access to the major services has expanded significantly to include more services during the 7th Plan period. The government is committed to strengthening e-governance further by including more services under SPS.

E-Governance in Land Administration: The e-mutation that started in July 2019 all over the country except three districts of hill tracts is a major step in restructuring the land sector; this will ensure more accountability and transparency on the part of administration. Since 2019, 485 Upazila land offices and circle offices and 3617 union land offices have been providing this service. Moreover, a total of 995,815 mutation requests were submitted online of which 655,220 cases were resolved. The Government is also presently undertaking Deed Registration Digitalization in 3 Districts and 5 sub-registry offices – which is expected to reduce the mismanagement of documents and disputes over the ownership of land.

Anti-Corruption Commission (ACC): During the 7FYP plan, the ACC has drawn up its own Five-Year Strategic Action Plan in 2016. Furthermore, in consultation with all the stakeholders including the intellectuals, politicians, bureaucrats, NGOs, businessmen and media representatives, the Commission formulated a Specific, Measurable, Achievable, Relevant and Time-bound (SMART) Strategy (2017-2021) that will help the Commission to reduce corruption in a more systematic manner. Additionally, to improve the quality of the enquiry, investigation and prevention related activities, capacity building measures were taken. In particular, the ACC officials were offered training both locally and internationally on forensic investigation, case management and analysis, cybercrimes, money laundering, intelligence activities, ICT, etc. The Commission conducted 5,183 enquiries cumulatively between 2016 and 2019 and filed 1,211 First Information Reports (FIR). In addition, in 2019 ACC received 1,47,524 phone calls through it's hotline 106, of which 4,760 were scheduled allegations of ACC. Based on those allegations, 1,001 preventive drives were made across the country. Between 2014 and 2020, ACC conducted 144 public hearing all over the country. From those public hearing, ACC received 4,464 complaints, where 3,080 were resolved. The

rate of success in public hearing complaint management was nearly 69%. Other complaints remained unresolved due to false information, out of ACC's schedule and under trail at court. The ACC officials sometimes assess the causes of corruption, mismanagement and harassment in public service delivery and recommend necessary preventive measures based on the discussion with different stakeholders, reviewing intelligence data, available documents, media reports, etc.

Information Commission of Bangladesh: The Government of Bangladesh has shown a steadfast commitment to the ideals of "right to information" and has accordingly invested in improving the capacity of the Information Commission under the 7FYP. The Information Commission has seen a noticeable increase in the number of requests and complaints it formally receives for public information between 2009 and 2018, which highlights the steady increase in the confidence of the people in the Information Commission. In fact, between 2009 and 2014, the number of complaints that were filed at the Commission was 807. However, between 2015 and 2018, the total number of complaints has increased to 2,137. The Commission has also encouraged different public agencies to publish Annual Reports and provide all essential information electronically through their respective websites. Additionally, the Information Commission also started online tracking of RTI application on a test basis during the 7th plan period. Another major improvement was that the commission brought the private banks under the definition of "authority" against which the public can file for RTI.

E-Procurement: The Government has introduced online procurement systems to reduce corruption and increase competitiveness in government contracts, as it will enhance both more participation and transparency in the tender process guiding public procurement. The 7th plan aimed to expand e-GP during its tenure and by 2020 planned to bring all the public institutions under e-procurement. Accordingly, government took measures to scale up the adoption of e-GP by procuring agencies and procuring entities. The CPTU data suggest that e-GP adoption increased at an exponential rate during the last few years. For instance, 458 organizations adopted e-GP till 2018. Currently, 55 percent of all procurement is conducted under the e-GP. It is also essential to mention that an independent study based on 7100 procurement packages of LGED, BWDB and the Roads and Highways Department showed that items procured under the e-GP system reduced the price-to-cost ratio by 12 percent compared to the traditional paper-based procurement system.

Table 1.4: Trend of e-GP in Ministries, Divisions and Organizations

Fiscal Years	Number of Ministries	Growth Rate	Number of Divisions	Growth Rate	Number of Organizations	Growth Rate
2012	5		4		4	
2013	5	0.00	4	0.00	5	25.00
2014	5	0.00	5	25.00	8	60.00
2015	11	120.00	9	80.00	32	300.00
2016	18	63.64	12	33.33	72	125.00
2017	33	83.33	18	50.00	300	316.67
2018	37	12.12	18	0.00	458	52.67

Source: CPTU 2019

Expanding UDCs: The introduction and expansion of union digital centres (UDCs) was a major step towards extending the reach of e-governance in local government institutions (LGIs). UDCs reduced the time, cost and number of visits previously made by the service recipients. In particular, an a2i estimate (2017) shows that the delivery time for local service users decreased by 85%, cost by 63% and number of visits by 40% on average. The same report indicates that nearly $2.0 billion has been saved owing to the simplification and digitization of the public services.

Grievance Redressal System (GRS): To ensure accountability of the public administration, to improve service and to establish good governance, the government introduced Grievance Redressal System (GRS). The Government has taken numerous measures to mainstream the application of GRS in most government bodies, which allows citizens and officials greater access to voice their concern and improve the state of transparency in public offices. These include the simplification of grievance submission process and appointment/designate the GRS and appellate officers in every public office.

Improving Governance in Urban Local Government: The Government is presently implementing numerous projects to improve the state of governance in urban local government. Prominent among these is the City Governance Project under the LGD, which aims to improve public services in six major city corporations in – Dhaka North, Dhaka South, Chattogram, Rangpur, Comilla and Narayanganj. The Government has also undertaken a project for Capacity Development for City Corporation (C4C), which has the following objectives: (i) a medium to long-term strategy for improvements in governance is developed; (ii) a Plan-Do-Check-Action cycle of administrative improvement activities in alignment with the strategy is established; (iii) an appropriate tax assessment and collection procedures are established, and tax collection is conducted in a fair manner; (iv) a procedure of recurrent expenditure planning according to revenue is established. Furthermore, for improving urban management and facilitating governance improvements in Paurashavas, the Government has articulated the National Strategy for Paurashava Governance Improvement (2016-2025). The LGD has also adopted two essential strategy documents–Mid and Long-Term Strategy for Upazila Parishad Governance Improvement and Strategy for Governance Improvement of City Corporations (SGICC), 2020-2030, which will offer strategies and policy alterations that can help improve the governance performance in both rural and urban local government bodies.

Improving the Effectiveness of Local Government and Rural Development: Under the 7FYP, the Government prepared the "Local Government and Rural Development Sector Strategy Paper (LGRD SSP)", which is a planning tool intended to help translate national goals and priorities outlined in the 7FYP into sector strategies and objectives. This planning tool is designed to complement and be consistent with both the 7FYP and other strategic and policy documents. In particular, LGRD SSP is designed to offer benefits in six main areas: (i) Project Identification– it offers a clear guidance to Ministries, Divisions, and Agencies (MDAs) engaged in the identification of projects to ensure that projects are aligned with sector goals and outcomes from the identification stage; (ii) Project Formulation– it provides a clear guidance to MDAs engaged in the formulation of projects to ensure that projects deliver sector goals and outcomes required to achieve 7FYP objectives; (iii) Project Appraisal–it provides a means by which both Ministries/Divisions and Planning Commission (PC) Sector Divisions can assess project proposals against their 7FYP relevance; and (iv) FYP Monitoring– by elaborating a Sector Results Framework (SRF) that offers the General Economics Division (GED) with more detailed information on sector-level performance to complement the higher-level DRF; (v) FYP Financing–it offers information on the needs for resources at the sector-levels that is valuable to GED, Programming Division, and Finance Division; and (vi) Aid

Coordination – it provides a clear overview of the current priorities within the Local Government and Rural Development (LGRD) sector to the Development Partners (DPs)–under the tutelage of the Economic Relations Division (ERD).

Department of Immigration and Passports (DIP): Under the 7FYP, the DIP has successfully offered Machine Readable Passports (MRP) to all new applicants and is following the guideline of the International Civil Aviation Organization (ICAO) to issue and extend the validity of Machine-Readable Visa (MRV). DIP has also started issuing e-Passports to its citizens, making Bangladesh the first South Asian country and 119th country in the world to issue such advanced travel documents. The DIP has also taken measures to enhance the acceptability of Bangladesh passports and visas around the world and have simplified the process of obtaining Bangladesh visas. Additionally, measures have been taken to simplify the process associated with the issuance of passports to Bangladeshi citizens, which will help accelerate the export of labour force to the overseas markets. This is expected to have a positive impact for the inflow of remittances and reductions in poverty.

Results-Based Monitoring and Evaluation: The Government of Bangladesh has remained committed to strengthen its Monitoring and Evaluation (M&E) as advocated by in the both Sixth and Seventh Plans. Mid-Term Reviews of all the plan documents are commissioned regularly to understand the effectiveness of the macro and sectoral policies that the Government has adopted. GED is vibrant in periodic result-based M&E exercise at the macroeconomic level. It has performed end evaluation of 6FYP and midterm implementation review of 7FYP during the 7th plan period. The Government has also widened its exercise of generating data by aiding the capacity of the Bangladesh Bureau of Statistics (BBS), which helps document a large array of socio-economic indicators and allows the examination of various policies in different sectors. Implementation, Monitoring and Evaluation Division (IMED) of the Ministry of Planning also continues to focus on physical and financial aspects of project implementation.

1.3 KEY CHALLENGES IN INSTITUIONS

Law making and Rule of law: A consolidated legal framework is one of the most important conditions of sustainable development. Legislative and Parliamentary Affairs division of Ministry of Law, Justice and Parliamentary Affairs is extending its intense assistance to the government to reach the goal. Still there are some challenges for achieving the desired goal. There is shortage of legislative officials to deliver the demanded quantity of drafting. For ensuring proper and perfect legislative draft, adequate and expert legislative officials are required. Therefore, expertise should be increased through providing national and international training.

Most of the people of Bangladesh are not aware about the legislation and constitutional provision. For ensuring legal and constitutional rights of the people, awareness building is required. Before 1987, all laws were enacted in English and therefore all people of Bangladesh could not understand the meaning of law. For proper enforcement of law, people should be aware about the law. Therefore, all English laws should be translated in Bengali. In Bangladesh, there is also shortage of translation officer which should be increased.

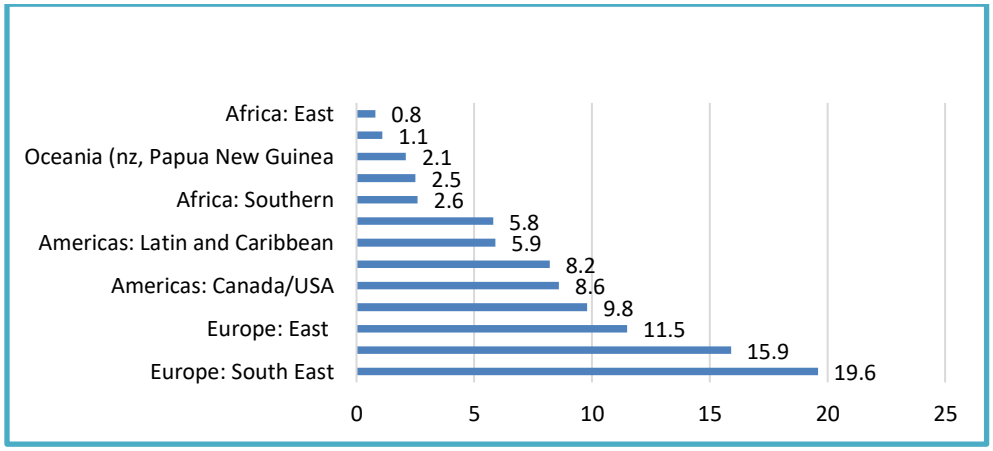
Justice and the Rule of Law: The Constitution of the People's Republic of Bangladesh envisages a society in which the rule of law, fundamental human rights, freedom, equality and justice will be secured for all its citizens. Moreover, all democratic polities recognize that the rule of law and an effective Judiciary create the fundamental foundations for human well-being – along with offering markets a predictable and efficient environment for performing productively. The Government of Bangladesh recognizes this and is committed to improve both the state of the Judiciary by improving both the substantive nature of the law and the neutral treatment of all its citizens, enhancing one's access to it and ensuring timely disposals of judicial cases. The Government of Bangladesh also takes Goal 16 of the Sustainable Development Goals (SDG) very seriously, which makes it a mandate for all policymakers to improve the access to justice for all citizens and create effective and inclusive accountable institutions at all levels. However, attaining timely disposals of cases has become a key concern within the Judiciary. In 2010, the total back log of cases in both upper and lower Judiciary was approximately 1.8 million, but it increased to approximately 3 million in 2014 and 3.3 to 3.8 million cases by 2020. This undermines the timely disposal of both civil and criminal litigations. Additionally, current debates on developing an effective, accountable and an inclusive justice sector have underscored a large array of factors responsible for its under-performance – i.e. scarcity of necessary judicial staffs (as reflected in Table: 1.5 and Figure1.1) to rules guiding recruitment and incentives for better performance to limited access to justice for the poor and marginalized communities. More specifically, in terms of specific cross-country comparison on judges for every 1 million populations, Bangladesh has 11, India has 19, Australia has 41, England has 51, Canada has 75 and the United States has 107. This underscores the magnitude of human capital scarcity within the justice sector of Bangladesh. It is to be noted that appointment of the Ombudsman has not yet taken place, even though it was a stated objective of the 7th Plan. The objective of preparing and approving standardized criteria for the recruitment of Supreme Court judges was also not achieved.

Table 1.5: Case Load against each Judge by types of Court in 2018

Type of Court	No. of Cases
1. Appellate Division	3143
2. High Court	5500
3. Lower Courts	1700

Source: Supreme Court of Bangladesh, 2019

Figure 1.1: Professional Judges per 100000 Population



Source: Harrendorf, et al (2010); Supreme Court of Bangladesh (2019)

Economic Governance: Strong focus on economic governance is fundamental for maintaining macroeconomic stability and attaining stable economic growth. Bangladesh has a traditionally been a prudent and effective manager of macroeconomic stability – and the Government has demonstrated effective management skills in maintaining inflation, import coverage of foreign reserve and international debt obligation. Moreover, maintaining sound macroeconomic stability is critical as it helps countries avoid what is popularly known as the "middle income trap" previously experienced by countries like Argentina and other Latin American countries. Government needs to seriously address the existing challenges related with governance in the banking sector. To protect the interest of depositors and to ensure safety of the banking sector Bangladesh Bank (BB) instructed all commercial banks to have strong and healthy corporate governance so that any fraudulent activities can strictly be monitored. Besides, BB has introduced substantial changes in bank supervision techniques and approaches in recent years. In light of global experiences, BB is emphasizing strengthening capital adequacy structure of the banks, re-fixation of reserve structure, strengthening risk management system and information technology in banks are being upgraded to enable rapid online accessing of data from banks.

On the other hand, there is an urgent need for measures that reduce NPLs in the banking sector, especially in the State-Owned Commercial Banks. The NPLs as a percent of total loan were stable (9 per cent) from 2015 to June, 2020 except 2018. NPLs (% of total loan) of SCBs after reaching peak at 30 have been decreasing since 2018. However, issuance of rules, such as increasing the number of family members in a bank's board of directors, and significant recent relaxation of provisions for rescheduling of defaulting borrowers have weakened the regulatory environment.

Moreover, Bangladesh maintains one of the lowest Tax-GDP ratios in the world, which underscores the need to improve its tax framework to mitigate both tax avoidance and tax evasion by the economic agents. The NBR took few measures to broaden the revenue base and enhance revenue collection. As an incentive, the government kept income tax rate and company tax rate unchanged. However, while tax revenues increased throughout the Plan period, it had little impact on a stagnant Tax-GDP ratio. As a result, the Plan targets on the Tax-GDP ratio were unmet, and due to the present Covid-19 pandemic – it is unlikely that the 7th Plan's tax-GDP ratio will increase in FY20.

Table 1.6: Trend in Non-Performing Loans as a Percent of Total Loans during 2011-2020

Bank type	Non-performing loan as % of total loan amount									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SCBs	11	24	20	22	22	25	27	30	24	23
DFIs	25	27	27	33	23	26	23	19	15	16
PCBs	3	5	5	5	5	5	5	6	6	6
FCBs	3	4	6	7	8	10	7	6	6	5
Total	6	10	9	10	9	9	9	10	9	9

Source: Banking Regulation and Policy Department (BRPD), Bangladesh Bank

State of Decentralization: Despite being a country of about170 million people, Bangladesh administration and economic management remains heavily centralized. The national government undertakes more than 90% of all public expenditures and mobilizes 98% of all resources, which is indicative of extreme fiscal centralization. Additionally, the initiatives of the local governments are excessively dependent on support from the LGD. Having lack of strong initiative as well as capacity of local resource mobilization, LGIs are

unable to deliver required services to the citizens. Decentralization issues are discussed in detail in Chapter 7, Part 2 of the Plan Document.

1.4 8FYP STRATEGY FOR IMPROVEMENT IN GOVERNANCE AND INSTITUTIONS

1.4.1 Key Area 1: Public Sector Capacity: Improving Administrative Capacity

There is a unanimous agreement in the development literature that long-run economic progress is only possible when nations are able to create and sustain effective states that can mobilize resources to invest in physical and human capital, enforce contracts and ensure public order. The Government is committed to democratic governance, which has motivated the public administration to harness more transparency, participation and accountability within its operations. Consequently, improving the Government's administrative capacity is fundamental for enhancing its effectiveness. The following measures will be prioritized for implementation under the 8FYP:

- **Participation, Accountability and Transparency in Decision-making:** The Government will ensure greater participation throughout the administrative process to ensure that its policies are formulated and implemented after completing a consultative process with all the stakeholders to enable better outcomes. This will also ensure better transparency and accountability within the administrative process.
- **Establishing a Shared Vision for the Public Administration:** The government will ensure that Vision 2041 and the associated PP2041 must be embraced by different organs of the state and government employees must understand and recognize their exact role in ensuring this vision is pursued with upmost rigour and diligence. This necessitates that each organ of the state operates under a clear framework with well specified organizational goals and targets. Moreover, government officials will be motivated to take ownership of this shared vision by developing sense of membership of the organization
- **Offering Adequate Training:** To develop an effective public administration, the policymakers will ensure that poorly qualified or insufficiently experienced personnel are not promoted within the Administration. Moreover, to mitigate this problem, the Government is committed to offer the civil servants specialised training to general educational and management skills. More specifically, the Government will ensure that: (i) the right set of training that addresses the deficit of skills in the public sector is provided to the employees; and (ii) the right candidates are chosen for the training. The Government will further ensure that every official should get a minimum number of hours/days of the right set of training, which will be included in the Annual Performance Agreement of the Government Offices.
- **Increase the Effectiveness of the Public Service Commission (PSC):** The Government will continue promoting the merit-based competent bureaucratic apparatus to effectively function as a modern state where the government employees are not only capable enough to perform their responsibilities efficiently, but can also improve the system of governance by becoming agents of positive change through undertaking innovation and reforms. It will also undertake measures to offer itself more financial autonomy for the PSC, so that it can undertake initiatives on its own to strengthen its operations and efficiency.

Annual Performance Agreement (APA): The Government has remained committed to the implementation of the APA under the 7FYP and it has taken a wide range of measures to make the APA an effective institutional arrangement. The key objective here is to enhance the state of accountability in line Ministries and make them more accountable to the Cabinet. In particular, the APA allows a systematic process for managing and monitoring the activities and work environments of public sector organizations. Consequently, under the 8FYP, the Government will remain committed to strengthening this appraisal system further and improve its methodology. No punitive measure or reward was built into the original design and the system only functioned as a mechanism for naming and shaming. However, under the 8FYP, it will be under consideration to see if some degree of tangible incentives is attached to the assessments of the APA, so that the line Ministries are further incentivized to deliver the targets that are agreed upon. Online APA management system will be further focused and improved during the 8th plan period. Cabinet Division is planning to implement five major activities to fulfil the desired commitment through strengthening the implementation of APA. These are i) formulation of a policy/strategy on government performance management including incentive mechanisms, ii) extension of APA to all public sector organizations, iii) linking employee performance with APA to synchronize organizational vision and objective with employee work plan, iv) updating online Annual Performance Agreement Management System (APAMS) for the improvement of preparation, monitoring, reporting and evaluation of the APA of public sector organizations and v) enhancement of the capacity of the implementing agencies.

Grievance Redressal System (GRS): Under the 8FYP, the Government will improve the functioning of the central Grievance Redressal System (GRS). The system has, until now, allowed the citizens to benefit from the availability of an institutional scope to systematically express their concerns or grievances with the public bodies, so that genuine concerns about them are addressed through a non-threatening, supporting mechanism. Thus, further mainstreaming of such institutional scopes for registering public grievance will allow the public bodies to serve the people better.

1.4.2 Key Area 2a: Justice and the Rule of Law

There is an increasing recognition within the Government that effectiveness of the formal judicial institution, semi-formal judicial institution and access to justice is crucial for improving the state of rule of law in Bangladesh. Even under the SDGs, formulated by the United Nations for all countries, an agenda to achieve "access to justice for all" has seen a prominent presence. It is also widely believed among social scientists that long-term development prospect of nations critically depends on the rule of law and their capacity to protect property rights and individual rights within their polities. This, nonetheless, necessitates that the policymakers invest resources to make judicial services accessible, affordable and acceptable. Thus, to improve the state of the rule of law in Bangladesh, the following activities are prioritized under the 8FYP:

Formal Judicial Institutions

1. Bangladesh presently has one of the lowest judge-to-people ratios in the world, which has contributed to the huge backlog of cases and the low rates of their disposal. In fact, latest estimates indicate that Bangladesh has approximately 1.1 judges for every 100,000 people, which is far below the South-East and South Asian average of between 2 and 2.5 judges per 100,000 people. Consequently, the Government under the 8FYP, will continue expediting the recruitment to the Judiciary to increase the judge-to-people ratio.

2. Existing empirical examinations have revealed that a handful of administrative Districts work as "pipeline" through which case backlogs cumulatively increases over time. Additional measures will be undertaken for such "pipe-line" districts to ensure that Districts Courts in such administrative Districts have the necessary resources to dispose cases efficiently in a time-bound manner.

3. Strategic Plan of the Supreme Court of Bangladesh 2017-2022 was adopted under the 7FYP period – and it identifies in details specific goals, strategies and activities that need to be pursued and undertaken in order to strengthen the effectiveness of the formal judiciary. Against that context, the Government under the 8FYP will remain committed to all the goals, strategies and activities that were formulated by the Supreme Court of Bangladesh, which remain incomplete or unrealized.

4. Reducing pressure on the district level courts and institutions by filtering out simple, minor or vexatious cases, while better equipping the actors in the judicial process to manage the serious and complex ones in need of legal representation and adjudication.

5. Increasing the capacity of local justice services to resolve disputes at low cost, fairly and quickly – so producing better outcomes for people.

6. In relation to the excessive backlog of cases on court records, the Government will take a two-pronged approach based upon the findings of the Justice Audit. It will review all pending cases, and institute rigorous and consistent filtering of new cases. Continuing the on-going work of the Supreme Court Backlog of Pending Cases Monitoring Committees, cases pending for more than 5 years and 10 years will be reviewed with the aim of closing or dismissing them and thus pruning the cases which are pending to those which are still 'live'. It will also explore supplementary screening activities to assess whether other pending cases are indeed pending or may have been unofficially settled along the way, with a view to closing these.

7. The Case Coordination Committees (CCC) will play a pivotal role in filtering cases to the more appropriate venue, as well as clearing the backlog of cases. During Eighth Plan an Inter-Ministerial coordination mechanism will be established to complete the policy-evidence feedback loop from district (CCCs) to national level.

8. The Government will invest in better understanding the barriers to justice for women and children. The growth of pending cases in the Nari O Shishu courts will be reduced rapidly. A root and branch study of the workings of the Nari O Shishu courts will be conducted so that services can be adjusted accordingly.

Semi-Formal and Informal Justice Institutions

Nearly 70-80% people in developing countries use semi-formal or informal judicial institutions to find redressal for civil disputes or quasi-criminal litigations[2]. Thus, developing an effective semi-formal or informal justice sector institution is fundamental for improving the state of rule of law in a country. Consequently, to improve the effectiveness of the informal justice sector, the following activities will be undertaken under the 8FYP:

[2] See: UNDP, (2006). *Doing Justice: How informal justice systems can contribute* Oslo Governance Centre

1. The Government will increase the capacities of the Union Parishads (UP) that operate as a key institutional arrangement guiding arbitration among people within their communities.
2. The Government will scale up village courts and ensure their 100% coverage of all Unions under the 8FYP. This will also require greater mobilization of resources in order to enhance their capacities.
3. The Government will design the village courts further so that there is limited duplication of judicial services between the village court and union parishads.
4. The Government will encourage the local agencies to increase the awareness amongst citizens in rural communities for them to use the village court mechanism to resolve disputes without resorting to formal judicial institutions, so that the problem of case backlogs in the formal Judiciary is reduced over time.

Access to Justice

1. To improve the access to justice, the Government will offer legal aid to approximately 200,000 victims annually by 2025.
2. The Government will invest in the National Legal Aid Services Organization's (NLASO) capacity so that it can effectively reach the poor and marginalized communities, and improve their access to legal redressal. The NLASO was established in 2000, and started to operate in fully since 2009 in all 64 districts of Bangladesh aiming to provide legal assistance to the poor and marginalized groups. At present, sixty-four District Legal Aid Offices, Supreme Court Legal Aid Office, two Labour Court Legal Aid Cells and the National Helpline Call Centre are working to ensure government legal aid services under NLASO. However, capacity constraint still remains a major problem in the NLASOs. Even though the plan committed to recruit legal aid officers in all 64 districts, a 2017 report states that 41 out of 64 districts do not have legal aid officers.
3. The NLASO will also formulate greater partnerships with the NGOs and other non-state actors to facilitate the access to justice. This will help greater synchronization of efforts and will assist an efficient delivery of quality legal aid.
4. The NLASO will commission diagnostic assessments so that better instruments are designed to deliver legal aid. It will also assess and document the proportion of the vulnerable population who qualify for legal aid, and their key profiles in order to understand the combination of factors that shape who has access to justice and when.
5. The Government will institutionalize Para-legalism as an instrument to complement the objectives of the NLASO. The use of paralegals has mitigated problem of case-backlogs and under-trial prisoners, and is associated with numerous positive outcomes. In effect, paralegals are not only addressing the problem of 'asymmetric information' that undermines the scope of the poor or women from availing necessary legal redressal, but they also facilitate jail visits by the District Judges and Deputy Commissioners (DC)/District Magistrates (DM)–as they help them to observe and recognize the real situation of the prisons. Paralegals are also encouraging the Police to submit reports within time, especially for petty crimes, as they reduce the amount of time prisoners have to stay in prison awaiting those Police reports. As a result, courts are becoming more 'proactive' in administering such cases.

1.4.3 Key Area 2b: Law Making and the Rule of Law

The government of Bangladesh is not only engaged in making proper legislation, but is desired in making the process fruitful and accommodative. For that purpose the following activities will be undertaken during the 8FYP to improve the existing law making process: (i) local and overseas training of legislative officials and various diploma and higher studies courses relating to legislative drafting for preparing skilled manpower in conformity with international standard, (ii) set up of legislative research cell and legislative editing unit, (iii) translation of all act from English to Bengali and vice versa on the basis of priority and importance, (iv) set up of legislative library with electronic cataloguing system, an archive and record room for conservation and preservation of historical and important documents in the field of law, (v) set up of law public awareness cell and resource documentation centre, and (vi) codification and update of subordinate legislation.

Advanced Steps to Keep Forward Judicial Sector under the 8th Plan

E-Judiciary: The Government of Bangladesh recognizes an imminent need for digitization of judiciary. This digitization will cover all the necessary equipment for the judges and court staff, hardware and connectivity support and relevant software support. So, three folds mixing and collaboration is needed among Supreme Court as of domain institution. Law and Justice Division has planned to undertake a development project valuing Tk. 2690 crore to develop ICT infrastructure, supply hardware and install connectivity with the help of Bangladesh Computer Council. In every district there will be a Programmer and some Assistant Programmers, Maintenance Engineer and other supporting staffs to look after the digital activities of the Judiciary at field level.

Establishment of Independent Prosecution Services: Government plans to institute a permanent attorney service to provide adequate, prompt and expert service. In principle, it is decided that with a guided and due process Bangladesh Judicial Service Commission will recommend appointment of the Addl. AG, DAGs and AAGs. Government will gradually execute this decision. Primarily 70% of this attorney service appointment will be from registered advocates which will be selected by Government. Rest 30% will be recommended by Judicial Service Commission to appoint. Before, adhering to the appointing process, it will develop attorney service appointing rule, disciplinary rule, service rule, posting and promotion guidelines, in service training procedures etc.

Establishment of a Judicial Academy: The Government of Bangladesh plans to achieve an ambitious target within 2041 in all aspects of a developed country. Respecting that target Judicial Sector will also play a role. To hold the judicial sector in a high position comparing to developed country necessity of establishing a Judicial Academy is crucial. Judicial Academy will conduct research and studies in the areas of interest, develop standard curriculum, design planning and standard training, maintain international collaboration and deal other issues for both subordinate and higher judiciaries. The academy may be located nearby Dhaka and it will require about 35 acres of land to construct physical infrastructures and provide allied facilities.

Professional Development of the Judges of Sub-Ordinate Judiciary: The Government of Bangladesh acknowledges that Judges need continuous in-service training. In particular, judicial staffs need to acquire international standard orientation through state of the art trainings on issues such as cybercrime, online

security, transnational terrorism, ICT use in judicial activities, digital court management, environmental justice, juvenile justice, domestic violence, offshore crime and dispute regarding offshore activities, law of the sea, climate change law and policy, energy law and policy, judicial sector planning for sustainable development, judicial sector project & programme monitoring, coastal zone management and planning, fisheries resources management, maritime security, environmental planning, governance and justice, environmental court system and trans boundary marine spatial planning system etc. Government will undertake specialised projects and activities to train Judges on all such dimensions - and will form specialised groups to address the key issues that carry key economic importance.

1.4.4 Key Area 3: Improving Economic Governance

Economic governance involves the processes that support economic activity and economic transactions by protecting property rights, enforcing contracts, and taking collective action to provide appropriate physical and organizational infrastructure and adequate human capital. This necessitates that institutions ensure the enforcement of contracts; protection of property rights and practice the rules and regulations required to facilitate successful interactions among the economic agents. Moreover, it is widely believed and empirically demonstrated that the countries that can harness public institutions which offer better economic governance have higher scopes to sustain long-run development. Consequently, the Government aims to undertake the following activities to improve state of economic governance in some key areas under the 8FYP.

Improving Effectiveness and Accountability of the Banking Sector

Improve Supervision of the Banking Sector: Under the 8FYP, the Government will sufficiently empower the Bangladesh Bank to effectively perform its responsibilities. As a result, the Government will facilitate increased recruitment of quality staffs, offer the resources to procure the technology required to strengthen its effectiveness, and implement prudential norms. The Government acknowledges that an effective autonomous Central Bank is necessary to conduct sound monetary policy management and to exercise utmost prudence in matters such as the licensing of new banks, bank consolidation, bank supervision and loan recoveries.

The positive experience with better supervision of banks leading to the adoption of Basel I and II is a reflection of the importance of continuously improving high-quality supervision. However, the deterioration in the portfolio quality of the State-Owned Commercial Banks is limiting the soundness of the banking sector. Consequently, under the 8FYP, the Government will take necessary measures to improve the performance of the banking sector. The entire banking sector (SCBs, PCBs, FCBs and NBFIs) will be brought under a single regulator, i.e., the Bangladesh Bank. The government will enable BB to act quickly to reduce NPLs in the banking sector and ensure that capital adequacy ratios comply with Basel III requirements.

Special Measures for Monitoring NBFIs: Under the 8th Plan, the Government will take measures for proper monitoring and supervision of the non-bank financial institutions (NBFIs) and Bangladesh Bank will be advised and supported to classifying them into categories, such as those that are performing well, those that may be salvaged through stringent central bank supervision and liquidity support.

Improving Loan Recovery and Effectiveness of Banking Courts: Attaining decisions from the court system on outstanding loans is a time-consuming process, which discourages the financial institutions from seeking this remedy. To mitigate this constraint, the Artha Rin Adalat Ain 2003 (Money Loan Court Act, 2003) was enacted in March 2003 with a view to streamline the process of realization of overdue loans and advances by the banks and financial institutions. Provisions have been made in this Act for realization of the banks' dues by selling properties held in security, without prior orders of the court. This is an encouraging step; however, its effectiveness has remained questionable due to the tremendous challenges of implementation. Against this context, the Government will improve the effectiveness of the 'Artha Rin Adalat' under the 8FYP to make loan recovery attain the desired benchmark. Moreover, steps will be taken to implement Artha Rin Adalat Ain 2003 along with other related acts effectively so that the defaulters get no loopholes to avoid and delay loan repayment.

Proper Management of the Interest Rate Policy: Under the 8FYP, the government will assist the Bangladesh Bank to prudently manage its interest rate policy in order to strengthen financial intermediation while also keeping interest rate low to promote economic activities. Instability or weakness in the management of interest rates can hinder a stable momentum of growth and weaken the banking sector by reducing the rate of growth of bank deposits. A slow-growing deposit base in the face of rising NPLs could create serious liquidity and profitability problems for the banks, possibly leading to financial disintermediation. The positive real interest rate for deposit mobilization can be reconciled with low real interest rate for lending by lowering NPL and improving bank competition.

Stringent Criteria for Re-Capitalization of Public Banks: Budget transfers (recapitalization) to under-performing state-owned banks will be linked to stringent performance criteria which require the recipient banks to reform their operations and become sustainably solvent, failing which required to be penalized as a first step. If non-performance continues beyond and agreed time frame, deeper reform measures to reduce the size of their operations, foreign management contracts, mergers, etc. will be considered. Information on capital injections to individual banks along with the reform program agreed between the government and the banks will be placed in the public domain on a full disclosure basis to justify the use of public funds.

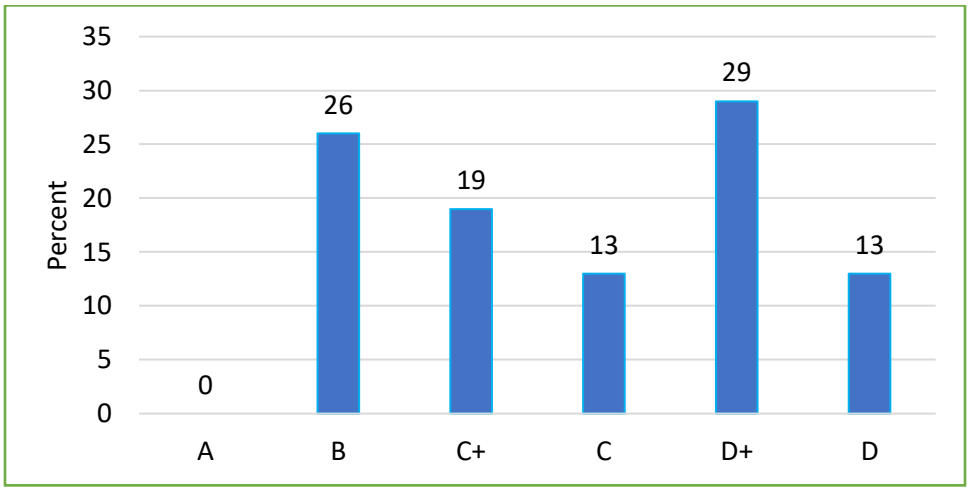
Improving Public Financial Management

Improving Tax-GDP Ratio: Effective functioning of the Government is contingent on the institutions that support markets. This, nonetheless, depends on the effectiveness of the institutions of taxation. It is well recognized that weak tax collection is a manifestation of weak state capacity and it undermines a government's possibility to mobilize resources for investing in human and physical capital and provide public order, which hinders the long-run growth of nations. As a result, the Government of Bangladesh has undertaken numerous measures to broaden the tax base in Bangladesh. The National Board of Revenue (NBR) also organizes regular events to enrol new taxpayers and encourage the existing taxpayers to pay their due share accordingly. Given that Bangladesh has among the lowest Tax-GDP ratios in the world, the government aims to increase its TaxGDP ratio under the 8FYP. Consequently, the Government will prioritize fiscal reforms and adequate investments in the NBR capacity. Details of the tax reforms are contained in Chapter 5, Part 1 of this document.

Improvements in Planning and Budgeting: Considerable progress was made in strengthening the planning and budgeting process during the 6FYP and the 7FYP. The medium-term fiscal framework is now introduced in all line ministries. The budget accounts are all integrated through the computerized ibas++ process that allows timely release of funds and expense accounting using a standard accounting framework. However, the budget process is still on a yearly cycle and expenses do not carry over to the next fiscal year causing an end-year spending bulge. Importantly, the link between development budget and revenue budget is still weak. Efforts will be made to address these issues in the 8FYP. More integration and synchronisation of National Plans and Annual Budgets need to be ensured.

Improved Public Financial Management (PFM): A series of financial management reforms in public spending at the national level based on multi-donor technical assistance has improved the accountability for public spending. Nevertheless, major gaps remained. The 2016 Public Expenditure Financial Assessment Report (PEFA) provided a mixed performance rating on PFM management for Bangladesh. Some 31 PEFA indicators were rated on a grading scale of A-D, with A as highly satisfactory. In between, grades are also rated as a plus, which brings the performance closer to the next higher grade (e.g. a C+ is closer to B). The distribution of ratings is shown in Figure 1.2.

Figure 1.2: Distribution of PEFA Ratings 2015



Source: 2016 PEFA Report.

The areas that require most attention (a grade of C or below) include: expenditure composition outturn (D+); revenue outturn (C); budget classification (C); government off-budget operations (D); transfers to sub-national governments (D+); performance information for service delivery (D+); public access to fiscal information (D), fiscal risk reporting (D+); public investment management (C); public asset management (D+); macroeconomic and fiscal forecasting (D+); revenue administration (D+); expenditure arrears (D); internal controls on non-salary expenditures (C); internal audit (D); annual financial reports (D+); and external audits (D+).

Efforts were made in the 7FYP to address these concerns by developing an Action Plan that was endorsed by the Ministry of Finance. However, implementation has been limited owing to a number of factors including the delay in technical assistance for the next round of reforms. The 8FYP will make a strong effort to implement the agreed program of actions with a time bound implementation plan.

Increased Commitment to Transparency and Participation in the Budgetary Process: To enhance transparency in the budget preparation process, the Government will make the pre-budget statement available in the public domain. This will be done to improve the level of transparency and participation of key stakeholders. The progress in this specific dimension will be tracked through Bangladesh's overall performance in the Open Budget Index–produced by the Open Budget Survey, which uses over 100 indicators to assess whether the government puts eight important budget documents in the public domain in manner that is both useful and comprehensive. The government will also make available all fiscal data showing actual outcomes for both expenditure and revenues.

Introducing Multi-Year Public Investment Programme (MYPIP): Building on the progresses and achievements in the 7FYP, the government is committed to accelerating the PIM reform in the 8FYP. The Planning Commission will continue taking the lead in the PIM reform in the 8FYP. It will plan and implement the PIM reform under the larger umbrella of the PFM Reform Strategy 2016-2021 and the PFM Action Plan 2018-2023. They will ensure full participation of all PIM stakeholders in the PIM reform process.

The focus areas of the PIM reform in 8FYP include the following:

- ***Improve project formulation, appraisal, and approval processes***. In the 8FYP period, Ministry Assessment Format (MAF) and Sector Appraisal Format (SAF) will be introduced and used in the assessment and appraisal process of all DPPs in two pilot sectors – (i) power and energy, and (ii) local government and rural development. After successful introduction in the two pilot sectors, MAF and SAF will be rolled out to all other sectors.
- ***Strengthen strategic linkages between ADP, FYP and MTBF***. In the 8FYP period, Sector Strategy Papers (SSPs) and Multi-Year Public Investment Programme (MYPIP) will be introduced and used in the MTBF, ADP, and Revised ADP (RADP) processes in the two pilot sectors, then rolled out to all other sectors.
- ***Align sector classification of ADP/RADP with FYP and MTBF processes.*** Current sector classification of ADP/RADP is based on 17 sectors, and this does not match with 14 sectors of FYP and MTBF. The Programming Division has taken the initiative to prepare ADP/RADP based on the 14 sectors of FYP and MTBF to contribute to strengthening the linkages among FYP, ADP/RADP and MTBF processes.
- ***Operationalize the database management system of ADP***. In the 8FYP, the new database management system for ADP will be made fully operational, including modules of MYPIP, for all government entities. In this process, digital interface of the ADP database management system will be also established with that of FD in the preparation process of national budget.

Improving the Effectiveness and Accountability of the Capital Market

The capital market of Bangladesh has not yet played a substantial role in financial intermediation and mobilization of resources in the economy, in spite of the ever-growing large financing needs of the economy. There are three major constraints hindering the performance of the capital market: asymmetry of information and lack of trust in the market; preference of the citizens towards investing more in banking sector more than the capital market, and weakness of monitoring and surveillance. In particular, the following activities will be undertaken under the 8FYP to ensure greater capacity and effectiveness of the capital market:

- Government will undertake a long-term capacity building of Bangladesh Securities and Exchange Commission (BSEC) in areas of skilled human capital, modern technologies and prudential regulations. A new organizational structure of BSEC is in-progress. The Commission is also redefining securities laws and regulations in order to ensure prudential regulations and supervision of issuers and market intermediaries in the capital market.

- Bangladesh will build a vibrant, dynamic and good-governed primary market. Acts and regulations concerning public issue of debt and equity securities will be redefined so that securities are fairly valued and the interest of investors is protected. In this process, the role of auditor and rating agencies is critical. Their regulations and enforcement will require speedy reforms.

- A technology platform of extensible business reporting language (XBRL) shall prove critical to this end of transparency and accountability for stock exchanges, issuers and other market intermediaries. BSEC will invest heavily to enforce observance of issuers and market intermediaries with International Financial Reporting Standards (IFRSs), International Standards of Auditing (ISAs) and modern corporate governance codes.

- Government is committed to building a diversified capital market involving both bond and derivative markets so that financing of business moves from banking system to the capital market. A well-functioning derivative market is indispensable for prudential risk management for the investors. The Commission shall closely work with stock exchanges for this important capacity building.

- Continuous coordination is needed between key regulators including Bangladesh Securities and Exchange Commission, Bangladesh Bank and National Board of Revenue (NBR) for a well-governed capital market. The Government will evaluate the need of an institutional mechanism to facilitate this coordination between Bangladesh Bank and BSEC for building a modern capital market. It will also create a task force to detect conflicts of interest within the regulatory bodies and financial institutions, especially amongst those who have an exposure to the stock market.

- The Government will improve the surveillance software/systems to prevent manipulation of the transaction of securities in the stock market and to ensure greater transparency. To this end, BSEC will guide stock exchanges in upgrading their trading platforms, order management system (OMS) and a dynamic real-time trade settlement infrastructure.

- Inquiry, supervision and enforcement of securities laws will comprise a critical capacity building for BSEC and stock exchanges. The new organogram of BSEC has made provisions for new human capital and other resources to deliver these core functions. Securities laws are also continuously evolving to make a big difference to this end. The Government will take measures to ensure that companies comply with the financial reporting and disclosure rules of the BSEC. Strict accountability will be enforced in cases where companies fail to comply with the financial disclosure rules. This may require penal measures. More stock market related legal cases need to be transferred to the special tribunal on capital market for quick disposal of the cases.

- Tax laws are undeniably important for capital market. The Government will improve the tax incentives further for the private sector companies to be listed with stock exchanges and to commit to enhanced transparency and accountability. An option to go for listing shall be made attractive for an issuer of capital and tax policies will be geared to this end. The Government is committed for a transition from the current bank-based borrowing to capital market-based financing.

- During the 7th plan period the government formed the Financial Reporting Council (FRC) to upgrade the accounting and auditing standards of the capital market to international levels. It is also mandated to play a key coordinating role between BSEC, NBR and the Bangladesh Bank to improve regulation of the capital. The Government will make FRC to be further operational and effective for enforcing accounting and auditing standards. On the other hand, the special tribunal on capital market was dormant for the last 18 months due to not receiving any stock-market-related cases. Under the 8th Plan, the Government is committed to upgrading the accounting and auditing standards of the capital market.
- Financial literacy is very low in Bangladesh. Bangladesh Academy of Securities Market (BASM) and Bangladesh Institute of Capital Market (BICM) are two institutes of the Government to enhance financial literacy in Bangladesh. The Government is committed to invest in both the institutes and making them effective for financial literacy.

1.4.5 Key Area 4: Improving Governance in Local Government

Improved governance in the activities of local governments allows countries to benefit from the rewards of decentralization. This allows effective policy formulation and execution as both local and national organs of the State coordinates to decide what policy is needed and how they can be best executed. The Government of Bangladesh recognizes the need of improved governance in the local government administration to take up the decentralization agenda, and intends to undertake a wide array of initiatives under the 8FYP. The detailed local government institution (LGI) reforms are discussed in Chapter 7, Part 2. The main objective of these reforms is to strengthen the capacity of LGIs to delivery better services to their constituencies through greater administrative and financial autonomy including higher and more predictable resources. The aim is to take the first step to move towards establishing a system of LGIs as found in current UMICs.

1.4.6 Other Areas of Activities under the 8th Plan

- **Strengthening the Election Commission (EC):** The Government recognizes that without an independent and effective Election Commission (EC), democratic franchise cannot be extended to the citizens. Consequently, under the 8FYP, the following activities will be pursued to enhance the performance of the EC: (i) The Government will offer all necessary support to EC to expand the use of electronic voting machines to improve transparency in the electoral process; (ii) EC will execute its operations independently and effectively; and (iii) More measures will be taken to improve EC's capacity to monitor election expenditure by candidates and control campaign contribution during local and national elections.
- **Making Parliamentary Process Effective:** The Government of Bangladesh is not only committed to the ideals of democratic governance, but is interested in making the process transparent, accountable and participatory. To that end, the following activities will be undertaken during the 8th Plan to improve the role of the Parliament as a reservoir of people's trust and aspirations: (i) The Government will remain committed to increasing the number of hearings open to the public, particularly of important budgetary committees such as the Public Accounts Committee; (ii) Efforts will be undertaken to reduce the time that is lost due to lack of quorum; (iii) The Government will remain committed to

improvements in the functioning of Public Accounts Committee; (iv) The Govt. will try to ensure that percentage of seats held by women in the national parliament is at least 33% by 2025.

- **Appointment of Ombudsman:** The government will ensure the appointment of an Ombudsman which was committed under the 7th Plan.
- **Addressing Corruption:** Addressing corruption will receive top priority from the government in order to eliminate it from institutions and society at large. This requires strong government commitment and major overhaul of ACC. It also requires a 'whole of government' approach along with collaboration with civil society organizations and other stakeholders, as ACC alone will have difficulty in combating corruption. Hence, the Government will focus on improving the country's performance in the internationally accepted ratings on governance. The following specific measures will be prioritized: (i) ACC will be empowered to effectively function as an independent institution reporting directly to the head of government by amending legal provisions if needed; (ii) ACC will not face any hindrance in investigating offenders, and prosecuting offenders; (iii) ACC will track the assets of public representatives; (iv) the Government will increase resource allocation to ACC to permit it to function at a level commensurate with its mandate—these resources include, more staff, financial resources and logistical support and enhance automation; (v) with additional resources ACC will commit to dispensing casing faster and take responsibility for failure; (vi) ACC will strengthen its capacity in modern preventive and investigative anti-corruption methods to improve effectiveness and efficiency; (vi) ACC will improve transparency by maximising information in the public domain and being responsive to RTI filings and views expressed in the public domain; (vii) ACC will facilitate more accountable through public hearings by the parliamentary committee; (viii) Government will establish anti-corruption cells in relevant departments within an agreed time frame; and (ix) Government will enact the Whistle Blower Act.
- **Strengthening the Office of the Comptroller and Auditor General of Bangladesh**: The Office of the Comptroller and Auditor General of Bangladesh are responsible for auditing and reporting on the accounts of the Republic and of all courts of law and all authorities and officers of the Government. Moreover, policymakers recognize that a transparent supreme audit institution will ensure regular auditing of these bodies and authorities and publish reports for public scrutiny – facilitating general accountability, views and opinions. Consequently, the government will take measures to develop a regular and effective framework so that the institution utilizes more independent and results-oriented audits. In addition, audit reports need to ensure transparency and accountability by clearly stating the methods approached.
- **Digitization of Land Management:** Land record digitization will be completed so that it is available to the three nodal offices: (i) land registration, (ii) Assistant Commissioner of land (ii) Deputy Commissioner of districts. This will ensure ease of access to the data when needed and also quicker disposal of the land disputes. In particular, digitally maintained particulars of mutation records along with clear and accurate records generated from plot-wise cadastral surveys of land and registered deeds of land transfer will provide an efficient and transparent basis for authentication of ownership or inheritance including the history of all previous transactions. Moreover, a one-stop service delivery system needs to be introduced for better public service delivery.

- **E-Registration:** The Government will continue the process of ensuring that land ownership is managed transparently and fairly. It will facilitate appropriate linkages between the role played by Village Courts at the local level in relation to resolving land disputes, and the process of formalising land registration, in order to support Vision 2041. The establishment of digital registration and presence of Land Registry Offices in all 64 districts will both simplify the range of registration processes, which are often a bar to individuals securing their property rights, as well as promoting speedy and transparent services.
- **Better Coordination among Concerned Ministry:** To ensure efficient and effective delivery to land-administration-related e-services, the coordination between Ministry of Land (MoL) and Ministry of Law, Justice and Parliamentary Affairs (MoLJPA) will be improved, both at the national and at the field level. Capacity-building programmes need to be conducted to improve the skills of staff in the office of the Assistant Commissioner (Land). Regular monitoring of the work of land offices along with regular publication of monitoring reports will be ensured. The authorities, involved with land administration, will be strengthened with adequate staff, financial resources and logistical support.
- **Addressing Data Availability:** There is scarcity of data; data is not also made available in a timely fashion, for example websites are not regularly updated. Availability of data and information will be given top priority to improve transparency and for conducting independent evaluation and assessment of government strategies, policies, activities, functions, etc. In many instances, the data provided in government websites are not user friendly. All public data collecting agencies, including BBS, needs to be strengthened to address this vital concern.
- **Increasing the Effectiveness of Information Commission:** The Government will ensure that the Information Commission authority would be more responsive to requests made under the Right to Information Act. Close monitoring of the status of such requests and follow up actions will be ensured to achieve this and faster release of the requests for information. The Information Commission will provide more data on the requests, filings and release of information in the public domain in a timely manner. Measures will be undertaken to include RTI act in the text book.
- **More Resources for Governance-related Institutions:** The Government will mobilize more resources to increase ADP allocation to justice institutions, public sector capacity development, digitization and automation of public sector organizations, ACC, NBR and PSC's operations, LGIs for effective decentralization, reform of the banking sector and capital markets. Moreover, it will take measures to ensure that the financial resources earmarked for the ADP projects are disbursed and utilized in a timely manner.
- **Strengthening UDCs:** The services provided through Union Digital Centres (UDCs) are internet-based. Technology infrastructure in regions where UDCs are located will be enhanced to enable residents of the regions to access the services of UDCs. Awareness campaigns about the operations of UDCs at the local need to be launched.
- **Improving Digital Literacy:** The level of digital literacy of the general public will be enhanced to tandem with the rapid roll out of digitization in the public systems and launching of e-services to enable them to benefit from them. This is also important to prepare people for adjusting with the 4th industrial revolution.

- **Department of Passport and Immigration (DIP):** Increased acceptability of Bangladesh passports and visas around the world will have a positive impact on the export of manpower. To that end, DIP is committed to the simplification of the process of obtaining Bangladesh visas. Simplification and modernization of the issuing of passports to Bangladesh nationals will also help to accelerate export of labour to the overseas markets. This is expected to have a positive implication on remittance earnings. Consequently, the targets for the 8th Plan are: (i) Achieve full coverage of electronic passports by 2025; (ii) Issue and delivery of passports in a time-bound manner; (iii) Create use-friendly procedures; and (iv) Make all necessary information available through the digital space.
- **Strengthening Implementation Monitoring and Evaluation Division (IMED):** IMED is the sole government agent to monitor and evaluate all development activities included in Annual Development Program (ADP). IMED is now focusing mainly on physical and financial aspects of project implementation and also conducting mid-term evaluation, terminal evaluation and in some cases impact evaluation of completed projects. The government recognizes that without strengthening IMED, updating monitoring tools, introducing results based and real time monitoring, monitoring and evaluation would not be effective. With a view to ensuring sustainable development, more measures will be taken to strengthen IMED for effective implementation of project.

1.5 PUBLIC ORDER AND SAFETY IN THE 8FYP

The Government of Bangladesh remains committed to maintain public order and safeguard the assets and lives of its citizens under the 8FYP period. Guaranteeing the enforcement of the law, protecting the citizens from internal and external threats, maintaining security in the border, battling narcotics, terrorism and other social vices and rehabilitation of prisoners remain the key objectives of the Ministry of Home Affairs (MoHA). As a result, the MoHA will ensure the cooperation of all the agencies under its jurisdiction to offer the necessary safety and security.

Improving the Effectiveness of Bangladesh Police: Bangladesh Police, as an organization, remains committed to the enforcement of law, ensuring social order, minimizing fear of crime, improving public safety and ensuring internal security with active support of the community. In particular, creating an effective and accountable police force is fundamental for the enforcement of the rule of law and improving the criminal justice system. This necessitates activities on multiple dimensions – and under the 8FYP, the following activities will be prioritized:

- **Strategic Directions and Organizational Reforms:** The Government will formulate strategic directions and organizational reforms to support planning and budgeting, enhanced accountability and oversight, as well as a modernized legislative framework. The primary objective of this is to build the capacity of the Bangladesh Police to formulate and implement its organizational vision.
- **Enhancement of Efficiency of the Police Personnel through Capacity Building at Home and Abroad and through Modern Training Centres:** Proper initiatives will be undertaken to increase skills and competency of police personnel by means of arranging training, workshops and seminars in the country. Police officials will be sent to the overseas to equip them with the latest policing knowledge, best practices and development in view of addressing recent issues and problems in Bangladesh. Appropriate budget allocation will be provided to implement the initiative of enhancing capacity of training institutes and capability of police personnel. Adequate initiatives will also be taken

to improve the infra-structure, equipment, transport and ICT facilities for furnishing a total of 30 In-Service Training Centres of Bangladesh Police. The facilitators and instructors of In-Service Training Centres will be trained at home and abroad through some capacity building projects. The In-service training centres would be utilized up to the maximum level to impart knowledge, skills and changed attitude to the field level police officers. The existing training centres would be made women-friendly with respect to quality of training, infrastructures and allied services

- **Developing Infrastructure and Improving Capacity of the Anti-Terrorism Unit (ATU):** Required initiatives will be undertaken to develop infra-structure for ATU in Dhaka and all over the country to curb terrorism and religious militancy. Besides, modern equipment will be procured and forensic labs will be set up in this purpose. In addition, Counter-Terrorism policy will be formulated incorporating other stakeholders in the initiative of ATU.
- **Setting up Forensic Labs in Six Divisional Cities:** Forensic science has been an essential part of modern police performances. Modern investigation process is based on forensic evidence. Prosecution of criminals and the clearance of innocent suspects become easier if forensic evidence is analysed properly and timely. At the same time, quick disposal of chemical and forensic Alamats expedite the quick disposal of pending cases of the police stations. For this reasons Bangladesh Police has established a central forensic lab, which has been proved as an effective facility in terms of quick disposal of Alamats and forensic evidence. For this reason, six more forensic labs will be established to make Bangladesh Police an effective investigating agency, which will be prioritized under the 8FYP.
- **Improvement in Investigation, Operations and Prosecution:** The Government will increase efforts to improve police operations, investigation and prosecution to enhance fair and equitable justice. In particular, Grievance Redressal Systems (GRS) will be introduced into police administration more effectively to ensure fair treatment of both police officials and citizens. In particular, IGP's Complaint Cell will be more effective as a Grievance Redressal System to ensure fair treatment to both police officials and citizens.
- **Crime Prevention and Community Policing:** Measures will be taken to improve the trust and interaction between the community and the Police resulting in improved access to justice, human rights and reduced fear of crime. Bangladesh Police is applying Bit Policing technique countrywide as an implementation tool of community policing.

  Under the 8FYP, these efforts will be further strengthened to enhance better policing services for the citizens. In particular, efforts of finding durable solutions to reduce crime through community policing would be continued. The Community policing would be made functional through practical initiatives like: (a) Community Policing Forums; (b) Sector-wise community involvement; (c) Open house day; (d) Bit meetings; (e) Youth and Student involvements; (f) School/College based awareness programmes; (g) Mass meeting/ Rallies; (h) Anticrime meetings; (i) Victim Re-contract; (j) Door to door/ home to home visits.
- **Promoting Gender Sensitive Policing:** The government is committed to ensure the rights of women and children at all levels by ensuring equitable and sensitive policing and support services for the victims. In particular, it will develop a Woman Policing Strategy (WPS) through the Bangladesh Police to mitigate gender discrimination in policing services.

- **Digitalization of all Police Stations:** With a view to implementing vision-2021 and vision-2041, different steps will be taken to digitize all police stations of Bangladesh Police for making them fully accessible to the citizens from all walks of life. Police Stations need to be interconnected electronically to reduce time, resources and workforce in terms of making daily transactions. In addition, web-based applications will be introduced to preserve legal documents and perform policing activities like online General Diary (GD), investigation, enquiry etc.
- **Strengthening and Building Capacity of 999 National Emergency Service:** National Emergency Service, 999 is a popular public enterprise undertaken by the present government. People at stake find 999 services as their cyber saviour. It has already enkindled hope in general masses to secure a space in the criminal justice system. Furthermore, 999 service has become popular with the distressed and fire-victims. The increasing number of calls at the 999 service will be handled promptly and efficiently. So, investments in the necessary infrastructure of the 999 centre and developing a pool of trained human resource will receive priority under the 8th Plan.
- **Reducing Cybercrime and Fake News:** The Government remains committed to reducing cybercrime and will undertake the necessary capacity building measures and investments in technology that will allow the prevention of cybercrime in the society. Especially, measures will be taken to reduce the misuse of social media networks to disrupt communal harmony through the spreading of "fake news" that hurt religious sentiments of any community.
- **Model Police Stations (MPS):** Police Reform Project I & II supported the creation of Model Police Stations (MPS) which benefit from better facilities, such as customer service areas, barracks and toilets for women, separate holding cells for men and women, secure facilities for firearms, private interview rooms and accessibility ramps. Moreover, under the 8FYP, the Bangladesh Police will continue to provide services from "Model Police Stations" to improve the facilities for delivery of services.
- **Enhanced CCTV and Other Surveillance Mechanisms:** Under the 8th Plan, the Government will ensure that selected metropolitan police jurisdictions and selected portions of highways would be brought under the surveillance of CCTVs to increase the state of safety on national highways and key cities.
- **Combat Human Trafficking:** Public Security Division (PSD) of MoHA is the focal division to combat human trafficking. This Division has formed the National Authority to address this crime under the Prevention and Suppression of Human Trafficking Act 2012. In 2018, PSD has adopted the National Plan of Action to Prevent and Suppress of Human Trafficking (NPA-PSHT) 2018-2022. The NPA 2018-22 is harmonized with the SDG implementation strategy of GoB. Under the 8FYP, PSD aims to strengthen the capacity of the National Authority to better implement the NPA. During the implementation of the 8FYP, this Authority can grow into the lead agency to coordinate all out efforts against the traffickers. As a priority, PSD plays a critical role in enforcement of legal provisions (Migrants Act 2013 and PSHT Act 2012) to make mobility of people, migration and migrants safer. The 8FYP will focus in investing in capacity development for law enforcement and border control to combat trafficking and smuggling in persons. As per NPA the counter trafficking committees (CTCs) are placed at Unions, Upazilas and Districts to reduce vulnerability to trafficking and to assist the victims of trafficking. The 8FYP can provide resources and capacity building assistance to strengthen and activate these CTCs. Hence during the 8FYP, the government will set priority on strengthening the role of PSD in meeting the objectives set in the NPA to prevent and suppress human trafficking.

- **Ensure repatriation and rehabilitation of Rohingyas:** Being denied citizenship, more than one million Rohingyas have crossed into Bangladesh. The Bangladesh Government deserves enormous credit for all it has done to help these destitute people. Under the leadership of Honourable Prime Minister Sheikh Hasina, the worst potential consequences of this human calamity have been avoided despite the incredibly difficult circumstances. Bangladesh is making every effort in a professional fashion to harness regional and global power to end this emerging crisis. The Bangladesh government has been making diplomatic efforts in persuading Myanmar to repatriate the refugees. Bangladesh is looking forward to the successful repatriation of the Rohingya to Myanmar and enable them to have access to different dimensions of human security. Considering the issues of overcrowding, congestion, and security in Cox's Bazar, the government of Bangladesh has been developing a relocation site in 'Bhasan Char' island to rehabilate the Rohingya refugees. Efforts will be continued to ensure peaceful stay of these forcibly displaced Myanmar citizens until repatriation in Myanmar.

Border Guard Bangladesh (BGB): The Bangladesh Border Guard (BGB) is entrusted with the security of the borders, addressing and minimization of smuggling and protection of the economic and commercial interests of Bangladesh. In particular, attaining effectiveness on such fronts allows the BGB to minimize the smuggling of foreign goods/commodities and reduce the evasion of duties– which would otherwise create uneven competition between the foreign goods and the goods manufactured/produced in the country. In 2017, the BGB adopted a long-term strategy named "BGB Goal 2041". This strategy aims to make the BGB a well-trained, well-equipped and technologically advanced force. Thus, to improve the effectiveness of the BGB, the 8FYP will prioritize the achievement of the targets within BGB Goal 2041. In particular, specific focus will be offered to the following areas:

- Increasing the number of personnel working for the BGB to meet the international standards;
- Increasing investments in logistics that facilitate the effective functioning of the BGB;
- Supporting formation and strengthening of a "Quick Response Force" within the BGB which will work to supply modern arms and ammunition to the border points swiftly in case of any emergency;
- Establishing a permanent station on the St Martin's island to protect the territorial integrity of Bangladesh;
- Installing mechanized inspection system in Benapole and other land borders;
- Enhancing the security of the international boundary between Bangladesh, India and Myanmar through increasing the number Border Out Posts (BOP) and the construction of border ring roads and barbed wire fencings;
- Developing a comprehensive strategy with all stakeholders to reduce smuggling;
- Increasing operation to reduce human trafficking mainly women and children in neighbouring countries;
- Increasing supervision of the Myanmar border to maintain peace at the Rohingya camps.

Bangladesh Coast Guard (BCG): The Bangladesh Coast Guard (BCG) is designed and formulated to enforce the maritime laws of Bangladesh. It is a paramilitary force and operates under the jurisdiction of the Ministry of Home Affairs. Its officers serve under deputation from the Bangladesh Navy. Additionally, the BCG also performs the duty of maintaining the maritime border security of Bangladesh. During the 7FYP period, the Government has also articulated the - Coast Guard Goal 2030 - which is a strategic document to modernize the Bangladesh Coast Guard. More specifically, the plan aims to improve the organizational capacity of the BCG by increasing the manpower, purchasing more ships, hovercraft,

helicopters, Unmanned Aerial Vehicles (UAV), maritime patrol aircrafts and adding new generation surveillance technologies. The vision is to make the BCG a technologically advanced two-dimensional force that is capable of protecting the coastal areas of Bangladesh well. Moreover, it will support the Bangladesh Navy during all national emergencies. Hence, under the 8FYP period, the Government will prioritize implementing the targets as noted in the "Coast Guard Goal 2030". It will also ensure that the strategic objectives of the "Blue Economy" agenda are protected by ensuring the safety of our marine resources.

Bangladesh Ansar and Village Defence Party (VDP): The Bangladesh Ansar is a paramilitary auxiliary force, which is entrusted to maintain internal security and law enforcement in Bangladesh. Its operation is administered by the Ministry of Home Affairs – and under the 8FYP period, the following initiatives will be taken to strengthen the role of the Ansar and Village Defence Party (VDP):

- The Government will enhance its capacity to effectively dispensing public welfare activities as per the instruction of the Government effectively;
- It will receive logistical support to ensure that it can effectively support the Bangladesh Armed Forces in any national emergency.

Department of Prisons: The Department of Prisons aims to ensure safe custody of prisoners, maintain strict discipline among the inmates and prison security, ensure humanely treatment of all prisoners; provide decent accommodation, food, medicine of the prisoners, as well as opportunities to meet their relatives, friends and lawyers and provide necessary training and motivation to the prisoners, in order to rehabilitate as a good citizen in the society. As a result, under the 8FYP, the Government aims to ensure better facilities for prisoners, by allowing them to have access to professional training and counselling services, develop advanced infrastructure to reduce prisoner burden – and provide special care for female and under-aged prisoners.

Fire Service & Civil Defence: The 7th Plan period witnessed numerous incidents of fire hazards that resulted in the death of hundreds of people. In fact, over the last twenty-three years – the average incidents of fire per years has increased threefold - with the year 2018 seeing a daily average of 53. More specifically, at least 1,970 people were killed in around 200,000 fires across the country between 2004 and 2018. Consequently, under the 8FYP, the Government will strengthen the capacity of the Fire Service and Civil Defence department to ensure public safety by investing in training of key emergency personals, importing necessary technologies and fire-fighting instruments to effectively carryout rescue operation during any man-made or natural disasters. The Government will also develop a surveillance team under the Fire Service Department to monitor hazardous economic activities, so that fire safety regulations are effectively enforced across the key "fire-hotspots" of the country.

Narcotics Control Department (DNC): The 7th Plan period witnessed a strong commitment to anti-narcotics drive by the Government and remains a key component of the election manifesto of the current Government. Hence, under the 8FYP, the Government will undertake the following activities: (i) It will strengthen the Department of Narcotics Control (DNC) to reduce the availability and usage of narcotics in the country. In particular, strong surveillance teams will be developed to stop drug trafficking across borders, so that key supply chains aiding the entry of drugs from various parts of the regions are disrupted; (ii) The Government will also support strong awareness building campaigns in both private and public schools, colleges and universities, to ensure students understand the adverse consequences of drug usage;

(iii) The Government will create partnership with NGOs to develop a state of the art rehabilitation hospitals in every administrative Division of Bangladesh to ensure affordable treatment and effective rehabilitation of drug addicts in the country.

National Tele-Communication Monitoring Centre (NTMC): The NTMC was formed in 2014 to improve the state of security and stability of the country by rigorously monitoring over all branches and medium of latest telecommunication arena. This organization provides a platform for all law enforcing agencies to monitor the activities of suspected threats. The threat in cyber space is radically different from others. The objective of NTMC for 8th Plan are as follows: (i) Support the procurement of state-of-the-art technological devices that can protect citizens from terrorist organizations; (ii) Increase parliamentary audits of its expenditure to ensure more public scrutiny of its expenditure; (iii) More investments in training, infrastructural facilities to accommodate all major components of NTMC like data centre, monitoring station and physical security measures; (iv) Deploy necessary IT experts to deal with emerging threats from telecommunication sectors; (v) Ensure annual hearings of NTMC officials with the Honourable Prime Minister and Defence Advisors to ensure that basic privacy of citizens are not violated.

1.6 DEVELOPMENT RESOURCE ALLOCATION UNDER THE 8FYP

The Government believes that improvements in public administration, public institutions and governance is fundamental for attaining the growth and poverty reduction targets of PP2041 and it requires noticeable improvement under the 8FYP. More specifically, the need for a more effective coordination mechanism continued strong political leadership, forward-looking attitude within government employees and an effective, transparent and accountable legal framework that guides governance within the public administration cannot be overstated. It is also essential to recognize that in order for the country to maintain its solid momentum in its socio-economic progress, not only it requires an enabling and effective public administration and institutions, it also needs an environment where there is order, public safety, and rule of law that ensures investments and exchanges within the commercial sphere enjoy predictable, effective and equitable legal framework. This, nonetheless, considerable investment in institutions will ensure that they are guided by the most adequate laws, infrastructure and human capital.

Accordingly, the 8FYP is committed to provide adequate resources to enable the smooth function of general administration and law and order to ensure safety and security. Most of the spending for general public services and law and order are recurrent in nature and are therefore provided for from the current budget, yet, it is understood that many development projects are necessary to enhance capacity and strengthen the underlying services. Therefore, in addition to allocations for current spending from the national budget, the 8th Plan provides sizable resources from the ADP. The indicative ADP allocations are contained in Table 1.7. Nonetheless, need based changes are possible to key areas of public administration given the Plan aims to be a living document – and it recognizes flexibility and adaptability are fundamental for achieving the broader objectives of the 8FYP that is linked to PP2041.

Table 1.7: 8FYP Ministry-wise ADP Allocation for General Public Services and Public Order and Safety in Current Prices (Taka billion)

No.	Sector	Ministry/ Division	FY2021	FY2022	FY23	FY2024	FY2025
1.	General Public Services	National Parliament	0.2	0.2	0.3	0.3	0.4
		Prime Minister's Office	39.3	50.9	58.7	68.5	80.1
		Cabinet Division	0.2	0.2	0.3	0.3	0.4
		Election Commission	7.5	9.2	10.6	12.4	14.9
		Ministry of Public Administration	2.4	2.9	3.4	3.9	4.7
		Public Service Division	0.3	0.3	0.4	0.4	0.5
		Finance Division	15.4	18.9	21.8	25.4	30.5
		Internal Resources Division (IRD)	0.8	1.0	1.2	1.4	1.6
		Financial Institutions Division	18.9	23.3	26.8	31.3	37.6
		Economic Relations Division (ERD)	0.4	0.5	0.6	0.7	0.9
		Planning Division	3.7	4.6	5.3	6.2	7.4
		Implementation, Monitoring and Evaluation Division (IMED)	0.8	1.0	1.1	1.3	1.6
		Statistics and Informatics Division	5.6	6.9	7.9	9.2	11.1
		Ministry of Foreign Affairs	0.6	0.7	0.8	1.0	1.2
	Sub-Total		**96.0**	**120.7**	**139.2**	**162.4**	**192.9**
2.	Public Order and Safety	Law and Justice Division	5.3	6.5	7.5	8.7	10.5
		Public Security Division	17.3	21.3	24.6	28.7	34.5
		Legislative and Parliamentary Affairs Division	0.9	1.2	1.3	1.6	1.9
		Anti-Corruption Commission	0.2	0.2	0.2	0.3	0.3
		Security Services Division	18.4	22.6	26.1	30.5	36.6
Total (Public Order and Safety)			**41.1**	**50.7**	**58.4**	**68.2**	**81.8**
GRAND TOTAL (GPS + POS)			**137.1**	**171.4**	**197.6**	**230.6**	**274.7**

Source: Chapter 5, Part 1, Annex Table A5.2

Table 1.8: Ministry-wise ADP Allocation for General Public Services and Public Order and Safety at 2021 Constant Prices (Taka billion)

No.	Sector	Ministry/ Division	FY2021	FY2022	FY23	FY2024	FY2025
1.	General Public Services	National Parliament	0.2	0.2	0.2	0.3	0.3
		Prime Minister's Office	39.3	48.3	53.0	58.9	67.5
		Cabinet Division	0.2	0.2	0.2	0.3	0.3
		Election Commission	7.5	8.8	9.6	10.7	12.2
		Ministry of Public Administration	2.4	2.8	3.0	3.4	3.9
		Public Service Commission	0.3	0.3	0.3	0.4	0.4
		Finance Division	15.4	18.0	19.7	21.9	25.1
		Internal Resources Division (IRD)	0.8	1.0	1.1	1.2	1.3
		Financial Institutions Division	18.9	22.1	24.2	27.0	30.9
		Economic Relations Division	0.4	0.5	0.6	0.6	0.7
		Planning Division	3.7	4.4	4.8	5.3	6.1
		Implementation Monitoring and Evaluation Division	0.8	0.9	1.0	1.2	1.3
		Statistics and Informatics Division	5.6	6.5	7.1	7.9	9.1
		Ministry of Foreign Affairs	0.6	0.7	0.7	0.8	1.0
	Sub-Total		**96.0**	**114.7**	**125.7**	**139.8**	**160.1**
2.	Public Order and Safety	Law and Justice Division	5.3	6.2	6.7	7.5	8.6
		Public Security Division	17.3	20.3	22.2	24.7	28.3
		Legislative and Parliamentary Affairs Division	0.9	1.1	1.2	1.3	1.5
		Anti-Corruption Commission	0.2	0.2	0.2	0.2	0.3
		Security Services Division	18.4	21.5	23.6	26.2	30.0
Total (Public Order and Safety)			**41.1**	**48.1**	**52.8**	**58.7**	**67.2**
GRAND TOTAL (GPS + POS)			**139.1**	**162.8**	**178.5**	**198.5**	**227.4**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 3:
INDUSTRIAL AND ECONOMIC SERVICES

CHAPTER 2

STRATEGY FOR MANUFACTURING SECTOR DEVELOPMENT WITH EXPORT-LED GROWTH

2.1 BACKGROUND AND OVERVIEW

After two decades of sound macroeconomic stability and robust growth of the economy, as the Government prepared to launch the 8FYP, the world fell in the grip of the most devastating economic catastrophe since the Great Depression of the 1930s owing to COVID-19 pandemic. Therefore, besides the challenge of sustaining economic and social progress, the 8FYP will have to start off with an economic recovery program that can then morph into the medium-term development agenda for rapid pro-poor and inclusive growth as envisioned in PP2041. The challenge is particularly telling because COVID-19 has been most damaging to the engine of past growth, the RMG sector, where the slump in world demand has already cost the economy a colossal loss of $10 billion in exports in the first 4 months of the FY2021.

The period of the 8FYP straddles two key milestones for the Bangladesh economy: (a) 2021 is the 50th anniversary of independence of Bangladesh, and (b) the economy is set to graduate out of UN's LDC group of nations in 2024. Given the stage of our social and economic progress, the Government is determined to embrace graduation and prepare for the challenges that may be expected – primarily arising from the process of "trade preference erosion". That calls for trade and industrial policy to be revamped during the 8FYP to cope with the impending challenges. A particularly important task is to diversify the manufacturing production and export base to insulate the economy from adverse developments associated with dependence on one single product group. The other task is to restructure manufacturing sector in a way that it creates more jobs as it grows, notwithstanding the ramifications of technology change and growing capital intensity of production associated with the on-going Fourth Industrial Revolution (4IR).

But first, the economy must deal with the impacts of the COVID-19 pandemic that has swept the globe with speed and impact on global output and trade. The fact that in 2020 Bangladesh economy is far more integrated with the world economy through trade and financial flows makes it highly likely that the global slowdown this time will have far greater ramifications on our exports, remittances, GDP growth and employment than was the case in the aftermath of the global financial crisis of 2008-09. So, the first year of the 8FYP will have to cope with the challenges of an economic recovery that will need robust policies to stimulate trade and growth in order to protect livelihoods of millions of vulnerable people including non-poor that are on the brink of poverty. In the first phase of policy response, the Government has launched a $12 billion (over Tk.1 trillion) stimulus (or relief) package to cushion the economy from the immediate health-cum-economic shock. The FY2021 Budget should comprise the economic recovery package that will launch the 8FYP to fuel economic recovery and resume the growth trajectory that was laid during the past 10 years. Yet, in light of the severe global economic slowdown in the aftermath of COVID-19 crisis, most global analysts are predicting a slow recovery rather than a sharp bounce back (V-shaped recovery). Since future trade (i.e. exports and imports) is a function of the state of global demand for Bangladeshi products and supply of essential agricultural and manufacturing products (food and intermediate inputs)

that enter the production and consumption system of Bangladesh, it is important to keep the global economic scenario as the backdrop of domestic policies directed towards boosting the manufacturing sector that is and will be the major driver of rapid growth and employment creation over the period of the 8FYP.

Trade Policy and Industrialization

The broad goals of Bangladesh's industrial policy can be classified into two tracks: import-substituting industrial development and export-oriented industrialization. This creates the need for industrial policy to be in tandem with trade policy, as the two-track industrialization policy raises issues of complementarity as well as conflict in the articulation of incentives between the two strands of trade policy – import substitution and export promotion. As part of policy fundamentals, the two-pronged approach of import-substituting and export-oriented industrialization brings to the fore the choice of two broad competing strategies: comparative-advantage-following (CAF) or comparative-advantage-defying (CAD). The CAF industrial and trade policies are those that promote economic activities based on the country's comparative advantage (e.g. labour-intensive production) while CAD policies do not necessarily select activities with comparative advantage (e.g. promoting capital intensive import-substituting industries with heavy protection in a labour abundant economy). In articulating trade and industrial policies during the period of the 8FYP these two approaches will be kept in perspective.

A sound industrial policy should complement market forces, maximizing the potential for the industrial sector to contribute to economic growth and job creation. In practice, Bangladesh industrial policy has multiple objectives including employment creation, promoting structural change towards an industrial economy, enhancing technological capacity, improving regional distribution of industrial activity, promoting investment in laggard regions, and facilitating more even income distribution. While it might be tempting to cover wide ranging goals the 8th Five Year Plan (2021-25) acknowledges that prioritization is of critical importance as industrial policy to be effective must have limited and clearly defined objectives, simply because there are not sufficient policy instruments to address multiple objectives. Moreover, different objectives may be inconsistent with each other. Thus, the principal focus of our industrial policy during the 8FYP will be to achieve structural transformation where industry's share in GDP would reach 40-45% of GDP by 2030 thereby absorbing the bulk of the labour force that was hitherto under-employed in agriculture and informal services. Furthermore, to develop a globally competitive manufacturing sector the strategy would be to provide support to infant industries with time-bound and performance-based criteria. Strategic coordination between the state and businesses in formulation and implementation of industrial policy is the accepted practice in Bangladesh.

Finally, Bangladesh's industrial policy for the 21st century (post-LDC graduation) has to be comprehensive rather than target specific in order to be WTO-consistent. Policies for promoting industries to stimulate investment or export growth are then restricted to generic instead of specific policy instruments with some scope for transitional arrangements under Special and Differential treatment with *de minimis* provisions. Generic policies for promoting industrial development include policies related to infrastructure, human capital formation, innovation, and diffusion of technology, all critical for export competitiveness.

The concurrent trade policy will have to be supportive of the industrialization strategy focusing on developing a globally competitive manufacturing sector with strong and sustainable export performance. The strategic approach will be to leverage the vast global marketplace via greater trade openness that

involves greater trade integration with major players in the regional and global economy. There is no option but for high and sustainable growth of the future to be driven by robust trade and export performance leveraging the enormous demand potential of the global marketplace.

In the post-LDC graduation environment trade may need to be reshaped in line with WTO rules. Subsidies for export promotion may not be available after graduation but other subsidies for regional development, R&D; environment etc. may be used more extensively for competitiveness development of exportable products.

2.2 BANGLADESH TRADE AND INDUSTRIAL POLICIES IN RETROSPECT

When it comes to trade and industrial policy Bangladesh began its development journey burdened by the legacy of past policies. It inherited highly restrictive trade policies that carried import substitution strategy to its extreme through high protective tariffs and import bans on a wide range of importable commodities. At independence since the economy was devoid of any foreign exchange reserves, this strategy was thought to be appropriate for saving precious foreign exchange and ensuring a sustainable balance of payments situation. As for the industry, by default, the state became owners of a vast pool of jute, textile and other industries that were owned and operated by Pakistani entrepreneurs who abandoned them as they moved to Pakistan. Furthermore, state ownership of large industry – nationalization – was adopted as national policy in 1972, thereby bringing within the fold of government management many large jute and textiles mills owned by Bangladeshi industrialists. Though private enterprise in manufacturing was still permitted within limits public enterprises dominated the industrial sector thus determining resource allocation, investment and production. Market competition was severely constrained in the presence of public monopolies which, as expected, operated inefficiently, making losses and drawing endlessly from the national exchequer.

Throughout these years, the economy was characterized by slow growth, at a time when other South Asian countries recorded faster GDP growth. The share of manufacturing in GDP, which was 10.2% in 1975-76, was down to 9.8% in 1990-91, without showing much traction in industrial growth. The policy of import-substituting industrialization with high tariffs and import bans produced neither manufacturing jobs nor industrial progress, nor the kind of growth needed to make a dent on the poverty situation. Consequently, in the final years of the 1980s, Bangladesh economy was engulfed in a severe macroeconomic crisis that involved foreign exchange shortages, the balance of payments difficulties, and fiscal imbalances in the domestic economy. Structural reforms were long overdue if the economy were to survive.

Indeed, the economy turned a page in the 1990s by undertaking structural reforms that included denationalization program, further liberalization of agricultural input markets, engaging in financial sector reforms, streamlining monetary policy to reduce inflation, all combined with de-regulatory measures to enhance the role of private sector enterprises. Trade policy changed direction towards outward orientation, with tariff and import liberalization, exchange rate flexibility, current account convertibility, including a host of supporting measures that encapsulated a strategy of export-led growth. All of these reforms in the 1990s together contributed to the lift-off in GDP growth of Bangladesh.

By the close of the 1990s, Bangladesh economy was included among a select group of developing economies described as “globalizers” by the World Bank. A 2004 World Bank study of developing countries found that, unlike non-globalizers, countries that were “globalizers” experienced growth

acceleration as well as poverty reduction in the 1990s[3]. This was also Bangladesh's experience starting from the 1990s decade. After unsuccessfully targeting 5% GDP growth for the first two decades post-independence, for the first time GDP growth in the 1990s averaged 5% for the decade while export growth for the first time crossed double digits averaging 12%. Particularly the period of 1996-2001 experienced a robust growth in export led growth of Bangladesh economy due to trade liberalization. Being a founding member of the WTO that was established in 1995 gave reasonable prediction and market stability in the world with preferential market access by developed nations.

During the first decade of the 21st century, industrial and trade policies evolved around the basic tenets of a free market economy with generous bits of government intervention in regulatory control of the economy while the private sector was acknowledged as the key driver of the economy as far as production and investment activities were concerned. Despite some occasional political setback, export-led growth took on a new meaning for the Bangladesh economy with the emergence of readymade garments (RMG) as the leading export industry overtaking jute and jute goods as the primary export product of the country. RMG exports overtook jute and jute goods as the predominant export item reaching 70% share in the export basket by close of the 1990s. During the period of the 6th and 7FYP RMG march continued with increasing export concentration, introducing export vulnerability on that account, though Bangladesh emerged as the No.2 exporter of apparels after China, with Vietnam now a close No.3 posing serious competition in US and EU markets, the competition that is likely to become even more acute as Vietnam has signed an FTA with EU and joined the recently established plurilateral free-trade club of East Asia and the Pacific, Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

Table 2.1: Trade and Tariff Policy Trends during 6th and 7FYP

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Average NPR	23.74	26.96	28.93	28.09	26.69	25.60	25.64	26.55	26.70	26.75
Average Output Tariff (*)	41.29	43.49	46.82	45.98	43.16	41.32	40.55	38.79	39.64	46.43
Average Input Tariff (**)	12.5	12.72	13.02	12.17	12.02	11.63	12.13	12.57	12.03	13.52
Exports ($ billion)	22.9	24.3	26.6	30.2	31.2	34.2	34.8	36.6	39.6	32.8
Export growth	41.5	6	9.3	13.6	3.4	9.7	1.7	5.2	8.2	(-) 17.2
Imports ($ billion)	32.5	33.3	33.6	36.6	37.7	39.9	43.5	54.5	55.4	50.7
Import growth	52.1	2.4	0.8	8.9	3.0	5.9	9.0	25.3	1.7	(-) 8.5

Source: BBS; GED estimates based on NBR data;
Notes: NPR=Nominal Protection Rates; (*) Output tariffs refer to NPR on mainly consumer goods; (**) Input tariffs refer to NPR on basic raw materials, intermediate and capital goods.

[3] *Trade, Growth and Poverty*, David Dollar and Art Kray, 2014

Table 2.2: Industrial Sector Performance 6 FYP

	FY11		FY12		FY13		FY14		FY15	
	Share	growth	Share	growth	Share	Growth	Share	growth	Share	Growth
Manufacturing	17.7	10.0	18.3	10.0	19.0	10.3	19.5	8.8	20.2	10.3
Industry	27.4	9.0	28.1	9.4	29.0	9.6	29.6	8.2	30.4	9.7
GDP growth		6.5		6.5		6.0		6.1		6.1

Source: BBS

Table 2.3: Industrial Sector Performance 7FYP

	FY16		FY17		FY18		FY19		FY20	
	Share	growth	Share	growth	Share	Growth	Share	growth	Share	Growth
Manufacturing	21.01	10.30	21.74	10.97	22.85	13.40	24.08	14.73	24.18	5.84
Industry	31.54	10.10	32.48	10.5	33.66	12.06	35.00	13.02	35.36	6.48
GDP growth		7.1		7.3		7.9		8.2		5.2

Source: BBS

Progress during 6FYP and 7FYP: With the launch of the 6FYP began the most prosperous decade of Bangladesh's development experience. Both the 6th and 7th Five Year Plans articulated trade and industrial strategies and approaches that were designed to generate high rates of growth with macroeconomic stability. Internal and external macroeconomic stability having been maintained, for the first time Bangladesh experienced 7-8%+ annual GDP growth during the 7FYP. In contrast to the average GDP growth that increased by roughly one percentage point each decade until FY2010, average annual GDP growth rose by one percentage point every five years during the 6th (6.3%) and 7FYP (7.6%). The share of industry in GDP rose from 27% in FY2011 to 35% in FY2019, with the share of manufacturing rising from 18% to 24% during the same period (Tables 2.1-2.3). Manufacturing growth averaged 10% during the 6th Plan and 12.3% during the 7th Plan playing the principal driver of growth acceleration.

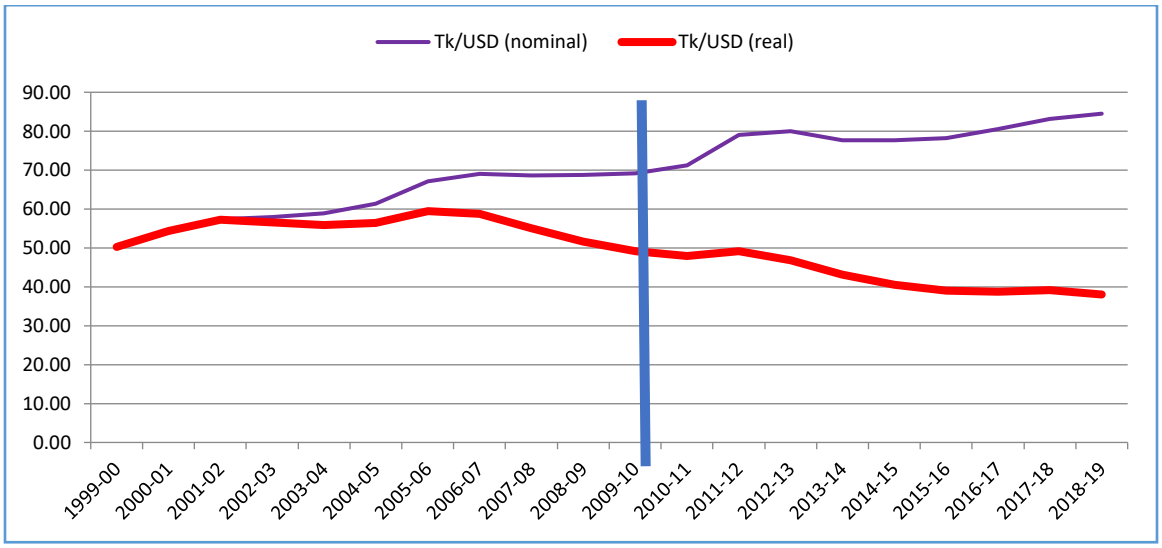
However, trade policy stance remained practically unchanged after some modest reforms in tariffs and customs practices during the first decade of the 21st century. The economy reaped the benefits of trade liberalization and deregulation in industrial investment. Trade and tariff liberalization of the 1990s soon gave way to the compensating emergence of para-tariffs in the form of Regulatory Duties (RD) and Supplementary Duties (SD) thus leaving average nominal and effective protection levels practically unchanged for much of the decade (Table 2.1). Though export performance could have been far more dynamic with CAF-based export-oriented trade policies proposed in the two Plans but left largely unimplemented, average double-digit growth of 11.2% was still maintained boosted mainly by the 41.5% growth spurt recorded for FY2011. For much of the 7FYP export growth was sluggish averaging a mere 6.8% until FY2019.

Though trade liberalization and export-led manufacturing growth became the principal strategy of growth, a fundamental conflict emerged between trade and industrial policies since the close of the 1990s decade. The industrial policy made no particular distinction between export-oriented industries and import-substituting industries in incentivizing "thrust" sectors. The promotion of "winners" was based primarily on current successes and presumption of potentially successful industries. Though average tariffs were

falling moderately, the decline was mainly due to a reduction in input tariffs while output tariffs remained stubbornly elevated resulting in persistently higher effective rates of protection. In comparison incentives for exports (through subsidies or concessional credits) were no match to the higher levels of protection to import substitutes. Thankfully, the RMG sector remained largely outside the ambit of the tariff regime because of the free trade regime they enjoyed though Special Bonded Warehouse facility that ensured inputs at international prices. Compared to the non-RMG exports, the RMG sector suffered no such handicap and continued with double-digit export growth until the end of the 6FYP.

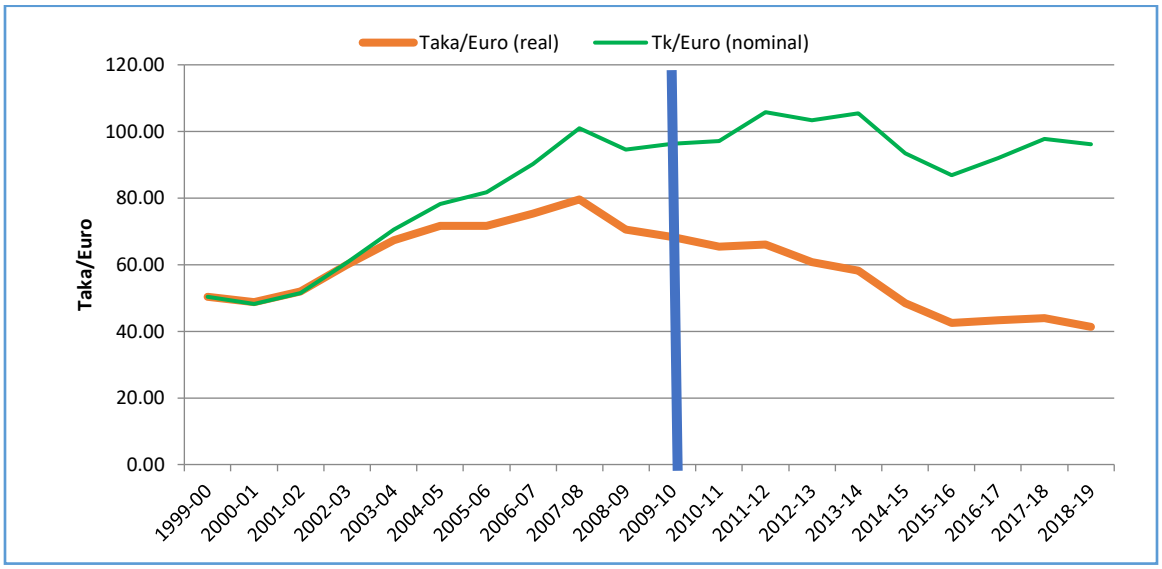
Appreciation of the real exchange rate: A major factor underlying the weakening of export performance during the 7FYP was the cumulative effect of appreciation of the real exchange rate since 2006. The Taka appreciated by 36% in real terms against the US dollar over the periods 2005-06 and 2018-19 (Figure 2.1). The appreciation against the Euro happened a couple of years later from 2007-08. From then until 2018-19, the taka appreciated by 48% in real terms (Figure 2.2). This extra appreciation against the Euro reflects the fact that Taka is loosely pegged with the US dollar, which has strengthened significantly against the Euro. The resultant appreciation of the dollar also transmitted into an additional source of taka appreciation against the Euro. These appreciations of the Taka in real terms against the two dominant global currencies where Bangladesh conducts much of its export trade was a real problem that substantially hurt export prospects and stemmed the diversification of exports.

Figure 2.1: Bangladesh-US Dollar Nominal and Real Exchange Rate Trends



Source: GED estimates based on BB data

Figure 2.2: Bangladesh Taka-Euro Nominal and Real Exchange Rate Trends



Source: GED estimates based on BB data

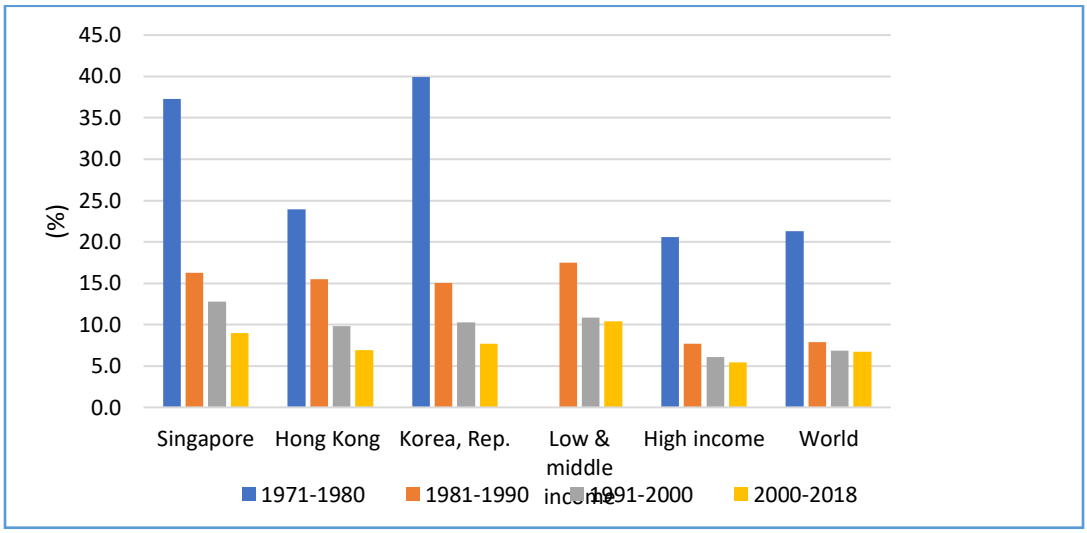
Based on the available evidence, the conclusion is that the large anti-export bias of trade protection and the additional substantial loss in export competitiveness owing to the appreciation of the real exchange rate basically rendered the cash subsidies and other fiscal incentives for exports as ineffective instruments of export growth and diversification. Export growth plummeted since FY2017 and is yet to recover its long-term trend of the past. Proper management of the exchange rate to boost exports will be a major policy focus of the 8FYP.

2.3 LESSONS OF INTERNATIONAL EXPERIENCE

In planning trade and industrial strategies for the next five years, Bangladesh can learn from the positive experience of developing economies that adopted trade and industrial strategies that yielded huge dividends in terms of rapid growth and poverty reduction. Notable among these are once the East Asian Tigers (i.e. Korea, Taiwan (China), Hong Kong (China), Singapore), high-performing economies of Malaysia, Thailand, Indonesia, China, and, more recently, Vietnam. Figure 2.3 gives a picture of the extraordinary export performance (in manufacturing goods) of the East Asian Tigers during the 1970s, 1980s, and 1990s. China surpassed their performance in export growth in the 1980s, 1990s, and thereafter. Vietnam is a new entrant to the club of high export performers. From poor developing economies in the 1960s, the East Asian Tigers joined the ranks of developed countries in about 50 years.

The development paradigm of export-led growth emerged out of the experience of the high-performing East Asian countries which led other developing countries to adopt strategies of trade openness with CAF-based export orientation, departing – some more speedily than others - from the previous policies of CAD-based import substituting industrialization. To pursue this change of direction in trade and industrial policies LDCs and other developing countries received guidance and financial support of multilateral agencies like the World Bank and IMF.

Figure 2.3: Growth Rates of Manufactured Exports (%) of East Asian Tigers



Source: World Development Indicators (WDI), World Bank

Research by leading trade and development economists reveal two strains of policies pursued: (a) openness to international trade based on largely neutral incentives between exports and import substitute production, and (b) selective industrial policy interventions, which often used trade policy instruments, in order to shift industrial structures towards newer and more modern sectors to capture opportunities from dynamic scale economies in the global marketplace. During their heavy and chemical industries (HCI) programmes, Japan and Korea were the most active in promoting individual industries and sectors. Singapore and Taiwan have also actively provided incentives for technological upgrading. Malaysia had an HCI program reminiscent of Japan's and Korea's, while Indonesia has attempted to leapfrog from labour-intensive manufacturing to high-technology industries such as machineries and electronics.

Early writing on trade policy and growth stressed the benefits of neutral incentives between production for the domestic market and production for export. With neutral incentives, it was argued; resources would flow to sectors in which the economy was most internationally competitive. Later theoretical work shows that, where market power, economies of scale, learning, or externalities are significant, departures from neutral incentives to favouring export production improves export performance. As far as government intervention is concerned, evidence shows that, on the one hand, government efforts to promote specific industries generally did not increase economy wide productivity. On the other hand, broad government support for exports was a highly effective way of enhancing the absorption of international best-practice technology, thus boosting productivity and output growth.

The review of East Asian countries trade and industrial policies indicates that most of the East Asian countries began industrialization with a protectionist orientation and have gradually moved toward increasingly free trade. Along the way, they often tapped some of the efficiency generating benefits of international competition through mixed trade regimes: they granted exporters duty-free imports of capital and intermediate goods while continuing to protect consumer goods. Since they had no control over export prices which were set in the international market and were often substantially less than current marginal or average costs the strategy was to ensure that profits in the protected market offset losses on export production. Nevertheless, export policies leveraged competition in the international market to ensure that

firms did not suffer from loss of cost discipline. Subsequently, all the high-performing East Asian countries reduced their protection of import-substituting industries, thus virtually eliminating any remaining ant-export bias of policy. What is notable is that even during the hay days of protection, effective rates of protection were much lower than what is in Bangladesh today.

Most East Asian countries made export performance the standard by which all economic activity would be judged. Even firms benefiting from higher than-average rates of protection in the domestic market understood that in the near future they would be forced to compete in world markets. Sustained reduction in import protection sent a similar message to producers in the Southeast Asian newly industrializing economies. Governments were credibly committed to export competition. Exports were important because they ensured that productivity growth would be facilitated by the improved ability to tap international knowledge. Import substitution was quickly accompanied by the promotion of exports and duty-free admission of imports for exporters. The result was limited differences between international relative prices and domestic relative prices. Market forces and competitive pressures guided resources into activities that were consistent with comparative advantage and, in the case of labour-intensive exports, laid the foundation for learning international best practice and subsequent industrial upgrading. The experience of China and Vietnam is highlight below and in Figure 2.4.

2.3.1 China's Strategy of Economic Development Post-1978

From the position of a poverty ridden large society until the 1970s, the emergence of the Chinese economy as a major global player within three decades of pro-market and pro-global reforms is the most striking example of successful economic strategy in the 21st century so much so that it is being described as "the world's factory" for creating the largest manufacturing hub in the world. This spectacular rise of China in becoming the top exporter of the world perhaps belies the record of the East Asian Tigers and is worth a careful review by all developing economies aiming at growth acceleration and poverty reduction in the shortest possible time. Bangladesh can surely attempt to take a leaf or two out of the Chinese book.

According to the 2013 World Bank report, *China 2030- Building a Modern, Harmonious, and Creative Society*, the key features of China's development strategy post-1978 that produced export surge, rapid growth and poverty reduction comprised the following:

Pragmatic and effective market-oriented reforms: One key feature of these reforms was their "dual-track" nature—supporting state-owned firms in old priority sectors while liberalizing the entry of private enterprises.

Balancing growth with social and macroeconomic stability: The unstable economic situation that prevailed prior to 1978 reform phase made economic growth an urgent priority. A mix of fiscal, administrative, and employment policies helped to maintain social stability during this period of rapid economic and structural change. The restructuring of SOEs created massive displacement of labour that had to be rehabilitated in alternative employment.

Domestic market integration: Policies were undertaken to restrict the regional barriers to the movement of goods, labour, and capital and the establishment of a single national market. Infrastructure development projects to improve connectivity via roads and coasts were prioritized to help markets grow.

Steady integration with the global economy: The establishment of special economic zones and accession into the World Trade Organization (WTO) helped China expand its economic integration with the global economy.

Value Chain Integration: The country evolved from a somewhat closed and guarded economy to a highly integrated manufacturing hub for the global value chains (GVCs) by implementing policies to attract foreign investment and promote trade facilitation. Over the years, China invested heavily in transportation, internet, information and communication technology (ICT) related infrastructure. Integration into GVCs helped improve firm productivity and competitiveness. As a result, today China is one of three main global manufacturing hubs; besides the US and Germany.

Asian economies are tightly linked with China through regional supply chains. McKinsey Global Institute finds that value chains are becoming more regional and less global. This development is particularly noticeable in Asia. China is the largest trading and investment partner of Malaysia, Singapore, and the Philippines. In recent years, China's role in international trade has begun to shift. China is moving into higher value-added sections of the GVCs.

2.3.2 Vietnam – Manufacturing Miracle

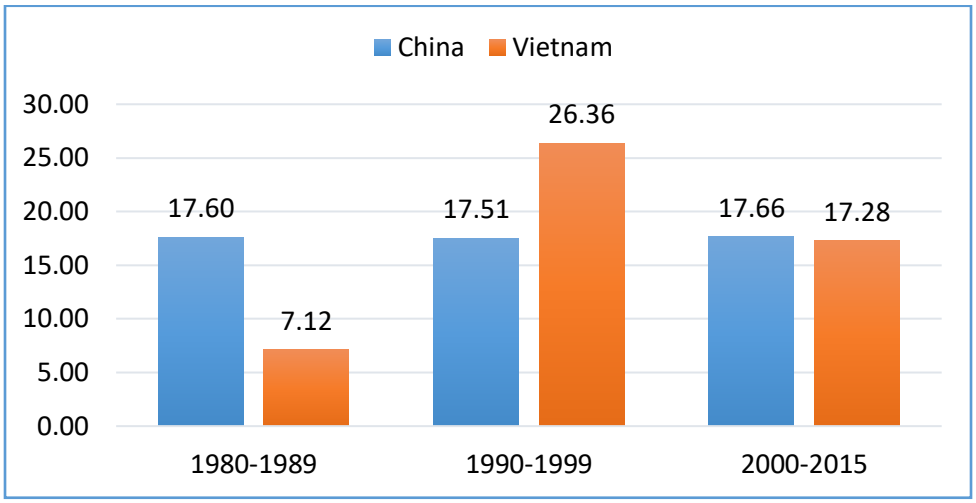
Worldwide, one in 10 smartphones is produced in Vietnam today. Mobile phones are Vietnam's number one export, generating export revenues of more than $50 billion in 2019. Globally, Vietnam is among the most open economies with a trade-to-GDP ratio of 190 percent in 2018. Through the removal of both tariff and non-tariff barriers and fulfilling its commitment in several regional and global trade agreements, the country has made remarkable achievements in trade liberalization and integration with the largest trading blocs in the world.

There is something unique about Vietnam's development strategy. At a time when global trade has stagnated, Vietnam's trade has soared to 200 percent of GDP in 2018 from 70 percent in 2007. By leveraging the world economy, Vietnam's manufacturing sector has steadily expanded, adding an estimated 1.5 million new manufacturing jobs between 2014 and 2016 alone.

Manufacturing witnesses a renaissance in Vietnam, while relapsing in many parts of the world. Given the recent clarion call by several world leaders to create manufacturing jobs in their countries, Vietnam's experience holds lessons for developing and advanced economies alike.

Vietnam succeeded in sustaining strong export growth based on its strong foundations through good policies. First, it embraced trade liberalization with gusto. Second, it complemented external liberalization with domestic reforms through deregulation and lowering the cost of doing business. Third, it welcomed FDI with open arms without conditions or restrictions. Finally, Vietnam has invested heavily in human and physical capital, predominantly through public investments. These lessons—global integration, domestic liberalization, courting FDI, and investing in people and infrastructure – are worth emulating for developing countries.

Figure 2.4: Export Growth in China and Vietnam (1980-2015)



Source: World Development Indicators (WDI), World Bank

First, trade policy has arguably been the most important industrial policy for Vietnam. With Singapore, it shares the top spot in East Asia of being a member for bilateral and multilateral free trade agreements. A signatory to 16 bilateral and multilateral free trade agreements, Vietnam is a member of the World Trade Organization, ASEAN, and has concluded bilateral agreements with the U.S.A, Japan, South Korea, the EU, and the Eurasian Customs Union. Earlier this year, it became one of 11 countries to join the revived CPTPP.

These trade agreements dramatically reduced tariffs, anchored difficult domestic reforms, and opened much of the economy to foreign investment. It is estimated that more than 10,000 foreign companies—including major global players such as Samsung, Intel, and LG—operate in Vietnam today, mostly in export-oriented, labour-intensive manufacturing.

Second, Vietnam has leveraged its demographic dividend through effective investment in its people. Vietnam's efforts to promote access to primary education and to ensure its quality through minimum quality standards have paid off.

Third, focus on competitiveness and the ease of doing business. Vietnam has made steady progress in improving its investment climate, as evidenced by higher scores in the 2018 World Economic Forum's competitiveness index (up five points to 55th in the world), and the 2018 World Bank's ease of doing business ranking (68th in the world, up 31 places since 2014). Vietnam also reduced the corporate income tax rate to 20 percent from 32 percent in 2003.

Finally, Vietnam invested in infrastructure, especially in the power sector and connectivity. Thanks in part to high public investment, power generation, transmission, and distribution capacity have been scaled up to meet rapidly rising demand.

Overall, Vietnam's manufacturing sector remains relatively small. Most of the sector is driven by foreign direct investment (FDI), which accounts for close to 90 percent of manufacturing exports. Many of the newly created jobs in manufacturing are in basic assembly which requires manual labour but does not

necessarily add a lot of value (per worker). Moreover, as wages inevitably rise, Vietnam's current comparative advantage in low-skill, labour-intensive industries will start to dissipate, a trend that may be amplified by new labour-saving technologies and automation. Vietnam's recent ascension to the ranks of global manufacturing hubs offers lessons on the potential of export- and manufacturing-led growth.

The take away: When it comes to trade and industrial policy the high-performing economies of East Asia including China left an indelible mark on development policies pursued until the present day. Vietnam, a latecomer, has taken export orientation to the extreme with its export-GDP ratio now crossing 100% and its trade-GDP ratio approaching 200%. What is common in the development strategies of all these economies is the leveraging of global markets through greater trade integration to provide impetus to industrialization and massive job creation at home. One common strategy across all East Asian Tiger economies was to ensure that, on balance, incentives to export production remained above those designed for production for the domestic market. This is contrary to the orthodox prescription of maintaining neutral incentives between the two markets. Industrial protection existed but was never high enough to undermine export incentives or create significant anti-export bias. In the case of industrial policy, "selective industrialization with significant government intervention" approach taken by Korea (heavy and chemical industries), Taiwan, and Malaysia, did not produce intended results and were ultimately abandoned by all. Departure from the age-old strategy of import-substituting industrialization (ISI) to export-led industrialization was clearly the predominant strategy. With the rise in global value chain integration and the explosion of trade in parts and components Vietnam brought in the added approach of FDI-led investment and export orientation so much so that in 2018, 90% of Vietnam's manufacturing exports were driven by FDI. All three lessons – incentives favouring export production over import substitution, the paradigm of export-led growth, and FDI-driven manufacturing exports – are worth drawing from in articulating a medium- to long-term development strategy for Bangladesh.

Finally, it is important to reflect on the limited but effective role state intervention played in these economies. Markets are powerful forces but they are not perfect; institutions are needed to make them work efficiently and Government interventions are needed to improve on market outcomes. In their approach to development, there was always a supportive though a market-facilitating role for the state with the pivotal responsibility of providing a stable macro-economy with clear rules of the game, opening the economy fully to international product and factor flows, giving the lead role to private enterprise, and furnishing essential public goods like basic human capital and infrastructure.

2.4 8FYP TRADE POLICIES FOR MANUFACTURING DEVELOPMENT

In the globalized world of today, trade policies are recognized as the major instruments for industrial development. In fact, industrial and trade policies are often two sides of the same coin. Broadly defined, industrial strategies are of two kinds: export-oriented industrialization and import-substituting industrialization, depending on which market – foreign or domestic – is the preferred destination of production. Trade policy is the major instrument used in steering the direction of industrial development towards foreign and/or domestic markets.

For much of the next quarter-century, the bulk of job creation in Bangladesh will be taking place in a diversified manufacturing sector that is globally competitive, export-oriented, and focused on breaking into emerging markets while expanding its market share in developed economies of the world. The

Government's Sixth and Seventh Five Year Plans, the Perspective Plan 2010-21 and the Perspective Plan 2041 already laid out the blueprint for trade and industrial policies for growth acceleration through outward-orientated trade policy regime. The strategies for outward-orientation of trade policies in order to ensure export-led or trade-led growth will have to be activated in full during the 8FYP. However, the reform agenda in this area remains unfinished and more will have to be done particularly as we approach the stage of graduation out of LDC status in 2024. Policies have to be put in place that ensures CAF-based export competitiveness on the one hand, and restores the balance of incentives between production for exports and import substitute production for sale in the domestic market on the other. There is little doubt that "preference erosion" in the post-graduation scenario is expected to unleash the strongest forces of competitiveness in the global market. That calls for stronger measures to raise productivity, efficiency, and competitiveness of Bangladeshi products – mostly manufacturing, but agro-processed (e.g. jute goods) and agricultural products could be no less competitive.

Trade Policy Strategy for Industrialization and Growth

Once the world economy has gone past the COVID-19 pandemic Bangladesh's future industrial prospects will be intricately linked to the projected trends in (a) global and regional trade in a highly competitive environment, (b) the future of globalization, and (c) the evolution of trade policies determined by the transformation of manufacturing and services of the future, during the 8FYP which is also a preparatory period of LDC graduation, it is imperative to develop an integrated strategy for future growth and job creation for Bangladesh building on the interplay of these three interlinked and strategic forces that can fuel economic growth and propel Bangladesh comfortably across the finishing line of LDC graduation that also straddles the end-year of the 8FYP.

Focus and principles of industrial policy: Structural change in Bangladesh has been consistent with the stylized facts of growth – where the share of industry in GDP rises at the expense of agriculture. Sound industrial policy is needed to make industrialization work for job creation and growth. Industrial policy has worked in countries such as Singapore, Ireland, Taiwan, Malaysia and S. Korea, who managed to direct the market into sectors using clustering and targeted technology complemented with human resource development. Over time, a more pragmatic view about the effectiveness of industrial policy is emerging: industrial policy is important in theory and practice and it is possible to identify a set of design principles behind effective industrial policy. Bangladesh does commit to an industrial policy periodically, so it is important that we should examine what makes good industrial policy that helps to promote growth and productivity change.

To sustain and boost industrial dynamism during the 8FYP, a two-pronged approach is needed and it is broadly on track though some shortcomings remain:

a. ***Growth acceleration will be driven by export-oriented industrialization along with promoting the domestic market demand*** that is globally competitive and based on the country's dynamic comparative advantage, such that industrialization is employment-intensive with evolving skill-intensity consistent with technological sophistication of the Fourth Industrial Revolution (Industry 4) thus paving the way for greater export diversification and domestic market expansion based on competitiveness. Recognizing that export and protection policies are not mutually exclusive, the objective will be to strike a harmonious balance between the two policies by modernizing and rationalizing export

incentives and protective tariffs in addition to completing the unfinished trade reform agenda with emphasis on the trade facilitation component of customs administration modernization.

b. ***Private sector will remain the driver of growth*** and, to this end, creating an investment-friendly environment by transforming the state's role as a facilitator of economic and investment activities, strengthening economic and political governance, including the interaction of the state with the private sector; improving law and order; addressing the critically constraining infrastructure bottlenecks (in power, overland and port transport, and communications); establishing a sound and well-functioning financial sector; and addressing other barriers to productivity growth and international competitiveness.

With growth acceleration for faster poverty reduction as the desired goal, Bangladesh's private sector complemented by facilitating state apparatus will have to pursue the following strategies in a world market that will get more competitive by the day:

Seek global markets: We are living in a world that is transforming at speeds almost incomprehensible to the average mind. Unlike historical growth rates experienced in the past centuries, it is now possible for developing economies like Bangladesh to grow at 7, 8, 9, or 10 percent annually. This is because of the enabling effect of a rapidly integrating global economy. The global economy provides two things. One is a huge market which is getting more integrated over time. Provided an economy has some competitive edge – and Bangladesh does -- it can basically grow as fast as it can invest and build productive capacity. The second thing— even more important—is that the global economy provides knowledge, technology, know-how. Globalization coupled with the instantaneous transmission of digitized information results in acceleration and augmentation of the flow of knowledge, technology, and learning. Properly harnessing these global forces will enable Bangladesh to grow at higher a rate in future that was simply not possible before.

Given Bangladesh's enormous challenge for creating roughly 2 million jobs annually, there is no option but to creating bridgeheads in the global market for our exports. Given the small size of its domestic economy, Bangladesh needs to expand its exports of goods and services in order to move to a higher growth path and grow out of poverty. The domestic market, despite its continual expansion, is still no match for the vast global market place of $80 trillion Capturing pieces of that market, beyond EU and North America, into China, India, and the Asia Pacific region to top $100 billion of exports by 2025 will have to be the target to reach.

Enhance productivity: Over the next five years or so Bangladesh must be ready to face unbridled competition in the global marketplace as significant "preference erosion" will have taken place by then. In the new competitive environment, the key challenge for us will be to raise 'productivity' of our firms and industries/sectors within the framework of sound macroeconomic management**.** Bangladesh has roughly five years to climb appreciably up the ladder of World Bank's Ease of Doing Business (EDB 2019) where it is behind most of the comparators. Economic governance and regulatory environment have to be conducive for business and investment-with well-functioning factor markets, efficiently run infrastructure services, easy market entry/exit, enabling regulatory environment and bureaucracy, access to information, and strong competitive pressures--would allow firms to become more productive, competitive, dynamic, and innovative. Such an environment accentuates competitiveness of exporting firms. It extends beyond comparative advantage (based on cheap labour) and shifts to competing on the basis of competitive advantages. Keeping this in mind, "Bangladesh National Productivity Master plan FY2021- FY2030"

prepared by National Productivity Organization under Ministry of Industry needs to be implemented. Considering the importance of productivity Government has declared to observe the 2nd October as the National Productivity Day every year.

Strive for diversification and competitiveness: This is what Bangladesh needs to strive for in the coming years for promoting export diversification and competitiveness. Given that there is a significant backlog of incomplete reforms, there is indeed an urgency to act fast in addressing the priority policy and institutional constraints to improving Bangladesh's competitiveness. First, global markets are undergoing rapid technological transformation and trade integration with mooting competitive pressures. There is no option for Bangladesh but to strengthen its competitiveness and diversify its export in order to improve our export performance to engender faster growth. Second, though Bangladesh has become a global player in RMG it has to be ready to cope with stiffer competition once it loses preferential access to its leading export market – the EU. The RMG industry has indeed matured with some of the world's greenest factories (top 3 eco-friendly and 7 of the top 10 garment factories in the world are in Bangladesh). Nevertheless, the industry must remain on the alert to keep in step with technological innovations taking place that could undermine Bangladesh's competitive edge unless all efforts are made to at least march in step with the industry leaders around the world. Finally, the potential for export diversification needs to be fully exploited. Bangladesh has a mono-product export basket with 83% of her exports made up of RMG. Yet, over the past 10 years, Bangladesh has been exporting non-RMG goods numbering 1000 to 1300 products (at HS6-code level) mostly under $1 million in value (75% of non-RMG exports in FY2018).

With LDC graduation looming large, the severest degree of competition will be unleashed over the next 5 to 10 years. Preparation for that stage must be done in earnest now. Given the current state of trade orientation, there are two areas in which the country faces serious challenges: (a) making trade policy – internal and external – tilted in favour of exports, and (b) addressing the plethora of behind-the-border obstacles or deficiencies in order to make exports diversified and competitive in the world market based on our comparative advantage. Efforts made towards enhancing international competitiveness and removing anti-export bias will eventually pay off. It is therefore critical that concerted effort is made to improve Bangladesh's competitiveness by addressing both behind-the-border constraints as well as the remaining significant external trade agenda.

2.5 CURRENT TRADE REGIME AND EXPORT PERFORMANCE

The trade policy reforms of the 1990s signalled a significant departure from the highly protectionist, inward-oriented import-substitution policies of the past, some of which were clearly CAD-based (e.g. machine tool and some chemical industries). Trade integration was enhanced along with greater domestic competition, and domestic relative prices were aligned closer to international prices. These reforms were meant to promote efficiency in resource use, lead to productivity growth, spur activities with comparative advantage, encourage technological progress and diffusion and thus generate dynamic gains. The trade policy measures included tariff cuts and rationalization, elimination of quantitative restrictions, adoption of a unified exchange rate system, switching from a fixed to a more flexible exchange rate regime, and current account convertibility. The expectation was that these reforms would be gradually intensified to make Bangladesh a CAF-based export powerhouse in the region with the economy more open and fully integrated with the global market.

Progress in the accentuation of trade liberalization has not been as deep and comprehensive as was needed to give sustainable impetus to Bangladesh's export performance. But with LDC graduation looming large Bangladesh can ill afford to remain complacent. Unless trade policy reforms are taken to the next phase, LDC graduation in 2024 could serve as an adverse shock to the economy. The plan is to move this agenda forward and be fully prepared to face any adverse developments in the global marketplace.

Despite considerable progress in the past decade, the current trade regime appears yet biased in favour of import substitute production Slower tariff reduction and phase by phase elimination of other protective instruments that protect domestic industries create some disincentives to exports and export activities through several channels. It has taken time to recognize that tax and incentive policies have created a situation where production for export is less incentivized than production for the domestic market.

- Almost all domestic production of manufactured consumer goods is protected by tariffs and Para-tariffs. Duties levied on imports of final goods raise their domestic relative prices, thereby increasing the profitability of import substitutes relative to exports, which have to be exported at world prices. This diverts resources towards production for the domestic market, away from the production of exports. For example, the very high protection (85.6 percent to 113 percent) afforded to the ceramics, plastics, and biscuits industry—tableware, kitchenware; footwear, lamps, etc. which, to some degree, are reflected in much higher domestic prices of these products compared to their export prices. The net result is that domestic sales are far more profitable than exports, so exports are discouraged. Almost all of these products have some exports but export potential, which is much higher, is never realized.
- With import demand being curtailed under high protection, import-related (ex-ante) demand for foreign exchange is being curtailed, thus perhaps enabling the exchange rate to be lower than otherwise (i.e., a lower domestic currency price for US$). This would mean that export proceeds, expressed in domestic currency, would be lower than what the exporter would receive. Thus, the exchange rate becomes over-valued as a result of protection making exports less competitive.
- Not just tariff levels, tariff escalation is also high. An escalating tariff structure, with lower tariffs on imports of raw materials and intermediates and higher tariffs on more processed products, raises the *effective protection* for an import substitute above the nominal protection that the same import substitute receives from import duties and other protection. This means that the value-added (processing margins) involved in production for the domestic market will exceed the value-added that would have existed in the absence of any protection, by proportionately more than the nominal protection of the final product. This further increases the anti-export bias. Research shows that the rates of tariff escalation in Bangladesh's tariff structure are among the highest in the world.
- Exporters sell in competitive world markets and cannot pass on increases in their costs of production to their buyers. Thus, import duties paid on imported inputs increase their production costs and reduce their profit margins. Similarly, if they buy their inputs from local producers, again there may be cost raising effects due to protection and/or lack of local competition.
- To counter the effects of tariffs on inputs and ensure supply of inputs at international prices, the Government has put in place two mechanisms: (a) The special bonded-warehouse (SBW) scheme used largely by the RMG sector and occasionally by others, and (b) the Duty Exemption and Drawback (DEDO) scheme, both managed by the Customs department. The SBW, which allows duty-free import of inputs, is far more effective in a high tariff economy and NBR is working to extend the facility to

other exporters as well. DEDO, which involves reimbursement of tariffs already paid on inputs, has proved dysfunctional and cannot be relied on to make exports competitive.

Anti-export bias remains high. Research shows that high tariff protection is the main source of anti-export bias**.** Export success so far has been limited to readymade garments (RMG) without much traction in other labour-intensive exports. Among other things, there is an inherent conflict between export policy and protection policy, which are not mutually exclusive. This needs to be recognized and actions need to be taken to streamline these policies. Table 2.4 shows Bangladesh's low ranking in reducing high trade tariff. High tariffs raise the relative profitability of domestic sales compared to exports, thus discouraging production for exports. Thus, there is an inherent bias of incentives skewed in favour of import substitute production rather than exports. This has to change.

Table 2.4: Bangladesh Rank, Average Tariff Ranking of Bangladesh in Relation to Other Developing Countries 2018 (Rank higher for lower tariff)

COUNTRIES	ALL PRODUCTS (IN ASIA)	MANUFACTURING (IN WORLD)
BANGLADESH	4	19
INDIA	10	74
PAKISTAN	5	25
SRI LANKA	12	82
VIETNAM	16	90
MALAYSIA	22	102
THAILAND	14	84

Note: *All products tariff rankings are based on Asian countries (46 countries); Tariff ranking in manufacturing is based on world ranking of tariffs (182 countries); Ranks higher for lower tariffs*
Source: ITC database, Indexmundi trade statistics, 2017-2018

Tables 2.5-2.7 show that our tariffs compare unfavourably with the average rates for different country groups based on various standard classification criteria.

Table 2.5: Average Tariff Rates by WB Country Classifications

Country Categories	Average Tariff Rate (%)
Low-Income Countries	11.0
Lower Middle-Income Countries	7.2
Upper Middle-Income Countries	3.7
High-Income Countries	2.0

Source: World Bank Tariff Tables, 2018

Table 2.6: Average Tariff Rates of Countries by UN Classification

UN country classification	Average tariff	Minimum	Maximum
Developed/ OECD Countries	2.06	0.2 (Iceland)	5.8 (Chile)
Developing Countries	6.53	1.1 (Turkmenistan)	25.7 (Bahamas)
Least Developed Countries	8.41	3.4 (Bhutan)	19.6 (Djibouti)

Source: Compiled from UN country classifications (2014) & World Bank tariff data, 2018

Table 2.7: Simple Average MFN Applied Tariffs of Selected Comparator Countries

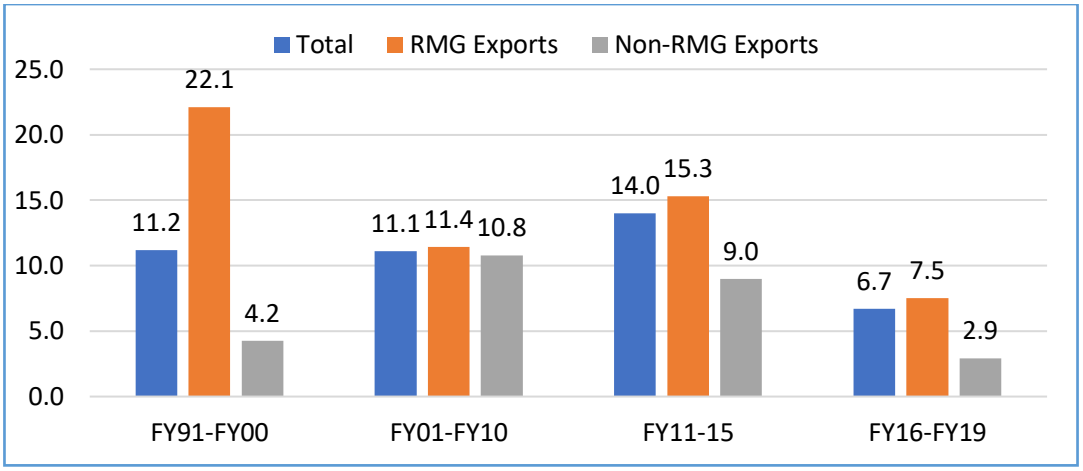
Country	Average tariff
Bangladesh	13.5*
Vietnam	9.5
Thailand	9.6
Malaysia	5.6
Philippines	6.2
Indonesia	8.1
India	17.1
Sri Lanka	9.3

Source: World Tariff Profiles 2019, World Trade Organization, ITC 2019 and UNCTAD 2019;

(*) Average CD only, excludes para-tariffs of another 13%.

In conclusion, though Bangladesh's export performance was boosted by the trade liberalization program of the 1990s clocking double-digit growth for a quarter-century, by the end of 6FYP export growth faltered owing to renewed trade protection and exchange rate over-valuation (Figure 2.5). This situation needs to be reversed with a concerted effort – a combination of trade and industrial policies and competitive exchange rate – to regain the export momentum of the past. Policies and actions need to be directed towards exploiting the latent potential in our exports beyond the RMG sector without losing continued momentum in RMG exports of course.

Figure 2.5: Disaggregated Export Performance (Average annual growth rate %)



Source: Export Promotion Bureau, Various Years

2.6 IMPLEMENTING A TRADE REGIME FOR HIGHER EXPORTS AND DIVERSIFICATION

Having established that the two inter-linked policies of rationalizing the protection structure and sufficiently incentivizing exports needs immediate attention, the 8 FYP articulates the required strategy. Since protection levels are high, any support to export (e.g. subsidies) will have to be high, but such measures will be fiscally unsustainable and will also fall afoul of WTO rules. More complaints will be forthcoming from competitors following LDC graduation. The imperative of being WTO compliant in our trade practices

will be all the more pressing upon graduation from LDC status in 2024. So, there is no option but to rationalize the level and structure of protection to import substitute industries in order to minimize the level of anti-export bias.

The Imperative of Tariff Modernisation: Streamlining trade and tariff policies calls for a five-year program of adjustment culminating in a trade and tariff regime that is reflective of or trending towards a UMIC economy, a goal that is set for 2031 in the Bangladesh Perspective Plan 2021-41. Needless to say, that the current tariff regime, which is replete with para-tariffs for protection purposes and the near absence of tariff bindings on manufacturing products, will have to change after LDC graduation. Both external (opening markets by seizing opportunities of bilateral, regional and plurilateral agreements) and domestic content (eliminating anti-export bias by balancing incentives for exports and domestic sales) of trade policy will have to be revamped to fit the demands of a dynamic global market and an export-oriented trading regime, not to mention the impending structural adjustments that might be unleashed into the manufacturing and service sector by the on-going 4IR.

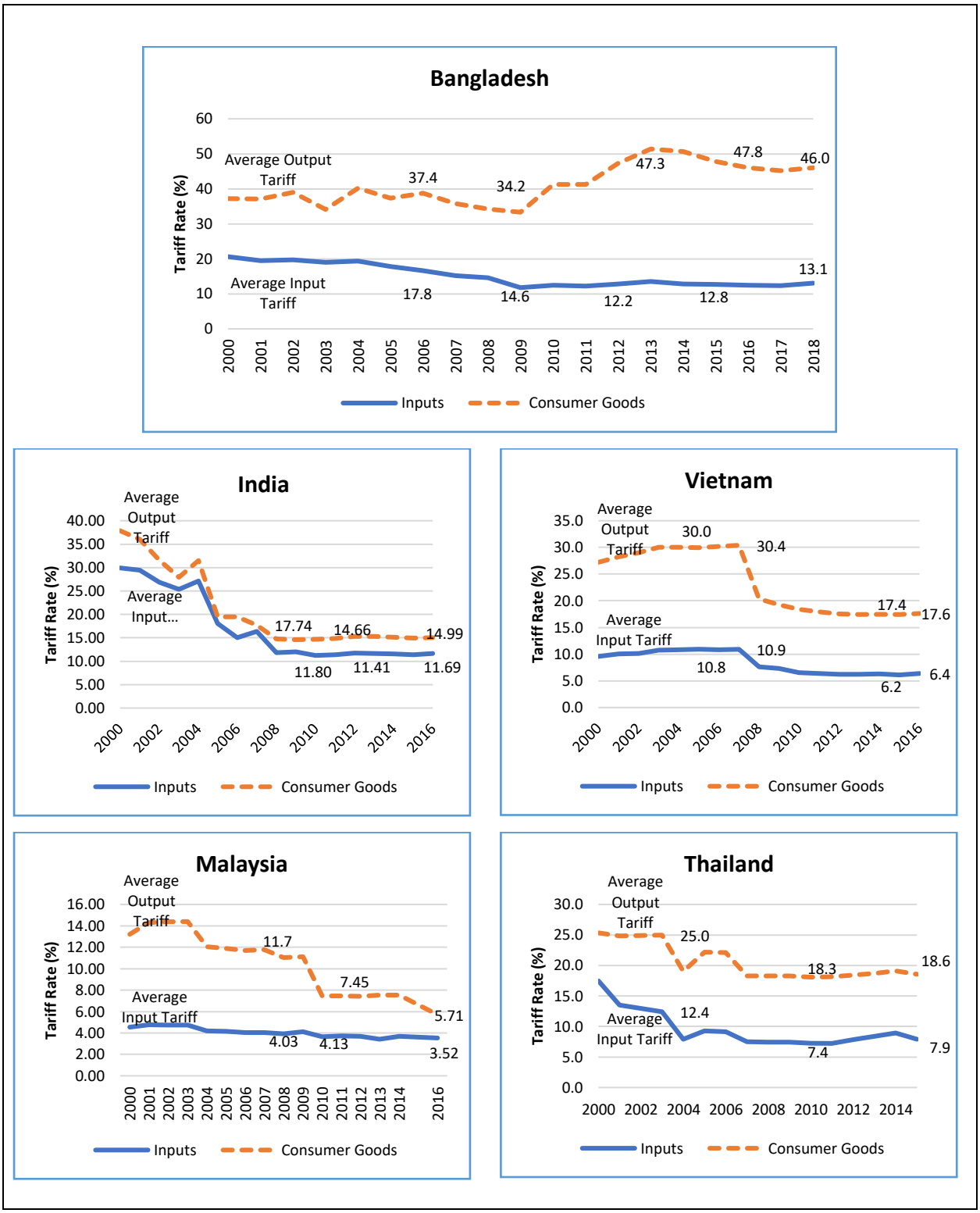
The current tariff structure is archaic and needs urgent reforms. One required priority action is the further rationalization and modernization of the tariff regime. A close examination of the structure of tariffs reveals that the decline in average nominal protection rate (NPR) was due primarily to the reduction in tariffs on basic raw materials, capital goods and intermediate inputs, while the top CD rate remained flat at 25% since FY05, topped up by generous supplement of levies such as supplementary duty (SD) and regulatory duty (RD) – para-tariffs. The trends in nominal protection rates of import categories reveals that in the recent past the average NPR for input categories have been declining rapidly while that of final consumer goods remained practically flat if not increased. The wedge between output and input tariffs has become unusually large, unlike that in any other country (Figure 2.6 and Table 2.8). What is seldom recognized is that this trend of input and output tariffs is unique for Bangladesh and deviates far from the pattern followed by the high-performing economies in East Asia and other comparator countries. Two things to be noted: while the divergence between input and output tariffs (tariff escalation ratio) in comparator countries is low and over time both input and output tariffs trend downwards, Bangladesh tariffs have not followed this trend. Instead, output tariffs have risen while inputs tariffs declined over time. It is also necessary to adjust the tax regime to shift the focus from indirect tax to direct tax for revenue collection sources.

Table 2.8: Tariff Escalation Ratios of Bangladesh and Selected Countries/Regions

Country/Region	Year	Average Input Tariff	Average Output Tariff	Tariff Escalation Ratio
Bangladesh	2018	13.13	45.98	3.50
China	2016	8.33	13.41	1.61
India	2016	11.69	14.99	1.28
Indonesia	2013	5.28	9.20	1.74
South Korea	2015	13.24	12.06	0.91
Malaysia	2014	3.69	7.53	2.04
Philippines	2015	5.01	9.82	1.96
Thailand	2015	7.92	18.59	2.35
Vietnam	2016	6.41	17.59	2.74
Turkey	2016	7.69	10.58	1.38
South Asia	2016	10.66	16.00	1.50
ASEAN	2016	3.65	7.27	1.99

Source: NBR; WITS Database, World Bank

Figure 2.6: Trends in Output and Input Tariffs: Bangladesh, India, Vietnam, Malaysia and Thailand



Source: NBR, TRAINS Database, WITS Various Years

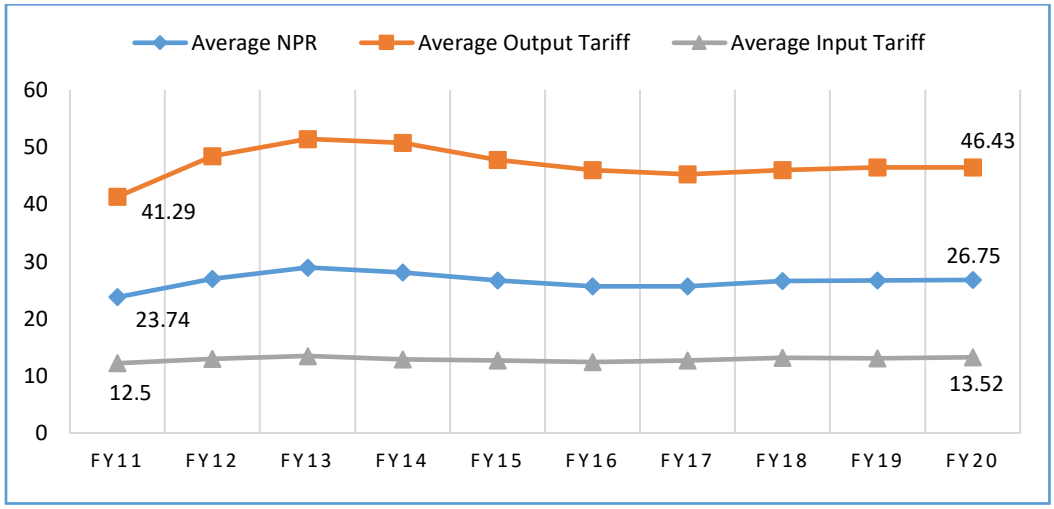
The gaping wedge between the two averages – of input and output tariffs – lasted all through the 6th and 7FYP (Table 2.9). This is untenable and needs to change for the future. There is no justification for tariff escalation -- defined as ratio of average tariff on output over avg. tariff on inputs – to be so high.

Table 2.9: Average Tariff Trends, FY11-20

	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Average NPR	23.74	26.96	28.93	28.09	26.69	25.60	25.64	26.55	26.70	26.75
Average Output Tariff	41.29	43.49	46.82	45.98	43.16	41.32	40.55	38.79	39.64	46.43
Average Input Tariff	12.5	12.72	13.02	12.17	12.02	11.63	12.13	12.57	12.03	13.52

Source: GED estimates based on NBR data

Figure 2.7: Average NPR, Average Input and Output Tariffs



Source: GED estimates based on NBR data

The common perception is that the reduction in input tariffs while keeping output tariffs high makes domestic production of import substitutes more competitive. But the net outcome of this process is higher effective protection to domestic producers over time yielding windfall profits simply through tariffs and without any improvement in productivity or competitiveness. It breeds further inefficiencies in the protected industries. This simply cannot be a long-term protection strategy for an economy seeking a productive and competitive manufacturing sector during the run-up to graduation in 2024.

To continue on a path of sustainable export growth with a diversified basket of goods, Bangladesh faces an immediate challenge to restructure its tariff regime in order to gradually phase out effective protection levels and anti-export bias. In the process, tariff escalation rates would be gradually minimized as the tariff structure trends towards low and uniform rates.

Protection, particularly for those industries that have enjoyed protection for ten years or more, will have to be phased out in five years. Activities that have enjoyed protection for less than ten years will have to be notified that further protection will be made time-bound and performance-based on output/employment or exports.

Addressing the challenges of export diversification: The Government fully recognizes that export diversification has become a major challenge for future trade policy. Export diversification matters because it lowers volatility and instability in export earnings. The Government believes that the strategy of export diversification cannot be limited to product diversification in the export basket. Rather, the strategy must embrace many different facets, each of which addresses the vulnerability aspect of export concentration, as summarized below:

- Product diversification – introducing a range of new products in the export basket.
- Geographical diversification – widening the range of destination markets for exports.
- Quality diversification – upgrading the value of existing products, i.e. moving up market from low end to high-end products.
- Goods-to-services diversification – seeking opportunities to expand non-merchandise exports.
- Intermediate goods diversification – product diversification need not imply adding only final consumer goods in the export basket.

Nevertheless, product diversification is the immediate and major challenge. Export concentration in readymade garments, which now accounts for 84% of our export earning, makes the economy, jobs and income, extremely vulnerable to external shocks arising from changes in global demand for RMG. While Bangladesh's export growth for the last decade and a half could be characterized as robust, a sudden decline in demand for Bangladeshi RMG would send shock waves throughout the economy. Such a prospect can be avoided through the creation of a diversified export basket. Some important non-traditional exports like footwear and leather products, light engineering products (bicycle and electronics), pharmaceuticals, ceramics, jute goods, ocean-going ships, and numerous labour-intensive products have the potential to grow. Thus, product diversification is a key objective underlying the strategy for manufacturing growth.

To gain traction on export product diversification the Ministry of Commerce recognizes the importance of focusing on three aspects of the trade policy regime:

- Ensuring export competitiveness– by addressing barriers (e.g. tariffs, trade infrastructure, energy and telecommunications, regulations, finance, etc.).
- Strategy for reducing anti-export bias of the trade regime.
- Strategy for reducing anti-diversification bias of exports.

The export-led growth philosophy underscores the need for setting up an incentive structure that overcomes the problem of serious policy-induced anti-export bias. The principal route to this 'biases or discrimination is accomplished by altering relative prices of exports and domestic sales. While for exporters it is not possible to influence the world price, import tariffs and quantitative restrictions allow the producers to raise the domestic price of their commodities above the world price. The resultant profitability (and thus relatively high price of import substitutes to export goods) under the shield of protective measures encourages reallocation of resources from the production of exportable to that of import substitutes. Also, policy-induced domestic production may result in increased demand for non-tradable diverting further resources into this sector at the cost of exportable.

The RMG sector escaped this anti-export through the government's creation of a "free trade channel" for this 100% export-oriented sector within an otherwise high tariff regime. Aided by the MFA which gave access to world markets, domestic policies designed exclusively for RMG industry, comprising special bonded warehouse and back-to-back LC, were able to soundly neutralize anti-export bias of a high tariff regime. Replicating these policies for non-RMG exports is the way to go as long as high tariff protection prevails.

At around the end of the 7FYP (FY19), Bangladesh exported some 1400 non-RMG exports (at HS-6 digits) but only a handful reached the volume of $1 billion (e.g. jute and jute goods, footwear and leather goods, home textiles, etc.), though this picture would be different if we include "deemed exports" (backward linkage industries to RMG) where fabrics, yarn and accessories supplies now account for over 60% of RMG exports of $34 billion in FY2019. This is part of the export diversification to be reckoned with. As for other non-RMG exports, the fact that exporting firms (estimated at about 3500) have a choice between producing for exports or the domestic market and find the latter to be far more profitable (i.e. anti-export bias), the incentive to export looks feeble, with the consequence that both the firms and their exports remain small in size (barely 300 non-RMG products exceed $1 million). The critical step needed to break ground on export diversification and to get traction under these policy circumstances is to rationalize the tariff and protection structure to change the current policy tilt in favour of import substitute production. This is the necessary condition for getting progress in export diversification that has been elusive so far.

Going forward, other aspects of efficiency and transparency will have to be added to customs administration which, by 2025, will no longer have a major role in revenue collection because domestic taxes (income tax and VAT) will become the principal revenue instruments. Trade facilitation will be the underlying principle of its existence. Still, protection of specific products through the application of tariff peaks (a high tariff rate) might emerge from time and time and exceptions to the uniform tariff rule would then have to be made as temporary measures. Such a tariff structure will impart minimal distortion to domestic production and trade. Our trade regime must be so formulated as to enable a modern high-tech industrial sector of the future to function with seamless movement of goods and services across borders or via online with least transaction costs.

New directions in trade policy: Some new thinking and new directions in trade policy orientation, with significant departures from past approaches have become the national imperative for successful export-push policies for industrialization in the post-LDC period. These are:

(a) *New approach to protection policy*: High protection for a long period creates inefficiency and undermines competitiveness over the long-term. Consider reviewing protection policy, scale down the level of protection, and institute a mechanism of time-bound protection for import-substitutes.

(b) *Tariff rationalization*: Bangladesh tariffs, nominal and effective protection levels are among the highest in the world. In addition, tariff escalation, and the spread between NPR on output and inputs is too high. Recognizing that a high tariff regime undermines export competitiveness, it is time to seriously start scaling back NPR on domestically produced final consumer goods. NBR must adopt a strategy of lowering average NPRs by 3-5 percentage points every year until 2025, largely by reducing NPR on import-substitute consumer goods.

(c) *Access to world-price (duty-free) inputs must be ensured to all exports*: The spectacular success of RMG industry has not been replicated. A major reason for this is the existence of anti-export bias in non-RMG export production. To replicate RMG success in other labour-intensive production, the facility of duty-free imported inputs must be provided even to firms that export part of their total production. The policy for providing duty-free inputs for export production is not a privilege (or support) but a requirement for all export production in order to be on a level playing field with global competitors who have access to world-priced inputs. Export success calls for a policy environment with no anti-export bias.

(d) *Intermediate goods sector needs a boost*: 98% of Bangladesh's exports are final consumer products with little or no intermediate goods. As high protection is provided to mostly consumer goods, trade and domestic policies have an anti-intermediate goods bias. This needs to change as trade in intermediate goods is the fastest component of global trade. Bangladesh needs to exploit the opportunities created by cross-border production networks to produce and export intermediate goods that could be assembled elsewhere.

(e) *Access to long-term and short-term financin*g: It must be made available to both large and small exporters in a country where large numbers of small exporters are unable to scale up their export activities due to various constraints.

(f) *Foreign direct investment (FDI):* Partnership with good international investors that can support technology transfer, create market access abroad and jobs at home can be the ultimate boost for diversification of our exports. Most important for the next decade, FDI can help bridge the technology gap and make Bangladesh manufacturing catch up with the latest advancement in global manufacturing.

(g) *Government support to open external markets:* As trade preferences get phased out over the 5-10 years in developed markets, government assistance and support through embassies become even more critical for successful market penetration in the largest global markets, such as EU, North America, Japan, and emerging economies.

(h) *Policy flexibility helps*: Not all good policies always produce their intended outcome. Experience of successful export economies shows how flexibility in policy implementation averts crisis. When a policy does not yield results there should be scope for changing directions.

(i) *Trade Agreements with Regional Communities*: Barring the USA, the vast majority of WTO member countries would like to see a reformed and more effective multilateral trading system. Bangladesh, which has benefited from the multilateral regime as an LDC, may use the special dispensation for LDCs for the remaining years (until 2024) but will have to prepare for the stiffer competition our firms will face in the global market, once the preferential access provision evaporates following graduation. Furthermore, it must seek market access under various bilateral and regional trade and investment agreements. Markets in Asia are growing faster than any other region of the world and ADB projects that by 2050 50% of global GDP will be in Asia. Two regional trading arrangements that hold tremendous potential for trade and investment are RCEP (ASEAN+) and CPTPP which together will constitute the bulk of the Asian market of the future. Bangladesh would be well advised to reach trading arrangements with these groupings. But that could be an uphill task given the current high tariff regime in Bangladesh and the enormous resistance from domestic import substitution industries to any reduction of protective tariffs. The political economy challenge is considerable but a breakthrough is essential in this area.

Behind-the-Border Issues for Export Competitiveness: For effective export promotion, in addition to the export policies, a set of other complementary policies and programmes are critically required. Stabilities of the macroeconomic environment, effectiveness of the export promoting and supporting institutions, and smooth functioning of the financial markets are necessities. Furthermore, the quality of governance should be improved through promoting transparency and accountability, and by reducing the extent of corruption. The government should also take an effective role in technology diffusion and in providing appropriate physical infrastructural facilities.

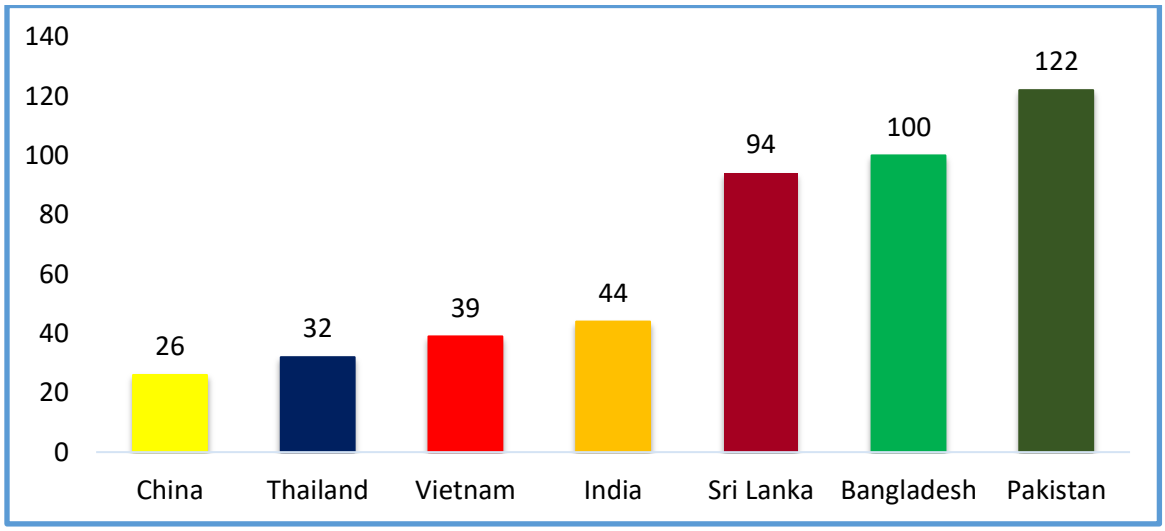
Streamlining and mainstreaming trade policies over the next five years or so will be the most important policy challenge to deal with. Then, there is the burning issue of ensuring competitiveness in a dynamic global marketplace. The competitiveness agenda is getting increasingly more challenging in the era of 4IR and the associated technology revolution, and automation. Trade preferences and trade concessions seek to compensate for some of the inherent vulnerabilities of LDCs. These vulnerabilities often include the high cost of production owing to infrastructure constraints and other domestic policy-induced rigidities. Indeed, global evidence shows that high trade logistic cost often imposes a higher cost disadvantage than trade taxes in developing countries. Evidence from Bangladesh also shows that there are many behind-the-border constraints that increase the cost of production and trading across borders thus undermining export competitiveness.

2.6.1 Improving Trade Logistics

Export competitiveness can be adversely affected by the high cost of trading, both for imports of raw materials and capital goods and exports of products. Bangladesh has gradually opened its economy to international trade. Domestic production and investment are now heavily reliant on imported inputs. Imports as a share of GDP amounted to 18.5% in FY2019. Exports have also grown and are now about 14% of GDP. Financial cost of trading (transport, insurance, and handling) and the efficiency of port clearances can both have determining influence on competitiveness.

Recognizing the importance of trade logistics, the World Bank compiles and regularly updates index of trade logistics performance (LPI) and ranks countries based on the LPI scores. The 2018 LPI rankings for Bangladesh and comparators are indicated in Figure 2.8. Bangladesh is ranked at 100 out of 160 countries. The LPI ranking is very low relative to China, Thailand, India and Vietnam. For example, China, India and Vietnam are major Bangladesh competitors for RMG in the EU market and the higher cost of trade logistics may have serious adverse consequences for maintaining market share post-LDC graduation. So, paying attention to improve trade logistics performance gains added significance in a post-graduation environment. Bangladesh must improve the LPI rankings.

Figure 2.8: Rankings of Bangladesh in the World Bank's Logistics Performance Index 2018



Source: World Bank, 2018

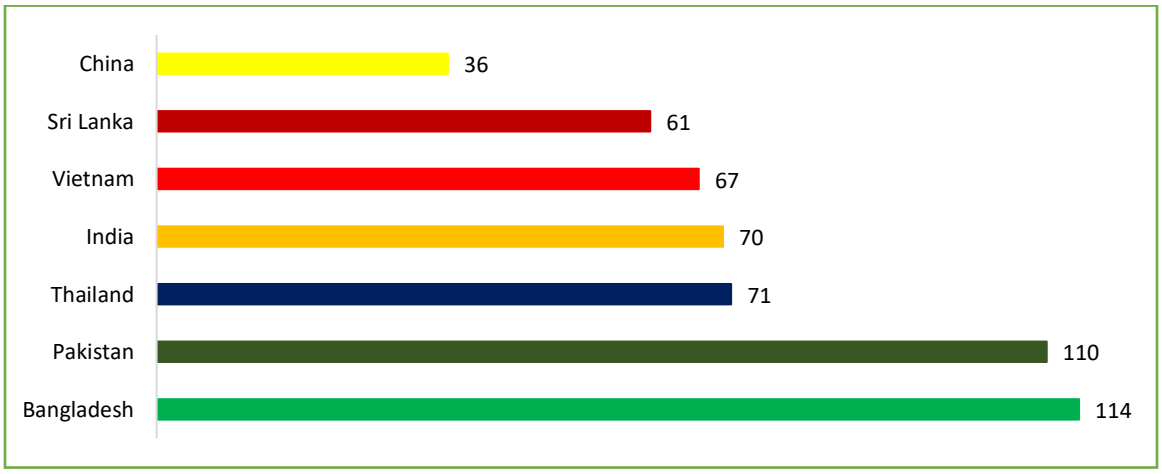
The Way Forward: Exports stimulate imports. Delays in imports not only increase the costs to the firms importing them, but it also puts them in a tight situation when many of these imports are raw materials for export-oriented industries. After Bangladesh graduates from LDC status in 2024, the competitiveness challenge will intensify. In order to maintain their market share in the more competitive environment, it will be vital for all the firms to have timely and less costly access to raw materials, maintain their production schedules and ship their products to their buyers on time. Chittagong port handles 75% of Bangladesh's $100 billion of export-import trade. Ship turnaround time and cargo clearance from container yards are longer than most ports in the region. Operational efficiency at the port must be radically enhanced to ensure lower turnaround time for vessels in order to benchmark good productivity and performance in this port. High efficiency in import clearance at ports is critical for export competitiveness.

2.6.2 Strengthening Electricity and Transport Infrastructure.

In today's globalized environment, infrastructure is one fundamental determinant of external competitiveness. While high GDP growth has been achieved, for further growth acceleration and achieving the medium to long-term socio-economic development targets, improved infrastructure including expanded and uninterrupted power supplies will be crucial. Besides, Bangladesh's inability to attract enough quantum of FDI as well as mobilizing higher levels of domestic private investment is often attributable to the lack of adequate and reliable infrastructure services. The 6th and 7th Five Year Plans rightly prioritized the need for improved power, energy, transport and other infrastructure-related services for achieving GDP growth and development targets. The implementation of these plans has been backed by enhanced resource allocation through the Annual Development Programme (ADP), leveraging private investments in the power sector with policy and institutional support.

Considerable progress has been achieved in terms of upgrading power and transport infrastructure. But the magnitude of the infrastructure gap can be gauged from cross-country comparison of infrastructure adequacy. The World Economic Forum regularly publishes global comparisons on competitiveness based on 12 broad pillars. Quality of infrastructure is one of them. Despite Bangladesh's notable economic growth performance and an impressive record of social progress, the country lags many other Asian developing economies on infrastructure-related indicators. In 2019 the GCI ranking for Bangladesh infrastructure stood at 114 out of 141 countries (Figure 2.9).

Figure 2.9: Global Competitiveness Index; Ranking in Infrastructure, 2019



Source: Global Competitiveness Report 2019, World Economic Forum.

The way forward: Keeping in mind the rise of projected demand for electricity to 34,000 MW by 2030, the government is planning to invest around $70 billion in the power sector over the next 15 years. It is important that this investment is based on using least cost options and renewable energy to the extent technically possible to lower the cost of electricity, to ensure the sustainability of primary energy supply and to reduce carbon pollution.

The current road network in Bangladesh is yet inadequate to provide infrastructural support to a country with a population of more than 160 million people which is aspiring to become a High-Income Country in 2041. This is reflected in the GCI's Road Connectivity Index, where Bangladesh is given a score 57.5 out of 100 and a rank of 117 out of 141. In transport there is presently excessive reliance on the road network. This is very costly and will also become increasingly difficult owing to the growing land constraint and the costs of rehabilitation of large number of displaced people. On the other hand, as analysed in great detail in the Delta Plan 2100 the inland waterways are low-cost and environment-friendly option and in the past that has not received adequate attention. Implementation of the inland waterway development strategy articulated in the Delta Plan will be of high priority. Additionally, much more attention needs to be given to the issue of inter-modal transport balance based on cost and efficiency.

2.6.3 Improving Technology Transfer and Market Access through FDI.

Export expansion and diversification is often constrained by limited domestic capital, technology and market knowledge. It is not surprising that the role of foreign direct investment (FDI) in promoting export-oriented industrialization has attracted considerable attention in recent times. FDIs with their better technological and managerial skills and knowledge about international marketing conditions, are expected to improve the productivity as well as export performance of host country firms by creating certain positive externalities known as 'spill overs'. Spill overs can take place when FDI improves the productive efficiencies of domestic firms, making their products efficient in price and quality in the international market and thus improving their export performance. Such spill overs may occur either to domestic firms in the same industry group of foreign firms through competition, known as 'horizontal spill overs', or to firms in the upstream supply chain through buyer-supplier linkages, known as 'backward spill overs'. FDI can help to channel capital and technology into industries that have the potential to compete internationally, and the global linkages of multinational corporations can facilitate their access to foreign markets. In addition to exports that are generated directly by foreign affiliates, FDI can also promote exports of domestic firms through the teaching of proper marketing strategies, methods, procedures, and channels of distribution.

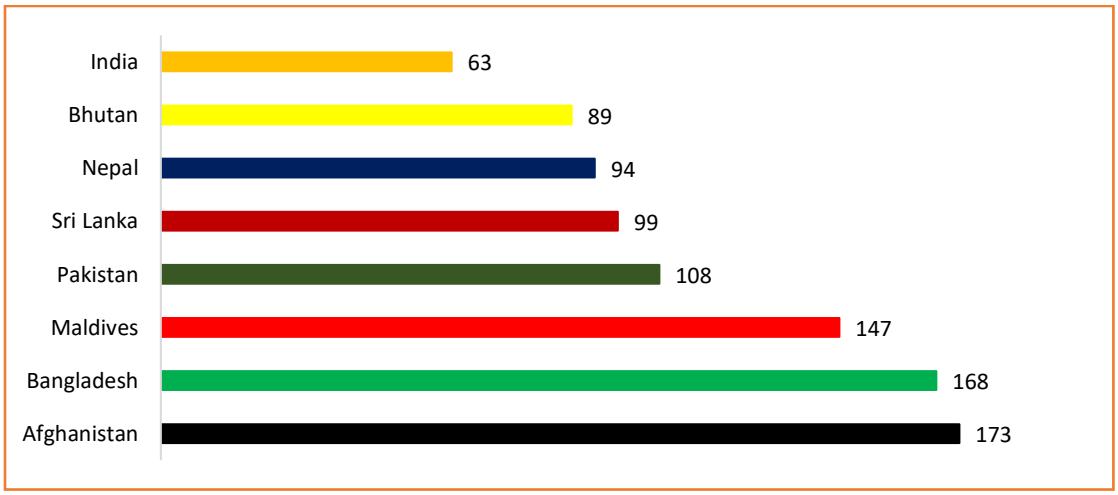
FDI strengthens competitiveness and fuels GVC exports. Finally, FDI is critical in supply chain trade (SCT). Bangladesh needs to get on the bandwagon of GVCs as a means to export-oriented industrialization. Cross-border FDI flows have been the lifeline for the growth of GVC (or SCT) trade that helps sustain the growing production networks across borders. Therefore, courting FDI in the future to capture and expand supply chains will have to be an essential strategy for Bangladesh's export-oriented industrialization. Because of the widespread existence of production fragmentation across borders – a phenomenon that creates challenges as well as opportunities - a better understanding of how Bangladesh as an LDC is positioned within global value chains is absolutely critical. In Asia, FDI has played a particularly catalytic role in stimulating trade in intermediate goods over the past 25 years or so.

The way forward: Currently, Bangladesh faces the dual challenge of mobilizing more FDI and into the GVC operation. That is, its best chance of getting on the GVC bandwagon lies in aggressively courting FDI from multinationals that are seeking low-cost locations for producing parts and components or for final assembly within the framework of cross-border production integration. FDI thus becomes critical for Bangladesh to not only develop a wider base of intermediate goods industry but also to diversify exports into intermediate goods by vertically integrating with cross-border production entities. It needs to translate its RMG experience with GVC on to other sectors like Footwear and Leather goods, electronics, light engineering, toys, plastics, and other sectors with an aggressive strategy of FDI-driven GVC over the course of the next decade. That would constitute a new form of export-oriented industrialization for Bangladesh on way to graduating out of LDC status and becoming a UMIC.

2.6.4 Improving the Investment Climate

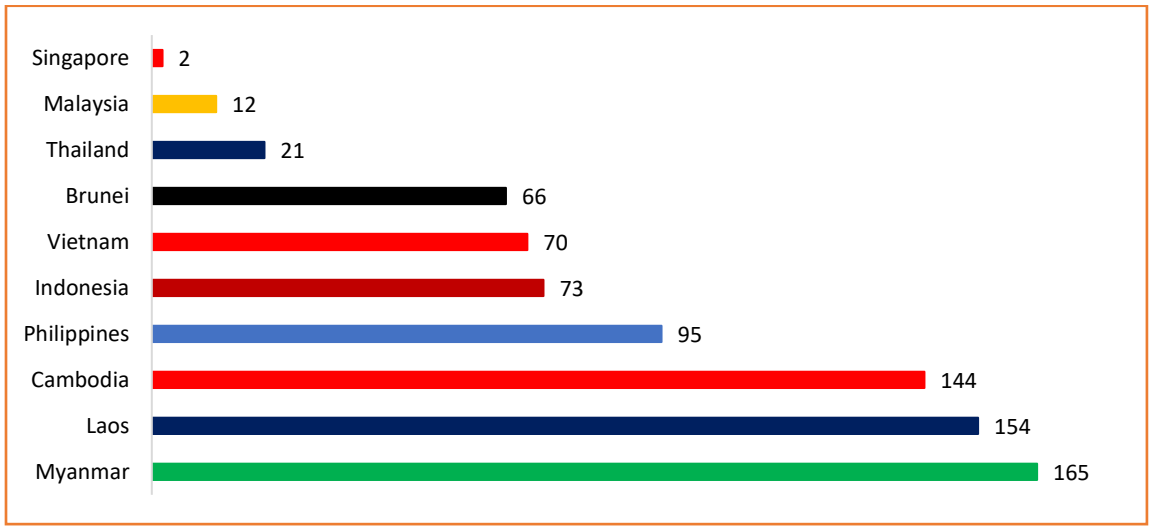
Despite progress with the policy environment for the private sector that has spurred the expansion of private investment from a low of 6% of GDP in FY1989 to 24% of GDP in FY2019, the overall investment climate for Bangladesh remains substantially weaker than those found in competing countries. This is reflected in the global rankings of investment climate prepared by the World Bank. For example, the World Bank's 2020 Ease of Doing Business (EDB) ranks Bangladesh at 168th out of 190 countries (Figure 2.10). The more advanced economies of the ASEAN countries perform much better than the South Asian countries in the rankings due to their institutional strengths and openness to trade (Figure 2.11).

Figure 2.10: Ease of Doing Business Rank of the South Asian Countries in 2020



Source: World Bank Doing Business 2020

Figure 2.11: Ease of Doing Business Rank of the South-East Asian Countries in 2020



Source: World Bank Doing Business 2020

These rankings reflect Bangladesh's shortcomings in the various factors which are taken into consideration for these computations. The evidence also shows very little progress over the past several years. Similarly, the World Economic Forum's Global Competitiveness Index (GCI) puts Bangladesh at 103 out of 140 countries surveyed for 2018. According to the World Bank's EDB rankings, the major problem areas that lower Bangladesh performance include weak infrastructure services and high transaction costs relating to paying taxes, registering property, enforcing contracts and trading across border. Additionally, the availability of serviced land with all necessary infrastructure connections including electricity, water, and industrial waste disposal facility is a major hassle that lowers private investment in the manufacturing sector. To strengthen the investment climate to attract domestic and foreign investments, these constraints will have to be addressed head on in the next 5 years to bring significant improvement in the investment climate.

In order to improve its position in the Ease of Doing Business and Global Competitiveness rankings, Bangladesh can take inspiration from Vietnam that had to go through reconstruction after a long and devastating conflict around the same time as our War of Independence. The country improved its ranking in the Global Competitiveness Report from 77th in 2006 to 55th in 2017, while its improvement in the Ease of Doing Business has been even more impressive – from 104th in 2007 to 69th in 2019. The reasons behind this jump were the reforms which Hanoi undertook with regards to paying taxes, trading across borders, enforcing contracts, access to credit and getting electricity.

The Way Forward: Bangladesh has taken some positive steps to address the serviced land constraint through *industrial parks* and special economic zones. This is a welcome move. Speedy completion of all on-going facilities and making those available on a timely and business-friendly way will be an important factor to spur domestic and foreign investment. The Government is focusing top attention on reducing the time it takes to (i) get electricity (ii) register property (iii) obtain credit (iv) trading across borders (v) enforce contracts and (vi) resolve insolvencies. If carrying out reforms addressing these issues results in an improvement of the country's rank for Ease of Doing Business, this should give a positive signal to potential investors around the world that the climate for investment in Bangladesh is improving due to sincere efforts

by the government. Improvements in the above areas are being developed under the direct supervision of the Prime Minister and coordinated by the Bangladesh Investment Development Authority (BIDA). In addition, a strong marketing effort is being launched by BIDA and Commercial Wings in Bangladesh's diplomatic missions around the world (especially Europe and North America) to highlight and showcase the progress made on the investment climate front as a means to attract FDI.

2.6.5 Strengthening the Institutions for Trade and Industry.

A careful review of economic history suggests that rapid growth that transforms developing economies into developed economies in the course of a generation requires a combination of two things: sound economic policies and good institutions to implement them. Research has shown that differences in institutions related to trade and industrial activity explain a good deal of why export and industrial performance differs across countries. There is much to be done in reforming several of the institutions in Bangladesh that deal with trade and industry, particularly in the area of promoting exports and its diversification.

The next decade will be crucial for strengthening economic institutions that will help entrepreneurs seize market opportunities emerging in a fast-changing global economy driven by innovation and creative destruction. In order to attain and sustain high economic growth what is needed is building and nurturing inclusive economic institutions that are effective in enforcing property rights, creating a level playing field for small and large entrepreneurs, SMEs and big business, and encouraging investment in innovation, adoption of new technologies and developing skills for the future.

The Way Forward: Transforming the Bangladesh economy into a high-income economy over the next 25 years will require strengthening of institutions that promote sound economic fundamentals, enhance functioning of markets for efficient resource allocation, and foster competitive discipline. Intervention in markets would have to be kept to a minimum. The record of high-performing economies show that promotion of specific industries did not yield results as industrial development tended to be market-conforming and exports performed better when driven by factor-intensity based comparative advantage. That means we need to revisit the approach to "thrust sectors" providing instead a conducive policy environment for all investors and let those with the best potential success.

As Bangladesh graduates out of its LDC status, it will need to be cognizant of some WTO rules that it had hitherto ignored – particularly, those relating to levels of protective tariffs and para-tariffs. Other multilateral disciplines will also come into play, such as rules governing intellectual property, subsidies, standards, and trade-related investment, which are going to be the same for developing and developed economies. Moreover, if Bangladesh were to seek membership of regional trading blocs, like RCEP, it would have to submit to their disciplines which are also likely to be stringent. Broadly speaking, economic institutions in Bangladesh will have to start getting ready to face and conform to a more competitive and rules-based global trading environment in the future. Nevertheless, trade facilitation with improved customs infrastructure and administration will remain effective mechanisms to promote exports while being consistent with multilateral rules.

Once the above policies are effectively put in place, overall growth and manufacturing development can follow the evolution presented in Table 2.10. FY20-21 growth rates, overall and industry/manufacturing, reflect the Covid19 shock plus recovery. The economy is expected to return to its pre-COVID-19 growth

trajectory in FY22 and beyond. The effect of export-led trade and industrial policies articulated in the preceding sections are expected to give the necessary boost to industrial growth of which manufacturing is the major component. The 8FYP projections indicate manufacturing growth to rise from 5.84% in FY20 to 12.60% in FY25, with its share in GDP rising from 24.18% in FY20 to 30.23% in FY25. Manufacturing will by far be the principal driver of rapid GDP growth during the 8FYP.

Table 2.10: GDP and Broad Sectoral Growth Rates and Shares FY2020-FY2025

Sectors	2019(Actual)	2020 (Actual)	FY21	FY22	FY23	FY24	FY25
	Growth Rate (Percent)						
Agriculture	3.92	3.11	3.47	3.83	4.10	4.00	3.90
Industry	12.67	6.48	10.29	10.59	10.79	11.20	11.90
o/w Manufacturing	14.20	5.84	10.73	10.99	11.24	12.00	12.60
Services	6.78	5.32	6.74	6.95	7.25	7.30	7.35
GDP	8.15	5.24	7.40	7.70	8.00	8.32	8.51
	Share as % of GDP (Constant prices)						
Agriculture	13.65	13.35	12.84	12.36	11.89	11.16	10.56
Industry	35.00	35.36	36.25	37.17	38.07	40.37	41.86
o/w Manufacturing	24.08	24.18	24.89	25.61	26.33	28.75	30.23
Services	51.35	51.30	50.91	50.47	50.04	48.47	47.58

Source: GED Projections

2.7 WTO-CONSISTENT INDUSTRIAL POLICY FOR RAPID DEVELOPMENT

In Bangladesh, as elsewhere, trade policy is an instrument of and an integral part of industrial policy. And industrial development is an integral part of any economy's growth strategy. So, it is and has been for Bangladesh for the past several decades. Structural change in our economy validates an important stylized fact of development where the share of industry rises over time, at 34% of GDP in FY2019 compared to only 14% in 1972. With impending LDC graduation it has also become essential to conduct an effective, WTO-consistent industrial policy. Given the changing global and domestic landscape, our industrial policy will have to encompass government efforts to promote industrialization that generates export-led and productivity-based rapid growth. In practice, industrial policy may include such goals as employment generation, increased output, removing regional disparity in incomes or investment, and enhancing technological capacity. The priority goal should be to promote industrial growth that is export-oriented and job creating.

Instruments of industrial polic: Bangladesh has been using a wide range of interventions in articulating its industrial policy. These could be categorized as external, product, and factor market interventions.

- *External market interventions* involve protecting domestic industries from import competition, using instruments such as tariffs and para-tariffs, import quotas (eliminated since 2004), backward linkage programmes, as well as export promotion measures (e.g. duty-free import of inputs, EPZs or SEZs, cash subsidies, concessional loans) to assist industries to catch up and break into new markets. Other policies directed to exports include promotion of FDI and participation in international networks, appropriate macroeconomic policies, efficient infrastructure and supporting

services, and policies to enhance human capital and technological capability, such as research and development, education, and creation of industrial clusters.

- *Product market intervention* that includes domestic market entry regulations, regulatory control and tax policies to ensure fair competition between domestic and foreign firms, promoting domestic content requirements.
- *Factor market interventions* include policies such as performance requirements and restrictions on FDI designed to influence the operation of foreign affiliates so that Bangladesh realizes a net benefit from FDI. Significant factor market interventions are prevalent in the capital market and the financial sector aimed at promoting infant industries, and protecting declining industries. For this purpose, there are development finance institutions providing investible capital to selected industrial enterprises, furnishing capital subsidies and capital assistance to declining or mature industries and providing priority access to subsidized and directed credit by requiring financial institutions to lend to "thrust" sectors (selected sectors with presumptive potential for future growth based on recent performance).

WTO-compliant Industrial Policy Instruments: Being a founding member and a major beneficiary of the WTO rules-based system of multilateral trade, it is incumbent upon Bangladesh to adhere by WTO rules regarding application of industrial policy instruments. Some of these instruments widely used in Bangladesh are highlighted here.

Tariffs and para-tariffs: Tariffs are now the principal instrument of protection of domestic industries. Although WTO only recognizes custom duties (CD) as the only tariff Bangladesh uses supplementary and regulatory duties (SD and RD) for additional protection though, ostensibly, these are levied for revenue purposes. WTO rules regard such para-tariffs under the nomenclature of other duties and charges (ODC). As an original WTO member, Bangladesh was subject to limited extent of tariff bindings or tariff caps. Bangladesh agreed to bind all agricultural tariff lines at 200% and only 5% of non-agricultural tariff lines at rates ranging from 3% on sparking plugs (HS3808.92) to 50% on sweet biscuits and wafers (HS1905.31). Generally, bound tariffs are much higher than the applied tariffs (CD). However, when ODCs are included, there are instances where applied tariffs exceed bound tariffs (e.g. biscuits, sparking plugs). Upon graduation from LDC in 2024, such deviation of WTO rules could evince complaints (and safeguard tariffs) from trading partners; so, it would be wise to restrict the level of applied tariffs within bound rates.

Export subsidies and other support measures: The Agreement on Subsidies and Countervailing Measures (SCM) prohibits export subsidies by countries with GNI per capita above US$1000 (at constant 1990 US$), with an exception for LDCs and some developing countries (listed in ANNEX VII of SCM Agreement) with GNI per capita below US$1000. Bangladesh currently offers cash subsidies to 35 export products ranging from 4% (export to non-traditional markets) to 20% (fruits and vegetables). Upon graduation in 2024, Bangladesh will not have this option as an LDC but may still enjoy the exemption if its per capita GNI is still below US$1000 (at constant 1990 US$), provided it applies to WTO for maintaining the exemption to be listed among the countries in ANNEX VII. Subsidies towards protecting local content use are also prohibited, but with the exception for LDCs. Roughly one-half of export subsidies in Bangladesh go towards supporting backward linkage in textiles and garments. This option could be in jeopardy in 2024 or thereafter. Finally, according to WTO procedures adopted in November 2001 export subsidies are prohibited in cases where the export product exceeds 3.25% market share globally because then the product

is deemed to have become competitive and the infant industry export support does not apply. RMG exports with 6.5% global market share falls in this category; therefore, any or all export subsidies to RMG exports are not WTO-consistent.

Trade-Related Intellectual Property Rights (TRIPS): This is a major facility accorded to LDCs like Bangladesh, one that has allowed Bangladesh to develop a robust pharmaceutical industry manufacturing generic drugs (through reverse engineering or imitation of brand name patented drugs) without any patent infringement. Thanks to this facility Bangladesh pharmaceutical industry now meets 97% of the domestic requirement of all drugs besides exporting about $150 million of medicines to some 60 countries. The period for this facility for LDCs was extended to 2033 but if Bangladesh graduates out of LDC in 2024 it will expire in that year. The option for seeking a transition period and/or extension to 2033 would require applying to the WTO but chances are that developed countries will put up strong opposition to accepting such a request.

TRIPS agreement which was actually directed to strengthening of protection of intellectual property rights (IPR), has important implications for industrial policy. Because developing countries do not in general have a comparative advantage in innovation, attracting FDI as a means of transferring and diffusing technology is important for them. An important provision for developing countries from an industrial policy perspective is TRIPS Article 66.2, which requires industrial countries to support technology transfer to LDCs. As IPR protection improves, firms from developed countries are expected to have greater incentive to invest in and operate in developing country markets. So IPR strengthening would be one item to focus on if Bangladesh wants to attract more FDI.

In sum, it is critically important to conduct industrial policy that maximizes its potential to contribute to economic growth while minimizing the risks that it will generate waste and rent-seeking. Bangladesh industrial policy to be WTO-consistent will have to be comprehensive rather than target specific sectors; that is, there should be a concerted effort to shift toward more generic policies for promoting industrial development. Policies related to infrastructure, human capital formation, innovation through more R&D, and diffusion of technology is now critical for export competitiveness. WTO-consistent industrial policy instruments for Bangladesh would include tariffs (within bound rates); subsidies for regional connectivity, R&D, and the environment; and export promotion measures such as credit and insurance schemes at subsidized rates, concessional tax and duty provisions, and export processing zones (EPZ) and special economic zones (SEZ).

Standing by WTO commitments: Bangladesh is a founding member of the World Trade Organization and as a significant beneficiary of the multilateral regime, it is incumbent upon Bangladesh to be compliant of WTO rules and regulations, availing of the opportunities under the WTO, building trade capacities and protecting the interest of the state in international trade regime.

Supported by the Enhanced Integrated Framework (EIF) WTO cell in the Ministry of Commerce (MoC) has accomplished 'Diagnostic Trade Integration Study' to radically improve Bangladesh's trade regime. This study ended up with an Action Matrix identifying the existing trade barriers in the country leading to addressing those by own funds and various Aid for Trade (AfT) schemes. Moreover, studies like 'Export Potentiality of Trade in Services of Bangladesh: Identifying opportunities and challenges' and 'Identification of Non-tariff Barriers Faced by Bangladeshi Products in Major Export Markets' have been completed. The

findings of those studies will help in formulating export strategy and action plan. Improved negotiation skill of the officials, heightened trade in services, reducing of non-tariff barriers will be in the sight once these projects are implemented. Other projects under MoC i.e., 1) Bangladesh Regional Connectivity Project 2) Export Diversification and Competitiveness Development Project (Tier-2), 3) E- banijjo korbo, nijer babsa gorbo project will certainly contribute to establish digital Bangladesh as envisaged under the "Vision-2021" and the Perspective Plan 2021. Additionally, Digital Commerce Policy-2018 has been approved by the Cabinet and duly made operational. Under this policy, an e-Commerce Cell will work to coordinate and boost up electronic commerce in Bangladesh.

The WTO Trade Facilitation Agreement came into force on 22nd February 2017 with the stipulated ratification of two-third members of the WTO. Bangladesh also ratified the Agreement on 13th June 2016 as the 94th country. This is the first multilateral agreement after the establishment of the WTO in 1995. The main objective of the Agreement is to establish a modern trade facilitation system globally so that time and cost of trade transactions can be reduced significantly. The LDCs, including Bangladesh, have been granted various flexibilities under this Agreement.

The Ministry of Commerce has been taking different initiatives to increase export under the multilateral trading system. Bangladesh has made progress in getting duty free quota free facility (DFQF) from many developed countries, thereby enjoying the preferential market access to almost all the major markets under WTO. DFQF facility for LDCs has also been promised by several developing countries: China, India, South Korea, Chile, and Thailand. All developed countries excluding the USA, Russia and Ireland gives DFQF facility for most products of LDCs. Furthermore, the European Union, Canada and China have simplified their Rules of Origin for LDCs.

2.8 COURTING FTA FOR RAPID MARKET ACCESS EXPANSION

A Preferential Trade Agreement (PTA) among member countries provides preferential market access, through duty concessions or other means, to selected products of member countries (e.g. Asia Pacific Trade Agreement (APTA), of which Bangladesh is a member). A Free Trade Agreement – FTA- is an extreme form of a PTA providing duty-free or lower-duty access to markets of partner countries on a wide range of products, typically with a small negative list of products (sensitive list). Thus, a PTA is characterized by a "positive list" of products whereas an FTA is characterized by a "negative list". An FTA could be bilateral (e.g. Vietnam and Japan), or regional (e.g. ASEAN), or plurilateral (among several countries spread across geographical regions; e.g. CPTPP-Comprehensive and Progressive Agreement for Trans-Pacific Partnership). Some 300 PTAs/FTAs have been notified to the WTO which has seen the proliferation of PTAs/FTAs since 2000. Typically, two conditions mark all TPAs/FTAs: (a) reciprocity (in contrast with non-reciprocity of GSP schemes), and (b) rules of origin (ROO), to ensure that substantial transformation of a product has occurred in the partner countries to deserve preferential access. The rules of origin are therefore a key element determining the magnitude of the economic benefits that accrue from preferential trade agreements and who gets them.

The multilateral trading system is now characterized by a multiplicity of overlapping and intersecting PTAs/FTAs with complex web of tariff schedules and ROOs. Each PTA/FTA creates its own web of regulatory rules that coexist alongside multilateral rules. The attraction of an FTA stems from the fact that it offers members a means of securing enhanced market access and attracting investment. A bilateral FTA

requires the assent of both governments, which becomes easier when there is a balance in the potential trade between the countries. It is understood that Bangladesh has received requests for bilateral trade negotiations for FTA from several countries including China, India, Malaysia, Thailand, and Nepal.

For Bangladesh, an FTA could be an attractive proposition in the context of market losses due to preference erosion following graduation in 2024. The only FTA that Bangladesh is signatory to is the South Asian Free Trade Agreement (SAFTA)) which, according to most analysts, has not made much headway in expanding intra-regional trade in South Asia – an avowed goal of the Agreement.

Post-LDC Bangladesh may have to negotiate a trading arrangement with the EU along with the possibility of another one with the post-Brexit United Kingdom to ensure favourable access to these important markets. Beyond that, Bangladesh may seek more bilateral or regional FTAs if the projected trade creation (or trade growth) contributes positively to growth and employment creation.

First, it is important to acknowledge that Bangladesh is a significant beneficiary of the multilateral trading system (WTO) and its special and differential dispensation for LDCs and developing countries. It would be in the best interests of Bangladesh to continue to be a strong participant under this global system of compliance of trade rules even after graduation.

In the meanwhile, since the multilateral system does permit the contracting of preferential trading arrangements, such as a Free Trade Agreement (FTA), departing from the guiding principle of non-discrimination defined in Article I of GATT, Article II of GATS, and elsewhere. FTAs may be signed under Article XXIV of the GATT, which allows for the formation of trade blocs, permitting WTO members of a trade bloc to discriminate against non-members, as long as the agreement results in trade liberalization among the signatories extends what is available under the WTO. FTAs in recent times are seldom limited to just trade in goods, as they encompass services as well as investment.

Of late, the multilateral trade regime and its offshoot, globalization, has come under serious strain from the rise in economic nationalism and protectionism. Consequently, a growing number of nations, both developed and developing, have been seeking to sign FTAs on a regional or bilateral basis. Bangladesh, with only one regional FTA (SAFTA) and no bilateral FTA in its armour, has fallen behind in this game of trade openness beyond the WTO. Basically, an FTA has the potential of creating access to larger markets for Bangladesh exports. But they have advantages and disadvantages.

On the plus side, an FTA can force local industries to improve competitively and rely less on government subsidies. These can open new markets, increase GDP, and invite new investments. They also allow companies to discover new technologies and better ways of doing things. FTAs could trigger a beneficial process of "competitive liberalisation", as nations vie to open their markets to each other. On the downside, FTAs could bring disruptive competition, destruction of traditional livelihoods, with adverse implications for employment. Given Bangladesh's high protection regime, an FTA with Malaysia (whose average tariff is 6.2%) would imply "enhanced protection" for Malaysian exporters while Bangladesh exporters would face "reduced protection". An FTA with Malaysia would also require substantial scaling down of protective tariffs which could be a major political economy challenge.

Whereas Bangladesh's preferential access into major global markets under WTO system relies on the unilateral provision, a fundamental tenet of FTA is "reciprocity". Concessions in the liberalization process have to be offered, though there is scope for negotiations for staggered adjustments of tariffs or other trade barriers. Where Bangladesh is involved in a North-South (i.e. developed and developing country) arrangement, tariff reductions on its part could have a longer timeline. Gains from an FTA is expected to be greater when such FTA opens larger markets (e.g. North-South FTA, such as between Bangladesh and OECD members).There are potentially large market creation effects to be had from engaging with regional associations (South-South) like the BIMSTEC, ASEAN or its surrogate, the Regional Comprehensive Economic Partnership (RCEP) that adds six more FTA partners.

However, it is worth keeping a few things in mind while considering FTAs:

- Deeper, broader, rapid liberalization under an FTA produces a bigger effect. Firms are less likely to incur additional administrative costs if the tariff advantage provided by the FTA is small.
- The FTA impact will be greater if the impediments to trade removed by the FTA are large relative to those that remain untouched.
- The most fundamental factor is the capacity of our economy to increase supply of products for which the FTA has boosted demand.
- They reinforce the point that any contribution of an FTA to Bangladesh's economic development is likely to be influenced heavily by the broader policy stance of its government, the flexibility of the economy and the extent to which supply can respond to any new demand that has been created.
- We could target FTA with countries that have already shown interest, such as Malaysia, China, India (post-LDC, as SAFTA already gives market access), and Thailand. Emerging market economies would also be good candidates, quite apart from OECD member countries. The point to note is that gains from any FTA will be minimal if the market size of the partner country is small.
- Most importantly, the first item in an FTA relates to trade openness in terms of tariffs. With its sky-high tariff regime relative to its comparators, that is where Bangladesh will face a major hurdle in getting prospective FTA suitors to come calling. Mutually reciprocating tariff reductions are usually critical items in any FTA negotiation. But when tariffs are very high, as is the case for Bangladesh, the leverage from offering tariff reductions is all but lost. Thus, rationalizing Bangladesh's tariff structure then becomes a national imperative if the country seeks FTAs with any country or region in the future. FTA negotiations could be highly complex and take long periods of time.

As Government policy, Bangladesh attaches high importance on bilateral and regional trade cooperation. It has signed a number of bilateral trade and investment cooperation Agreements. Beside the WTO membership, the country is also a member of SAPTA, SATS, SAFTA, APTA, BIMSTEC, TIP-OIC and D-8 Preferential Trade Agreements. Bangladesh would continue its endeavours in RTA negotiations for ensuring better market access. Bangladesh will be officially graduating from the Least Developed Country (LDC) status in 2024. The graduation is expected to have some adverse impact on trade as the country will lose preferential market access in its major markets. The Ministry of Commerce will therefore prepare and implement an action plan for overcoming the potential challenges of trade and commerce after graduation.

Therefore, the Government has adopted a policy of signing FTAs with potential partners to overcome the graduation challenges, particularly to meet the trade challenges, especially after phasing out of Duty-Free Quota Free (DFQF) and Everything but Arms (EBA) market access facility. The Ministry is now negotiating with a number trading partners for signing bilateral Free Trade Agreements (FTAs) or Preferential Trade Agreements (PTAs). The Ministry of Commerce aims to accord as many as PTAs, FTAs and continue efforts joining CEPA during the 8th Five Year Plan. The Ministry prepared a Policy Guideline for Free Trade Agreement in 2010. The Policy needs to be updated to meet the requirement of time. The Ministry plans to revise the Free Trade Agreement policy guideline during the 8th Five Year Plan to make it more pragmatic.

The Ministry of Commerce has already completed its assessment for initiating FTA/PTA negotiations with Sri Lanka, Bhutan, Nepal, Indonesia, Malaysia and the United States of America. It has undertaken another study for examining the impact of signing FTA/PTA with Lebanon. The Ministry has also taken program for conducting the joint study on Comprehensive Economic Partnership Agreement (CEPA) with India. At present, four border Haats had been set up at the border's points of both Bangladesh and India in ensuring availability of essential commodities to the marginalized people living in the surrounding remote areas. 16 more border Haats are expected to be opened during the 8FYP period.

It is necessary to explore the possibility of signing FTA with trade blocks of interest of Bangladesh. In this regard initiative will be taken for signing FTA with European Union (EU), Association of Southeast Asian Nations (ASEAN), Eurasian Economic Union (EAEU) & MERCOSUR Countries. The Ministry is currently engaged in building trade negotiations capacity among officials in the Ministry and relevant agencies.

To conclude, it is time to mainstream trade policy. For trade reform to unleash its catalytic potential during the run up to LDC graduation it should be designed as part and parcel of Bangladesh's 8th and 9th Five Year Plans, where its role will be given due cognizance and the necessary facilitating infrastructure adequately provided to make trade policy perform. In practical terms, this means incorporating trade issues into every stage of the development planning cycle. This must be underpinned by strong inter-ministerial coordination and consultative processes with a wide range of stakeholders, including consumer groups.

2.9 TECHNOLOGY, EMPLOYMENT AND 4th INDUSTRIAL REVOLUTION

This chapter concludes with a brief message on the emerging challenge of labour displacement and employment implications of Fourth Industrial Revolution (4IR). As the digital economy gains a stronger foothold and digital technology spreads across all sectors and activities in Bangladesh, the manufacturing sector cannot but embrace the benefits of technological sophistication to enhance productivity and maintain global competitiveness over time in the age of the 4IR. 4IR, primarily driven by automation, robotics and artificial intelligence (AI), has been transforming the way we work, live, and produce goods and services. 4IR is both a destructive force and a creative force unleashing a *tsunami* of Schumpeter's famous "creative destruction" in the marketplace. In Bangladesh's rapid march to industrial progress driven largely by export-led growth it faces the enormous challenge of coping with this technological transition so that the gains far outweigh the loss.

For Bangladesh, this slow but sure technological transformation in production, inescapable in the age of internet and growing digital sophistication of 4IR, undermines the time-tested principal of specialization and competitiveness based on factor endowment–labour-intensive industrialization in the case of Bangladesh which is still endowed with abundance of low-skilled labour force. The RMG industry is the classic case in point. Apparel production, particularly the final stage of processing of garments, has been for the past 50 years a labour-intensive activity. Thanks to globalization and multilateral rules of open trade creating and opening vast global markets, Bangladesh was perhaps the most successful example of an LDC exploiting in full its comparative advantage in labour-intensive production and CAF-based exports of RMG, eventually becoming the second largest exporter of apparel in the world. With the rapid and deep technological transformation occurring in the digital age that static world of comparative advantage is changing fast.

The RMG sector is the lifeline of Bangladesh's economy and industrial jobs. It turns out that this sector has been aggressively adopting automation technologies to cope up with the pressure of cost, quality, and product cycle time. In terms of production per unit (unit measured by $ millions of export revenue), over the last 35 years, research shows that reduction of labour use per unit of output has been as much as 350%. That is to say, that for every million dollars of RMG exports, on average, the industry uses 3.5 times less labour than it used to 35 years ago, making the RMG industry much more technology intensive than in the past. By the same token, the industry has become much more technology and capital intensive and much less labour-intensive than before. So far, the rapid growth in export volume has offset the job loss due to automation.

Unfortunately, growth is failing to cope up with the job loss due to automation, resulting in net job loss. Despite having fewer workers, falling from 4.4 to 4 million, Bangladesh succeeded in nearly tripling the export volume from $12.5 billion in FY 2010 to $34 billion in FY2019. However, during this time, wage pressures with compliance costs have increased rapidly driving the industry to accelerate adoption of 4IR technology. A joint research project by the ICT Division of Bangladesh Computer Council and UGC predicted that by the end of the 8FYP (2025), more than 40% labour reduction might take place in producing the same amount of RMG output produced today.

The reshoring prospect: Moreover, due to the development of SewBot in automating sewing, the reshoring prospects (developed countries relocating apparel production in their own economies) is getting far stronger than before. Bangladesh RMG growth has benefitted from many years of investors offshoring apparel production to low-cost factories around the globe. With 4IR tech transformation as the labour content in producing apparel keeps falling, the offshoring advantage keeps eroding. And at certain point, reshoring would take place. But the world is far from reaching the tipping point. Global analysts are still developing a theoretical framework to analyse the offshoring and reshoring decisions of firms in the age of automation. Available theory suggests that increasing productivity in automation does lead to a relocation of previously off-shored production back to the home economy but without improving low-skilled wages and without creating jobs for low-skilled workers. Since it leads also to increasing wages for high-skilled workers, automation induced reshoring is associated with an increasing skill premium and increasing inequality. Such theorization endeavour claims that by using a new measure of reshoring activity and data from the world input output table, there is evidence of a positive association between reshoring and the degree of automation. On average, within manufacturing sectors, an increase by one robot, performing jobs equivalent to 6 workers, for every 1000 workers engaged in offshore production, there could be a 3.5% increase in reshoring activity. There may be disagreement about the numeric figure of implications of automation on reshoring activity. But there is no

denial that increasing automation keeps eroding labour cost advantage, thereby decreasing the attractiveness of offshoring. There is evidence that the degree of automation has been increasing in Bangladesh's RMG sector over the past decade

Greater reshoring would shrink global demand or at least slow down import demand growth for apparels from exporting countries like Bangladesh. On the positive side, apparel being a basic necessity, global demand growth is expected to be strongly correlated with income growth so that rising economies of non-OECD countries (e.g. emerging markets of China, India, and other East Asian and Central Asian economies) could easily pick up the slack.

Rather than be too concerned about slack in global apparel demand Bangladesh must focus on capturing a bigger size of the market for, say, basic garments (where China is downsizing) and prepare the industry on the basis of double-digit growth in our export demand. Nevertheless, with the given progression of automation and likely growth of export volume (at 10% per year), it is being predicted that Bangladesh's RMG sector will suffer a net loss of 1 million jobs by 2025, the closing year of the 8FYP. The Government must therefore begin taking measures for job creation in other potential sectors (e.g. jute manufactures, footwear and leather goods, agro-processing, plastics, light engineering) by adopting necessary policy reforms for invigorating the process of export diversification. Not to be ignored is the alarming research finding that women are far more likely than men to be retrenched from their jobs due to automation. That calls for a more forceful skill-development policy directed towards women with adequate investment in TVET and other training options.

2.10 DEVELOPMENT RESOURCE ALLOCATION IN THE 8th PLAN

Though public enterprises exist in a limited form in jute and cotton textiles, and fertilizer sector, trade and industry are by and large in the realm of the private sector. Dynamism of the manufacturing sector, its export orientation, and job creation prospects depend on appropriate industrial and trade policies that support private sector initiatives to invest and become globally competitive. The primary role of Government therefore lies in funding of support services in areas of trade policy, industrial policy, and small and micro enterprises, rather than allocating public resources to install public enterprises. The allocation of public investment will be available in Industrial and Economic Service sector. For manufacturing SOEs, the investment programme will be mainly financed from own resources. The allocation of resources in the 8th Plan is basically intended to finance these support services for the manufacturing sector and fund activities or institutions that facilitate trade (Bangladesh Standards and Testing Institute) and create market access (e.g. PTAs and public expenditures incurred in opening of non-traditional markets) for Industrial and Economic Service sector. The following chapter on overall service sector of the economy analyses the private sector investment in different services. Indicative allocations of development resources for Industrial and Economic Services to support the manufacturing sector of the in current and constant (FY2021) prices are shown in Tables 2.11 and 2.12 respectively.

Table 2.11: 8th Plan ADP Allocations for Industrial and Economic Service Sector
(Taka billion; Current Prices)

Ministry	FY21	FY22	FY23	FY24	FY25
Ministry of Commerce	1.6	2.0	2.3	2.7	3.2
Ministry of Labour and Employment	1.2	1.5	1.7	2.0	2.3
Ministry of Industries	12.8	15.7	18.1	21.1	25.4
Ministry of Expatriates' Welfare and Overseas Employment	2.7	3.3	3.8	4.5	5.4
Ministry of Textiles and Jute	5.3	6.6	7.6	8.8	10.6
Sector Total	**23.6**	**29.0**	**33.5**	**39.0**	**46.9**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 2.12: 8th Plan ADP Allocations for Industrial and Economic Service Sector

(Taka billion; FY2021 Constant Prices)

Ministry	FY21	FY22	FY23	FY24	FY25
Ministry of Commerce	1.6	1.9	2.1	2.3	2.6
Ministry of Labour and Employment	1.2	1.4	1.5	1.7	1.9
Ministry of Industries	12.8	14.9	16.4	18.2	20.8
Ministry of Expatriates' Welfare and Overseas Employment	2.7	3.2	3.5	3.9	4.4
Ministry of Textiles and Jute	5.3	6.2	6.8	7.6	8.7
Sector Total	**23.6**	**27.6**	**30.2**	**33.6**	**38.5**

Source: Chapter 5, Part 1, Annex Table A5.2

CHAPTER 3

SERVICE SECTOR AS THE BRIDGE FOR STRUCTURAL TRANSFORMATION

3.1 DEVELOPMENT CONTEXT

Development progress involves structural change. For an economy to undergo transformation from a low-income country to a high-income country traversing several decades of economic progress, significant change in the structure of the economy is inevitable. Broadly speaking, the stylized facts of such transformation indicate that the share of agriculture in output will be dwindling over time, as industrialization takes hold driving growth while creating wage employment for the armies of redundant labour force leaving rural agriculture and migrating to urban centres that are home to industry, trade and modern services.

This is not to imply that agricultural output or its critical importance in the economy will be declining. The historical record of progress towards a developed economy shows that the evolution of agriculture into a highly productive activity such that a small farm labour force complemented by modern technological inputs is capable of meeting the demand for cereals, meat, poultry, fisheries, and vegetables for the entire population of the country and even leave some surplus for exports. Yet, even modern agriculture, with all the technologically driven productivity improvements over time, still suffers from the vicissitudes of nature, and historical output growth of agriculture in the developed or developing economies hovers around 3-5% annually. Thus, for all the productivity gains in agriculture, this sector cannot be counted on to drive high growth in a developing economy like Bangladesh whose share of agriculture has fallen a low of 14% of GDP in FY2020, from 60% in FY1973.

For developing economies seeking rapid growth in the range of 7-8% or higher, the sectoral strategy boils down to rapid industrialization as the growth driver. Development economists without exception have accorded industrialization the role of prime mover in structural change during the evolutionary phase of economic progress. Historically, the one common feature of development has been the secular rise in the share of industry in output compensating for the diminution in the share of agriculture. Concomitantly, industry has been responsible for the creation of wage employment in the modern sector as rural agriculture shed its labour force as rising productivity created a vast pool of redundant labour seeking gainful employment in non-farm and industrial activities. To this structural phenomenon was added the new paradigm of manufacturing export led growth in the 1960s and 1970s that only gave a new impetus to industrialization but also gave credence to a new strategy for rapid growth by leveraging the scale economies opened up by global markets. This approach to industrialisation and export led growth has been the cornerstone of Bangladesh's development strategy for much of its existence with the result that the share of industry raised from a mere 10% in FY1973 to 35% in FY2020.

3.2 SERVICES AND STRUCTURAL TRANSFORMATION

The economy's growth performance now hinges on a stable but dynamic service sector. As it is the largest component of GDP, growth of the service sector exerts the largest influence on the economy's GDP growth as well as its stability. International analysts who have reviewed Bangladesh's growth performance over the past 25 years found that not only had Bangladesh economy achieved rapid growth but that growth was found to be relatively stable when compared to other high performers. Stability of service sector growth rate has contributed to this long-term stability. Now, to this stability, the digital economy has infused a good element of dynamism. Digital economy, which is at once an input and output of the service sector, has introduced an element of innovation and speed in the overall performance of this sector which is poised to play a pivotal role in accelerating Bangladesh's growth. Digital economy will play a strong role in rebooting and reshaping the country's economy as it attempts to revive from the impact of COVID-19.

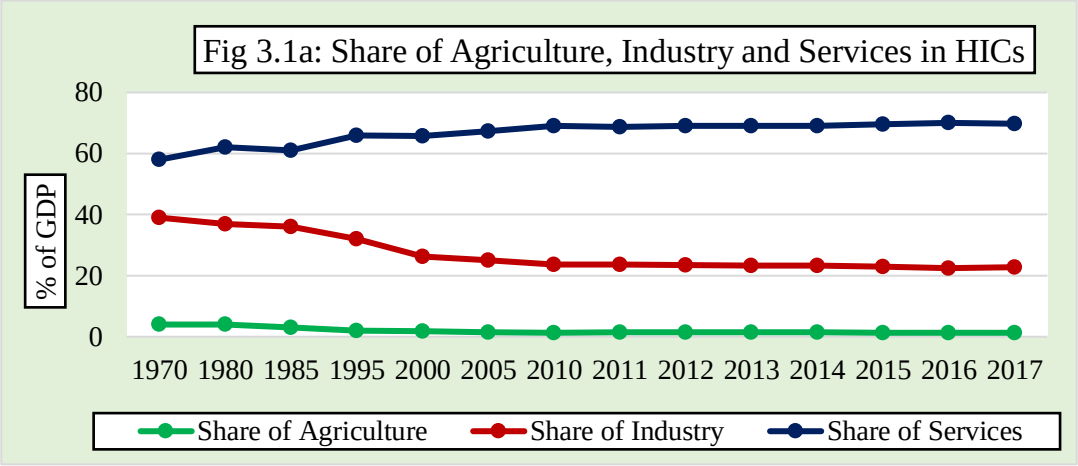
Notably, the service sector provides a convenient bridge for the transformation of the rural agrarian economy to a primarily urban industrial economy. In a typical transformation path, as the agriculture sector modernizes, labour transits initially from agriculture to mainly low-skill rural and urban services. These services, mostly informal in nature, provide a cushion for labour absorption as agricultural employment shrinks. The labour thus released from agriculture eventually either retrains and gets distributed to manufacturing and modern services, or stays put in informal services. The growth of services activities and employment is primarily a function of demand. In today's global world where labour and capital are mobile, both domestic demand and world demand matter for the expansion of the service sector.

Figures 3.1a-3.1c portrays structural change and the evolution of the Service sector in High Income Countries (HIC), Middle Income Countries (MIC), and Low-Income Countries (LIC) over the past four decades, from 1970. By 1970 the developed countries were already industrialized (averaging 40% of GDP with agriculture well below 5%). Thereon, the notable trend of structural transformation was the secular rise of services to become the dominant economic activity in developed countries, from under 60% of GDP in 1970 to 70% or higher by 2017. Between 1985 and 2000, there was a sharp rise in modern services resulting from the spread of technological revolution across the developed world, with leading HICs having high contributions in their GDPs from their service sectors. This happened at the expense of some deindustrialization which started in the 1980s. The same trend, albeit somewhat modest, is noticeable in middle income countries, where services accounted for over 50% but fewer than 60% of GDP, but the de-industrialization trend (falling share of industries in GDP) was more pronounced in HIC than in MIC. For most of this period, service sector in LIC hovered around 40% of GDP though modestly showing signs of upward movement.

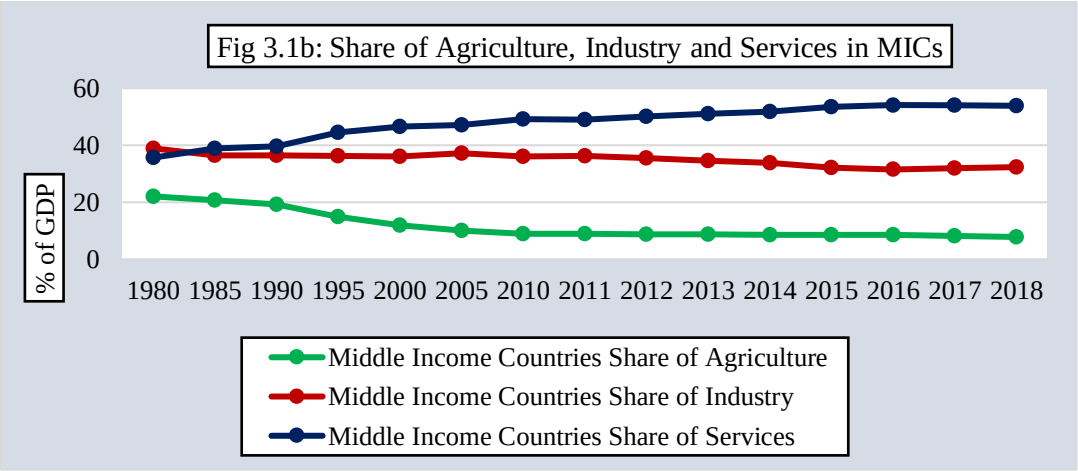
A look at the current state of the service sector and its contribution in the economies of the world (Figure 3.2) shows economies placed in the higher income scale tend to have larger share of Services in GDP (HIC highest, followed by MIC, then LIC). It is also pertinent to note that more modern services with higher productivity are to be found in the developed economies of the world.

Figure 3.1: Structural Change in HIC, MIC, and LIC, 1970 – 2018

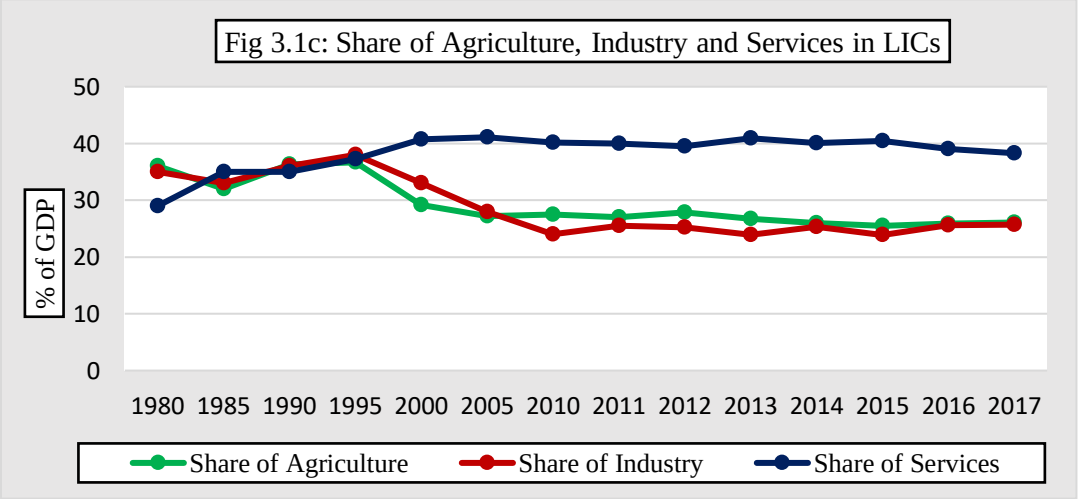
(Shares as % of GDP)



Source: World Development Indicators (WDI), the World Bank

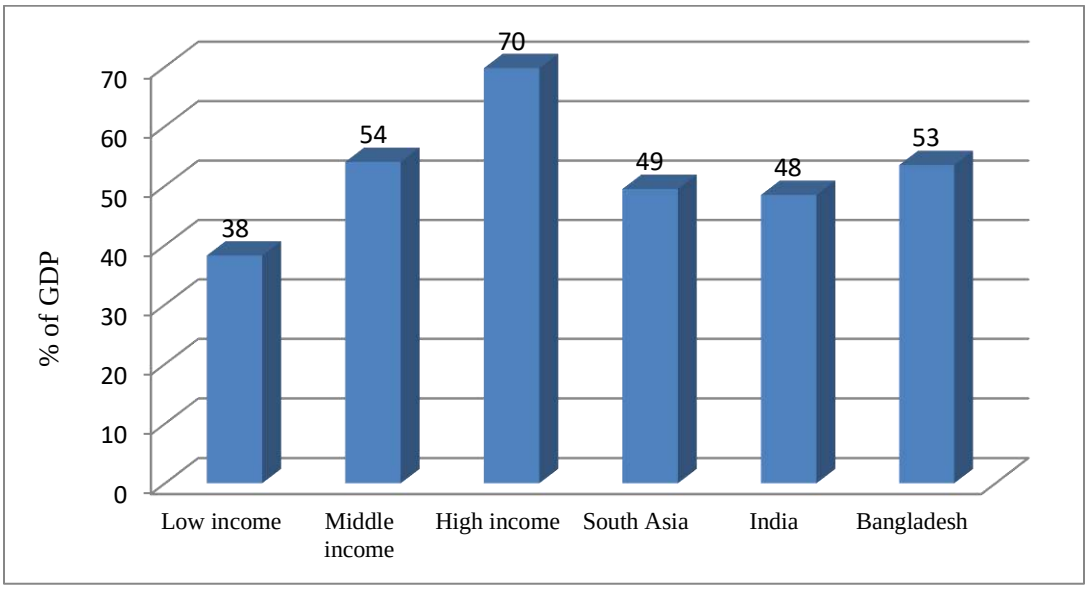


Source: World Development Indicators (WDI), the World Bank



Source: World Development Indicators (WDI), the World Bank

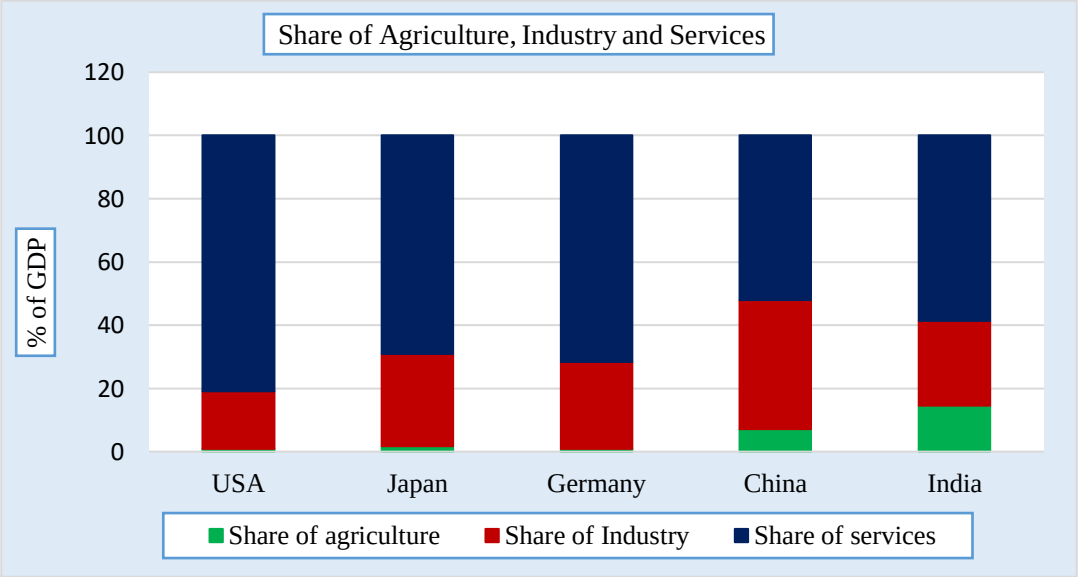
Figure 3.2: Economic Contribution of Service sector, 2017



Source: World Development Indicators (WDI), the World Bank

Finally, in 2018, the top 5 leading economies of the world (Figure 3.3 and Table 3.1) reveal the culmination of the structural transformation described above, with USA, Japan, and Germany, having predominant service sectors today (69-77% of GDP), with China (52%) and India (59%) still on the march towards a dynamic predominantly service driven economy.

Figure 3.3: Structure of Five Largest Economies in the World by GDP, 2018



Source: World Development Indicators (WDI), the World Bank

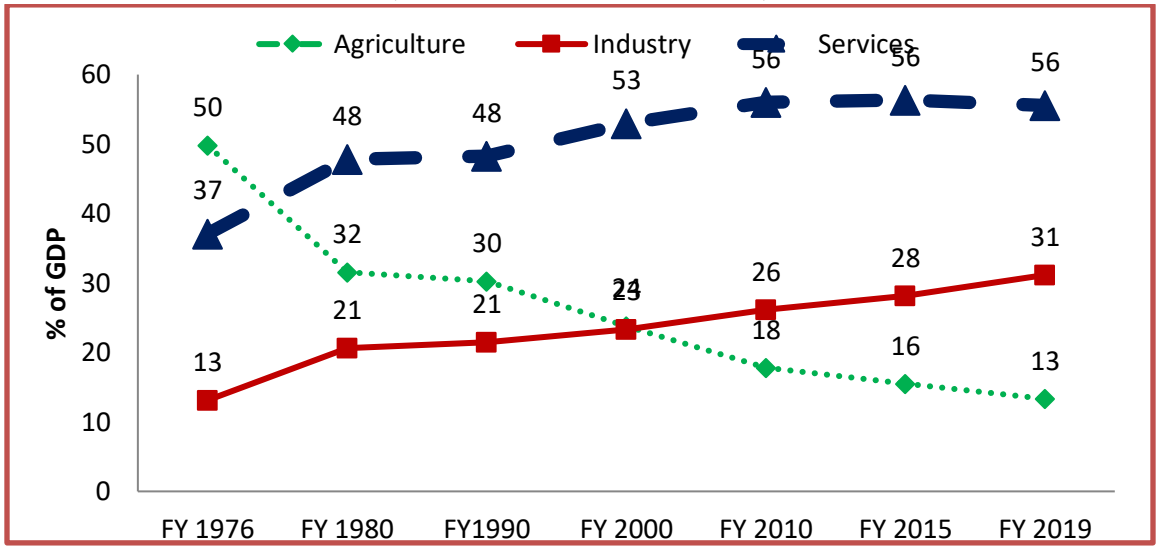
Table 3.1: Structure of Top 5 Economies in the World, 2018
(% of GDP)

	SHARE OF AGRICULTURE	SHARE OF INDUSTRY	SHARE OF SERVICES
USA	0.9	21.7	77.4
GERMANY	0.8	27.5	71.7
JAPAN	1.8	29.1	69.1
CHINA	7.2	40.7	52.1
INDIA	14.6	26.7	58.7

Source: World Development Indicators (WDI), the World Bank

Bangladesh, which is an LDC, was characterized as an LIC (World Bank classification) until 2015 when it became a Lower Middle-Income Country (LMIC). Throughout its development process its structural transformation has followed the stylized facts of growth, where industrial growth overtakes growth in agriculture with the result that share of industry in GDP rises to compensate for the shrinking share of agriculture. As for services, Figure 3.4 reveals that by 1980 services overtook agriculture to become the largest sector in GDP (at about 50%). Since then, unlike what we observe in the case of HIC or MIC, services share in the economy has hovered around 50% of GDP, give or take a few percentage points. But, as mentioned before, much of services in Bangladesh comprise of informal employment and economic activities like retail and wholesale trade, transport and communications, social and community services, etc. Only in the past two decades, the technological revolution is providing the impetus to the growth of a modern service sector with more formal employment and economic activities.

Figure 3.4: Services in the Evolving Structure of the Bangladesh Economy (1976 – 2019)
(Sectoral Shares as % of GDP)



Source: Bangladesh Bureau of Statistics (BBS)

A striking aspect of the development of the service sector in Bangladesh is that it not only has responded well to the growing demand emerging from the growth of manufacturing and agriculture activities, it has also positioned itself well in the global market for low-skilled workers, especially to the oil-rich middle-

eastern markets. As a result, there has been a rapid inflow of worker remittances that has fuelled a huge demand for construction activities and for a range of services in both urban and rural areas. This inflow of remittances has played a major role in transforming the rural economy and contributing to poverty reduction.

The service sector itself is transforming. As Bangladesh transited from a low-income developing country at the time of independence in 1972 to a Lower Middle-Income Country (LMIC) in 2015, the service sector has been steadily transforming from a primarily low-productivity, low-income unorganized service sector dominated by trade, transport and low-end personal services towards more organized and higher-income commercial services. In addition to the standard organized service activities provided by the public sector through public administration, defence, law and order, education and health services, the private service sector has undergone a slow but steady structural change in the form of growth of a range of modern commercial activities including banking and other financial services, shipping, Information Communications Technology (ICT), aviation, tourism and hospitality services. Nevertheless, this transformation is rather slow and falls short of what has been achieved in neighbouring India. This is a missed opportunity that will need to be comprehensively addressed during the 8FYP in order to facilitate the transformation of the Bangladesh economy to a high-income economy, a challenge that is addressed in Chapter 12, Part 2 of the Plan Document.

Research evidence from South Asian countries reveals that services can be a driver of growth, job creation, and poverty reduction. Moreover, the role of services is critical in sustaining export-led growth. Tradability of services has been driven by technological change (e.g. mobile telephone, internet), called splintering and disembodiment of services, so that many services are now tradable, just like manufactured goods. These services include communication, banking and finance, insurance, and back-office processing. These services have gone global thanks to technology, transportability, and tradability – the 3Ts driving the services revolution. What is certain is that the old idea of services being non-scalable and non-tradable no longer holds for a host of modern services. Instead, given the right incentives and policy environment, modern services could make significant contribution to growth of Total Factor Productivity (TFP), a key component of future growth acceleration. To sum up, services could be playing a leading role in changing the pattern of development and also accelerate growth in some developing countries. For Bangladesh, a dynamic service sector could provide an additional route to economic development.

This chapter looks at the developments in the service sector in terms of major achievements in growth, employment, exports and rural transformation and provides a strategy for further dynamising the services' sector role over the next 5 years as Bangladesh graduates out of LDC status and aspires to achieve UMIC status by FY2031. This chapter outlines the required policy and institutional reforms needed to implement this strategy. It also provides an outlook for the service sector with a view to supporting high growth in a transforming Bangladesh economy.

3.3 SERVICE SECTOR PERFORMANCE IN BANGLADESH

The service sector continues to have the predominant weight in shaping Bangladesh's GDP besides contributing to the stability in the rate of growth. In the following section the contribution of the service sector is reviewed in light of four critical and inter-linked economic indicators: GDP growth, employment, exports, and rural transformation.

3.3.1 Contribution to GDP Growth

One striking aspect of the service sector in Bangladesh is that unlike the conventional wisdom that value-added and growth in services activities follow the growth in agriculture and manufacturing, the service sector has been a growth leader during the early part of Bangladesh's development. This is illustrated in Figure 3.4. In the early years after independence, as the relative role of agriculture fell, the service sector expanded rapidly, growing much faster than total GDP and its relative share rose from 35% in FY1974-76 to 50% in FY1980, then stabilized at just over 50% and remained at 50-55% for much of the recent period. The service sector continued to grow faster than GDP until FY2010 (Table 3.2), when its GDP share reached 55%. The growth has now slowed slightly below the pace of GDP growth. Consequently, the GDP share of service sector is declining and has fallen to 51% in FY2019. Until about 2000, the service sector was largely characterized by informal employment manned by low-skilled labour. Only recently, modern services are emerging as the more dynamic segment of the service economy. Nevertheless, this 45% increase in the relative GDP share of services in about four decades is a remarkable achievement and has been a major contributor to income, employment and poverty reduction.

Table 3.2: Decadal Growth Rates of GDP and Services

Average Growth Rates	FY74-80	FY81-90	FY91-00	FY01-10	FY11-19
Services	3.2	3.8	4.5	6.1	6.2
GDP	2.9	3.5	4.7	5.9	6.9

Source: GED estimates based on BBS data

The decadal growth record of Bangladesh's service sector is impressive and can be viewed in the context of W.W. Rostow's well-known "Stages of Economic Growth" hypothesis about the path to growth take-off. Rostow's (1960) stages hypothesized that a poor agrarian economy initially moves to a path of growth take-off based on the strength of the industrial sector and then eventually when it achieves self-sustained growth the role of service sector expands. Bangladesh followed a slightly different route in the sense that the service sector played a stronger role than the industrial sector in the early stages of development. As a result, the share of services value-added in total GDP is higher than the average for the low-income economies (Figure 3.2).

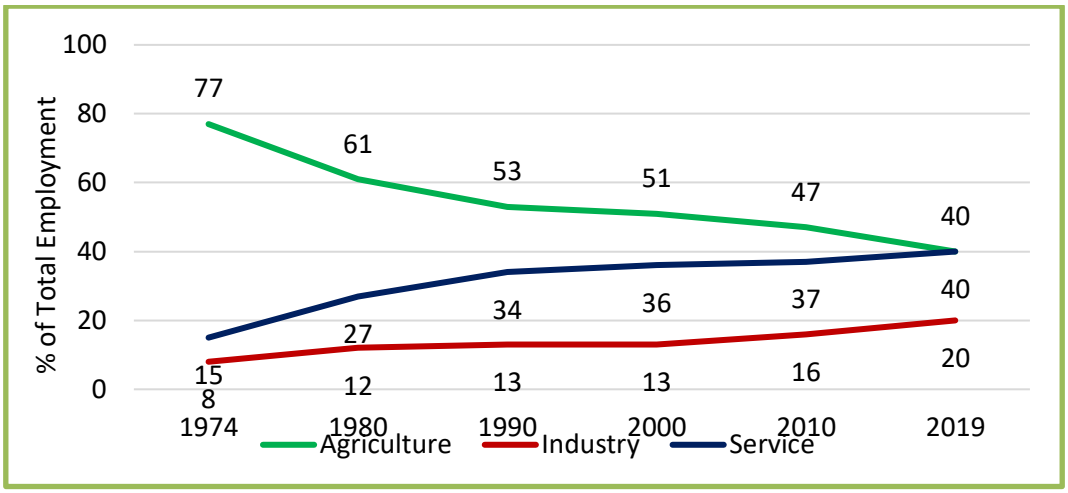
3.3.2 Employment Generation in Services

Whereas informal employment in rural and urban services provided the initial cushion for employment absorption, as rural agriculture released surplus labour, in subsequent years labour absorption occurred in more modern services (in addition to industry) as the service sector underwent structural change over time. Fig.3.5 presents the historical evolution of service sector employment contribution vis-à-vis agriculture and industry. Implications of this transformation are the subject of discussion in Section 3.6.

Surplus agriculture labour initially moved to a range of rural and urban services in trade, transport and personal services. Thus, the employment shares of services surged from 15% in FY1974 to 34% in FY1990. It has continued to grow somewhat faster than total employment since then, although the pace was considerably less rapid than during the FY1974-FY1990 period. A part of the slowdown service sector employment growth post FY1990 is explained by the RMG revolution that gained momentum during the 1990s. But another contributing factor was external migration, particularly to Middle Eastern Countries

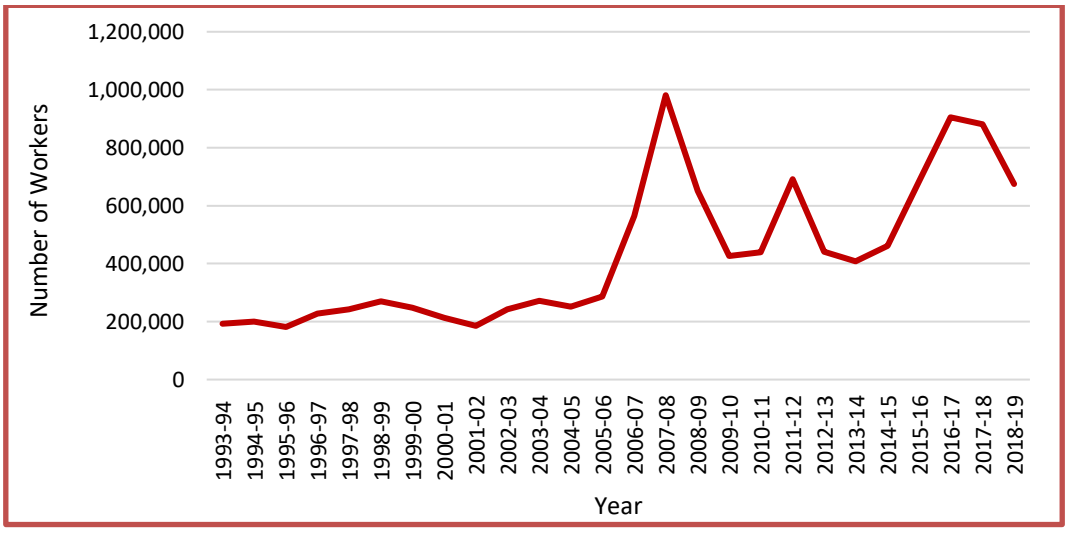
(Figure 3.6). Along with internal migration to urban sector jobs, the external job creation through migration has been a major contributor to the tightening of labour market in the rural economy and resultant increases in agricultural wages.

Figure 3.5: Share of Services in Employment



Source: Bangladesh Bureau of Statistics (BBS)

Figure 3.6: Annual Outflow of Migrant Workers



Source: Bureau of Manpower, Employment and Training (BMET)

3.3.3 Rural Transformation through Accelerated Non-Farm Service

Bangladesh rural economy has undergone profound transformational change compared to its state in the 1970s. Growth of informal and formal service activities in the rural areas have been a source as well as consequence of this rural transformation. Rural poverty has declined substantially; life expectancy and adult literacy has improved significantly. The substantial improvements in the fundamental indicators of well-being of the rural population were also accompanied by explosive growth of activities that fall within the ambit of formal or informal services: enhancements in the quality of life in terms of quality of dwelling,

access to safe water, access to sanitary facilities, access to electricity, access to rural roads, access to telephone, access to internet, better health and nutrition services and facilities and growing education of rural children at the primary and secondary level.

Along with social progress, the sources of income have changed dramatically. Agriculture is no longer the dominant source of income. The rural households now draw a substantially larger proportion of their income from non-agricultural activities and transfers, mainly from foreign migrant workers. The effects of growing demand for services in the rural economy financed by the remittance and non-farm income is adding a new dimension to employment opportunities for services in rural areas. The observed improvement in the quality of life of the rural population in terms of housing, rural infrastructure, health, nutrition and education is an example of the growing demand for services. The expansion in rural electrification, cell phone and internet services are also changing the economic and social character of the rural population.

Fertility decline and growth of food production explain the developments in rural Bangladesh between 1972 and 2000 quite well. From 2000 onwards, other dynamic factors have started playing a more dominant role in changing the rural landscape. To appreciate their role, it is instructive to look at the sources of rural household income (Table 3.3). HIES Data suggest that even as late as 1991 farming accounted for some 53 percent of rural household income. By 2010, this share had fallen dramatically to only 30 percent, whereas the share of non-agricultural income surged from 36 percent to 53 percent (BBS 2010). The other important and growing contributor is total transfers from domestic and foreign sources, which expanded from 11 percent in 1991 to 17 percent in 2010. Much of this transfer is accounted for by the contribution from foreign remittance. Although the relative importance of transfers fell in 2016, they have continued to play a major role in rural incomes.

Table 3.3: Sources of Rural Household Income (Percent)

Year	Total Household Income	Agriculture	Non-Agriculture	Transfers (Remittance)
1991/92	100	40	49	11
1995/96	100	35	55	10
2000	100	26	63	11
2005	100	29	59	12
2010	100	30	53	17
2016	100	19	69	12

Source: BBS, HIES (various years)

These changing income trends suggest a huge economic transformation of the rural economy as non-farming activities have corroborated the developments in national accounts that show that as compared with agriculture, which grew by an average of 3.4 per cent during FY1992-FY2010, manufacturing grew by 7.3 per cent While the income from farming tends to be more equalizing than income from non-farming and transfers, once the general equilibrium effects of growing demand for services in the rural economy financed by the remittance and non-farm income is considered, the most likely beneficiary of this is the rural wage earners, who tend to belong to the poorest income group. The observed improvement in the quality of life of the rural population in terms of housing, rural infrastructure, health, nutrition and education is an example of the growing demand for services.

The expansion in rural electrification, cell phone services and internet services are also changing the economic and social character of the rural population. Better communications along with improvement in rural transport has lowered the transaction costs between the rural and the urban centres, thereby facilitating the expansion of trade and commerce. The expansion of ICT services to the rural economy is slowly but surely reducing the information gap between the urban market centres and rural production points and also helping improve production technology. Additionally, the expansion of mobile financial services is changing the payments options. Both are helping reduce cost and secure better returns to rural entrepreneurs. It is pertinent to note here that despite progress in expansion of ICT services in rural areas, the digital divide between urban and rural areas still exists. The 8FYP envisions bridging the gap.

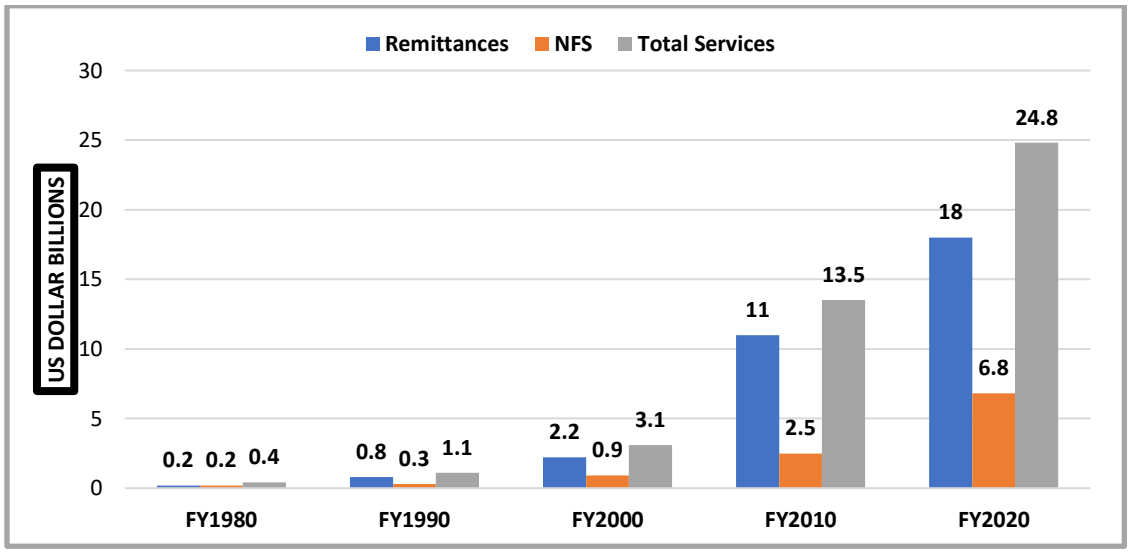
3.3.4 Growing Export Earnings from Factor and Non-Factor Services

Traditionally speaking, apart from such services as international shipping and air transportation, most services activities are considered non-traded. But evolution of international trade and the rise of embedded digital services in merchandise trade has brought a lot of service activities in the tradable category. As cross-border flows of digital information rise by leaps and bounds, more and more service activities which were considered non-tradable now have become tradable (e.g. printing, advertising, back-office processing). Though, by and large, services represent non-traded activities, it is possible to think of export and import of many types of services.

Service exports from Bangladesh could be divided into factor- and non-factor services. The EPB now publishes regular monthly statement of non-factor services export, as a complement to the data on merchandise exports. Remittance of migrant workers constitutes export of factor services. These services are provided under Mode 4 of WTO's General Agreement on Trade in Services (GATS). In the Bangladesh context, export of both factor and non-factor services generate significant amount of foreign exchange earnings to keep the current account of the balance of payments in sustainable range. Remittance inflows, which reached $17.5 billion in FY2020 (despite massive layoffs of migrant workers in the Middle East due to Covid19 related shock), have been a bulwark in propping up our foreign exchange reserves to record levels. Remittances make up as much as 6% of GDP and are the second largest source of foreign exchange earnings after RMG's 13%. Bangladesh also earns a fair amount of foreign exchange from a range of Non-Factor Services (NFS), such as shipping, air transport, insurance, tourism, IT and peace-keeping services. It is worth mentioning that IT sector export is growing over time. The export of IT service reached 265.17 million US$ in FY2020, which was 191.84 million US$ in FY2017. The trend in these sources of export earnings is illustrated in Figure 3.7.

Export of workers and related remittance inflows took off in a big way after FY1990. Other service exports have also shown some upward movement, but income from remittance inflows has dwarfed the contribution from other services. Remittance inflows reached a peak of $18 billion in FY2020 growing by an annual average rate of about 11% in nominal dollar terms between FY1990 and FY2020. Other service export income also grew significantly although at a more modest pace of 8% per year.

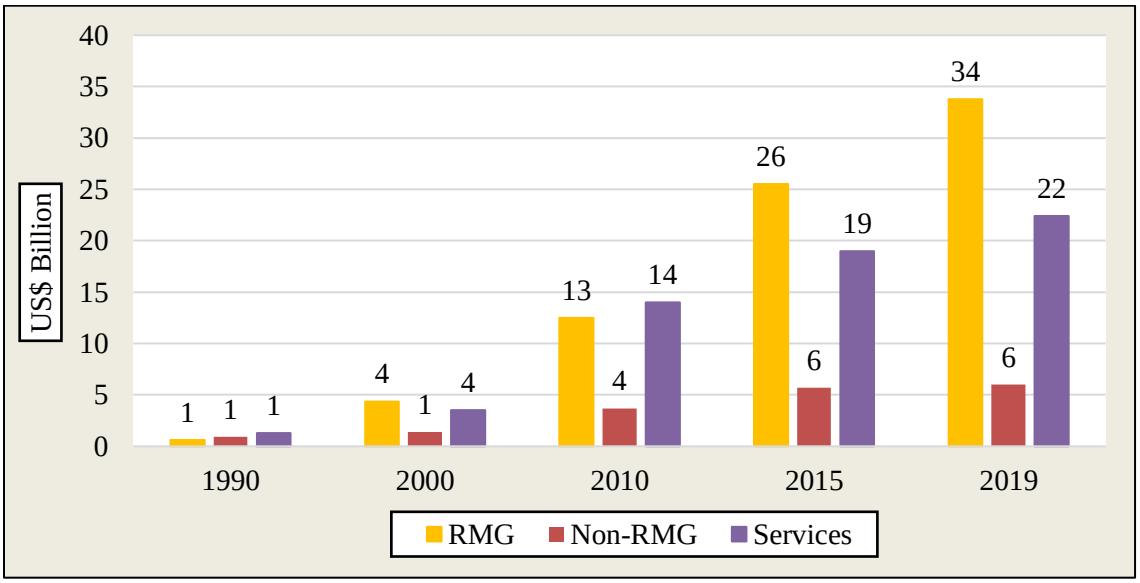
Figure 3.7: Trend in Factor and Non-Factor Service Exports



Source: Bangladesh Bank

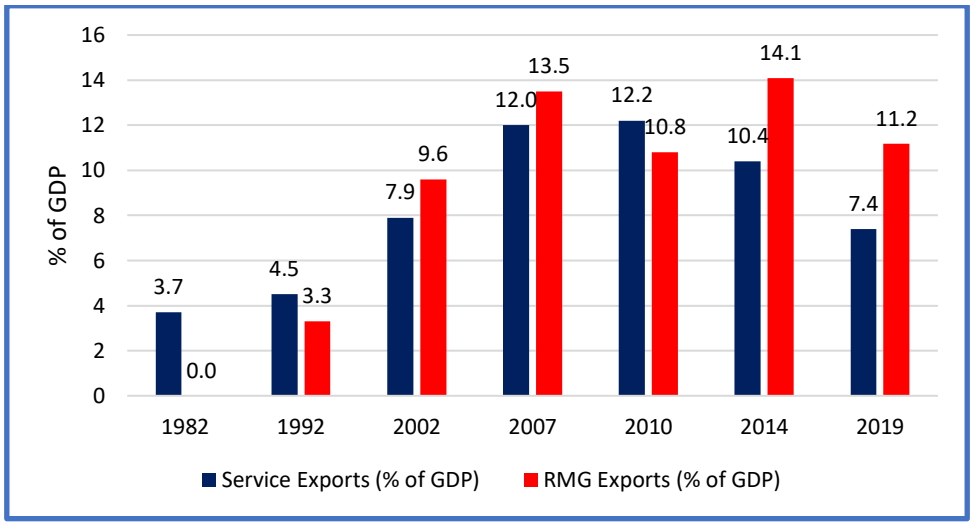
Income from remittances (factor services) and other services is a major source of foreign exchange earnings and an important driver of GDP growth. Before the emergence of ready-made garments (RMG), factor and non-factor services were the largest source of FE earnings (Figure 3.8). This dominance prevailed even after the arrival of RMG well until FY2010. The relative role of remittances and other service earnings has fallen considerably since then, owing to acceleration of RMG exports, a slowdown in the growth of remittance and the inability of non-factor services to grow fast. So, the total export earnings from services as a share of GDP fell from a peak of 12.2% in FY2010 to only 7.4% in FY2019 (Figure 3.9). Nevertheless, they still constitute the second largest source of foreign exchange earnings after RMG, accounting for 35% of total foreign exchange earnings in FY2019.

Figure 3.8: Value of Services Exports



Sources: Bangladesh Bank and the World Bank

Figure 3.9: Earnings from Services Exports as % of GDP



Sources: Bangladesh Bank and the World Bank

The solid contribution of service sector to export earnings is self-evident. The challenge moving forward is how the recent decline in service export earnings can be reversed and its historical dynamic role preserved and further expanded, especially focused on NFS. Unlike earnings from factor services that are largely exogenous to Bangladesh because they depend upon immigration policies of host countries (i.e. Mode 4 of GATS), earning potential from NFS is substantial. The global market for NFS is large and Bangladesh is a relatively small player. With proper policies it should be possible to capture a larger share on the global NFS market.

3.4 HARNESSING REMITTANCE FLOWS FOR DEVELOPMENT

Remittance, the income and savings of migrant workers, is unquestionably a strong driver of growth via its impact on consumption and investment spending as well as its singular contribution to Bangladesh's sustainable current account balance in the wake of rising demand of foreign exchange for import of goods and services to meet development requirements.

Remittance inflows arise from export of factor services. After merchandise exports, remittance inflows make up the second largest foreign exchange source for Bangladesh. Migrant workers (under Mode 4 of GATS) and their remittances have played a pivotal role in reducing poverty as well as fuelling growth in Bangladesh. As the labour force grows in size, a good number is finding temporary work abroad, mostly in the Middle Eastern countries and also elsewhere. In the past three years (FY17-19) the number of migrant departures ranged from 700,000 to 1 million. The Ministry of Expatriate's Welfare and Employment estimates that 12% of our labour force (about 8 million) of 65 million is employed abroad. One estimate by the RMMRU (Refugee and Migratory Movements Research Unit) puts the current stock of Bangladeshi migrants worldwide at 11.5 million.

After RMG exports, remittances bring home the maximum amount of foreign exchange, rising to US$16.4 billion in FY19 or 5.4% of GDP (Table 3.4). Despite the COVOD-19 pandemic, the remittance inflows performed remarkably well in FY2020. Inflows growth slowed down initially in the March -April months

but then recovered growing strongly in June 2020. On the whole, remittances grew by a solid 10.8% in FY2020 from FY2019. There are, however, reports of loss of overseas jobs and a slowdown in the departure of new overseas workers owing to COVID-19. It is expected that overseas job market will recover in 2021. The government is also making an effort to restore the momentum of overseas jobs.

Table 3.4: Bangladesh Remittance Inflows

Year	Remittance Inflow (US $ Millions)	Remittance Growth (%)
2009	9689	
2010	10987	13%
2011	11650	6%
2012	12843	10%
2013	14461	13%
2014	14228	0%
2015	15317	8%
2016	14931	-3%
2017	12769	-14%
2018	14982	17%
2019	16420	10%
2020	18205	11%

Source: Bangladesh Bank

Cross-country research evidence confirms that remittances from migrants have positive impacts on poverty reduction and development in originating countries, mostly developing ones, substantially contributing to the achievement of development goals. These positive impacts become greater when remittances can be saved and invested in infrastructures and productive capacity. Government policy measures could induce such use. Significant barriers to migration and remittance transfers in Bangladesh need to be addressed in order to harness opportunities for development and poverty reduction including through easing financial transfers, setting appropriate incentives, improving policy coherence in migration and facilitating the temporary movement of people.

The poverty reduction impact of remittances is substantial, as they are, in many cases, directly received by the poor households, augmenting their income and alleviating their poverty. Remittances have proved to be a more stable source of poverty reduction in Bangladesh. Such flows could last for one generation or more, and usually go to more or less the same family members or families in the same local neighbourhood within districts.

Remittances have also played an essential role in smoothing impacts of devastating natural disasters. International aid and private philanthropic support may be useful in the initial phase of reconstruction; however, this aid cannot be long-lasting. Remittances and other supports from migrants abroad play a more effective role in the post-disaster recovery and rehabilitation in Bangladesh.

Though not the most productive use of remittances, they have driven consumption spending in a big way particularly in the rural areas. The multiplier effect stems from the purchase of essential goods and services, home appliances, and medical and education services. Most of the goods and services consumed (mostly utilities and financial services) are produced locally, except for home appliances with a high level of

imported component. Such consumption increases the local demand, particularly in poor or rural areas, thereby driving domestic production.

When remittances are converted into investible resources, they have stronger multiplier effects with a major impact on the overall economy. When a share of remittances is used for small business investments, the multiplier effect becomes larger and more sustainable as they create income stream. On average, around 10 per cent of remittances are found to be saved and invested. Evidence shows that remittances help to increase the level of small business activities in the country as they are key sources of finance for investment in farming and other off-farm small and medium enterprises. Remittances have helped small local entrepreneurs bypass inefficient or non-existent local credit markets, especially in rural areas, and to start productive activities. To get the most developmental outcome from remittances, one goal of the 8FYP will be to channel remittances as a source of development finance to support development and poverty reduction, including the building of local infrastructure, expansion of CMSMEs, and augmenting productive capacity.

Steady flows of remittances from migrants have had important stabilizing effects on the balance of payments. Despite chronic trade deficits, the current account balance of Bangladesh has turned positive with the rise of remittances. Remittances have contributed significantly to the sustainability of our external balance with accumulation of foreign exchange reserves of $33 billion by end of FY2019.

Such funds also improve a country's creditworthiness for external borrowing. Remittances create the scope for introducing diaspora bonds which could be used as an innovative tool for development financing by tapping into the wealth of a diaspora population and opening new marketing channels. India was the first developing country to issue diaspora bonds during the economic crisis in 1991, when it experienced a large trade and fiscal deficit, high inflation and devaluation of the Indian rupee. The Indian Development Bonds targeted at Indian diaspora enabled India to raise $1.6 billion in a short period of time, which was critical to India's recovery from the crisis.

Depending on whether the lion's share of remittance is used for consumption purposes or investment, the effect and longevity of poverty alleviation and development effects vary accordingly. Research on the effect of remittance shows that while remittance used on consumption has short-term effects and can induce inequality, remittance used for investment has a lasting and more equalizing effect on income. It is argued that any form of spending, whether it is consumption or investment, will bring about a series of economic transactions, spurring demand for goods and services and more growth eventually. Moreover, consumption spending on human capital, education, healthcare and better nutrition also has a long-term influence on poverty reduction.

*Remittance investment and the multiplier effect***:** The bulk of remittances in Bangladesh, up to 80 percent, are spent on consumption and welfare, while only a small amount is invested in land, housing, or new productive investments. Clearly, expenditure on land and housing creates employment, as does spending for consumption, education, and welfare. However, it has been found that for the long-term economic growth of a community, new productive investment is the critical factor. When a share of remittance is used even for small business investments, the multiplier effect becomes larger and more sustainable as they create income stream. Remittance recipient households are known to use them as key sources of finance for investment in farming. Providing financial counselling to remittance recipients could help to mobilize

their savings into the financial sector, which could then be utilized for credit to enhance the country's productive base. Remittances are an attractive source of funding for local entrepreneurs because of its easy access and especially because they can circumvent any barriers to local credit market access due to inefficient practices and complexities.

It is fair to conclude that remittance has not only helped Bangladesh earn valuable foreign currency but it has also had the effect of raising its economic growth. For this reason, it will be important to take appropriate policy measures to keep the inflow of remittances on a higher growth trajectory. The volume and effectiveness of remittances, however, depend on factors like the type of workers going abroad (skilled or unskilled), ease of transferring money from abroad to home (i.e. official channels through which money is remitted) and how much is actually used for enhancement of society's welfare. Large portions of remittance move through informal channels and is never reported. To make the best use of these funds, pooling and redirecting them to such areas as microenterprise or infrastructure development, or human capital development, would yield the highest dividends for the country.

Remittance and Exports – twin sources of development finance: It is important to consider the impact of the two medium of foreign exchange earnings for Bangladesh that started to show promise since the 1990s. Together they account for 20% of GDP, driving consumption, investment and job creation. The chronic trade deficits resulting from the import-dependent development programmes that arguably involves rising imports of machinery, capital goods, and industrial raw materials, has been regularly offset by consistently rising remittance inflows to yield current account surpluses for 13 of the last 20 years. For a rapidly developing economy with enormous requirement for investment current account surplus indicate paucity of investment relative to national savings. During the 7FYP, the implementation of several mega projects (e.g. Padma Multi-purpose Bridge Project, Rooppur Nuclear Power Project, Rampal Coal Based Power Project, Chattogram-Dohajari to Ramu-Cox's Bazar and Ramu-Gundum Railway Construction Project, Dhaka Mass Rapid Transit Development Project) that required massive imports of heavy machinery and equipment, has now tipped the external balance towards negative current account which thus far has been financed largely through remittances, merchandise exports, concessional aid, supplier's credit, and other loans. But the good side of current account deficits is that it signifies excess of investment over national savings, indicating that we are finally displaying an appetite for meeting the yawning infrastructure gap that, once bridged, will yield enormous returns in terms of growth over the medium and long-term.

The bottom line is that for planning purposes exports combined with remittances now make up the principal source of development finance with official development assistance (ODA) playing a much smaller (albeit critical) role.

Cross-country research on remittances has identified ways to ensure that remittances are used in an effective manner which will contribute to the country's welfare. Strategies under the 8FYP will explore some of these for implementation:

- Encouraging wallet-to-wallet remittance flows with cash transfers in increasing saving by recipients (and senders)
- Improving investment climate by reducing red tape and other complexities will encourage recipients to use remittance money for investment purposes, whose effect is more long lasting and less volatile than that of consumption

- Weaknesses in the financial sector and in government administration impose substantial transaction costs on migrant workers; therefore, these issues should be addressed so that transaction costs are minimized. Evidence suggests that inefficiencies in the banking system—long delays in check clearance, exchange losses, or improper disclosure of transactions costs dissuades inward remittances
- Improvements in banking sector technology could ensure a smoother, quicker and more transparent money transfer system
- Remittance impact could be maximized by establishing partnerships between leading banks and the government post office network in countries that do not have access to banking services in rural areas
- Collecting remittance data and analysing them could help formulate policy actions in favour of remittance inflow. In order to do so, a better understanding must grow amongst key policy makers, regulatory bodies, financial service providers and migrant groups so that assessments on flows, migration patterns, technology and other motivations can be made

- Regulations must be eased so that there's a wider range of financial products available to low-income migrant households.

3.5 OVERSEAS EMPLOYMENT STRATEGY FOR THE 8FYP

Over the past decade, the Ministry of Expatriate's Welfare and Employment has taken the lead in paying increasing attention to the welfare of migrant workers and effective use of remittance inflows. A systematic journey towards building a robust system to take care of overseas employment and well-being of migrant workers started with enactment of 'Overseas Employment and Migrants Act 2013' followed by the adoption of a number of important legal instruments (Expatriates' Welfare and Overseas Employment Policy 2016, Labour Migration Management Rules 2017, Wage Earners' Welfare Board Act 2018, Policy Guidelines for Mandatory Insurance for Migrant Workers 2019, CIP Guidelines for Recruitment Agencies 2019). Bangladesh Bureau of Manpower Employment and Training (BMET) now track every worker who went abroad. However, there is no system in place yet to track returnee migrants, thus services for returnee migrants remain largely unutilized. The Wage Earners' Welfare Board (WEWB) introduced an Enterprise Resource Planning (ERP) system, which allows to process services for migrant workers.

Important lessons have been learnt from past experience:

- Bangladesh has been experiencing strong growth in the overseas employment and migration sector. There is confidence among the stakeholders that a big push can improve the scenario further and overseas employment and migration can play further substantive development role, beyond just counting remittance.
- Decentralization of migration governance proved to be effective by reducing hassles and cost for migrants. The decentralization needs to be continued and DMEOs need to be established in all districts.
- Along with the decentralization of migration governance, the decentralization of training facilities also improved training capability of BMET. Each Upazila should have a training facility in coordination with BTEB.

- The ability of PKB to function properly to serve the needs of the Migrant workers requires innovation, service and product diversification for various stages of migration, service to the families of the migrants and bringing commercial principles of operation.

3.5.1 Development Vision, Objectives and Agenda for 8FYP

The development vision, objectives and agenda for 8FYP of overseas employment and migration sector are drawn from the Vision 2041, Sustainable Development Goals (SDGs), International Labour Standard (ILS) and Conventions; Global Compact for Migration (GCM), and Other national and international commitments and the Action Plan of the Policy.

Vision

Having decent employment opportunities (both national and international) with dignity and protection of rights for every citizen, where overseas employment and migration contribute to national economic and social development.

Objectives

- Make a paradigm shift in the overseas employment and migration framework so that it becomes an important strategy of poverty and unemployment reduction, macroeconomic stability and well-being of every citizen of the country;
- Promote zero migration stance until the dignity, fairness, freedom, security and human rights of all Bangladeshi expatriates, especially for women migrants, are ensured;
- Make Bangladesh a preferred source of manpower in addressing critical developmental needs of countries around the globe;
- Attach highest importance to developing skills responsive to the needs in international labour market.
- Achieve low- cost migration for Bangladeshi citizens through concerted efforts of Ministries and agencies in the country as well as working along with regional and global stakeholders;
- Make overseas employment and return of Bangladeshi citizens, after contributing to Bangladesh economy and economy of host countries, safe, assured and protected.
- Make sure that return of the migrants is ensured through sustainable social and economic reintegration.

Big Agenda of Paradigm Shift in overseas employment

Merchandise exports crossed USD 40 billion in FY2019, contributing to macro-economic stability and jobs at home. Remittance inflows of $16.4 billion brought in the second largest amount of foreign exchange. Proper harnessing of overseas employment and ensuring well-being of migrant's workers could produce far-reaching results for the economy and society reaping the benefits of demographic dividends, addressing the challenges of 'job-less growth', as well as contributing top macroeconomic stability. A declaration of decade of "overseas employment diplomacy" may be a cornerstone of the paradigm shift. During the period

of 8FYP, roughly 1.5 million will be added to the workforce every year. Building on past experience, 50% of this additional labour force could be employed overseas by effective harnessing of overseas employment opportunities.

'Ethical recruitment' and 'empathy' will be two key parameters for this mind-set shift agenda. All curriculum and training of related stakeholders, both public and private sector will focus on the two parameters.

For shifting the paradigm, we need to re-look at the term 'labour', which gives the perception of low-skilled workers. As the paradigm shift agenda includes overseas employment of higher skills categories, with higher educational qualification and socio-economic status, it is apparent that the existing administrative arrangement is not equipped to facilitate migration of a skilled university graduates. The paradigm shift will include an agenda of institutional reform, which can cater to the need of potential employees of all sections of the society.

Overseas Employment and Well-being of Migrant Workers: A 10 Point Agenda for 8FYP

1. Institutional and Legal Reform and Capacity Enhancement: The first thing required for a paradigm shift is strong institutions with adequate capacity. Among the three major building blocks of migration, pre-departure, employment at destination countries and return, there is no policy framework to facilitate adequate provisioning of services for returnee migrants. The Ministry will initiate adoption of a 'Sustainable Reintegration of Migrant Workers Policy'. The Ministry will expedite adoption of a 'Rules for Wage Earner's Welfare Board Act 2018', so that benefits of provisions for migrant workers reach them.

The agenda for comprehensive institutional reform include:

- BMET will have to be raised to a Full-fledged department.
- One of the major action points for the Ministry during the period of 8FYP will be mapping the activities of these two key institutions reducing overlap in mandate and activities and ensuring appropriate integration of activities in the migration continuum. The responsibility of coordination will be with the Ministry with an integrated digital service management.
- To address the vacuum in research and analytical capacity to understand labour market dynamics in existing and new destination countries, a new Centre for Research on Labour Migration will be established linked with the Research Wing of the Ministry with a similar status in BIDS or BIISS. The Ministry will also establish a Labour Market Research Unit (LMRU) inside BMET.
- The era of migration diplomacy has arrived. Economic diplomacy has evolved into trade diplomacy in the 1990s and 2000s and Bangladesh was able to reap the benefit for such foreign policy reorientation. Without reducing focus on trade diplomacy, Bangladesh will be able to reap the benefit of foreign employment market through 'overseas employment diplomacy'. This will require significant capacity enhancement of and coordination between the MoEWE and MOFA. Besides, Bangladesh also needs to explore markets of the Central Asian and South-East Asian countries for exporting its products. To address this issue effectively, the Ministry of Finance, Ministry of Commerce and Ministry of Industries can be brought into a cluster to promote the economic diplomacy. Ministry of Foreign Affairs should help in this endeavour. BIDA, BEZA,

BEPZA and BHTPA can work with this cluster to attract the FDI in Bangladesh, and thus ensure employment, industrialization, export diversification and so on.

- In connection with reduction of cost of migration and reducing harassment of labour migrants, District Employment and Manpower Offices (DEMO) were established and a number of pre-departure processes were decentralized. In line with the strategy of sending at least 1,000 citizens from each Upazila, the Ministry will establish DEMOs in all uncovered districts, and increase capacity of the offices at migration-prone districts the facilities of registration and smart card distribution will be developed in all 64 districts. Scope of work for the DEMOs need to be outlined to ensure effective migration, employment and reintegration facilitation.
- Currently, 64 Technical Training Centres (TTC) and 6 Institute of Marine Technologies (IMT) are in operation and 70 more are under process of establishment. During 8FYP all Upazila will have TTCs. This expansion will provide appropriate and adequate training to potential migrant without leaving station.

2. Market Expansion and Economic Contribution: Current overseas employment is limited to 20 countries on a regular basis with other countries arising occasionally. The market expanded from about 2.6 million during the 6FYP period to nearly 8 million at the end of 7FYP period.

- The Ministry will target at least 5 million new workforces for facilitating migration abroad in 8FYP, with minimum 50% in higher skilled categories. The Ministry will target 20 new countries in 4 new geographic regions. The Ministry will target reaching USD 150 Billion of remittance in 8FYP period, with an average remittance income of USD 30 Billion per year.
- For reaching the target, the Ministry will launch an 'Overseas employment market expansion road-map' by a new 'Market Expansion Task-force', combining all relevant Ministries and agencies.

3. Skills Development: To achieve these positive outcomes of skills development and qualification recognition of migrant workers, a National Action Plan for Skills Development and Migration Management has been developed. The aim of the action plan is to guide skills development initiatives in line with the National Skills Development Policy 2011, while also maintaining effective coordination with other skills development stakeholders.

- The Ministry will take initiative during this period to work with National Skills Development Authority (NSDA) and Bangladesh Technical Education Board and Future of Work Lab.
- The Ministry will establish one TTC in every Upazila by 2025, which will allow potential migrants to go for longer training outside of their home.
- The Ministry will initiate in association with the Ministry of Foreign Affairs and other relevant entities pursuing international accreditation of certification of skills and mutual recognition of skills for at least 20 countries by the end of 8FYP period.
- The Ministry will develop a 'Policy for Skills Classification for Migration' to replace the traditional 4 level category (Less-Skilled, Semi-Skilled, Skilled and Professional) to new competency-based grading system (NTVQF). The Ministry will also upgrade BMET occupational database by re-classifying migrants in terms of the new classification system. Annual review will be conducted in COD to establish realistic wage rates and differentials for skilled workers.

- The Ministry will introduce skills competency assessment and certification as a new precondition for the issuing of Smart Card exit permit. It will establish Assessment Centres for outward migrant workers with international accreditation.
- The Ministry will work closely with the Ministry of Foreign Affairs to induct Skills Recognition of Bangladesh TVET qualifications in COD's.

4. Access to Service

- The 8FYP will introduce seamless one-stop-service for the potential migrants by integration of physical and digital infrastructure.
- The 8FYP will expand the capacity of the grievance management system integrating with national grievance management. The system will be seamlessly integrated with relevant institutions at home and in destination countries, including Bangladesh Missions.
- Access to Information is the key for making informed decision for migration. The Ministry will develop a communication strategy on skills training & NTVQF qualification and better-quality information on safe migration for aspiring migrants.
- The Ministry will initiate private-public partnership in the areas of access to services for migrant workers at home and abroad with a provision of quality control and engaging expatriate Bangladeshi professionals.
- A number of programmes were implemented with support from development partners, including call centre, grievances management system. The Ministry will mainstream services under those programmes/projects through public-private partnership, engaging Office of the Public-Private Partnership at Prime Minister's Office.

5. Access to Finance

- The Ministry will work closely with the PKB to remove all bottlenecks, including expanding the branch network including agent banking outlets in each Upazila. The PKB will introduce digital banking and banking services to families of migrant workers with a whole range of products as like as any other commercial banks, for making the bank reachable to majority of the migrant workers.
- The government has also introduced a very progressive system of 2% cash incentive to the migrant workers for sending their remittance through regular channel. As a result of that the remittance flow through legal channel has increased. The government has introduced insurance service for migrant workers and their family members. The coverage and time length of insurance service will be increased during the 8FYP.
- The Ministry will take comprehensive plan to promote financial literacy and remittance management training for migrants at the pre-departure stage. The Ministry will lead activities to ensure migrant's families are well aware about the gainful utilization of remittance.

6. Protection, Rights and Well-being

- The Bangladesh Constitution ensures protection of every citizen from abuse and torture, be it at home and abroad (Article 35(5) of the Constitution of Bangladesh), as a signatory of the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families 1990, the Overseas Employment and Migration Act 2013, and the Expatriates' Welfare and Overseas Employment Policy 2016, ensures execution of those commitments. During the 8FYP, Ministry will allocate resources for strengthening institutional capacity for ensuring protection, rights and well-being of migrant workers, especially women migrants.
- One of the specific measures is engaging non-resident Bangladeshi specialists to support new migrants and migrants facing trouble in destination countries in terms of legal protection and mental health. The Ministry will launch a comprehensive programme in collaboration with the private sector and NGOs for ensuring mental health support during their stay abroad and after return.
- The Ministry will explore scope of introduction of a package of support for returning migrant workers (including entrepreneurial skills training, job placement and skills assessment) to assist their reintegration into the domestic labour market.
- The Ministry will explore the scope of introduction of International Recruitment Integrity System (IRIS) for encouraging private sector recruiting agencies at home and destination countries practicing fair recruitment to reduce excessive cost of migration as well as protection of rights of migrants.
- While Bangladesh's strategy will be to explore new markets and facilitating migration with higher skills, Bangladesh will take a stance of 'no migration', unless a minimum set of criteria is fulfilled in terms of wage, rights and protection, in line with international conventions.

7. Digitization

- The Ministry will initiate mapping of all existing services and assess the effectiveness and adequacy. By 2025, the whole migration process will be digitized with a very simple user interface for migrant workers.
- The Ministry will develop a labour migration data strategy, which will facilitate all relevant Ministries, Agencies at home and abroad to share data to better strategize and provide services to migrant workers as well as better protection. One example of what data strategy may include is introduction of a centralised electronic management information system (CMIS) for capturing data on all trainees of BMET, TTCs, other ministries and departments providing skills training, dis-aggregated by course level, course type, course name, institution, district and gender and assessment results. The MIS would be helpful for skills assessment and efforts of accreditation and mutual recognition.
- The Ministry will launch e-learning programmes, with appropriate design so that migrant workers get refreshers for their skills with support distance-based learning

8. Private Sector and Stakeholders Engagement

- The Ministry will undertake project for further streamlining the process of migration with optimization of engagement of intermediaries, by launching an accountability framework for intermediary. The outcome of the project will allow reducing the cost of migration.
- Recognizing that the private sector is the main vehicle for overseas migration, the Ministry will form a technical committee for coordination of implementation of action plan so that activities, programmes and projects complement in terms capacity and specialization, rather than compete with each other.
- The Ministry will lead and take effective initiative and programmes to include the private sector in promoting migration of skilled workers, protection rights and ensure gainful migration.
- The Ministry will develop "ethical recruitment" system and monitor BAIRA for implementation.
- The Ministry will take leadership in mobilizing governments and stakeholders of sending countries and international stakeholders for developing a strategy of 'zero recruitment cost migration' (employers pay model) and 'every citizen's right matter' policy for safety and rights of migrant workers.

9. Cost of Migration

- The Ministry will undertake a five-year programmes targeting 'low recruitment cost migration' through negotiation with employers, recruiting agencies and service providers.
- The Ministry will also increase capacity of BOESL for accessing new market and expanding existing market, which will reduce cost of migration and increase competition, through market-based incentives for reducing cost.

10. Reintegration

- The Ministry will initiate adoption of a 'Sustainable Reintegration of Migrant Workers Policy'. The Ministry will expedite adoption of a 'Rules for Wage Earner's Welfare Board Act 2018', so that benefits of provisions for migrant workers reach them. The Ministry will adopt a Standard Operating Procedure (SOP) for returnee migrant reintegration, especially for female migrants.
- The Ministry will establish an inter-ministerial and inter-agency/department "referral mechanism" for the sustainable reintegration of the returnee and will develop and implement a package of support for returning migrant workers, including social and psychosocial reintegration, entrepreneurial skills training, job placement and skills assessment to assist their reintegration into the domestic labour market.
- During 8FYP, initiatives will be taken to introduce new mechanism, including the introduction of mandatory deposit schemes for migrant workers, which can be deducted by the remittance receiving banks and accumulate in the account of migrant workers. The deposit scheme will allow the returnee migrant workers to have financial resources to start her/his own venture or a breathing space for reintegration.

- Capacity building of the DEMOs and WEWB to deliver reintegration services to the returnee migrants including referral for medical, psychosocial support, skills development, economic rehabilitation and financial inclusion.

3.6 DEVELOPMENT CHALLENGES IN THE SERVICE SECTOR

The past solid performance of the service sector has played a major development role in creating jobs, increasing exports, supporting income and reducing poverty. Nevertheless, there is substantial scope for further strengthening the contribution of this sector to the development of Bangladesh, especially in terms of growth and equity. The quality and productivity of the service sector must enhance tremendously to provide the necessary growth and employment support to ensure the successful completion of the aspired journey for Bangladesh from Lower-Middle Income to Upper Middle Income by FY2031 and High Income by FY2041.

There are a number of issues and challenges that need to be addressed to facilitate this journey. First, despite some progress with modernizing the service sector, it remains dominated by unorganized activities where productivity and incomes are low. Much of the workforce outside agriculture who are considered poor are engaged in these low-productivity, low-income unorganized services in rural and urban areas. Second, the skill base of the service sector, although better than in agriculture and manufacturing, is still low that largely explains the dominance of unorganized, low productivity, low income activities. Third, while earnings from export of labour services have done very well, the performance of export earnings from NFS is considerably below potential. Fourth, the regulatory policies and public institutions for supporting the expansion of modern services require substantial revisions and upgrading in order to fully exploit the benefits of a modern and dynamic service sector.

3.6.1 The Structure of Service sector

The structure of service sector is shown in Table 3.5. Trade is the dominant services activity, growing at a faster pace than total GDP between FY1974 and FY2010, with its share in GDP reaching 14 percent. Since then its GDP share stabilized at around 14%, growing at the same pace as total GDP. The increasing importance of trading activities can be gauged from the fact that its GDP share in FY2019 exceeded the GDP share of crop agriculture and forestry combined. The expansion of trading activities has benefitted from a flexible and liberal entry/exit business environment of the sector. The investment requirements are relatively low and flexible because scale can be adjusted easily to fit the available financing. Trading is a major source of rural non-farm employment and income.

An important though informal component of service sector is the large range of personal and community services. Its GDP share climbed from 6.2 percent in FY1974 to a high of 11.1% in FY2010, before falling down to 8.2 percent in FY2019. The expansion of personal services benefitted from the generous inflow of remittances. The demand for a range of personal services including chauffeurs, plumbers, shoe-repair, informal electrician, mechanics, tailoring, household support staff, hair dressing, beauty salons and parlours and the like have mushroomed all over urban Bangladesh, especially in the high-income metropolitan cities of Dhaka and Chittagong. The high-income elasticity of demand for these services and plentiful supply makes this a very vibrant source of income and employment. Wage data from the 2015-16 Labour Force Survey shows that the average wages in non-household informal activities tend to be higher than average

wages in manufacturing (BBS 2017). As in the case of trading, the highly flexible employment market with almost no regulatory intervention and minimum investment requirement have contributed to the expansion of this activity.

Table 3.5: The Structure of Service sector (% GDP) at Current Price

Activity	FY1980	FY1990	FY2000	FY2010	FY2019
Trade	12.92	12.28	13.30	14.0	13.34
Transport	10.42	9.53	7.49	9.01	8.24
Telecommunication	0.23	0.4	0.68	1.56	1.10
Financial Services	1.31	1.38	1.75	3.08	3.89
Real Estate	8.70	8.54	9.48	7.15	7.87
Public Administration	1.40	2.05	2.85	3.34	4.09
Education	1.98	1.88	2.43	2.40	3.02
Health	2.33	2.29	2.12	2.01	2.15
Hotels and Restaurants	0.57	0.59	0.6	0.92	1.04
Personal and Community Services	7.95	9.35	12.22	12.57	10.78
Total Services	**47.81**	**48.28**	**52.91**	**56.05**	**55**

Source: Bangladesh Bureau of Statistics

Table 3.6: Composition of Transport Sector (% of GDP)

Transportation Mode/Activity	FY1980	FY1990	FY2000	FY2010	FY 2019
Land	5.3	6.2	6.4	7.3	7.0
Water	2.5	2	1.1	0.9	0.7
Air	0.1	0.2	0.2	0.1	0.1
Storage etc.	0.2	0.3	0.4	0.6	0.6
Total Transport	**8.1**	**8.7**	**8.1**	**8.9**	**8.4**

Source: Bangladesh Bureau of Statistics

The third major service activity is the transport sector. Following an immediate expansion between FY1974-FY1980, on average the transport sector has underperformed. The major transport components are shown in Table 3.6. Land transport seems to have performed well, growing faster than overall GDP, but water and air transport have performed poorly. Even in land transport, there are major performance issues in road infrastructure and rail services.

The rapid decline in the share of water transport underscores the huge neglect of this mode of transportation. Given the large network of waterways in Bangladesh, river transport serves a major development role in terms mobility of rural people and commodity flow. It can also be a dynamic source of employment and poverty reduction for the rural poor. With the growing congestion of road network and limited capacity of rail cargo services, water transport provides a huge, environmentally friendly alternative that has been by-passed.

There are several factors that have constrained the performance of river transport. The most important factor is the limited navigability of many river ways owing to the growing incidence of siltation. Huge investments are needed for river dredging to make them navigable and conducive to the use of modern river vessels. A

second factor is the inadequacy of safety standards to protect people and cargoes from accidents. Many river vessels have questionable river-worthiness features. Additionally, the frequency of over-loading is huge. Due to absence of adequate monitoring and enforcement, safety standards are frequently violated resulting in accidents that cause substantial loss of life and property. Because of safety concerns a large amount of potential river traffic tends to get diverted to land transport that further adds to the congestion problem. A third problem is the inadequacy of river ports and cargo handling capacities. It is obvious that a combination of major investments in river dredging and river ports combined with effective monitoring and implementation of safety standards will substantially improve the quality of water transport and spur private investment and value-added. Investments during the 8FYP are expected to make up for this deficiency.

Regarding air transport, the main constraint is the weak performance of the national carrier Bangladesh Biman. The demand for air transport has swelled at both the international and domestic level. Yet, capacity constraints and management deficiencies have plagued the national carrier. Consequently, fleet capacity, reliability and service quality remain weak. As a result, it has not been able to benefit much from the large growth in the demand for both international and domestic travel. High-performing international carriers have captured the bulk of the market share of international travel to and from Bangladesh. In the area of domestic air travel, the government deregulated air operations to allow for national based private air services. The response has been positive but inadequate. A major constraint is investment. Air services are highly capital intensive and also require special skills, the absence of which tends to make domestic private investment hesitant to enter this high-risk sector. The inadequacy of domestic air connectivity combined with heavily congested land transport is a major constraint to the growth of the tourism industry.

A fourth large contributor to services GDP is the real estate sector. It has generally been on an upward trend since FY1974, achieving its fastest growth during the first 10 years after independence. As a result, its GDP share surged from 4.9 percent in FY1974 to 10.2 percent in FY1980. The activities of the real estate sector got a boost from the inflow of remittances. Also, with growing urbanization, the demand for urban housing and urban office space has surged. The supply of real estate services has responded adequately to the demand and the market works competitively. However, speculative activities over the 2007-10 periods caused an over-investment in high-cost urban housing projects that have created a market bubble. Real estate prices and urban housing rents have moderated in response to this bubble, causing a slowdown in the growth of real estate activities. Its share in GDP is down to 6.1% in FY2019.

Additionally, there are major policy constraints that prevent the emergence of a modern and efficient real estate market. First concerns the inadequacy of home loan mortgage services and the second is the inadequacy of enforcement of zoning regulations. The inadequacy of long-term home mortgage options reduces the effective demand for housing services, while the ineffectiveness of zoning regulations reduces the quality of real estate services with excessive bias towards commercial real estate services. This in turn contributes to the weakness of urban development.

The low GDP contribution of education and health and nutrition services despite growth of these services may reflect the expansion of low-quality these services. While the composition of activities in both sectors has changed substantially with a growing share of private provision, the average service quality and inputs remain low. The inadequacy of tertiary education in science and technology area is emerging as a major constraint to the expansion of quality manufacturing and high-value-added service exports. In the area of

health and nutrition, the absence of modern health financing options, such as health insurance, is an important constraint to the more rapid expansion of higher value health and nutrition services.

One major service industry not directly reflected in the service sector value-added is the role of tourism. While the international travel-related effects of tourism are captured through the travel receipts in the service account of the balance of payments, other aspects of tourism linked hospitality services and domestic transport are captured in transport, hotels and restaurants. Additionally, there are large indirect effects linked to tourist spending on travel, hotels, food, and purchases of other local goods and services. Research shows that the multiplier effects of tourism can be large as reflected in the role of tourism in such economies as Thailand and Malaysia.

3.6.2 The Quest for Modernization of Service Sector Activities

Reviewing the structure and evolution of Bangladesh's service sector, one would get the impression that the economy has already reached the appropriate relative size of services to GDP as one would expect in a MIC – slightly over 50% contribution to GDP (see Fig.3.1b). But that is not the case. Though the contribution to GDP of services is 51%, as already mentioned, much of the services activities are characterized by informal CMSEs operations without the kind of wage employment one would find in industry or formal services, like banking and finance, education, and public administration. According to LFS 2016-17, some 71.8% of the workforce engaged in services are employed in informal activities. Thus, the goal of structural transformation in services during the 8FYP period would be the expansion and modernization of service activities so that the service sector plays its role as a productive and dynamic segment of a rapidly developing economy. Needless to say, a modern and efficient service sector can play effective intermediary to boost output and productivity in industry and agriculture.

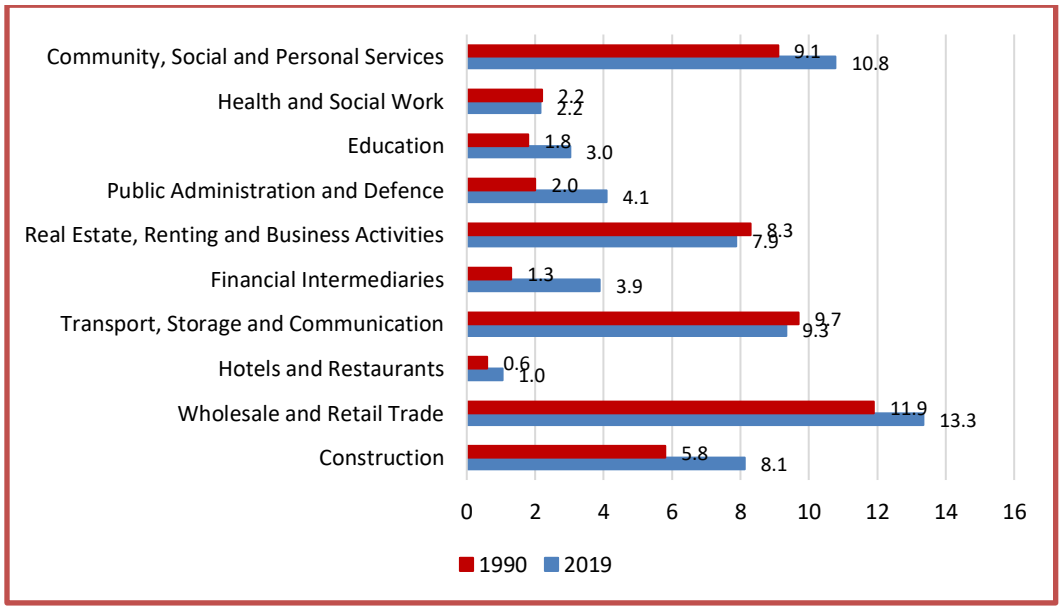
But we face an enormous challenge in order to transform this sector into a predominantly modern operation with formal institutions and enterprises. Modernization has been creeping in. There are parts of services that have leapfrogged into the modern digital era by adopting the latest advances in technology (e.g. widespread use of ICT and online services, mobile telephone, digital financial services, etc.). The march of technological innovation is so rapid that it is fast changing the way we live and do business, even in Bangladesh which is not yet recognized for its depth of ICT usage.

Yet, there is still a long way to go on the path of modernization of the service sector. In addition to the traditional definition of formal service sector that mostly includes public administration, public health and public education, in each category of service there is a mix of formal and informal provision. The absence of data makes it difficult to fully understand the extent of modernization of the service sector. In view of this limitation, the modernization is defined more specifically to include the formal public sector and the growth of a range of private sector services that are well organized and registered with the government, that is much more skill based, that involves better technology and that are relatively more capital intensive. These activities include Telecoms and ICT, banking and financial services, aviation industry, international shipping, hospitality industry (hotel and restaurants) and modern storage and transport support services. Each of these activities holds considerable growth prospects and can cater to both domestic and international demand.

The expansion of high potential modern service activities is indicated in Figure 3.10. Starting from low base values in FY1990, all services, except healthcare and air transport, have grown faster than GDP. The financial sector in particular has done well, thereby acquiring a rapid increase in its GDP share. Storage and transport support services and telecoms/ICT services have also performed well. However, in comparison to its potential ICT and telecoms services have under-performed. International shipping also has under-performed. Hospitality service growth has shown some momentum starting from its tiny base value, but compared to potential it has under-performed. Along with domestic air travel, it constitutes another constraint to the expansion of tourism activities. The healthcare services require special policy attention. In high income countries healthcare tends to be one of the most dynamic and high value-added activity.

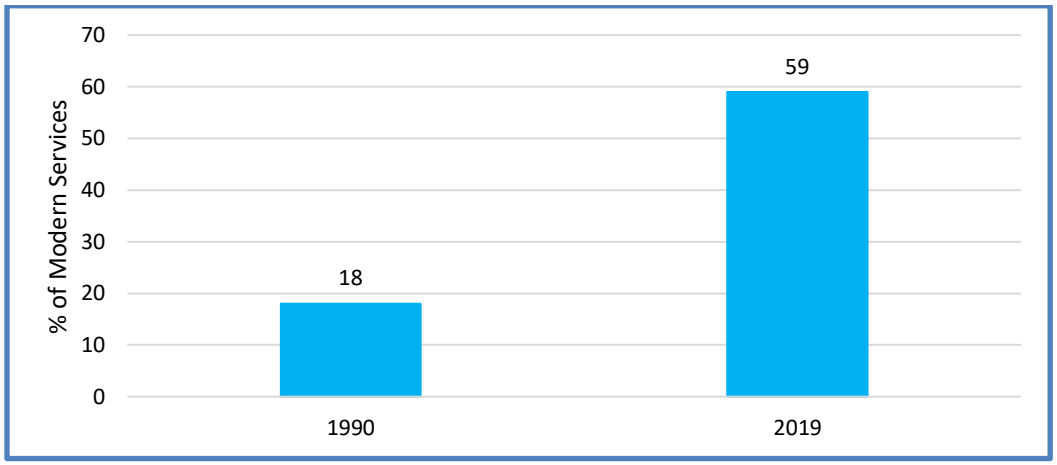
The growth of high-potential services is beginning to make an impact in terms of modernization of the service sector. Thus, the share of modern services has more than tripled from 18 percent in FY1990 to 59 percent in FY2019 (Figure 3.11). Much of the growth has come from private-sector led modern services involving finance and technology. Nevertheless, as noted, most of these services are under-performing relative to domestic and international demand. In particular ITC, hospitality services, shipping and aviation services can considerably expand by taking advantage of considerable global demand for these services. Additionally, housing, healthcare and education will need to create the basis for supporting the skills base and the technology base to spur the development of the manufacturing sector.

Figure 3.10: Evolution of Modern Services (% of GDP)



Source: Bangladesh Bureau of Statistics (BBS)

Figure 3.11: Structural Change in Services



Source: Bangladesh Bureau of Statistics (BBS)

Commensurate with its growing importance in the economy, the employment share of modern services has also increased significantly over the years. The growth has been particularly dramatic since 2010. This is an important indication of the slowly improving formal employment base in the service sector. Yet, this performance has to gather momentum if Bangladesh were to achieve services modernization characteristic of a MIC by 2031, and a highly modern sector with predominantly formal enterprises and institutions as the country reached HIC status by 2041

3.6.3 The Productivity Challenge in Services

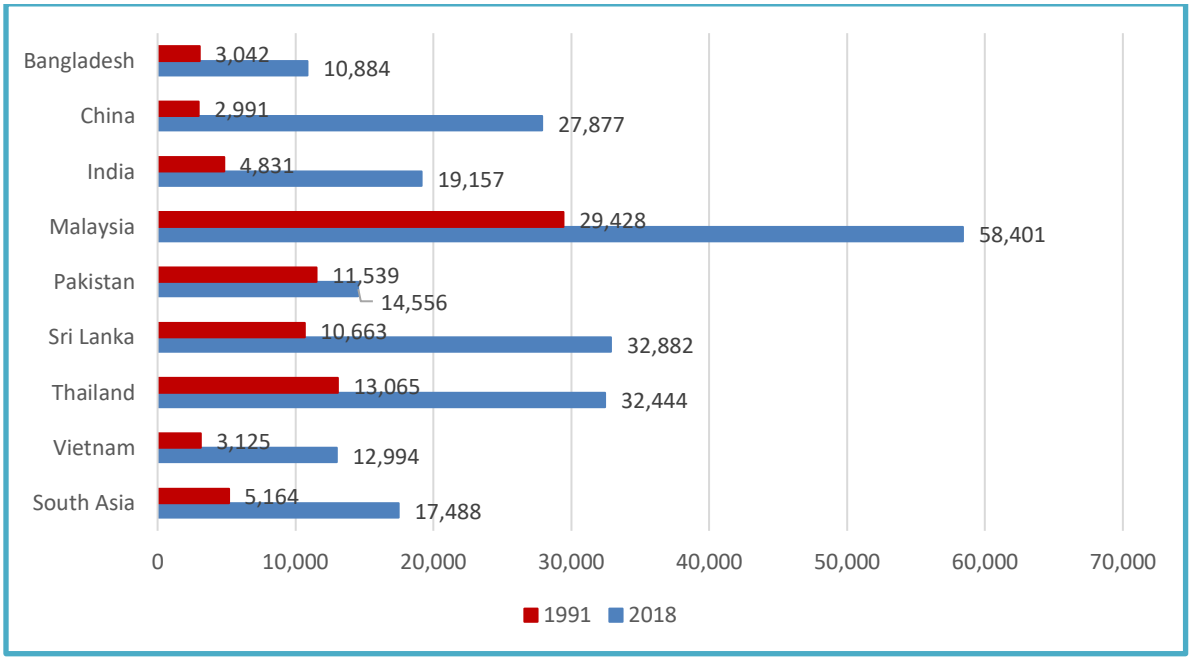
Apart from the specific need to expand the contribution of high-potential services in the economy, there is the more general challenge of increasing the productivity of services activities. Professional and skill-intensive services such as banking, finance, ICT, healthcare, education, shipping and aviation tend to be high productivity, high income activities. As noted above, the role of these activities is still limited despite recent growth. Other services like trade, transport and personal services have done well but generally they tend to be dominated by low productivity, low skills and unorganized activities.

In order to provide a reference point, it is first important to look at how average labour productivity economy wide in Bangladesh compares internationally across key trading competitors. This is shown in Figure 3.12. To make comparisons meaningful, GDP is measured in purchasing power parity (PPP) terms. The good news is that Bangladesh has made important progress in improving average labour productivity between 1991 and 2016. The bad news is that there is still a lot of catching up to do to approach the productivity levels of competitors. Average labour productivity in Bangladesh is 53 percent lower than in India; 69 percent lower than in China; 75 percent lower than in Sri Lanka and 86 percent lower than in Malaysia. Increasing average labour productivity is perhaps the biggest challenge facing Bangladesh in aspiring to reach higher income in the next 20 years.

Looking at the Bangladesh sectoral productivity, the average labour productivity in manufacturing is the highest, followed by services (Figure 3.13). Not surprisingly, average productivity is the lowest in agriculture, which pulls down the average productivity nationwide and partly explains the observed very low average labour productivity at the international comparator level. The average productivity

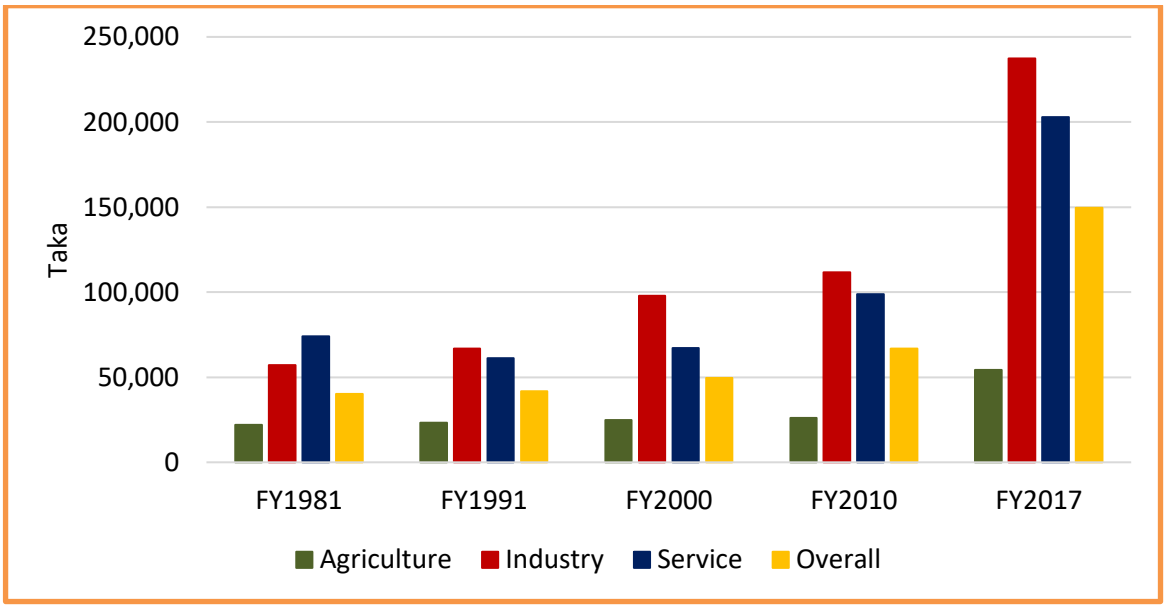
differentials across sectors are reasonable. The development process involves labour transfers from the lowest productivity activity (agriculture) to medium average productivity activity (services) and then eventually to the highest productivity activity (industry).

Figure 3.12: Average Labour Productivity in Bangladesh and Comparator Countries (2011 PPP$)



Source: The World Bank

Figure 3.13: Trend in Average Labour Productivity, 1995/96 Prices



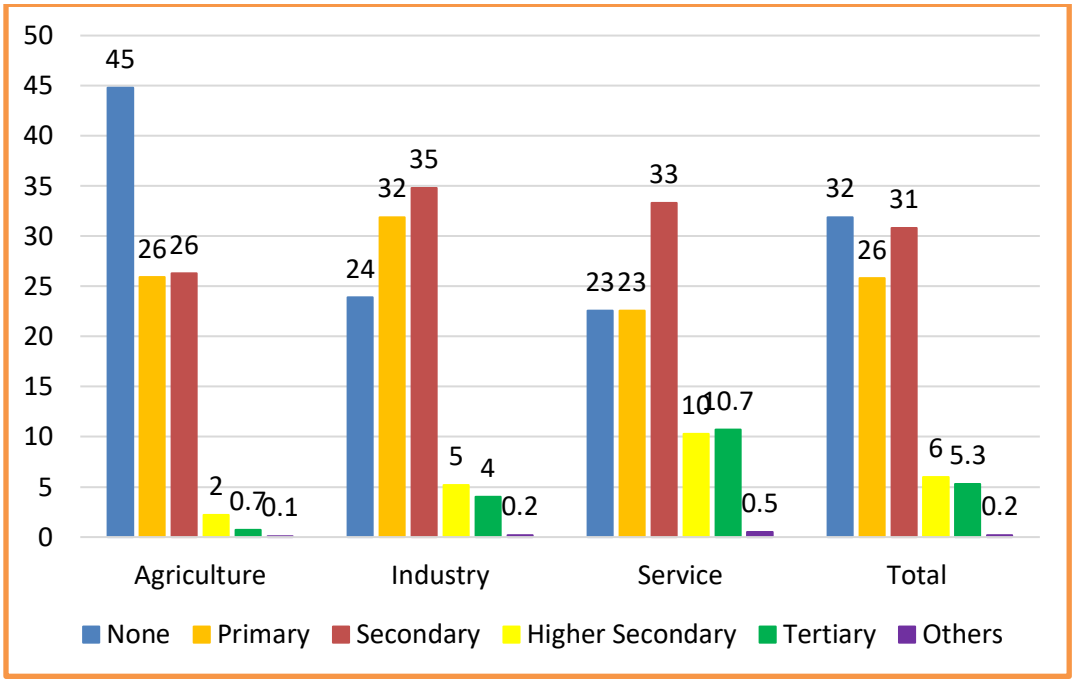
Source: Bangladesh Bureau of Statistics (BBS)

The productivity challenge in the service sector is clear. According to LFS 2015-16, trade and transport account for 57% of total services employment. An additional 5% are employed as household staff. Combining these low productivity workers with the low productivity outcome of education services (10% of the work force); some 72% of service sector employment suffers from low average productivity. Modernizing and upgrading the quality of this 72% of the service sector employment is a major challenge that the 8FYP will need to address.

3.6.4 The Skills Challenge in Services

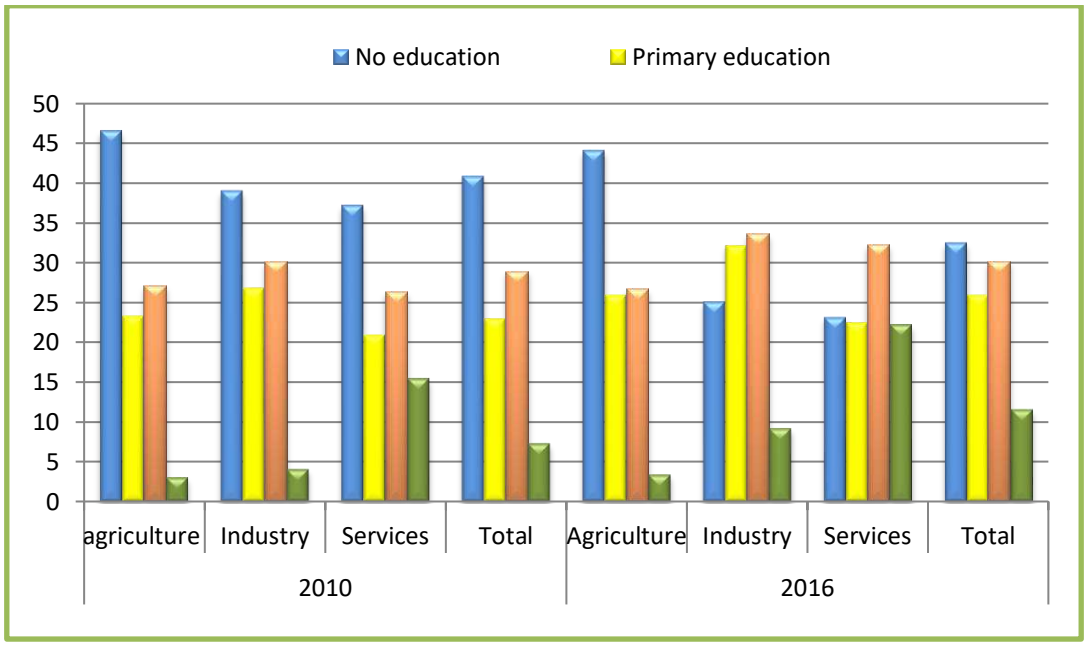
Informal employment permeates the largest segment of service sectors – wholesale and retail trade, transport and personal services. Low wages and low productivity are pervasive in this segment, compared with the high productivity in professional services (ICT, Telecoms, finance, etc. This is largely explained by the skills differentials between these activities. On average, the professional services are characterized by labour force with tertiary degrees and other professional and specialized training. In contrast, the average education level in transport, trade and personal services is very low. Figure 3.14 shows the education attainments of employed labour in Bangladesh. The Figure 3.15 shows that some good progress has been achieved in improving the education profile of the work force but the gaps remain alarming. Some 32 per cent of the Bangladesh labour force had zero education even as late as FY2016. This number is as high as 45 per cent in agriculture. About 26 per cent have only primary education, while 31 per cent have secondary education. Only 11 per cent have tertiary level education (higher secondary and above). On average the education attainments of the service sector are better than industry and agriculture. For example, on average, some 22 per cent of services workers have tertiary level education as compared with 9 per cent in industry and only 3 per cent in agriculture.

Figure 3.14: Education Profile of the Workforce



Source: Labour Force Survey (LFS) 2016-17, Bangladesh Bureau of Statistics (BBS)

Figure 3.15: Improving Education Profile of the Workforce



Source: LFS, 2010; LFS 2015-16. Bangladesh Bureau of Statistics

Some further insights on the skills challenge in the service sector can be obtained from the combined analysis of the 2010 Labour Force Survey data and the 2010 HIES data. The LFS 2010 suggests that some 79 per cent of labour force engaged in service sector is informal in nature. The level of formality varies considerably by occupation, with most informal activities concentrated in trade, transport and personal services (over 90 per cent of activities are informal in nature) while activities in financial sector, education, real estate and public administration are mostly formal (60-80 per cent). According to HIES 2010, the average years of schooling for formal workers are 10.1 years among public sector employees and 5.9 years among private sector employees. In contrast, informal workers including day labourers and self-employed have 2.1 and 4.2 years of education, on average, respectively. In 2010 there were some 15 million-day labourers and 20 million self-employed in the workforce. Some 9.7 million-day labourers and 8.9 million self-employed had no education at all. A World Bank Survey of reading assessment of rural non-farm workers conducted in 2009 showed that some 77 per cent of non-farm day workers and 57 per cent of no-farm self-employed could not read. The bulk of these informal workers and self-employed are engaged in the service sector. These data are indicative of the skills challenge of the service sector as well as the broader skills challenge for the workforce in general.

Not surprisingly, the skills situation in the formal services is better. Modern services such as ICT, telecoms, financial sector, aviation, international shipping and professional services are the largest employer of the graduates of the tertiary education system. Although there are quality differentials among supply sources of the tertiary education network, the expansion of these services is usually constrained by supply of specialized skills needed. In particular, the ICT industry is constrained by supply of requisite skills. Public administration, education and health services are primarily dominated by the graduates of the tertiary education system, yet quality differential between various suppliers of tertiary education is substantial that reduces the value-added of these services. Though the modern segment of services is constrained by

inadequate supply of workforce specialized in requisite skills, in the evolving knowledge economy the skills situation is significantly better than what we find in informal services.

In 2015-16 about 11.5 per cent of the workforce (6.9 million workers) acquired skills from the higher education system and most of them are employed in formal service sector. Male graduates outnumber female graduates. Enrolment in higher education is expanding rapidly in recent years. BANEBIS (2015) data show that college enrolment (HSC and above) grew at a rapid pace of 11.6 per cent between 2005 and 2015. Female enrolment has grown slightly faster than men (13 per cent and 10.5 per cent respectively). This is the result of both a higher rate of graduation at the secondary level and also the rapid growth of private supply of tertiary education. This is a welcome development and with continued progress this will be highly beneficial for the expansion of modern services including ICT. Nevertheless, there are substantial quality issues. Additionally, less than 10 per cent of the students are enrolled in engineering, science and technology related subjects. This low concentration technical and scientific education is a serious weakness of the higher education system and tends to reduce the relevance of the higher education to market demand.

3.6.5 The Challenge of Non-Factor Services Exports

The strong performance of international remittances (export of factor services) is indicative of the success achieved by Bangladesh in the employment of migrant exporting workers abroad (export of factor services under Mode 4 of GATS), especially to the Middle East countries. This is a welcome development and benefitted from a range of government support services including remittance facilitation, government level dialogue with host countries to protect the interests of the migrant workers, tax exemption and cash incentives, and information sharing. There is a dedicated Ministry, The Ministry of Expatriate's Welfare and Overseas Employment, that is dedicated to the promotion of legal overseas employment, promoting migrant well-being, and protecting promotes the interests of the migrant workers abroad and at home. Further efforts are underway to improve these services. As compared to this, the success in expanding the exports of other NFS is more limited.

The breakdown of services NFS export income is shown in Table 3.7. The largest source of service NFS export (non-factor services -NFS) income is government services (47 per cent), arising from immigration related service provided by the Home and Foreign Ministries (including Bangladesh Embassies) and financial services of Bangladesh Bank. In the private sector, the four largest service exports in FY2019 are transport (15 per cent), Telecoms and ICT (14 per cent), business services (13%) and tourism (5%). The remaining 6% is comprised of a range of services including financial services. While the composition of private export earnings from services looks promising, the yields from three high-potential activities: international transport, tourism and ICT are very much below potential.

International Transport Services: In transport, the opportunity cost of weak earnings is reflected in service payments. As compared with export earnings of merely $663427 million from transport services in FY2019, Bangladesh paid a huge service charge on transport from international providers to the tune of $ 44756.9 million. This yawning deficit on the transport front is a reflection of the strong dependence on foreign shipping and airlines for international passengers and freight services owing to the weak capacities and poor service quality of Bangladesh air and shipping services. The fact that Bangladesh's merchandise trade grew from $13 billion in FY2000 to about $100 billion in FY2019 presents a huge opportunity for substantial expansion of national shipping and air transport services that remains unexploited. The huge

demand for these services from trading and passenger traffic presents a substantial investment opportunity for local investors that needs to be cashed in through proper public investments in related assets and infrastructure (sea ports and airports, operation of private and public shipping and airlines, and container terminals) and with facilitating regulatory policies. This effort will also create good jobs for the labour force. There is enormous scope for job creation in these service sector activities.

Table 3.7: Non-Factor Services Exports Income ($ Million)

Type of Services (NFS)	FY2010	FY2011	FY2012	FY2013	FY2014	FY2017	FY2018	FY2019
Total NFS Income	**2233.6**	**2570.2**	**2491.4**	**2827.6**	**3115.3**	**3642.2**	**4260.11**	**6221.90**
1. Transportation	150.6	191	336.1	458.7	460.9	426.8	589.20	662.76
2. Travel	79.1	85.6	97.0	107.3	142.4	290.6	344.81	367.86
3. Telecommunications, computer and information services	246.5	349.6	520.7	349.5	444.8	594.7	538.23	549.05
4. Other business services	495.1	670	313.1	316.4	403.3	522.6	681.25	980.02
5. Government services	1203.2	1192.7	1089.5	1425.6	1468.3	1539.8	1683.78	2883.76
6. Others n. i. e.	59.1	81.3	135.0	170.1	195.6	267.7		

Sources: Bangladesh Bank (BB) and the Export Promotion Bureau (EPB)

Tourism: Like the inflow of remittances, receipts from tourism can be a major source of export earnings. Importantly, it creates demand effects for a range of domestic goods and services and thereby contributes to the total employment and the GDP of the economy. Although a part of the tourism is reflected in the travel receipts in the service account of the balance of payments, the employment and GDP effects based on tourist spending on travel, hotels, food and purchases of other local goods and services are picked up in the growth of value-added and employment in transport, hotels, restaurants and trade activities. While all activities have forward and backward linkages, tourism is particularly potent source of forward and backward linkages unleashing a lot of derived demand activities. Consequently, tourism can be a major source of growth and employment in a developing economy.

Bangladesh is blessed with natural beauty, ranging from mountains to rivers to beaches to bio-diversity. It boasts the longest natural beach in the world in Cox's Bazaar as well as the largest mangrove forest in the world at the Sundarbans. Despite this, the tourism industry is far from thriving. According to World Travel & Tourism Council (WTTC), in FY2019, tourism in Bangladesh accounted for an estimated 3 per cent of the total economy, around US$ 9.11 billion. Travel and tourism contributed 1.86 million jobs, which was 2.9% of total employment – while the international visitors had an impact of US$ 333 million, 0.7% of total exports.

Table 3.8 provides an international comparison of the performance of Bangladesh tourism sector prepared by WTTC. Comparator countries like China, India, Thailand and Malaysia are much ahead of Bangladesh in taking advantage of its tourism industry.

Table 3.8: Cross Country Comparison of Tourism Performance, 2019

Indicator	Bangladesh	China	India	Malaysia	Thailand
Contribution of Travel and Tourism to GDP	US$ 9.11 billion *(3% of total economy)*	US$ 1.58 trillion *(11.3% of total economy)*	US$ 194 billion *(6.8% of total economy)*	US$ 41.8 billion *(11.5% of total economy)*	US$ 107 billion *(19.7% of total economy)*
Contribution of Travel and Tourism to Employment	1.86 million jobs *(2.9% of total employment)*	79.87 million jobs *(10.3% of total employment)*	39.8 million jobs *(8% of total employment)*	2.22 million jobs *(14.7% of total employment)*	8.05 million jobs *(21.4% of total employment)*
International Visitor Impact	US$ 333 million *(0.7% of total exports)*	US$ 131 billion *(4.9% of total exports)*	US$ 30.3 billion *(5.6% of total exports)*	US$ 22.5 billion *(9.4% of total exports)*	US$ 68.9 billion *(21.1% of total exports)*

Source: World Travel & Tourism Council (WTTC)

The Government has pursued several policies and legislations for the tourism sector including the Bangladesh Tourism Board Act and the Tourism Policy 2010. The aim of these policies is to create a tourism friendly environment in Bangladesh, ensure quality service, and ensure comfort and safety of the visiting tourists. The Ministry of Civil Aviation and Tourism is vested with the overall coordinating responsibilities for policy formulation while implementation is the responsibility of the Bangladesh Parjatan Corporation. Several initiatives were undertaken during the 7th Five Year Plan to boost tourism services. These are summarized in Table 3.9. These programmes will be continued and expanded during the 8FYP.

Table 3.9: On-going Tourism Expansion Initiatives

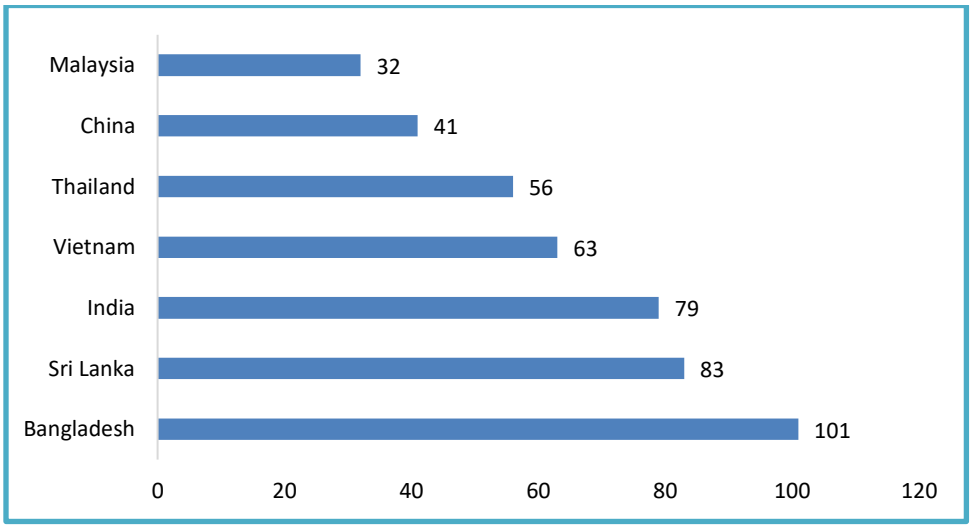
Medium-Term Strategic Objectives	Activities	Implementing Departments/Agencies
Safe and secure aviation system	Upgrading Hazrat Shahjalal International Airport	**Civil Aviation Authority**
	Construction of Civil Aviation Authority's Head Office	
	Development of Cox's Bazar Airport	
	Infrastructural development of the existing airports and construction of a new international airport.	
Expansion of tourism	Identifying potential tourist spots scattered over different places of the country and modernizing and expanding existing ones	**Bangladesh Parjatan Corporation**
	Involving local government institutions in tourism activities	
	Creating infrastructure and improving management of the tourism industry through Public Private Partnership (PPP) arrangements	
	Producing documentary films on Bangladesh Tourism & publicising tourism events	
	Maintaining tourism related training courses and establishing 4 more tourist training centres	
	Participating in tourism fairs organized home and abroad and arranged related programmes	**Bangladesh Tourism Board**
	Capacity building in tourism sector	

Source: MoCAT

Export of ICT services: Bangladesh is a relatively new comer to the ICT sector. The emphasis gained momentum in the wake of the leadership role provided by Prime Minister Sheikh Hasina through the Digital Bangladesh initiative developed in the context of Vision 2021. Chapter 12 lays out the medium- and long-term vision for harnessing the digital technological revolution for acceleration of inclusive growth. Both the 6th Five Year Plan and the 7FYP put considerable emphasis to the implementation of the Digital Bangladesh Initiative. Considerable progress has been achieved. However, much of the ICT focus has been in improving the connectivity and service delivery inland within the country. The impact on export of ICT services has been relatively modest when compared with the global market prospect. Earnings from ICT exports have grown from US$ 247 million in FY 2010 to US$ 549 million in FY2019. This is a welcome increase but pales into insignificance when compared with ICT earnings of US$ 137 billion in India in FY2019 (Statista 2020). Even after allowing for size effects, India's exports of ICT services amount to 4.66 per cent of its GDP whereas it is less than 0.2 per cent of the GDP in Bangladesh. The global market for ICT services is large and India has successfully tapped this market even while expanding ICT services domestically. An important target for the services exports for the Eighth Plan will be to boost the penetration of Bangladesh into the global ICT market through a well thought out ICT strategy that looks at both domestic market and also the global market. This progress will then lay the basis for longer-term growth of ICT exports.

The past experience suggests a number of factors that constrain the growth of ICT exports. First, although a significant number of educated and qualified entrepreneurs have started ICT ventures during the last couple of decades, most are trapped in the 'small size-low growth' situation because of funding constraints. Second, there are severe gaps in both quantity and quality of human resources for the software industry. This is due to institutional deficiency of the tertiary ICT-related educational institutions (lack of industry orientation of teaching resources, slowness of curriculum modernization etc.) as well as inadequate quality input from the higher secondary education system to the tertiary level. Third, high cost of bandwidth deters growth of domestic market for ICT. Fourth, the absence of IT park/software Technology Park, high internet cost, no redundant submarine cable, and power shortages are some of the common infrastructural problems for most of the IT enterprises. The weakness in ICT infrastructure capabilities is well reflected by the World Economic Forum's (WEF) Networked Readiness Index (NRI) performance that measures the capacity of the countries to leverage ICT for development (Figure 3.16) (WEF 2019). Finally, the growth of export of ICT industry is below the expected level due to inadequacy in entrepreneurial dynamism, limited overseas marketing budget and absence of government level initiatives in *promoting* country brand. Policies and facilities are not friendly for value added service providers in the mobile phone industry.

Figure 3.16: Network Readiness Index (NRI) Rankings, 2019
(Out of 121 Countries)



Source: Network Readiness Index (NRI), Portolans Institute

Nevertheless, things are happening fast. Acknowledging these constraints and recognizing the huge export potential of this industry, the Government in concert with the Bangladesh Computer Council is proactively engaged in resolving the problem issues on a priority basis, activities that will be intensified during the 8FYP. Bangladesh Computer Council has played a vital role to promote ICT industry both locally and globally. Leveraging ICT project has promoted local IT and ITES capabilities into global market leading to improved global awareness and perception of Bangladesh for IT and ITES business. Bangladesh Hi-Tech Park Authority (BHTPA) is nursing and promoting IT Start-ups/IT Entrepreneurs to establish giant IT Company like Google/Apple / Microsoft/Amazon / Alibaba. In this regard, BHTPA has allotted space, internet and electricity free of cost to 100+ selected local IT Start-ups/IT Entrepreneurs; some of them are transformed into registered BPO/KPO/IT Company. Furthermore, BHTPA is promoting local BPO/KPO/IT Companies for getting international standards like CMMIL-5, CMMIL-3, ISO- 9001 and ISO- 27001 etc. Already 2 companies-CMMIL-5, 21 companies-CMMIL-3, 47 companies ISO- 9001, 6 companies- ISO-27001 have received international standard certification by the patronization of BHTPA.

3.6.6 Institutional Support and Facilitating Regulations

The service sector is dominated by private businesses and individuals. Public ownership of services is limited primarily to public administration, public schooling, public health facilities, a limited number of public financial enterprises and dedicated infrastructure (e.g. High-Tech Parks). So, the main driver of service output, export and employment is private enterprise and private investment. Yet, the government's role is very important in providing the infrastructure support services, in providing a flexible regulatory regime and facilitating institutional support. Over the years, through a series of deregulation drives and associated policies, the service sector was progressively deregulated and private provision encouraged. This deregulation policy has continued with recent efforts focused on encouraging private provision even in areas that are traditionally considered the domain of the public sector: education, ICT services, aviation and electricity. The response to this deregulation drive has been highly positive.

Despite good progress, there are several areas of regulatory concern that will need to be addressed moving forward. The first relates to regulatory policies for the ICT sector. The price of bandwidth needs to be reduced to facilitate increasing number of net users, enhancing demand for local content and applications and developing a connected Bangladesh. Whilst the lowest recorded price of fixed-broadband (as a per cent of GNI per capita) is 0.7 per cent in case of China, it is 7.3 per cent in Bangladesh. The Rural Telecommunications Network Development and Utilization Guideline 2010 will need to be implemented to make sure that the existing network infrastructures have been optimally utilized for commercial communication and key social services (e.g. education, health care, e-governance, etc.).

A second important issue is the taxation policy. The tax rates on ICT services and banking services are very high and may need to be revisited, especially to spur the expansion of ICT. For example, total taxes on ICT sector are a whopping 58 per cent, which is among the highest in the world. This policy is also inconsistent with the Prime Minister's Digital Bangladesh Policy and would have to be revisited.

A third set of regulatory issues that needs attention concerns quality assurance and accountability. Both these matters relate specifically to education, health and hospitality services. A huge number of educational, health and hospitality enterprises have mushroomed throughout the country, but quality of service provided, safety standards of food catered to customers, cleanliness and hygienic environment and accountability of medical profession for improper diagnosis and medications have not received adequate attention. For example, the low value-added of education services is partly a reflection of low quality and inadequate regulatory standards.

A fourth regulatory issue concerns transport safety standards in both land and river transport. The frequency of fatal accidents for both modes of transport is far too many and cannot be considered as acceptable. As noted earlier, in addition to the issue of navigability of many river routes owing to heavy siltation, the inadequacy of safety standards of river transport has substantially lowered the demand for this important mode of transport.

A fifth regulatory issue concerns compliance with zoning laws. In the absence of proper implementation of zoning laws, the location of service enterprises has complicated urban traffic management and reduced the quality of life and safety standards of residential neighbourhoods. This matter needs urgent attention and resolution through a time-bound implementation.

Regulations are helpful only to the extent that these are properly monitored and implemented. The accountability for regulations and implementations is usually assigned to concerned line Ministries overseeing the service along with a number of specialized institutions. The rapid growth in private services has not been matched by an expansion in the capacities of these ministries and agencies. Moreover, there are substantive challenges regarding training and incentive policies for public agency staff that are linked more broadly to overall public administration capacity and good governance. This is a long-term challenge that will need to be addressed holistically over a long period of time, with sustained progress during the 8FYP.

3.7 8FYP STRATEGY FOR ENHANCING THE ROLE OF THE SERVICE SECTOR

3.7.1 Service sector Strategy

The growing importance of the service sector for growth and job creation suggests that continued strong performance of the service-economy will be critical to achieve the PP2041 target of reaching UMIC by FY2931 and attaining HIC by FY20141. The strategy for the service sector under the 8FYP is to consolidate past gains, build on the lessons of past experiences in Bangladesh and in other countries and focus on addressing the specific issues and concerns highlighted in the preceding Section. The sector strategy consists of the following major elements:

1) Improve the incentive policies for boosting private investment in services.
2) Increase public investment in key service sector infrastructure.
3) Develop capabilities that strengthen the skills base for the service industry and the industrial sector.
4) Develop effective programmes for the productive use of remittance inflows and improve facilities for migrant workers to legally exploit job opportunities abroad and send remittances home.
5) Strengthen implementation of prudential regulations to boost service quality, increase public safety, improve compliance and ensure accountability of service providers.
6) Strengthen public institutions to support the growth of service sector and improve service quality, safety and accountability.
7) Develop a modern public administration that is consistent with the needs of an Upper Middle-Income Country (UMIC).
8) Support skills development for employment and entrepreneurship

3.7.2 Incentive Policies

Learning from the positive results of the past experience in Bangladesh, the deregulation drive to motivate greater private provision of service sector activities should be strengthened. Experience with deregulation of the service industry in other emerging economies, especially India, is similarly positive. Each line Ministry concerned with regulating a particular service should undertake dialogue with concerned service providers through public meetings with business chambers and conduct special purpose surveys as necessary to obtain specific feedback on regulatory burden or other constraints. The findings of these consultations and surveys will be used to reform policies and institutions as relevant. Foreign investment in export-oriented services will be promoted, especially with a view to importing technology and thereby increasing service quality and export competitiveness. Import of technical skills in the area of aviation, international shipping, ICT and tourism should be facilitated. Wherever possible, joint venture with foreign partners will be encouraged. To encourage greater tourism, the visa requirements for visitors will be further simplified through visa on arrival facilities. Steps will also be taken to ensure the full safety and courteous treatment of all visitors.

ICT facilitation: The Government recognizes that the ICT is a high potential sector. The Digital Bangladesh Initiative reflects this priority. While considerable progress has been made, the ICT industry is still at an early formative stage and there is tremendous scope for service expansion and industry growth. In that regard, the Government will review all ICT policies to ensure their consistency with private incentives for

additional investment. Specifically, the Government will invite private sector and not-for-profit sector for rolling out broadband connectivity in rural area. The Government is aware that the tax policy for ICT has been raised as a major issue by the service providers. It is important to tackle this swiftly in order to facilitate additional investments from private providers and boost demand. The tax policy for ICT will be re-examined comprehensively to check for its consistency with the development objective of faster growth of this high return enterprise. The relevant international experience will be reviewed to determine proper response to this incentive issue. The competitiveness of the ICT industry is necessary to attract additional foreign investment and expand ICT services exports. The Government also endorses ICT as a major tool for COVID 19 response in Bangladesh. The Government mandates the ICT Division to undertake necessary actions to support other ministries to integrate ICT for COVID 19 response, impact mitigation and growth.

International shipping: The considerable gap between payments for shipping services and income received should be addressed quickly. Bangladesh now has gained considerable shipping experiences. The merchant navy has developed considerable capacity based on the graduates of the Chittagong Marine Academy (CMA). The CMA trainees have international recognition and many graduates proceed for international training. As a result, there is a large body of trained marine staff many of whom work for international shipping firms. With adequate investments the Bangladesh shipping companies can fruitfully use this skill base to serve the shipping needs of the country's growing merchandise foreign trade. Total merchandise trade amounted to $73 billion in FY2017. The usual shipping margin is about 10%, which yields a total shipping market of about $7.3 billion. If Bangladesh can tap even 50% of this market, earnings from shipping will grow from $0.4 billion now to $3.6 billion. The high potential of the shipping sector is obvious. To facilitate the growth of private shipping the government should immediately organize a consultation session with local and international private shipping companies to find out major obstacles and constraints to improve the shipping industry including regulatory barriers and taxation issue. Based on this, necessary reforms should be initiated to strengthen the national shipping sector.

International and domestic aviation: In the area of aviation, the Government will explore the option of twining arrangements between Bangladesh Biman and a reputed international airline. A similar arrangement between Emirates and Ari Lanka was very helpful in upgrading the capability of Air Lanka. The partnership with a reputed foreign carrier will provide Biman management essential on-the-job training with how to run and manage a profitable airline industry in this globalized and highly competitive aviation world. The demand for air services, especially to London and the Middle East market, is huge and the upgrading of Biman skills and service performance will allow the capture of a larger share of this market. With good and reliable services, Biman can also attract cost-conscious international travellers visiting Bangladesh. Biman should be run as a commercial enterprise with full management flexibility. Management and staff remuneration should be market based and management should be held accountable for financial performance.

Regarding domestic aviation, the possibility of joint ventures with international partners will be encouraged. The shortage of domestic private investment is a major constraint to the expansion of domestic air services, which in turn hurts tourism prospects. Joint ventures with international partners might help relieve this constraint. The possibility of joint ventures in international shipping should also be explored. For both areas, a special study should be commissioned to highlight the constraints and identify specific reforms. The study should be conducted in the next year or so and its recommendations should be implemented following cabinet approval.

Safe and secure aviation system: The 7FYP adopted a significant programme to upgrade both the international and domestic aviation capacities. The 8FYP will build on this progress and strengthen implementation. Based on this experience, a longer-term aviation plan to meet the air travel needs of a high-income country will be developed with technical assistance of international aviation experts. Lessons of experience of highly successful and profitable Asian and Middle Eastern aviation giants like Singapore Airlines, Thai Airways, Emirates, Etihad and Qatar airways will be analysed to gain insights regarding the development of the long-term aviation plan of Bangladesh.

Tourism: In tourism, the strategy consists of two broad elements: Expansion of fixed infrastructure to facilitate an expanded and safe aviation system in Bangladesh and second to expand and upgrade the tourism industry facilities comprising of visa and currency exchange facilities, hotels, restaurants, tourist resorts and inland transportation.

Tourism facilities and support services: Based on the lessons of good practice international experience from countries that have done well in tourism including India, Malaysia and Thailand, the strategy will focus on 5 entry points: (1) establishing at least 3 premium shopping outlets that meets international standards in the cities of Dhaka, Chittagong and Sylhet; (2) developing an eco-nature integrated resorts near Sundarbans; (3) development of a strait Riviera linking Teknaf to Sundarbans; (4) promoting the archaeological sites; and (5) establishing eco parks in Chittagong and Sylhet. Additionally, there are several common enablers that can be put in place to ensure successful implementation of the above. These are:

- *Increase and focused marketing*: Devise and ensure the right level of marketing support in the priority markets.
- *Ensure an adequate supply of qualified human capital:* Introduce measures to address issues pertaining to the supply and quality of workforce in the tourism industry.
- *Improve the tourism environment:* Improve offerings and accessibility for key tourism enablers (such as taxi services, restaurants, hotels and resorts), access to funding, security and regulations as well as improving the service quality of front-line staff.
- *Rollout of visa facilitation services:* Ensure that tourists from target markets have easy visa procedures including online 48to 72-hour approvals and visa on arrival facilities.

Successful implementation of the tourism strategy will require a strong public-private partnership. The government's role is to provide investments in fixed infrastructure (aviation), provide right incentives and enabling environment including ease of entry and exit, and ensure the safety of the tourists. Much of the investment in tourism facilities and services will have to come from the private sector. The Parjatan Corporation will work closely with Chambers of Commerce to determine how this investment promotional activity can be facilitated. Depending upon need, other incentives including credit facilities and tax incentives may be considered as relevant. Partnership with foreign investors should be encouraged.

Housing: In a typical high-income country, domestic housing is a major source of GDP growth and employment. Bangladesh is way behind. The issues and challenges are well known. The Government needs to develop a thoughtful strategy for boosting the housing sector. The main elements of the strategy are to develop a strong enabling environment to facilitate both housing demand and supply.

Demand for housing: The biggest constraint to a large-scale organized housing market (which is typical of all high-income countries) is the absence of a highly- competitive well-organized mortgage financing industry. In high-income economies mortgage interest rates are very low as house ownership tends to be the safest asset. Long-term low-cost housing finance up to 40 years is available from a range of housing finance companies including commercial banks. The competitive range of mortgage products availability typically enables young families to afford home ownership at low levels of income with little or even zero down-payments based on current income and credit history. Bangladesh has recently made progress with the emergence of a number of private home mortgage enterprises. But the interest cost tends to be high and qualification requirements stringent. Fiscal policies play an important role in home ownership through tax deduction of interest costs on mortgage and lower tax rates on capital gains of residential property. This is another policy that might be considered by the Government to promote home ownership.

Supply of housing: On the supply side the biggest constraint is the price of urban land. A host of factors has contributed to this including poor land administration and high cost of land transactions. Better land management including digitized property records and low-cost land sales and registration procedures are essential reforms to boost housing supply. The regulatory regime also needs to be simplified and properly enforced in regards to zoning restrictions, building permits and safety standards. Trade tax reduction on housing materials will also help to lower the cost of housing.

3.7.3 Increase Public Investment in Related Infrastructure

Details of various service-sector related investment program priorities are provided in relevant sectoral chapters. Some of the highlights are given below.

Transport

- Convert all inter-district roads to 4-way lanes.
- Complete the road/bridge links to make the Asian Highway functional.
- Complete the Padma Bridge.
- Complete all on-going flyovers in major urban centres, especially Dhaka and Chittagong.
- Complete the Dhaka circular road.
- Implement all urban mass transit projects as scheduled
- Complete the Karnaphuli tunnel.
- Expand the railway capacity.
- Build the Matarbari dedicated port.
- Upgrade the effectiveness and capacity of the Mongla Port.
- Upgrade Hazrat Shahjalal International Airport.
- Upgrade the Cox's Bazar Airport.
- Initiate work on the new international airport.
- Initiate dredging of major river routes with provisions of maintenance dredging.
- Upgrade river docking and storage capacities in major cities.

Education

- Enhance the quality of education in both primary and secondary education thorough upgrading of both physical facilities and teaching materials.
- Expand the reach of tertiary education with a special focus on women to eliminate the gender gap in tertiary education.
- Strengthen the education system capacities in Science and Technology.
- Rapidly expand ICT education at all levels
- Invest in teacher training.
- Upgrade the quality of madrasas.
- Improve quality of vocational training institutions.
- Increase R&D spending.
- Help educational institutions adapt to the rapidly changing technology landscape driven by the COVID19 pandemic.
- Increase the use of evidence to inform decision-making about education technology.
- Develop a Digital Learning Ecosystem by equipping each institution with all required digital infrastructure facilities through public-private-partnership.
- Develop a centralized educational resource repository for curating all innovative solutions in preparation for future emergencies

Health

- Strengthen rural health centres with focus on mother, adolescent child and neo-natal care.
- Strengthen immunization drive.
- Upgrade and expand district tertiary public health care facilities.
- Strengthen quantity and quality of public medical staff through proper training.
- Expand higher medical education facilities for creating specialized health workforce.
- Expand and improve the quality of medical, nursing and other medical technical education for producing quality doctors, nurse and other technical personnel.
- Expand and strengthen modern family planning methods.

Information Communications Technology (ICT)

- Build ICT parks through PPP initiative,
- Install the second submarine cable connection for expanding high speed internet facilities.
- Complete the Second Phase of implementation of broadband internet connectivity under the South Asia Sub-Regional Cooperation (SASEC) initiative.
- Expand investment in Research and Development.
- Facilitate PPP for ICT enabled services in e-Governance, agriculture, health, education, fintech sectors.

Public Administration

- Strengthen training programmes for civil servants.
- Strengthen public sector financial management.

- Modernise civil service decision making through introduction of ICT in policy and decision making, including e-procurement, e-service transactions, e-payments of wages, salaries, pensions, social security and public procurement contracts.
- Institute training programmes to strengthen capacity of local government staff.

3.7.4 Strengthen the Skill Base of the Service Sector

The highest priority is to adopt appropriate policies and investments to upgrade education and training quality, including emphasis on expanding tertiary education and science and technology. The on-going policy of partnering with the private sector is sound and should continue. There is, however, a need to improve the government's oversight on quality standards for both public and private educational institutions. The Government should also adopt a grant program to facilitate advanced research in all high-priority fields, but especially in science and technology. The Government should also facilitate e-learning and encourage partnership arrangements with international universities. A special program that has helped Japan, Korea and China to upgrade the skill base is through publicly-supported education programmes in science and technology in top international universities. Bangladesh can learn from this experience and initiate a similar focused program for high-level skills that are especially scarce.

Another major policy is to substantially enhance the public spending on Research and Development (R&D). While the private sector is the main source of R&D spending at the enterprise level, innovation is mostly a public good and requires public funding. Research grants to top universities on specific areas of development interest can be a great facilitator of innovation. Linking this research to the agricultural and industrial sectors can also leverage public resources with private funding. Presently, the government spends a mere 0.15 GDP on R&D. This has to sharply go up to reach 1 per cent of GDP by FY2025, and 3 per cent of GDP by 2030, and maintained at that level.

A massive effort is needed to jump-start the training sector in Bangladesh. The government adopted the National Skills Development Policy (NSDP) in 2011 with a view to upgrading the training system of Bangladesh. The NSDP broadened the training strategy to include emphasis on public-private partnership. A broad-based skill development program was adopted in 2013 with support from the Asian Development Bank (ADB 2013). Private sector training efforts have also increased, both through a range of skills-based training and through employer-financed on the job training. Yet, the progress is slow. The efforts are simply dwarfed by the scale of the skill development needs. In particular, focused initiatives are needed to upgrade the capabilities in export –oriented services like aviation, international shipping, tourism and ITC.

Much of the specialized skills in aviation, international shipping and tourism are best acquired through on-the-job training. Hence twining arrangements and joint ventures with international partners are the best ways to impart these skills. The success of the RMG industry, for example, owes a lot to these types of international partnership arrangements. The hotel industry that caters to international tourists is also benefitting from similar arrangements, but the scope for doing more is substantial. The Government should review the related regulatory policies to promote these partnership arrangements including further simplifying work permits, visa requirements, security clearances etc. of international technical experts.

Regarding the ICT, special efforts are needed on a number of fronts. First is the need for expanding the breadth and depth of science and technology education in Bangladesh. The tertiary education system is still unduly biased in favour of general education. The Government should support the growth of centres of

excellence in science and technology through grants and PPP initiative. Higher government spending on R&D will also support the growth of scientific education and research. Indeed, public spending on R&D is the most important driver of the growth of science and technology education and research in advanced economies. Additionally, a long-term plan should be undertaken so that current supply of 5,000 yearly IT graduates can be doubled in next 2-3 years. Students from non-metropolitan cities with relatively low overseas migration trends should be encouraged to enrol. To facilitate this, colleges under national universities should be required to start IT education. Also, special education loan policy and scholarship programmes should be designed to encourage students for IT education enrolment. More industry involvement will be ensured during academic programmes.

3.7.5 Strengthen Prudential Regulations

Prudential regulations are needed to protect consumer interest (all services), to protect depositor interests (in banking), to protect state security (internet security) and to protect citizen safety (transport, food industry, health care). In many areas, prudential regulations are in place. Nevertheless, there are important gaps in regulatory framework for many services, especially in healthcare. Most importantly, the implementation capacity is weak.

Accordingly, all regulatory authorities dealing with transport, trade, education, health, tourism and ITC should be asked to look at the adequacy and relevance of all concerned regulatory issues, both prudential and enabling, with a view to upgrading and modernizing the regulatory framework for service sector. Proper consultation with stakeholders should be done to ensure correct diagnostics for reform. Lessons of international experience should also be reviewed as necessary

In the area of prudential regulations, the emphasis should be on the following core aspects:

- Accreditation policies to ensure minimum quality standards in education.
- Licensing of health practitioners and private hospitals/clinics/labs to ensure health safety and acceptable standards.
- Ensure accountability of healthcare professionals by establishing a grievance unit under the Ministry of Health and Family Welfare that looks at public complaints for poor services.
- Licensing of food vendors in hotels, restaurants and other commercial food vendors to ensure sanitation and health safety standards.
- Strict monitoring of licensing and driving records of truck and bus drivers.
- Monitoring of road damage based on vehicle weight and loading norms.
- Strict implementation of safety features of commercial vehicles
- Strict inspection of all river vessels and monitoring of vessel loads.
- Require purchase of liability insurance for all healthcare providers and enterprises engaged in the transport industry.
- Enforcement of proper zoning laws for all commercial enterprises and strict implementation of parking regulations for all vehicles.

The implementation of these regulations will require proper education through mass media as well as cooperation with the private enterprises. To minimize the administrative burden on public institutions, a system of financial penalty and revoking of licensing where deemed necessary will be instituted to provide

an incentive for self-regulation. Implementation will be done through spot check. To ensure that the regulations are not used by public agency staff to harass the enterprise or increase the cost of doing business, all licensing requirements will be administered online with established timelines for responses. An online complaint registry will be established to redressal enterprise grievances. Staff of public regulatory agencies will be enhanced as necessary and will be given necessary training. Strict disciplinary actions will be enforced for public service agents that are found in violation of ethical and service standards.

3.7.6 Strengthen Public Institutions

The challenge of strengthening public institutions is pervasive in Bangladesh. But this challenge is most intensive in the public service sector, especially those public sector institutions that provide direct services to the citizens. These include health, education, transport and agriculture. Some public sector agencies provide only regulatory and policy support to private sector. These include the Ministry of Finance, the Bangladesh Bank, the Ministry of Commerce, and the Ministry of Land. But there are many that provide both services. Together, these agencies are a part of public administration. Hence, a broad-based reform of public administration is a key to Bangladesh achieving higher income status. Of particular importance is the need to ensure the efficiency and effectiveness of the regulatory agencies dealing with services that are subject to global competition. They require special skills and capacities. These include: The Civil Aviation Authority, the Ministry of Shipping, the Bangladesh Telecommunications Regulatory Commission (BTRC) and the Parjatan Corporation (Tourism Board). The capacity and effectiveness of each of these regulatory agencies is critical to increase the international competitiveness of related services.

The reform of public administration is a long-term endeavour. It is complex, politically sensitive and time consuming. So, a pragmatic reform strategy is needed. One possible approach is to start incrementally focusing on areas that are not very controversial and adopt a phased approach for the more complex institutional reforms. Three broad-based initiatives that can yield considerable long-term benefits are: digitization of public administration; public financial management reforms and a comprehensive training strategy for public administration staff. The digitization could be of especial benefit to tackle corruption problems upfront. Adoption of e-procurement, e-payments, and e-service delivery can be instrumental in improving the accountability of public administration and reducing corruption. The Government has already initiated reforms and adopted specific programmes in each of these areas but progress is slow. For each of these three areas, a time-bound action plan with performance indicators of progress should be adopted. Progress should be monitored at the cabinet level with each line Minister and Secretary responsible for implementation.

In terms of basic service delivery, a key reform is the devolution of health and education services to the local governments. This is admittedly a politically sensitive and contentious reform; but its implementation is essential if Bangladesh is to aspire to achieve high-income status by FY2041. The process needs to start now as implementation will take time. The devolution will need to be broadly defined to include: reform of the legal framework that clearly delineates the responsibilities by levels of government, avoids contentious overlaps of responsibilities and accountabilities; fiscal decentralization that enables appropriate sharing of public revenues in line with devolved responsibilities; capacity building and training; and a framework of accountability for performance. There are ample international experiences that Bangladesh can learn from in developing its devolution strategy.

3.7.7 Skills for employment and entrepreneurship

- **Close the gap between demand and supply:** This will entail skills retraining for lifelong learning, job redesign, establishment of inclusion and diversity in the workforce and government support in matching education with employment policies.
- **Support a systems approach for entrepreneurship and employment:** Ensure whole of society approach that benefits the most marginalized and vulnerable and ensures a sustainable, meaningful, evidence-driven approach to transforming employment and self-employment.
- **Advance a sector-oriented approach to experimentation and adaptation:** Sector strategies for adaptation, involving the key industry bodies, and combining support for adoption of new technologies, new business methods and models, and new skills. Encourage experimentation, particularly with incentive models for different stakeholders, to arrive at the right strategies.
- **National adaptive collective intelligence system:** Pool different sources of knowledge to help Bangladesh build labour market resilience.
- **Create space for public-private cooperation on financing, support to the innovation ecosystem, demand-creation (for both national and international markets) and ESG (environmental social governance) investment:** This will help to effectively engage the private sector, achieving greater clarity in terms of its role–including access to finance, business incubation and acceleration services – as well as a shared responsibility and accountability towards building a resilient and sustainable future of work in Bangladesh.

3.8 INVESTMENT REQUIREMENTS FOR THE SERVICE SECTOR

Much of the investment in service sector will come from the private sector. The improvements in regulatory and incentive policies will spur the expansion of private domestic and foreign investment. Yet, complementary public investments in fixed infrastructure will be a critical determinant for expansion of private investment, value-added, employment and exports of services.

To secure the modernization of the service sector both public and private investment will need to go up as a share of GDP. In the indicative projections (Table 3.10), total investment requirements in services will go up from 15.2 per cent of GDP in FY2021 to 18.6 per cent in FY2025. Public investment in service sector increases from 4.2 per cent of GDP in FY2021 to 4.6 per cent in FY2025, whereas private investment moves up from 11.0 per cent of GDP in FY2021, to 14.0 per cent in FY2025. Most of the public investment will be in physical infrastructure and facilities related to transport, ICT, education, health facilities, housing, urban services, sports and recreation and public administration. Private investment on its part will focus on providing direct services in health, education, tourism, ICT, shipping, aviation, road transport, housing and a range of other services. Along with reforms of regulations and incentives for private investments, these complimentary public investments will be necessary to spur the expansion of private investment in direct service provision.

Table 3.10: Investment Requirements of the Service Sector
(Taka in Billion, 2021 Prices)

	FY2021	FY2025
Public	1335	2132
Private	3475	6478
Total	3610	6944
Public (% of GDP)	4.2	4.6
Private (% of GDP)	11.0	14.0
Total (% of GDP)	**15.2**	**18.6**

Source: GED Projections

SECTOR 4:
AGRICULTURE

CHAPTER 4

STRATEGIES FOR AGRICULTURE AND WATER RESOURCE MANAGEMENT

4.1 INTRODUCTION

The agriculture sector has been one of the important drivers of growth and rural development, accounting for almost 14 per cent of the gross domestic product (GDP) and providing employment opportunities for more than 40 per cent of the country's workforce. Despite the sector's continued expansion, its relative significance in the overall output has been subject to a secular decline following the stylised fact of development in which the rest of the economy (manufacturing and services) starts to play a much more dominant role. As an agriculture-dependent economy at independence when agriculture accounted for over half of the economy, Bangladesh has made great strides forward in diversifying its economic activities towards industry and services. Putting aside the relative significance, however, agricultural growth has accelerated from an average annual rate of less than 2 per cent during the 1970s-1990s to around 3.0 per cent in the 2000s and to 3.5 per cent in the next decade. Marginal farmers and landless workers in the agriculture sector constitute a major part of the population living below the poverty line and thus the strategic importance of agriculture in meeting food and nutrition security and providing livelihoods for a substantial part of the population deserves a special attention.

Despite its impressive progresses, Bangladesh still faces formidable challenges in ensuring food and nutrition security for its growing population. These challenges emanate from, inter alia, continuing population growth, deceleration in the growth of agricultural productivity, increasing income inequality, increasing rate of urbanization and growing concern about food safety. While increasing income and urbanization have led to some dietary diversity, cereals still account for about 70 per cent of the dietary intake suggesting that a rapid diversification in agricultural production will be needed to support the process of economic development in the country. The on-going process of climate change can also have serious impact on food production in Bangladesh. Increased salinity in the coastal areas may also alter the nutritional contents of foods including rice which may become deficient in zinc and other micronutrients together with less volumetric production.

Due to the outbreak of COVID-19 global pandemic, the role of agriculture and its sustained growth in ensuring food security received an emergency renewed attention. Globally, different strategies, such as large-scale shutdown of economic activities, border closures, and restrictions on movements, etc., were adopted to contain the spread of Coronavirus. Having achieved food self-sufficiency, Bangladesh did not have to face a crisis of food shortage. Nevertheless, economy wide lockdown measures have significantly affected agricultural supply chains and the food consumption behaviour of poor and vulnerable groups dealing with the crisis that resulted in a massive temporary unemployment. The crisis seriously impeded farmers' market access for procuring raw materials and hiring labourers, destroyed underdeveloped productive capacities particularly in poultry and dairy sub-sectors, and hindered them from selling their products, resulting in increased levels of food loss and waste to cause concern for nutrition and food security. The duration of the crisis and the subsequent recovery process could take several years, according different multinational organizations such as OECD, IMF and World Bank. The supply chain in agriculture

being more complex, and involving a significant time lag for production, the disruption would have a potential bearing on food security for a longer period. Therefore, shielding the agriculture from the vulnerabilities arising from the COVID-19 crisis is pivotal to cope with the immediate shocks as well as for the medium- to long-term food security. A short-to-medium term policies and strategies needed to meet the challenges and to restore food security and improve nutrition security.

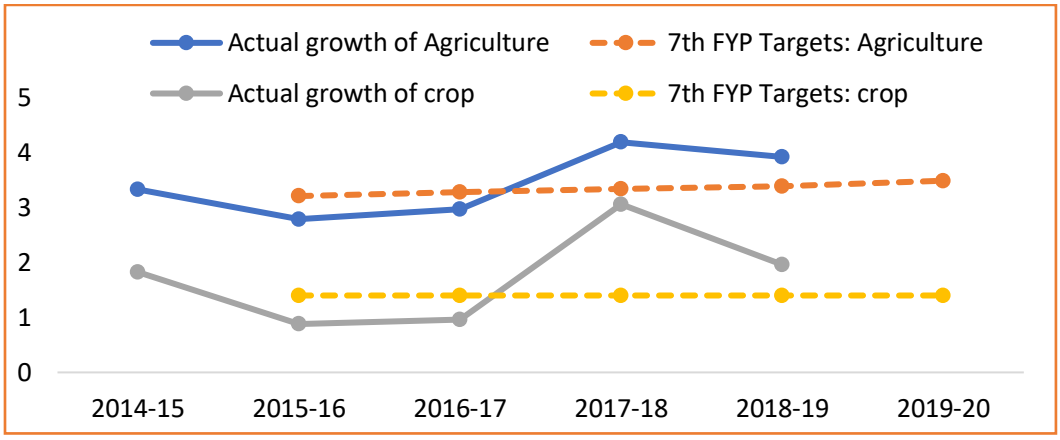
Against the backdrop of the above, this chapter focuses on agriculture, which is a key determinant of food security and nutrition from the supply side, and the all-important issue of water resource management, which is the most important input to agriculture, but has much wider ramifications linked to climate change and natural disasters. Proper management of water resources is critical to lower vulnerability of the rural poor and protect their livelihood. Food security issues are discussed in Chapter 14 in the context of social protection and social welfare strategies.

4.2 AGRICULTURE SECTOR PROGRESS UNDER THE 7FYP

The development vision for agriculture in the 7th Plan was to ensure food and nutritional security, enhancement of sustainable intensification and diversification of climate resilient agricultural production with increased commercialization, and livelihood improvement through technological innovations; strengthening research and extension system; developing supply chain extension of agricultural products; and linking the farming community with markets, both local and global. The major focus was centred on consolidating and expanding the productivity gains already achieved in food grain production as well as designing policies, strategies and actions to accelerate the crop diversification and commercialization process by increasing local and export market opportunities by the farmers and other stakeholders.

The largely subsistence nature of operation with very low labour productivity makes it difficult to secure and sustain high growth performance of the agriculture sector. In the first two years under the 7FYP, the sector had seen growth rates lower than the targets (Figure 4.1). However, since then, the sector performed better than expected. During the first four years of implementation of the 7th Plan, the sector grew at an average annual rate of 3.5 per cent against the target of 3.3 per cent. The crop subsector, which comprises more than half of agricultural GDP, expanded annually at 1.7 per cent on average against the target rate of 1.4 per cent.

Figure 4.1: Agriculture and Crop Growth: Actual and 7FYP targets (%)



Source: BBS and 7FYP

The forestry subsector achieved an average growth rate of 6.1 per cent in the first four years of the 7th Plan in comparison with the corresponding the average growth rate of 4.58 per cent during the 6th plan period FY2011-FY2015. The fisheries subsector also exhibited a strong performance, achieving an annual growth rate of above 6 per cent consistently (Table 4.1).

Table 4.1: Growth Performance of Agriculture Sub-Sectors

	2014-15	2015-16	2016-17	2017-18	2018-19
Growth (%)					
Agriculture	3.33	2.79	2.97	4.19	3.92
A. Agriculture and Forestry	2.45	1.79	1.96	3.47	3.15
i) Crops & horticulture	1.83	0.88	0.96	3.06	1.96
ii) Animal farming	3.08	3.19	3.31	3.4	3.54
iii) Forest and related services	5.08	5.12	5.6	5.51	8.34
B. Fisheries	6.38	6.11	6.23	6.37	6.21
Per cent of GDP (%)					
Agriculture (A+B)	16	15.35	14.74	14.23	13.65
A. Agriculture and Forestry	12.32	11.7	11.12	10.67	10.15
i) Crops & horticulture	8.87	8.35	7.86	7.51	7.06
ii) Animal farming	1.73	1.66	1.6	1.53	1.47
iii) Forest and related services	1.72	1.69	1.66	1.62	1.62
B. Fisheries	3.69	3.65	3.61	3.56	3.49

Source: Bangladesh Bureau of Statistics (BBS).

The share of agriculture in Bangladesh's GDP has been declining for the past few decades because of the structural transformation that is taking place in the economy. During the 7th plan, the share has contracted by 2.35 percentage points to reach 13.65 per cent in 2018-19. In 2018-19, the sector, however, still accounted for 35.2 per cent of total employment in the country. Most of the people involved in agricultural production are marginal or landless farmers. Around 60 per cent of the employed women were engaged in agriculture.

4.3 CROP SUBSECTOR

Bangladesh has made remarkable progress in domestic food production, which almost doubled during the last two decades. Along with expanding production, per capita availability of food items increased substantially (Table 4.2). Availability of food grains per capita declined slightly compared to the level of 2010-11, but it was accompanied by a sharp rise in the per capita availability of fish, meat and milk, indicating diversity in the diet taking place. Per capita availability of potato, oilseeds, fruits and vegetables also increased considerably. Bangladesh, in fact, is a surplus producer of two food items: rice and potato. The government policies in favour of agriculture and food security are attributable to this success of rising per capita availability of food items. Domestic production and per capita availability of pulses declined significantly between 2010-11 and 2017-18. One possible reason could be the low yield rate compared to other non-cereals. Bangladesh has long been dependent on import of pulses and oilseeds (edible oil) as domestic production constitutes a small share in the availability of these food items. Also, the relative prices of other crops could have also resulted in lower acreage allocation in favour of pulses.

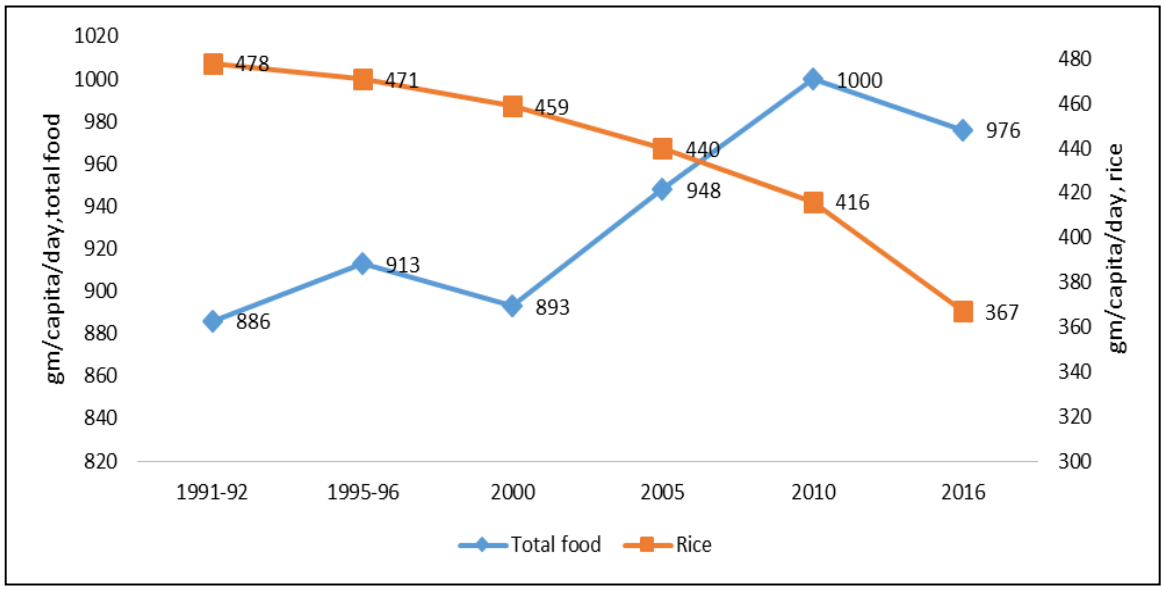
Table 4.2: Per Capita Availability of Food Items (gm/capita/day)

Items	2004-05	2010-11	2017-18
Food grains (rice and wheat)	495	638	634
Potato	108	153	168
Pulses	10	13	7
Oilseed	10	15	16
Vegetables	35	57	70
Fruits	68	65	78
Fish	41	53	74
Meat	21	35	125
Milk	42	55	162

Source: BBS, DLS, DOF

Actual consumption of food is the real indicator of availability of and access to food for the people. The national household income and expenditure survey shows that per capita food consumption had risen until 2010 and then fell marginally (Figure 4.2). The per capita consumption of rice is on a secular decline depicting the dietary diversity inconsistent with the increased availability non-rice items as mentioned above.

Figure 4.2: Changes in Total Food and Rice Intake in Bangladesh, 1991-2016



Source: Household Income and Expenditure Surveys, BBS.

It is worth pointing that per capita calorie intake decreased, however, from 2266 kcals in 1991-92 to 2210 kcals in 2016, with some minor fluctuations during the period. The highest calorie consumption was 2318 kcals in 2010, but even that level of consumption was lower than the desirable level of consumption of 2430 kcals per/cap/day. The lower consumption of calorie may partly be attributed to the fact that people shifted some consumption away from the calorie-dense food rice to other foods. Per capita protein intake in 2016 was 63 grams/day which was moderately higher than the desirable intake of 58 grams. It is generally

held that in presence of calorie deficiency in the diet, the available protein may be converted into calorie, so that a person with gross protein sufficiency may be rendered protein deficient in net term.

4.3.1 Performance of Crop Sub- Sector under 7FYP

Bangladesh has made substantial progress in increasing food production and thereby improving food security over the past three decades. The 7th Plan stipulated the production target for major food items in consistence with the perspective plan 2021. By 2019-20, Bangladesh had already achieved the production targets for all crops but wheat (Table 4.3). The uses of high yielding variety (HYV) seeds along with government interventions and favourable monsoon seasons contributed to this success. Wheat production has decreased due to the occurrence of wheat blast in 2016-17.

Table 4.3: Production Targets of Selected Agricultural Crops in 7FYP and Achievements (million MT/ million bales for jute)

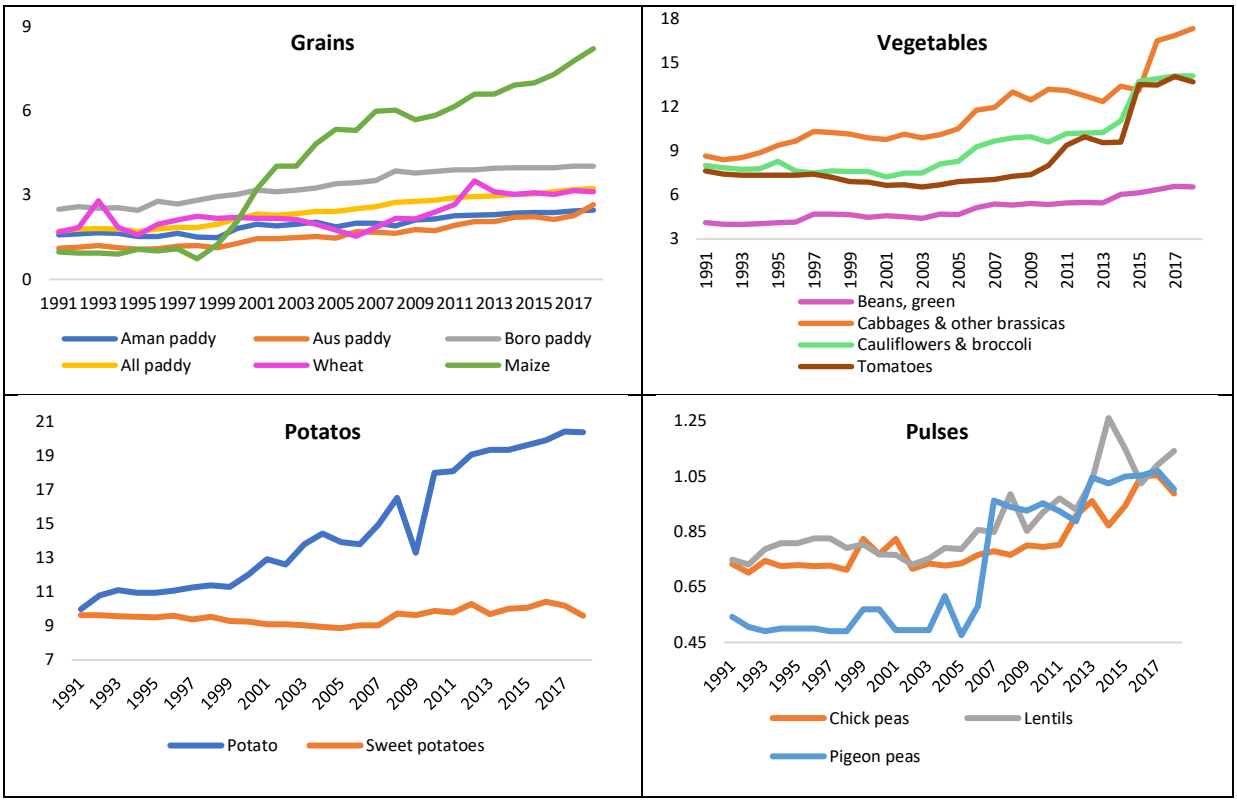
	Performance					Target 2021
	2015-16	**2016-2017**	**2017-18**	**2018-19**	**2019-20**	
Rice	34.71	33.80	36.28	37.36	**38.70**	36.81
Wheat	1.35	1.31	1.1	1.15	**1.25**	1.40
Potato	10.30	10.21	9.74	10.65	**10.92**	10.34
Oil Seeds	1.00	1.06	0.97	1.06	**1.15**	0.52
Pulses	1.01	1.03	1.04	0.94	**1.05**	0.31
Maize	2.76	3.52	3.89	4.7	**5.40**	1.85
Vegetables	15.26	16.04	15.95	17.25	**18.45**	n.a.
Jute	7.56	8.25	8.89	7.44	**6.82**	n.a.

Source: DAE (2020), Ministry of Agriculture and PP2021

The 7th Plan put much emphasis on agricultural productivity to sustainably increase production. Over time, the yield rates of major agricultural products have increased but these still lag many comparable countries. From only 1.711 mt/ha in 1991, the paddy yield rate increased at a rate of 2.634 per cent per annum to reach 3.23 mt/ha in 2018. Among the three paddy growing seasons, growth in productivity is more pronounced for Aus (3.205% per annum), followed by Boro (2.071% per annum) and Aman (1.893% per annum) (Figure 4.3). The recent policy shifts towards paddy cultivation, use of stress tolerant HYV seeds, and increasing use of balanced chemical fertilizers and modern technology including agricultural mechanization to some extent played an important role in boosting yield growth.

With only a couple of exceptions (e.g. rubber and papaya), the yield rate for all major crops significantly increased. Some of the crops showing notable yield growth performances are maize among the cereals, pigeon peas among the pulses, garlic and onion from the category of spices and fruits like mangoes, guavas and melons. Despite these improvements, Bangladesh still has low yield rates in many crops in the world. For instance, although Bangladesh is the world's second and third largest jute and paddy producer, it ranks, respectively, 7th and 44th in terms of the crop yield. Even for maize, the crop with the highest yield growth rate, Bangladesh ranks 26th in the world. In this backdrop, increasing productivity will be a major focus during the 8th plan.

Figure 4.3: Yield Rate Trend of Major Food Items (Mt/Ha)



Source: Background paper of 8th plan.

4.3.2 Challenges in the Crop Sub-Sector

Some of the current and future challenges are linked to rapid industrialization and associated decline in agricultural land. Availability of high-quality seeds, access to credit, inadequate investment in agriculture, and vulnerability to climate change are also important challenges. Furthermore, the volatility in commodity prices is one of the major issues confronted by the farmers. This, in turn, leads to increasing production and large postharvest loss, occasionally over 30 per cent. It will be difficult to sustain the growth of production of high-value and labour-intensive crops unless investment is made in the postharvest management (a 10% reduction of postharvest loss would add 10% additional food for the nation), processing and storage to stagger marketing of the crops throughout the year to match the demand that remains stable across the season. In addition, it is also important to exploit international markets with investment in packaging, Sanitary and Phyto-sanitary Standards (SPS), and safe food production through Good Agricultural Practices (GAP).

Major drivers of crop production have been the development and diffusion of improved crop varieties and technologies, more efficient on-farm water management, crop management, and expansion of irrigation infrastructure – mostly shallow tube well based groundwater irrigation. In addition to modern varieties of different crops, production technologies have been developed in the national agricultural research systems. Use of non-urea fertilizer has increased because of government subsidies. However, the yield gap between potential and actual yields of a crop variety realised by farmers remains high. New technology generation for vulnerable areas e.g. stress tolerant varieties and management practices, quality improvement of major crop varieties, pest and disease management, resource conservation, farm mechanization value addition and

postharvest management, and climate smart technology constitute important challenges in the crop subsector. The key challenges in crop agriculture are:

Low productivity: Low productivity remains one of the major problems in agriculture. Productivity can be enhanced through technological innovation and correcting market distortions. The Bangladesh Agricultural Research Institute (BARI), BINA, BJRI, Bangladesh Sugar crop Research Institute (BSRI) and Bangladesh Wheat and Maize Research Institute (BWMRI) and Bangladesh Rice Research Institute (BRRI) has been working to develop new verities of stress tolerant HYV products through innovation. Uses of technology in agriculture sector have substantially increased in recent years. However, many of the poor farmers have less or no access to modern agricultural technologies, causing a loss in productivity. To enhance productive capacity, the agriculture sector, a major technological breakthrough is the must.

In Bangladesh, the productivity of rice and other crops is low and there are large yield gaps between farmers' fields and research trials. The same is true for other agricultural commodities of fisheries and livestock sub-sector. The high yield gaps have significant implications on farm production and profit, food security and ultimately, agricultural GDP. In this context, with the financial help from the World Bank, the government initiated the National Agricultural Technology Prgramme-Phase 2 Project (NATP2) to disseminate different rice yield gap minimization technologies. The project claims minimizing yield gaps in the demonstration plots by 1.05 t/ha (through 25% yield increase over conventional farmer practices), 1.20 t/ha (22% yield increase) and 0.61 t/ha (17% yield increase) for Aman, Boro and Aus season, respectively. However, the widespread adoption of the technologies remains a concern, particularly when the extension services in the country is yet considered moderately efficient.

The agricultural cropping intensity in Bangladesh is 194 – meaning that on an average less than two products are produced in a piece of land per year – which is low compared to many other countries including China, Indonesia and Vietnam. Increasing the current level of cropping intensity can help to increase productivity.

Institutional bottlenecks in research-extension-farmer linkage: Evidence shows that agricultural R&D investment plays an important role for increasing productivity and growth. There is a need for establishing effective and strong coordination between research and extension linkages with a view to transferring new technologies to the farmers, private sector entrepreneurs and NGO, s. Nonetheless, agricultural research has been a neglected area with low budgetary allocation and comparatively lower research and financial facilities for scientists. A Sub-Assistant Agricultural Officer (SAAO) serves on an average 1,162 farm holdings, which is an impossible target (BBS, 2019; DAE, 2017). Increasing spending on research and extension along with promoting good governance and accountability of the public institutions are therefore important for promoting productivity.

Climate change and associated challenges: Bangladesh is one of the top nations that are most vulnerable to climate change although it has very little contribution to greenhouse gases emission. Bangladesh has already been suffering a lot in coping with the adverse effect of global warming. Future climatic variability and its associated events are predicted to have more adverse effects on agriculture and living standards of the citizens, particularly for those who are poor and earn livelihood from agriculture (World Bank 2018).

The most important effect of climate change is the rise in temperature caused by greenhouse gas emission. It has been predicted that the rise of mean annual temperature will be 3.3°C over the century. Presently, sea level is rising at a rate of 3.3(± 0.4) mm/yr due to added water from melting ice sheets and glaciers and the

expansion of seawater. This phenomenon will directly affect Bangladesh because of its low elevation and connection with the Bay of Bengal. A large area of agricultural cropping land will go under water in coming years due to the rising sea level. On the other hand, intrusion of saline water caused by rise in sea level will directly affect the livelihood of the people living in coastal region. Climate change is expected to increase the risk of salinity through two mechanisms. First, the deltaic regions and wetlands are exposed to the risks of sea-level rise and increased inundation causing salinity intrusion into irrigation systems and groundwater resources. Second, higher temperatures would lead to excessive deposits of salt on the surface, further increasing the percentage of brackish groundwater.

As a direct consequence of climate change, the timing and intensity of rainfall is changing, that will adversely affect the livelihood of the people especially the farming households. With the changing temperature, there would be increased monsoon rainfall, but decreased dry season rainfall. The situation will cause serious disruption in agriculture by creating shortage of water during the dry and excessive water in the wet season. Increased flood risk to rice and other summer crops in Kharif (pre-monsoon & monsoon) seasons are likely to interact with other climate change impacts on the Boro (post-monsoon) rice crop production, leading to substantial economic damages (Yu et al. 2010). To meet the excess maintenance and repairing cost as well as construction of infrastructure to protect livelihood will require maintaining a resilience fund. Also, it will require significant amount of money for habitation of the people affected by the impacts of climate change.

Degrading natural resource base and depleting ground water: The limited natural resources of the country are further degrading. The soil fertility is low to medium with organic material content being particularly low. Nitrogen and Phosphorus deficiency in soil is known for many years now. At present, nitrogen constitutes about 75 per cent of total fertilizer nutrients used in Bangladesh. Such excess Nitrogen use may enhance mineralization of organic matter which may decrease carbon content in soil and increase CO_2 emission. Since 2008-09, Bangladesh is aiming to balance urea and non-urea fertilizer subsidies. This has raised urea prices for some period and then remained stable; whereas prices of TSP, MoP and DAP fell and consequently urea sales reduced and the use of other three fertilizers increased (Table 4.4).

Table 4.4: Fertilizer Price and Sales over the Years

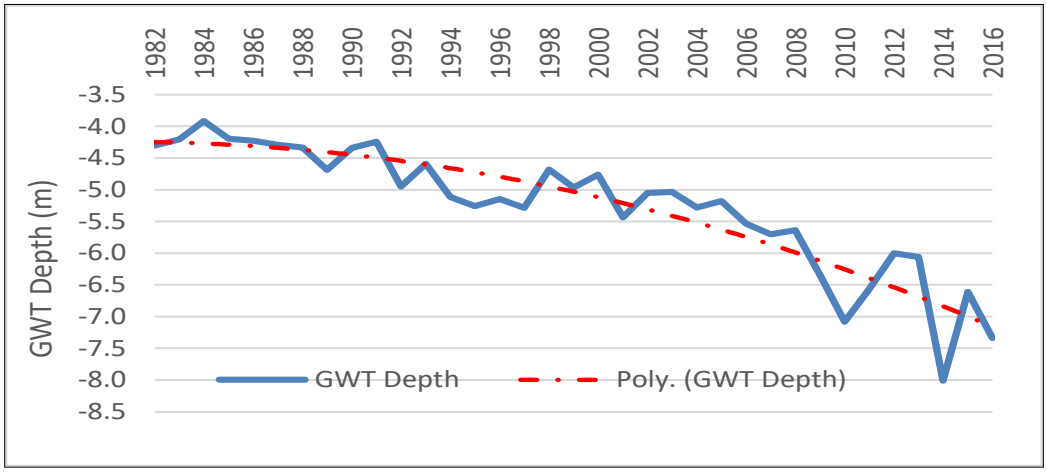
Period	Price (tk/kg)				Sales (lakh MT)			
	Urea	TSP	MoP	DAP	Urea	TSP	MoP	DAP
2008/09	12	40	35	45	25.33	1.75	0.85	0.18
2009/10	12	22	25	30	24.09	4.32	2.75	1.37
2010/11	12	22	15	27	26.55	5.91	5.07	3.31
2011/12	20	22	15	27	22.96	6.41	6.03	4.03
2012/13	20	22	15	27	22.47	6.54	5.71	4.34
2013/14	16	22	15	27	24.62	6.85	5.76	5.43
2014/15	16	22	15	25	26.38	7.22	6.4	5.97
2015/16	16	22	15	25	22.91	7.30	7.26	6.58

Source: Ministry of Agriculture (2020).

Proper irrigation is a key to agricultural production. The sector alone consumes 70-80 per cent of the total fresh water used in the country. This has a critical implication from the environmental perspective. The groundwater table in the northern districts is dropping fast (Figure 4.4). This will have severe implications on the availability of irrigation and drinking water in future. The irrigation efficiency in the country is very

low– in the range 30–40 per cent, implying that a huge amount of the water is wasted. Along with several other reasons, the conventional irrigation pricing system where farmers pay area-based fixed charge has a role behind this level of inefficiency. Volumetric water pricing is practiced in Barind Multipurpose Development Authority (BMDA) areas and in some other Bangladesh Agricultural Development Corporation (BADC) areas. In this arrangement, a farmer can minimize irrigation cost by reducing water consumption keeping the production level intact. A farmer may also feel encouraged for crop diversification, since compared to paddy, other crops require less water. Therefore, efforts should be taken to increase the acreage of non-rice crops during dry Boro season in order to minimize ground water extraction and to increase the production of high value crops like pulses, oilseeds, spices and vegetables for ensuring food and nutritional security with generation of income through processing and marketing.

Figure 4.4: Groundwater Table Depth in Northern Bangladesh



Source: FPMU

Declining availability of agricultural land: With increasing population and economic growth, demand for land outside agriculture is increasing and agricultural land is diverted to non-agricultural uses. Pressure on agricultural land has been increasing for housing, roads, etc., resulting in a decline in the cultivated area at an annual rate of 0.73 per cent. The total available arable land stood at 8.5 million hectares (Mha) in 2020. If the rate of reduction continues, the country will be left with 8.00 Mha ha by 2025. Climatic and environmental factors such as water logging, depletion of ground water and soil fertility, erosion, and salinity also contribute to the process. For instance, in the southern region, about 170,000 ha of agricultural land have been degraded in the last three decades due to increased salinity (MoA and FAO, 2011). Riverbank erosion accounts for about 40 per cent of the land loss in about 1,200 km of riverbanks. This also results in the topsoil being washed away and replaced by sand. Availability of arable land will thus be a major issue in the coming years.

Difficulties in accessing credit: Agricultural credit plays an important role in sustainable development of the sector. It is a key to poverty alleviation, livelihood diversification for small farmers and traders which can contribute to overall agricultural diversification. Research has shown a positive relationship between institutional credit and agricultural production and therefore an expansion in the disbursement of agricultural credit, particularly to small farmers, is a priority. However, farmers of Bangladesh face

difficulties in accessing credit for agricultural production, crop diversification, processing, value addition and marketing. The lack of availability of funds and high collateral requirements pose as major hindrances.

Food safety and nutrition: Food borne diseases are now becoming a concern for health and nutrition security. Pesticides are used indiscriminately in agriculture, particularly in vegetable crops, and thus pesticides residue in food bear important health hazards. Harmful agro-chemicals and/or excessive doses of preservatives are also used in food items. Food poisoning is however preventable following the principles of food hygiene and by imparting the training to the persons involved in food processing and food business. Food safety should be ensured from production to consumption. Poor people, particularly infants and children, mostly suffer from under nutrition, which is the outcome of insufficient food with low vitamins and minerals intake. Under nutrition leads to underweight, stunting, and dangerously thin physical structure (wasting) for one's age. Across the world, under nutrition causes 45 per cent of deaths of children under five.

Storage, agro-processing and commercialisation: Farmers' access to storage well developed agro-processing and improved value chain facilities are critical for agricultural promotion. Low product prices during harvest are always a concern for farmers. The limited available storage facility not only raises quality concern but also reduces farmers' profits. A substantial amount of food losses occurs at different stages in the post-harvest period due to inappropriate handling, storage, processing and marketing. Food processing has a great potential provided that a good quality control is enforced. To ensure that their production and export potential are fully realized, there is a need for investing in appropriate manufacturing capacities and infrastructural facilities. Good Agricultural Practices (GAP) also needs to be employed for production and post-harvest management.

Other challenges: There exists several other challenges in crop subsector including, among others, slow agricultural/farm mechanization; inefficiency in the irrigation system; low quality and adulterated agricultural inputs (seeds, fertilizers and pesticides) marketed by unscrupulous traders; intrusion of saline water into the groundwater table; non-availability of farm gate price support for the producers; reducing the current yield gap in crop; increasing land, labour and water productivity; enhancing product quality and food safety; improving postharvest management and reducing postharvest loss; improving the energy management in agriculture: use of solar energy, organic fertilizer, agricultural waste management, etc.

4.3.3 Strategies for Crop Sub-Sector during the 8FYP

The development vision for crop sector under the 8th Five Year Plan is to ensure food security and nutrition through increasing productivity; minimizing yield gap; stabilizing price of agricultural products; improving farmers' profitability and securities; diversification of crop products towards climate-resilient production; strengthening agricultural supply chains; increasing commercialization through uses of information and communication technology (ICT); easing credit facilities for small farmers; escalating HRD for undertaking frontier research and delivery services; and ensuring efficient utilization of natural resources. The major focus of the Plan in the sector, therefore, focuses on consolidating and expanding the productivity gains through designing policies, strategies and actions to accelerate the crop diversification and commercialization process by increasing local and export market opportunities for the farmers and other stakeholders. The major objectives of the crop sub-sector for the 8FYP are to:

- Increase availability of food, right to food and purchasing power by increasing productivity and production of crops.
- Increase farmers' capability and income through institutional infrastructure development and efficient technology services.
- Adopt and implement food production plans to meet the needs of nutritious, safe and demand-driven foods.
- Restore and develop the agricultural supply chain aftermath of COVID-19 crisis; minimise the impact of COVID-19 for smooth agriculture growth and ensure food security after the crisis.
- Develop agricultural research for promoting export of products through coordination with local and international partner organizations; modernize agricultural research, education, extension, input management and develop skilled manpower for sustainable technology innovation.
- Provide assistance to the farmers in increasing agricultural production and ensuring marketing facilities of agricultural commodities and obtaining fair prices.
- Introduce precision agriculture and synchronise farming, reduce the use of physical labour and introduce cost saving farming system through farm mechanization.
- Ensure sustained agricultural growth through more efficient and balanced utilization of land, water and other resources, and encourage more use of surface water for irrigation and reduction of pressure on ground water while expanding irrigation facilities through improving existing irrigation system and related infrastructures.
- Installations of solar panels for small scale irrigation in rural areas will be a priority.
- Promote gradual shifting of high water- consuming crops to low water consuming high value crops.
- Introduce nanotechnology in agriculture promote science-led agriculture technology systems and encourage research and adoption of modern agricultural practices for development of drought, submergence and saline prone agriculture considering water and time economy, adaptation to climate change, proper use of genetically modified technology in agriculture, and promote adoption of modern agricultural practices in dry land, wetland, hills and coastal areas including use of environment friendly green technologies (e.g. IPM, INM, AWD, etc.) and climate-smart/resilient technologies; introduce salinity, submergence and other stress tolerant varieties specially in the Southern regions.
- Create new sectors of agricultural commercialization and employment generation through value addition, improving supply chain, demand-driven and export-oriented agricultural development. And,
- Ensure proper use of water resources through active participation in the formulation of strategies and their proper implementation through inter-ministerial/inter-agency coordination.
- Enhance farmers' income and livelihood through Holistic Farming System Approach (HFSA) with special emphasis on productivity enhancement of homestead areas.
- Maintain plant genetic resources, genetic diversity of seeds of food crops and medicinal plants and conserve local and land races for protection from extinction.

Targets: In order to enhance agricultural production and ensure food security, the 8FYP targets to assure the supply of quality and high-yielding seeds for production and continue and extend the supports to farmers. The already attained self-sufficiency in staple food (rice) production will be maintained to meet the nutritional requirements of the huge population through supply of an adequate and diverse range of foods. Diversification of agricultural production with high value crops, strengthening supply channels in

the country, and ensuring credit for the small farmers should be the ideal targets for the country for the next five years. The projected production of major crops over the next five years is given in Table 4.5.

Table 4.5: Projection of Production of Selected Crops up to 2025 based on last 5-10 years average production performance of major crops (million MT, million bales for jute)

Major Crops	2019-2020 (Base Year)	Projection/Estimation				
		2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Rice	**38.70**	39.29	39.89	40.49	41.11	41.73
Wheat	**1.25**	1.29	1.323	1.37	1.41	1.46
Potato	**10.92**	11.23	11.54	11.86	12.20	12.54
Oil Seed	**1.15**	1.18	1.21	1.23	1.26	1.29
Vegetables	**18.45**	19.44	20.48	21.58	22.74	23.96
Maize	**5.40**	5.67	5.95	6.25	6.56	6.89
Spices	**3.95***	4.03	4.11	4.19	4.28	4.36
Pulses	**1.05**	1.09	1.13	1.17	1.21	1.25
Jute	**6.82**	8.01	8.02	8.02	8.02	8.03

Source: DAE, 2020, * Target (2019-2020)

The rice production is projected to expand to 41.73 million MT in FY2025, from the baseline value of 38.70 million in FY2019. Similarly, wheat, potato, maize pulses are projected to expand substantially. In order to attain higher productivity through crop diversification and to minimize the impact of climate change, the following other targets are set to be achieved within the plan period.

- To ensure affordable price of agricultural inputs and low volatility for prices of major cropping items.
- To ensure efficient utilization and management of natural resources including groundwater with special emphasis on surface water availability and use.
- To develop crop varieties for rice (25 varieties) and non-rice (2000 genetic resources, 100 climate resilient varieties).
- To introduce organic fertilizer use and organic pest management system
- To develop seed production, soil and fertilizer management, crop management, pest management and location specific technologies.
- To take and implement research and development activities on food-based nutrition with a view to increasing the nutrition level of the people.
- To increase awareness and to improve health reducing malnutrition problems related to food and nutrition in the country and to conduct research on harmful effect of agro chemicals or heavy metals (for example arsenic, lead, cadmium etc.) contamination existing in food chain and enhance consumer awareness. To ensure supply of modern HYV and hybrid cotton varieties to the growers along with the transfer of modern crop management technologies.
- To extend credit facilities to farmers through banks and other financial institutions at a low rate of 2 per cent.
- To achieve expanded digitalization of market access and market linkage activities, establishing e-agricultural marketing.
- To reconnaissance soil survey of the whole country on the basis of aerial photo interpretation and field and laboratory investigation of soils; detailed/semi-detailed soil surveys of development project areas and research farms for various beneficiary agencies; soil surveys for locating areas of problem soils (e.g., toxic, saline, alkaline or peat soils) and investigating soil degradation and erosion especially in hilly areas for planning reclamation, conservation and watershed management.

- To provide services to farmers regarding balanced fertilizer application through Online Fertilizer Recommendation System (OFRS) and Offline Fertilizer Recommendation System (Mobile Apps).
- To provide capacity building training and awareness training to the farmer on uses of modern technologies, post-harvest storage etc.

Table 4.6: Targets for Sustainable Soil Management Programme under 8th Plan

Programme	FY2021- FY2025 (each year)
Updating Upazila soil and land utilization guide	50
Land, soil and fertilizer recommendation guide at union level	160
Soil analysis and fertilizer card distribution	26,000
Upazila wise updated soil and land related data entry for online fertilizer recommendation system	50
Updated soil and water salinity data generation for coastal saline areas	600
Fertilizer sample analysis for quality control	4000
Technology generation and transfer for sustainable soil management in coastal saline areas	3 (by 2025)
Technology generation and transfer for sustainable soil management in hilly areas	3 (by 2025)
Demo plot for soil fertility management	90
Farmers' Training on balanced fertilizer use and adulterated fertilizer identification	6000
Training of DAE/SRDI officers on Upazila Nirdeshika	200

Note: Target is for each year up to 2025 if not indicated otherwise. ***Source: SRDI 2020***

Achieving the above objectives and targets will require undertaking a range of diverse activities. These are briefly discussed below.

Promoting sustainable agriculture and green growth: Sustainability does not only have biophysical dimension, which relates to use, preservation and enhancement of the long-term productivity of the resource base, but also has economic and social dimensions (Herdt and Lynam, 1998). An effective sustainable agricultural system must be built on current achievements. The approach will be to achieve and sustainably maintain high yields and farm profits without undermining the natural resource base. In earlier plan and other policy documents, several tools and strategies such as organic farming, Integrated Pest Management (IPM), Alternative Wetting and Drying (AWD) and others were identified and recommended. For successful adoption of these, the plan documents stressed on coordination and combined actions of different government ministries and agencies including MoA, Ministry of Environment, Forest and Climate Change (MoEFCC), Ministry of Land, Ministry of Water Resources and Local Govt. Division. However, the actual adoption status has not reached the desired level. To offer farmers some benefits of adopting these environment-friendly technologies, Economic and Policy Instruments (EPI) for ecosystem payment should be designed. For instance, compared to conventional urea, granular urea is less polluting and ensures higher productivity. To make it more popular, there can be greater incentives (e.g. higher subsidies) for using granular urea.

Sustainable agriculture and green growth in crop sector will be promoted through different policies. It will be planned and implemented in such a way that it will be resource conserving, socially supportive, commercially competitive and environmentally sound. The activities that will be promoted in this respect

are: (1) fostering partnership among the public-private and international organizations to make sustainable agriculture to work, (2) protecting and conserving environment by promoting ICM, INM, IDM, IPM (sex pheromone, botanical pesticides, biological control, etc.), surface and rainwater utilization, use of solar energy in farm activities, (3) Capacity building will be targeted at all segments of agriculture: farmers, extension providers, dealers, distributors, entrepreneurs, agribusiness people, trainers and researchers (man, woman, youth will be the target groups) through knowledge and skill development, (4) improving rain-fed agriculture, (5) technology transfer through farmers' group approach, (5) protecting biodiversity (plant, animal, fisheries, pollinator, etc.), (6) promoting food safety, nutrition and dietary diversification, (7) improving natural resource management (land, water and biodiversity), (8) Promoting agricultural exports, (9) sustaining economic viability of farming practices, (10) creating enabling environment for the institutions, (11) promoting farm mechanization, (12) exploiting newly accreted char and coast land and promoting seaweed cultivation.

Ensuring production of enough staples and diversifying to the non-crop sector: In line with the previous two plan documents, the 8FYP should concentrate on maintaining self-sufficiency in the major staple production through ensuring required increase and simultaneously diversifying the production portfolio within and beyond the crop sector so that diversified foods are produced to meet the nutritional requirement for the country's growing population in a sustainable manner by covering people living in different agro ecological zones.

The strategy requires research for area specific modern variety development and increasing productivity. The National Agricultural Research System (NARS) institutes and agricultural universities need to play critical role in inventing relevant new technologies. The DAE will be responsible for farm level dissemination of the new technologies. The MoA has to play the leading role for proper coordination among different ministries. In the case of rice, a short duration variety of Aus rice to avoid climatic uncertainty during the late summer is of upmost importance. Strategies are also needed for minimizing yield gap through increasing productivity and using modern and appropriate technologies at the farm level.

More attention is needed for crop intensification in environmentally and economically vulnerable areas such as the coastal zone, the Sylhet region and the char areas and in the northern poverty-stricken districts. Another strategy should be to encourage farmers to devote ecologically favourable months of the Boro season for growing high return non-rice crops leaving the remaining eight months for growing two rice crops.

Minimising the impact of the COVID-19 pandemic: In order to minimise the impact of pandemic on the agriculture sector (not limited to the crop sub-sector only), the government, in the backdrop of the Covid-19 fallout, announced a stimulus package of BDT 5,000 crore for farmers to boost agricultural production. Small and medium-scale farmers, including those in the poultry and dairy sector and fisheries can avail the loans available under this package at only four per cent interest rate. Farmers will benefit from these initiatives for the next three years. Small farmers will be able to avail this loan without collateral. Apart from this, an additional BDT 9,500 crore was allocated for fertilizer subsidies (as in the budget for FY2021) as part of the government's strategy to minimise the impact. Seeds worth BDT 150 crore will be distributed among affected farmers so that agricultural production would be continued.

Boosting social protection programmes are critical to protect incomes and purchasing power, particularly for the most affected households. This is important to ensure food security for the poor households. The existing cash and food transfer programme including VGD, VGF, and EGPP will also be expanded and other new employment generating programmes will be initiated.

The success of stimulus packages depends on the distributional efficiency and monitoring. A monitoring body will be established for the disbursement of loan from the stimulus and for monitoring its effective implementation. Besides, a long-term Crisis Management Fund should be established for the agriculture sector so that production and supply chains are not disturbed from any crisis. This fund will be applicable for crop, non-crop and fisheries subsectors. Besides, price stabilization policies should be adopted and implemented.

Ensuring optimal use of water resources: Crop diversification is an effective tool for ensuring optimal use of water given that the water requirement for paddy is much higher than in other crops. For ensuring irrigation efficiency, technologies that enhance conveyance efficiency (e.g. buried pipe, PVC/plastic/polythene pipe, etc.) and on-farm water use efficiency (e.g. drip irrigation, fertigation through drip irrigation system for the non-cereal crops, etc.) need to be promoted. As in BMDA areas, volumetric water pricing that offers incentives to the farmers to rationalize water use will be promoted in areas under deep-tube wells. Tiered pricing – setting lowest price at that threshold level of water use – will further encourage farmers in the Barind areas to rationalize water use.

Rational use of quality inputs: In Bangladesh, informal sources supply larger portion of the total agronomic requirements. The Bangladesh Agricultural Development Corporation (BADC), Department of Agricultural Extension (DAE) and other government agencies need to enhance their capability for producing more seeds. Their distribution channels also need to be improved so that farmers can access at lower transaction costs. Extension programmes will be designed to encourage farmers to use recommended/balanced doses of chemical fertilizers. The government has already adopted the policy of rebalancing fertilizer subsidy policy in favour of non-urea fertilizers. This has generated success in reducing urea use and increasing use of non-urea fertilizers. Furthermore, strategies for extensive production and use of organic/bio fertilizers, and proper utilization of soil guide and soil testing facilities will be developed and implemented.

Promote measures to expand mechanization and value chain development: Increased agricultural wages particularly during the harvesting season has become a major concern in recent times. Agricultural mechanization boosts productivity, reduces cost and contributes to farm efficiency. Strategies for credit and technical support will be developed to support the local machinery producers. Collaborative efforts are needed by public and private sectors in technology development and its diffusion. Technological progress needs to be supported by public and private investments for irrigation, flood control and drainage, and farm mechanisation, especially expansion of power tillers for land tilling, power threshing and processing as well as milling rice trans planters, rippers, tractors, and combine harvesters, etc. In line with the suggestions made in the national agricultural, policies for the promotion of mechanization through cash incentives for selected machineries at producer, manufacturer and farmer levels should continue.

Land reform: Land reform has its implications beyond agriculture as it balances the power structure, both economic and political. It empowers the actual tillers of the soil, and organizes and enables them to seek development

However, its implementation requires strong political will and motivation. The rising agricultural land market has already created some equity benefits. To further facilitate the process, strategies are needed to safeguard of the tenants against eviction and granting them the right of pre-emption in land transfer. The government khas land needs to be distributed among the landless and the marginal farmers. Automation of land records and transfers will further reduce the associated transaction costs and anomalies. It is worth mentioning that Ministry of Land is implementing 'Automation of Land Management Project' and 'Capacity Development of Land Records and Surveys to Perform Digital Survey Project' in this regard.

Promoting urban agriculture through rainfed rooftop and vertical farming: Urban agriculture may promote food security for urban households. It is also a source of safe food for the urban people for whom conventional farming is not possible. Urban agriculture also contributes to environmental sustainability, but that can only be pursued using rain harvesting water or with surface water not using underwater supply, as it is less input intensive. Moreover, for increasing productivity in urban agriculture, agricultural technological innovation is required to ensure sustainability of production. Research is also needed for efficient fertilization technology and eradication of plant pests and diseases. Technological innovation and dissemination are also needed for the postharvest technology. Finally, linking urban agricultural products with the value chain will be important. Expansion of vertical farming can help attain food security for urban as well as rural households by making use of small areas more efficiently. Private and/or public-private joint enterprises can establish commercial vertical farming in urban areas. Using appropriate technologies, vertical farming can commercially produce substantial amount of leafy vegetables in urban areas.

Crop zoning and land use planning: Considering the increasing demand for food production, it is an essential task to promote optimum land use and its conservation for higher productivity and production. The seventh Plan stressed on crop zoning and land use planning, however, a little has been achieved. A comprehensive land use planning through integration of economic, ecological, social and cultural values in production will be given priority. The 8th plan will broaden emphasis on soil and water conservation, land development, drainage and flood control, and reclamation programmes. Land use planning will be promoted and production programmes will be managed based on crop zoning.

Promotion of precision agriculture: For resource conservation and judicious use of inputs, the 8FYP will give more focus on Precision Agriculture (PA), which will ensure optimization of inputs use and maximization of returns while preserving resources and reducing environmental risks. Precision agriculture will be adopted wherever possible. Land levelling with laser equipment, buried pipe irrigation, drip & sprinkler irrigation, hydroponic culture of vegetables, bed planting, and use of USG & IPM are some of the examples of precision agriculture. This will save inputs, increase yield and profitability, and improve environmental management.

Introduction and popularization of Good Agricultural Practices (GAP): In a standard setting, certification and accreditation will continue to be the main focus for safe food production and marketing at local and export markets. Protocol development for Good Agricultural Practices (GAP) suitable for Bangladesh agro-ecological and socio-economic conditions of Bangladesh should be the major priority.

Introducing the GAP is an unfinished agenda of the 7th plan. There are four pillars of GAP: economic viability, environmental sustainability, social acceptability and food safety and quality. Research and extension will put effort jointly to promote the process. Establishment of GAP will ensure: i) safety and quality of food and other agri-products; ii) capturing new market opportunities for farmers and exporters; and iii) better natural resources use, workers health and working conditions.

It would also be an important initiative to promote regenerative agriculture, which aims to capture carbon in soil and aboveground biomass, reversing current global trends of atmospheric accumulation. At the same time, it offers increased yields, resilience to climate instability, and higher health and vitality for farming and ranching communities. Overall, it will ensure the resource use efficiency in agriculture along with environmental sustainability and biodiversity conservation. During the implementation of the 8th Plan efforts will be made to promote and popularize regenerative agriculture among the farmers...

Post-harvest management: Bangladesh experiences seasonal surpluses in several agricultural commodities of perishable in nature. Development of agro-processing facilities can prevent postharvest losses and enhance farmers' income. The agro-processing industries are at present in their nascent stage of development. Most of the technologies and facilities for handling, storage, processing and packaging of farm products and by-products are substandard and outdated as they cater primarily to the domestic market. There exists considerable underutilization of capacity as well. Agricultural research institutes like BARI and BRRI will carry out research on technology development for post-harvest management e.g. packaging and agro-processing. Meanwhile, some technologies are already available with these institutes for the development and growth of agro-processing industries in the country. Nevertheless, some specialized extension activities could be delegated to the private sector such as those related to fruits and vegetables enterprises. The process of supporting agro-business will be continued and strengthened during the Eighth Plan period.

Refrigerated vans and cold storage: Bangladesh produces huge quantity of fruits and vegetables round the year. Due to inappropriate methods of processing and marketing of agricultural products especially at storage and transportation stage, farmers experience a significant amount of post-harvest losses. However, it is possible to minimize the post-harvest losses by increasing product shelf life through maintaining cool chain by using cold chambers in storage stage and refrigerated vans in transportation stage. A significant change in terms of shift in demand has been made during the recent past in the consumer end. Due to change in consumer preferences, numbers of super shops or chain shops are increasing in Bangladesh. As a result, the demand for using cool chambers and refrigerated vans are also increasing. In addition, there is a great importance for storing and transportation of the exportable perishable vegetables and fruits. Recently, the exports of agro-processed goods have increased which resulted in increasing demand for maintaining a cold chain throughout. Developing the suitable storage and transportation capacities can ensure fair prices to the producers and can help maintain the demand-supply balance in the market for all seasons.

Strengthening agro-processing: The demand for processed agricultural products is increasing worldwide which is reflected in the recent growth in the exports of agro-processed items from Bangladesh. Food processing and dried food production have significant prospects both in domestic market and foreign markets. To ensure that the production and export potential are fully realized, the government will continue its current commitment to investing in the relevant infrastructure and supporting manufacturing of

processed foods. Special attention will be given support initiatives relating to ready to cook food, halal food export, dried fruits, canned fruits and assuring quality phyto sanitary compliance.

Agricultural research: Research and development is the key for enhancing productivity growth and diversification. In the 8FYP, emphasis will be given on agricultural research promotion, focusing on developing and refining technologies that will bridge yield gaps and promote diversification and intensification, community farming, sustainable natural resources management (e.g., rain water and river water harvesting for agricultural production), disease and pest management, development of varieties/species with postharvest technology of high value agricultural commodities, frontier researches like genomics and phenomics, physiologial mechanisms regulating photosynthetic efficiency, polyshed and nutrient dense culture, vertical farming,_ mechanization, etc. It will also address climate change effects by breeding and introducing saline and drought tolerant, short duration varieties, high value commodities, and low-cost, high-impact post-harvest technologies. Furthermore, research on packaging, harvesting, food processing, market intelligence, IPM, on-farm water management, food technology, biotechnology and biosecurity will have special emphasis along with other contemporary issues. For this purpose, budgetary allocation for research and extension should be expanded to at least 5 per cent of Agricultural GDP as against 1.5 per cent of current allocation.

Demand-led agricultural extension: Transfer of technologies, diversification and intensification of crop production program through appropriate extension services are of crucial importance. Technology extension mapping will be done based on agro-ecological niches, prevailing productivity gap and regional specificity. The extension services must be able to render required technical advice and management support at the appropriate time and place. Pluralistic extension approach will be adopted to enhance production and productivity. Extension services will address skill gap, productivity gap and agricultural diversification for attaining food safety, dietary diversity and volume and value addition for agricultural commodities. Research-extension-farmers linkages will be further strengthened to achieve and sustain a high level of productivity. Feedback mechanisms from farmers-extension-research linkages will be established for possible solutions and taking back the results to the farmers for their field adoption. Further strengthening of these three-way linkages and communication among research, extension and farmers' community will be made in the 8FYP for effective research-extension-farmer linkages. The technical committee and Agricultural Technical Committees (ATC), each covering 2-6 districts in similar agro-ecological zone (AEZ), will be strengthened. Agricultural extension together with nutritional awareness programmes will be strengthened. The following priority activities will be pursued in the 8FYP for extension services:

- Strengthening research–extension–farmers linkages
- Formulation of programmes to promote diversification on the basis of crop zoning and value addition
- Expansion of small-scale irrigation technology and surface water for irrigation
- Extension of Boro rice cultivation in southern Bangladesh
- Popularization of salt-tolerant varieties in the coastal region
- Diversification to high value crops in Barind tracts and hill districts
- Field monitoring for seed, pesticide and fertilizer quality
- Organizing technology demonstration, field days, agricultural exhibition, etc.

- Adoption of decentralized extension approach, bottom up planning and micro planning
- Addressing all categories of farmers with special emphasis on marginal, small, tenant and women farmers
- Development and promotion of environment friendly farming practices ensuring good agricultural practices.
- Easing agricultural credit facilities for small farmers and intermediaries
- Promotion of Rice Yield Gap Minimization (RYMG) techniques
- Reduction of yield gap, knowledge gap and productivity gap by productivity enhancing technology
- Strengthening human resources development programmes of extension agencies
- Strengthening MIS and ICT-based knowledge management system and e-agriculture
- Establishment of Farmer's Information and Advisory Centre (FIAC) at all union level Promotion of commercialisation of agriculture

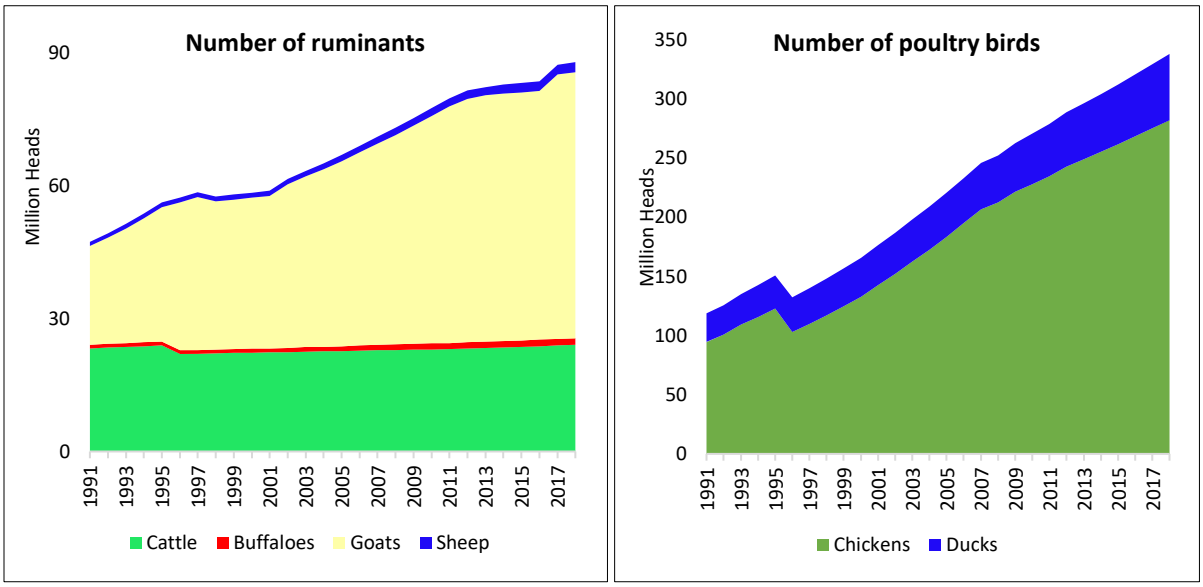
Increasing women and youth participation in agriculture: Globally women have an increasing participation trend in agriculture and Bangladesh is no exception where more than half of the total agricultural labour force is women and their participation is gradually increasing. Likewise, youths are to be attracted in farming and allied activities through provision of introducing of incentives for inspiration like easing loans, and offering training as a new generation entrepreneur. Most of the cases, women are engaged in seedling and post-harvest activities. The 8FYP plan will focus on productive participation of women in agricultural employment and will seek to address the following issues, amongst others: (1) wage differences between male and female in agriculture, (2) socio-economic backwardness and constraints that women endure in a male dominated society, (3) women's access to institutions and facilities including extension and credit services and linkages with other services such as health and nutrition,, and (4) women's access to markets and high value-added agriculture.

4.4 LIVESTOCK SUB-SECTOR

During the past three decades, the production of livestock – both ruminant and poultry – increased significantly (Figure 4.5). Cattle, which consisted almost half of the total ruminant population until the early1990s, is replaced by small ruminants, particularly goats, which is currently around 70 per cent of the total livestock population. Total population remained almost unchanged, which may be attributed to the gradual decline in the use of cattle as animal power in farming. Among poultry population, around 80 per cent is chicken and the share remained almost unchanged.

Bangladesh has one of the highest cattle densities – 282 large ruminants/km^2. But most of them trace their origin to a poor genetic base. The average weight of local cattle ranging from 125 to 150 kg for cows and from 200 to 250 kg for bulls falls 25–35 per cent short of the average weight of all-purpose cattle in India. Milk yields in Bangladesh are low: 200-250 litres during a 10-month lactation period against 800 litres for Pakistan, 500 litres for India and 700 litres for all Asia.

Figure 4.5: livestock production in Bangladesh (numbers)



Source: FAOSTAT

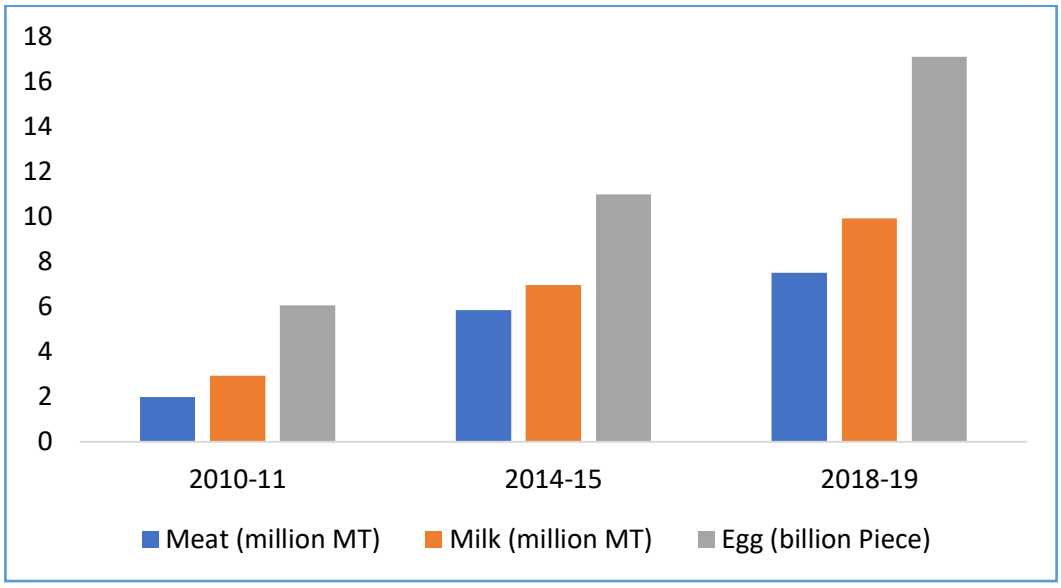
4.4.1 Performance of Livestock Sub-sector under 7FYP

Livestock is a key component of the agricultural economy of Bangladesh. It contributed to 1.47 per cent of GDP and 13.6 per cent of agricultural GDP in 2018-19. During the first four years of the 7FYP, the sector expanded at an average annual rate of 3.4 per cent, which is considerably higher than that of the 6FYP of 2.8 per cent. Livestock serves an essential role as a source of protein, employment generation, export earnings, and provision of food security. Livestock resources play an important role in the sustenance of landless people, livelihood options for the rural poor families and are potentially important for poverty reduction.

The 7FYP objectives for the livestock sub sector were to promote sustainable improvements in animal productivity in the dairy sector, including increased product processing and value addition, and sustained improvements in income and employment opportunities for the landless, small and marginal farmers, and women in livestock rearing. The Bangladesh Livestock Research Institute (BLRI) is responsible to identify the livestock and poultry production constraints at the national and farm level, seek solutions to those problems through multi and inter-disciplinary and inter-institutional research and to develop technologies to help food and nutrition security, contributing to poverty alleviation, employment and income generation, and reduced environment pollution.

During the 7FYP period, Bangladesh achieved self-sufficiency in meat production and near self-sufficiency in the production of eggs (Table 4.7). The production of meat reached at 7.51 million MT in 2018-19 – up from 5.86 million MT in 2014-15 (Figure 4.6, Table 4.7). Milk production during this time increased from 6.97 million MT to 9.92 million MT – an increase of 42 per cent, while production of eggs grew by 55 per cent. With increasing production, per capita availability of milk, meat and eggs rose to 161.69 ml/person/day, 122.47 gm/ person/day and 101.78 piece/person/year respectively in FY19.

Figure 4.6: Production of Milk Meat and Eggs



Source: Department of Livestock Services (DLS), MoFL

Table 4.7: Demand, Production, Deficiency and Availability of Milk, Meat and Eggs

Products	2014-15				2018-19			
	Demand	Production	Deficiency (-)/Surplus (+)	Availability	Demand	Production	Deficiency (-)/Surplus (+)	Availability
Milk (Million Tonnes)	14.48 (250 ml/day/head)	6.97	-7.51	122.00 (ml/day/head)	15.34	9.92	-5.42	161.69 (ml/day/head)
Meat (Million Tonnes)	6.95 (120 gm/day/head)	5.86	-1.09	102.62 (gm/day/head)	7.36	7.51	+0.15	122.47 (gm/day/head)
Egg (Million Numbers)	16504.8 (104 nos./year/head)	10995.2	-5509.6	70.26 (nos./year/head)	17482.07	17109.70	-372.37	101.78 (numbers/year/ head)

Source: DLS

4.4.2 Challenges of Livestock Sub-sector

Although, an impressive success has been experienced during the last plan period, the livestock sector is constrained with several challenges. The following challenges are notable:

Disrupted production and markets due to the COVID-19 pandemic: The livestock sub-sector has been affected by the economic shutdown measures to contain the spread of COVID-19. Towards the fag end of the 7FYP, the virus-related disruptions caused the demand for poultry meat and milk to fall sharply, negatively affecting prices and the existing productive capacities in the sector. In rural areas, about 40-50 per cent decline in prices of milk, eggs and poultry were reported, causing huge economic loss for the smallholders. Many farmers reportedly stopped procuring new cycles of production of poultry birds and eggs which might have an impact on food and nutrition security in the coming days. The commercial dairy

milk producers are at high risk. During the prolonged economic shutdown period, a huge amount of milk, which was used in sweet shops and other food-processing firms, remained unsold, eventually causing supply-side shocks. Besides, the production of feed for livestock and fisheries reportedly declined because of the crisis in the supply of raw materials. If appropriate measures are not taken in helping with the recovery process of the sector, the crisis could have long term implications for livestock production, food security and nutrition.

Low productivity: Although in terms of number of live animals, Bangladesh ranks in the quintile of top 10 per cent for buffaloes, cattle, goats, chicken and duck, the yield rates of different livestock products over the past three decades have remained stagnant. This implies that the production growth is mostly attributed to increasing number of animal population. The productivity of all the major three types of livestock in Bangladesh is notably lower than those of neighbouring countries such as Bhutan, India, Nepal and Pakistan (FAOSTAT, 2020).

Scarcity of quality feeds and fodders: Feeds and fodders are important inputs for livestock rearing. Naturally grown grasses and crop residues are the main source of feed for cattle in Bangladesh. The shortage of natural feed and high price of processed feed are major challenges for small holders raring livestock. Scarcity of land for fodder production, seasonal fluctuations in supply of feeds and fodder, low quality feed, and poor husbandry practices – all add to the problem. The coastal region in the south used to be regarded as a large source of natural feed as there are plenty of uncropped areas. However, in recent times, due to salinity, the scarcity of grasses started in this region, resulting in a decline in buffalo production. Increased salinity in coastal area is a potential threat to natural growth of grasses in the char lands for grazing of animals. The pastureland has reduced significantly all over the country due to cultivation of High Yielding Varieties (HYV) of rice. Climate change is causing unusual behaviour in temperature, rainfall, flooding pattern etc., and affecting either natural growth or damaging the pasture grasses. Besides, adulteration and inadequate or lack of quality control system of commercial feed are identified as major challenges for processed animal feeds, causing harm to animal and public health and nutrition as well.

Emerging and re-emerging diseases: Occurring and re-occurring of diseases is a major concern for livestock farming. Every year about 15 per cent of animal and 20 per cent of poultry die from different diseases causing a huge economic loss to the farmers. Anthrax, Haemorrhagic Septicaemia (HS), Black quarter (BQ), Foot and Mouth Disease (FMD) in cattle and Peste de Petits Ruminants (PPR) and Goat Pox in goats, New Castle Disease (ND), Infectious Bronchitis (IBD) and Gumboro in chicken and Duck plague and Duck Virus Hepatitis in ducks are the major animal diseases in Bangladesh. The cattle and poultry also suffer from protozoan disease including Toxoplasmosis, amebiasis, giardiasis, leishmaniasis, cryptosporidiosis, and parasitic infestation due to moist humid climatic condition in Bangladesh. Parasitic diseases can be easily controlled by improving management and regular de-worming with appropriate medicine, which is not so much expensive. Almost all animals are infested with one or more parasitic diseases in Bangladesh. Nutritional disorders are common in livestock and poultry birds due to shortage of feeds and fodder and also due to lack of knowledge of the farmers.

Insufficient veterinary and animal health care service: Veterinary and Animal Health Care Service are inadequate in the country. Public veterinary services are available at the upazila level; however, there is shortage of veterinary and animal health care professional at the root level which is the major hub of livestock farming. The Bangladesh Livestock Research Institute (BLRI) is responsible for producing

vaccines for animal care. The quantity of vaccines is inadequate and the quality is also a major concern. The use of subsidies in vaccine production needs to be rationalized to encourage private investors. Quality control for standard vaccination needs to be developed for both local and imported varieties. The facilities of disease diagnostic are also limited and there is a shortage of skilled manpower for this.

Limited access to credit: Development of small and medium scale farms for animal and poultry rearing require significant investment while access to credit for small holders in livestock is very limited and requires high collaterals. The following challenges in accessing credit facilities are notable: (i) insufficient funds; (ii) inappropriately packaged loans for production cycles of livestock; (iii) collateral requirements effectively reducing credit access for smallholders, particularly for the poor; (iv) inadequate loan supervision; (v) insufficient training in financial management and business planning (applies to both loan providers and takers); (vi) inadequate technical support; and (vii) smallholders' vulnerability and risk from natural and man-made disasters.

Adverse impacts of climate change and natural disasters: Climate change poses a threat to sustainable livestock development. The impact of climate change on livestock can be transmitted through (i) rise in the sea level, which will inundate char lands reducing the grazing facilities, (ii) intrusion of saline water in coastal regions will increase stress factors and therefore, will not be conducive for livestock rearing, (iii) vegetation will be destroyed leading to a serious feed scarcity resulting in reduction of livestock population. Natural disasters including cyclones, tidal surges and flooding cause colossal damages to livestock. In the aftermath of such a disaster, productivity runs off due to shortage of animal feed and outbreak of diseases.

Other challenges: The underdeveloped marketing system for livestock products is considered as a major constraint for the development of this sector. The marketing network and information system for dairy milk has not been developed in rural areas. Production and prices mostly depend on the local demand and supply conditions and are not integrated with a comprehensive nationwide marketing network. Among other challenges, limited knowledge and technical skills of smallholder dairy farmers; limited milk collection and processing facilities and low prices at collection points; lack of insurance coverage; absence of market information; lack of appropriate breeds and knowledge gaps of farmers; lack of quality control facilities for medicine, vaccines and biological products, feed and feed ingredients, chicks, eggs and birds; and absence of an effective regulatory body; etc. In addition, most meat production is handled (including slaughtering of animals) under unsatisfactory sanitary conditions in both rural and urban areas.

Food safety, Nutrition and Human health hazards:

4.4.3 Objectives, Targets and Strategies for Livestock Sub-sector

The objective of the 8FYP plan is to meet the increasing demand of animal protein by sustainably enhancing production, productivity and value addition of milk, meat and egg. The specific objectives:

- To promote sustainable production of milk, meat and egg including processing products
- To ensure a nutritional-sensitive production system and consumption to tackle malnutrition among poor and vulnerable population groups, including the children and women
- To promote sustained income generation and employment opportunities for the landless, small and marginal farmers

- To generate need-based technology and improve livelihood of livestock farmers through adaptive research and to transfer developed technologies to users through training of extension workers, planners, livestock farmers and other stakeholders
- To develop climate resilient and low-cost feeds and fodders production
- To facilitate entrepreneurship and increased participation of the private sector in the production, marketing and export of livestock products and by-products on a commercial basis.

Targets: The 8FYP plan sets a target to expand the production of milk from 9.92 million metric ton in 2018-19 to 16.37 million metric ton in 2024-25; meat production from 7.5 million MT to 8.51 million MT and egg production from 17,109.7 million to about 22,400 million pieces (Table 4.8). These targets will be achieved through enhancing productivity by using modern biological techniques, adopting appropriate disease diagnosis and treatment, and by addressing climate smart livestock interventions for safeguarding nutritional food security.

Table 4.8: The Projected Demand and Supply of Milk, Meat and Eggs

Items	2020-21		2024-25	
	Demand	Production Target	Demand	Production Target
Milk (million MT)	15.84 (250ml/person/day)	15.84 (250ml/person/day)	16.36 (250ml/person/day)	16.36 (250ml/person/day)
Meat (million MT)	7.61 (120gm/person/daily)	7.93 (125gm/person/daily)	7.85 (120gm/person/daily)	8.51 (130gm/person/daily)
Egg (million piece)	18055 (104/Year /Person)	18576 (107/Year /Person)	19407 (104/Year /Person)	22393 (120/Year /Person)

Source: Department of Livestock Services (DLS) projections.

Strategies

The following strategies will be implemented to achieve the objectives of the livestock sector:

Enhancing productivity through research and development: Productivity will be enhanced through extensive research and development activities. Research capacities of BLRI and other universities/institutes undertaking the relevant research activities will be enhanced to address the national priority and harness the untapped potential of regional livestock resources, and to ensure safe production of animal products and by-products, animal protein supplement, feed additives, premixes, probiotics and mineral and vitamin supplements as inputs for poultry and livestock development. Initiatives will be taken to encourage and support private agencies and NGOs to undertake livestock research.

Developing good quality breed: Bangladesh has one of the highest livestock densities in the world, where the growth in population largely comes from commercial poultry and small ruminants. But the productivity of local breeds is very low. Breed development through crossbreeding local variety with suitable exotic variety should be of upmost priority. For backyard farming, where investment potential is limited, local breeds that have relatively higher productivity and hardy in nature will be promoted. Besides, Artificial Insemination (AI) programmes need strengthening in promoting quality breeds of livestock. Along with

these, the original variety breed those are high-yielding needs to be conserved and promoted. For instance, the Black Bengal goat (Bangla goat) is known for its relatively low demand for feed, high reproduction rate, and disease resistance and is thus a traditional choice of asset for many poor and vulnerable households.

Veterinary services and animal health: (4) Policy support will be provided to accelerate the development of private and community-based veterinary services, including compliant private veterinary diagnostic centres, clinics and hospitals. (3) An autonomous quality control agency would be established to ensure quality of veterinary drugs, vaccines, feeds, feed ingredients and breeding tools and materials. (2) A massive programme on disease prevention and control of cattle and poultry diseases, awareness building and mass programme for de-worming of animals against parasitic diseases will be designed. (1) Measures will be taken to extend veterinary services up to union level with adequate service provider and infrastructural facilities.

Promoting poultry and livestock farming: While there are several government initiatives for providing multiple incentives for the farmers in crop production, there is ample room for strengthening policy support mechanisms for poultry and livestock production. Considering the need for protein and diet variety on the one hand and creating employment opportunities on the other, policy incentives for the livestock and poultry subsectors can have important and far reaching development implications. To meet the huge target of milk, meat and egg production by 2025, many small growers will need to have improved access to finance. Short-to-medium term collateral-free loan facilities at subsidized interest rates, amongst others, should be introduced for poultry and livestock farmers. Besides, policy options for vaccine coverage for poultry birds and ensuring quality feed supplies should be looked into.

Supporting small and medium farmers: Immediate actions will be taken to address the constraints of smallholders in livestock rearing. Support to small and medium size livestock and poultry unit will be emphasized along with large business enterprises. Private initiatives will be encouraged and supported for producing inputs like feed, medicines, vaccines and biological products, genetic stocks and materials for the small and medium size enterprises. All possible support should be extended to them also for processing and exporting livestock products. Smallholder poultry and dairy producers and entrepreneurs will be facilitated through allowing access to bank financing at an affordable rate of interest with low or no collateral.

Improving management practice: Better management practices such as quality assurance of feed stuff including water, disease and pest control, hygienic processing of products and environmentally safe disposal of wastes are important strategies. These also have implications for food safety. The DLS has a role in developing human capital through training on appropriate feed mixture, vaccination and adherence to bio-security guidelines. The supply of quality day-old chicks is important for small-scale commercial poultry farms. The strategy should be to address the main determinants of production, namely ensuring that animals are disease-free and well-fed with cost effective and balanced forms of animal feed. Introduction of insurance schemes, at least for large commercial farms, will also be an important consideration. Veterinary and extension services are critical for livestock farming, although the DLS offices do not exist beyond the upazila level. The lead farmer approach will be continued with more training and incentives for the farmers.

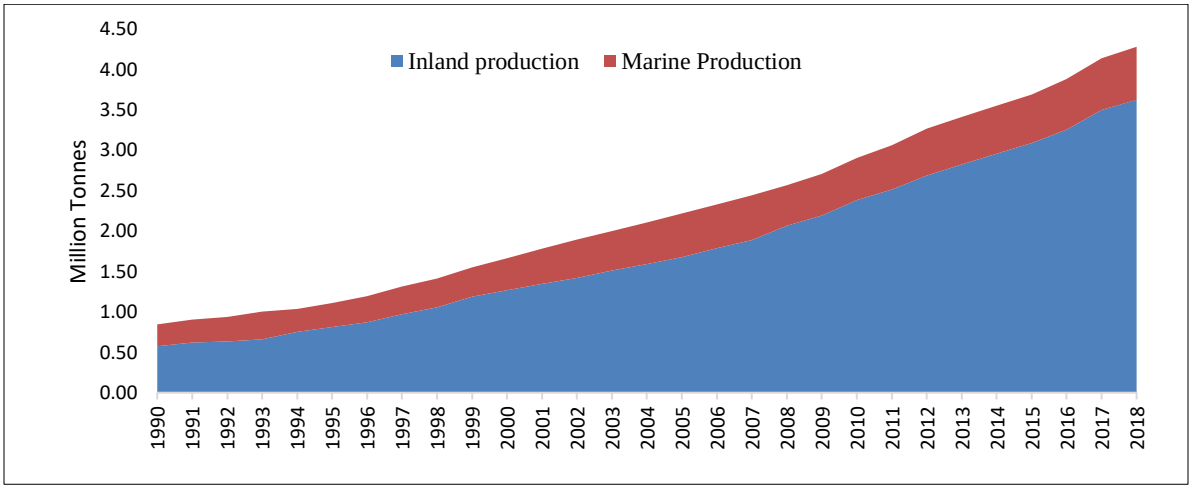
4.5 FISHERIES SUB-SECTOR

Bangladesh is one of the world's leading fish producing countries with a total production of 42.77 lac MT, where aquaculture production contributes more than 56 per cent of total production. The fisheries sector contributes 3.50 per cent to the national GDP and 25.71 per cent to the agricultural GDP (BER, 2019). During the past decade, the sector expanded at an average annual rate of 5.26 per cent. More than 10 per cent of the population are directly or indirectly engaged in various fisheries activities for their livelihood. Bangladesh achieved self-sufficiency in fish production with a per capita fish consumption of 62.58 g/da

4.5.1 Performance of Fisheries Sub-Sector under 7FYP

Bangladesh ranks 3rd in producing fish from inland water bodies, 5th in aquaculture production and 11th in marine fish production. Since 1990, fish production has increased by more than five times. The 7FYP Plan objectives for fisheries were to enhance productivity, livelihoods security and equitable distribution of benefits while conserving the potential fisheries resources and aquatic biodiversity. During the Plan period, the fisheries subsector grew annually at 6.23 per cent – slightly higher than the 6FYP plan average yearly growth rate of 6.18 per cent. The fisheries sector the largest growing subsector of agriculture. In 2017-18, the total fish production was 4.28 million MT and the yearly volume growth rate was 5.94 per cent (Figure 4.7). The two major contributing factors behind the performance of fisheries sector are: (i) pond aquaculture using hatchery produced fingerlings and (ii) conversion of fishponds by raising embankments around low-lying land. Inland production is historically the major supply source of fisheries products in Bangladesh. The average growth of inland fisheries was 6.7 per cent against 3.25 per cent for marine fisheries.

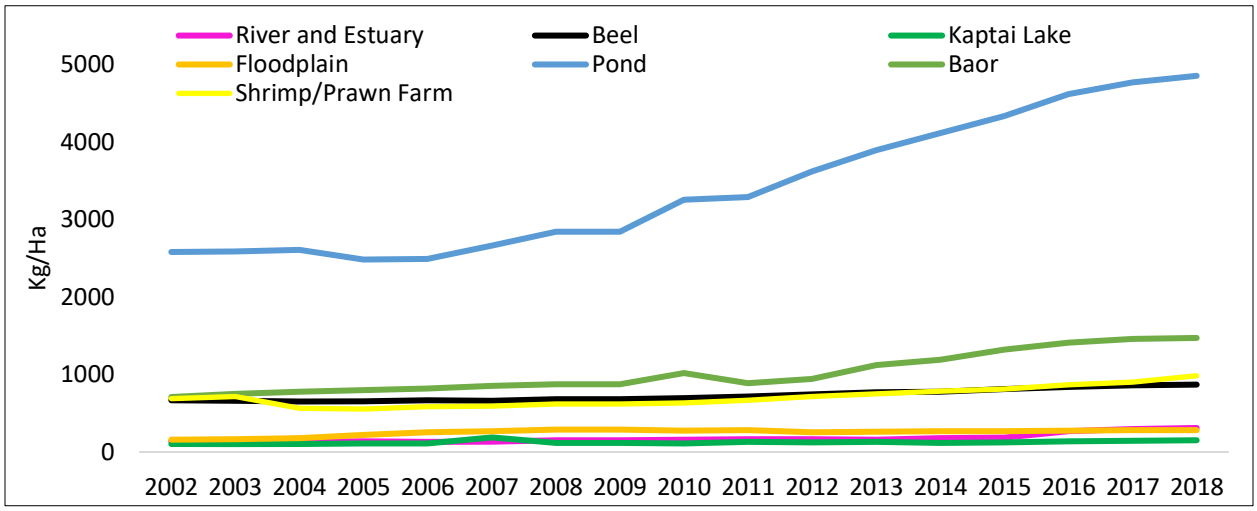
Figure 4.7: Trend in Inland and Marine Fisheries Production



Source: FSYB, various issues

Over the years, productivity of fish produced in pond, oxbow-lakes, shrimp/prawn farms and depressions has increased substantially while the same productivity for other water bodies stagnated. Fish productivity is highest in pond (4851 kg/ha), followed by oxbow-lakes (1471 kg/ha) and shrimp/prawn farms (983 kg/ha) (Figure 4.8).

Figure 4.8: Fish Productivity across Different Types of Water Bodies



Source: 8PYP Agriculture sector background paper.

Hilsa contributes to around 12 per cent of country's total fish production – the highest as a single species. Its contribution to the GDP is more than 1 per cent. In 2017-18, a total of 5.17 lac metric tons Hilsa were caught, up from 2.99 lac metric tons in 2008-09. The fishing ban during reproductive periods has contributed to this growth. The enlisted fishers receive allowances and other trade materials under the Alternative Income Generation (AIG) scheme during the banned periods. Apart from this, the increasing public awareness to stop jatka fishing contributed to this high growth. It is worth mentioning that Hilsa got recognition of geographical indication (GI) product of Bangladesh in 2017.

Shrimp is one of the most important exportable merchandise in Bangladesh. Shrimp production increased to 2.54 Lack MT in 2017-18 from less than one lac MT in 2001-02. Several government initiatives including zoning of shrimp areas, official ban of wild shrimp fry from nature, shrimp farming infrastructure development, quality certification system and farmer training programmes contributed to this growth. Currently, shrimp zoning activity is running through survey of coastal area by a national committee. To increase galda and bagda shrimp culture, 46 golda shrimp hatchery and 49 prawn hatcheries have been established under both public and private ownership. The increase in fish production has been contributed to export earnings. In 2018-19 Bangladesh earned BDT 4,250.31 crore by exporting 73,171.32 metric tons fish and fishery products. Of this, BDT 3,088.85 crore (USD 365.54 million) was due to exports of frozen shrimp. Several initiatives, including training of farmers on Good Aquaculture Practice (GAP), implementation of National Residue Control Plan (NRCP), modernization of fish quality control laboratories, etc. attributed to the export success.

Table 4.9: Exports of Fish and Fisheries Products

Financial year	Amount (MT)	Earnings (Crore Taka)
2009-10	77643.29	3408.51
2010-11	96469.23	4603.67
2011-12	92479.18	4703.95
2012-13	84904.5	3412.61
2013-14	77328.86	4898.22
2014-15	83524.37	4662.6
2015-16	75337.93	4282.82
2016-17	68305.68	4287.64
2017-18	68935.45	4309.94
2018-19	73171.32	4250.31

Source: Export Promotion Bureau (EPB) of Bangladesh.

4.5.2 Challenges of Fisheries Sub-sector

Although the fisheries sub-sector performed quite well during the 7FYP plan period, the sector is confronting with several challenges that can constrain the sectors' growth in the future. Some of these are discussed below:

Supply chain disruptions due to COVID-19: The outbreak of COVID-19 may have some implications for the fisheries sub-sector in the short to medium run. For wild-capture fisheries, the inability of fishing vessels to operate (due to limited demand as well as social distancing measures being difficult to abide by on board a vessel) can generate a domino effect throughout the value chains in terms of supply of products. However, the consequence of the COVID-19 induced disruption in the fisheries supply chain is likely to be not clear at this stage.

Degradation of natural resources: Inland fishery including seasonal flood-land which includes floodplains, depressions (beels) and rivers is the main hub of fish production in Bangladesh. The inland open water fishery is threatened by gradual depletion and degradation of natural resources, owing to rapid urbanization, and infrastructure investments etc., which negatively impacted fisheries. If the inland open water resources cannot be reversed by effective conservation measures, the fish production will be threatened further.

Inland capture fisheries: Conservation and sustainable management: The inland capture fisheries is continuously shrinking mainly because of over-fishing, use of destructive gears, silting up of water bodies, closure of natural fish passes, non-fishers' control of the 'jolmohal' by malpractices in lease and by encroachment; and pollution of water bodies by agro-chemicals, industrial wastes and urban sewers etc. Consequently, inland fisheries, which were a main source of livelihoods of poor fishers and a source of free protein supply for many rural households, have been declining. Proper policies, regulations and management of inland water resources can help reverse the declining trend.

Inland aquaculture: The inland aquaculture experienced fastest growth mainly through the introduction of new technologies, species and intensification and improvement of farming particularly in pond aquaculture. However, the sector is undergoing multiple challenges including, among others, poor brood

stock management, inadequacy of the supply of fish and shrimp spawn and fries of desired quality and from reliable source at reasonable price, low availability of reliable and quality fish feed at a reasonable cost, spread of infectious diseases of both fish and shrimp, lack of institutional capacity to assist with the needed extension services, etc. Flood plain aquaculture is at risk because of increasing waterlogging, blocking migratory routes of indigenous fish species, disturbing biodiversity and creating social conflicts.

Marine fisheries: The marine fisheries are an important source of protein, contributing about 15 per cent of the total fisheries production in 2018-19. Although growing in terms of absolute production, the rate of expansion has been very slow. As a result, marine fisheries are experiencing a decline in its share in total fish production – shrinking from almost 18 per cent in 2009-10. Key challenges include, overcapacity of fishing effort, infringement of rules and regulations, entry of illegal fishing vessels and pouching in the Bangladesh EEZ, long gap exploratory survey on stocks assessment, intense and overfishing deploying destructive and illegal gears, shift in the climate change paradigm, illegal, unreported and unregulated (IUU) fishing, destructive fishing, pollution, catching of juveniles, degradation of highly productive coastal and near-shore marine habitats like coral reefs, mangroves, estuaries, spawning and nursing grounds seriously impacts our marine fisheries productivity disrupting ecosystem function etc.

Shrimp and brackish water aquaculture: Aquaculture specifically shrimp and prawn production, which is also an export earner, involves manufacture of numerous inputs such as feed, fertilizers, pesticides and veterinary drugs, as well as of technical devices for water treatment and pond operation. The off-farm post-harvest production links also include processors and marketing agents (packaging, transport, export-importers, consumers, quality control). While shrimp and brackish water aquaculture have been growing over the last three decades but productivity remains low. While the processors and hatcheries have created excess capacity, shrimp production could not reach the desired and potential level. One reason is that the shrimp farms, particularly the brackish water bagda farms, use very traditional and extensive method, hence yield remains very low. Golda farming is facing scarcity of feed while bagda farming is facing scarcity of good quality and virus-free shrimp fry called post larvae (PL). In past years there were problems with shrimp cultivation and processing, such as, quality assurance and traceability and inadequacy in social compliance, which affected export.

While shrimp and brackish water aquaculture expanded significantly, there are several threats. The problems with shrimp cultivation and processing in the past years, such as, quality assurance, traceability and inadequacy in social compliance affected exports. The quality assurance system with regards to fish and fishery products has been improved remarkably during the 6th and 7th plan periods. Laboratory facilities for microbiological, residual and chemical testing have also been raised up to the European standards and sustained successfully. Traceability along with other bio-security issues shall be further improved and laboratory facilities needs to be further expanded during the 8th plan.

Other major challenges: Among other major challenges in the fishing industry, product quality control measures were limited to exporting. It is difficult to adequately comply with HACCP standards and there is a need for building capacity and enforcing standards-related requirements. Other challenges include scarcity of quality fish fry and fingerlings; inadequate infrastructure for processing, transportation and marketing of fish and fish products; inadequate post-harvest management system; adverse impacts of climate change; inadequate human resources and logistic support and knowledge gap of the producers; and limited facilities for research and development for production up gradation.

4.5.3 Strategies for Fisheries Sub-sector

Objectives: The major objective of the fisheries sub-sector in the 8FYP is to support sustainable growth in fish and shrimp production with other aquatic resources for domestic consumption and exports by managing open-water fisheries resources, exploring blue economy through community participation leading to equitable distribution of the benefits for optimal economic and social growth, and reducing post-harvest loss. The strategic objectives for the sub sector are to:

- Enhance fisheries resources and production.
- Alleviate poverty through creating self-employment and improvement of socio-economic conditions of the fishers.
- Achieve economic growth and earn foreign currency by exporting fish and fisheries products.
- Manage resources including manpower development for ensuring optimum productivity, sustainability of production and conservation of fisheries resources.
- Establish and maintain fish and wetland sanctuaries which include ban on fishing in certain eco-sensitive areas.
- Harness the potential of blue economy, stock assessment of marine fisheries and promote sustainable exploitation of marine fishes, especially tuna and tuna like other pelagic fishing.
- Promote value chain in fish and fisheries products.
- Ensure safe and quality fish supplies in the domestic and international market.

Targets: The strategic objectives in the 8FYP plan for the fisheries sector will be achieved by increasing fish production targets as set out in Table 4.10. The Plan targets to increase the participation of women in aquaculture production, fisheries, CBOs/Co-management and fish/ shrimp processing industries by 30 per cent. Good Aquaculture Practice (GAP) and Good Manufacturing Practice (GMP) will be promoted at all stages of fish/shrimp supply chain to comply international standard.

Table 4.10: Projected Production of Fish in the 8th plan

SL NO.	Source	2020-21			2024-25		
		Water area (‘000 ha)	Total production ('000 MT)	Production (kg/ha)	Water area (‘000 ha)	Total production ('000 MT)	Production (kg/ha)
1	River and estuaries	854.00	331.00	0.388	854.00	395.70	0.46
2	Sundarbans	177.00	19.20	0.108	177.70	20.00	0.11
3	Beel	114.16	105.40	0.923	114.16	110.4	0.97
4	Kaptai Lake	69.00	10.60	0.154	69.00	11.00	0.16
5	Floodplain/Haor	2617.00	818.40	0.313	2617.00	825.06	0. 32
	Total open water	**3831.86**	**1284.60**		**3831.86**	**1362 .16**	
6	Pond/Dighi	371.00	2032.20	5.478	371.00	2333.30	6.29
7	Baor (oxbow-lakes)	5.00	8.50	1.700	5.00	8.84	1.77
8	Seasonal cultured water-body	131.00	230.90	1.763	131.00	252.26	1.93
9	Shrimp/prawn Farm	275.00	271.40	0.987	275.00	295.60	1.07
10	Crab	98.54	12.80	0.130	98.54	14.00	0.14
11	Pen culture	5.29	10.60	2.004	5.29	11.08	2.09
12	Cage culture	0.013	4.30	330.769	0.013	4.60	353.85
	Total aquaculture	**885.84**	**2570.70**	**-**	**885.84**	**2919.68**	**-**
13	Marine Artisanal		569.4			583.00	

SL NO.	Source	2020-21			2024-25		
		Water area (‘000 ha)	Total production ('000 MT)	Production (kg/ha)	Water area (‘000 ha)	Total production ('000 MT)	Production (kg/ha)
14	Marine Industrial (Trawler)	0.00	127.7	-	-	130.16	-
	Total marine		**697.10**			**713.16**	
	Grand total	**-**	**4552.40**	**-**	**-**	**4995.00**	**-**

Source: Department of fisheries

Culture fisheries: Culture fisheries being the major source of fisheries growth in the country, further intensification in pond aquaculture and brackish water shrimp culture will be required to meet the growing demand in the country. On this ground, the 8FYP will focus on sustainability (environmentally, socially and economically compatible) and quality (improved traceability for compliance) of the fish production and management system. A proper safeguarding mechanism for the landless and marginal farmers will be developed against any type of natural and non-natural shocks.

Supply of quality fingerlings and fish feeds through private sector will remain an important strategy for culture fisheries. Promoting small indigenous species in conjunction with pond carp culture will be given importance. The Bangladesh Fisheries Research Institute (BFRI) will work on new varieties and technological development and provide technical support to the department of fisheries (DoF), which will be responsible for dissemination at the field level. DoF will also work extensively on developing capacity of the farmers through skill development programmes.

Aquaculture development: The following priority strategies have been identified for aquaculture development:

- Aquaculture intensification and species diversification will be promoted, avoiding water pollution;
- Farm mechanization and vertical expansion of aquaculture will be the major priority for sustaining and diversifying of aquaculture production;
- Fish health management strategy and aquaculture policy will be adopted and implemented for sustaining development of the fisheries sector;
- Introduction of adaptive aquaculture technologies and fisheries management system for the poor fish farmers/fishers of coastal region through training and farm demonstration;
- Operation of hatcheries, nurseries and supply of spawn and fry, in which the private sector is the key player, will be constantly monitored by GO-NGO collaboration and public-private partnerships;
- Production, import and marketing of fish and shrimp feed, feed ingredients, minerals and vitamin premix, and other inputs will be monitored constantly;
- Cage culture in the flood plains, with private ownership will be encouraged which can certainly contribute to productivity;
- Aquaculture and conservation will be restructured to reinforce the strengths of each other, sustainable and community-based flood plain aquaculture will be combined with maintaining sanctuaries and restocking of indigenous species;

- Natural breeding, spawning, nursery and grow-out areas will be conserved to complete the whole lifecycle and natural reproduction process to ensure pure brood and fingerlings;
- Transportation and rearing in the hatcheries will be facilitated. To ensure supply of virus-free shrimp PL, all hatcheries will ensure PCR testing of both mother shrimps and shrimp PL;
- Community organizations of shrimp farmers and other primary stakeholders will be supported with technology, input, financing and market linkage by contract growing system run by the processing plants and monitored by the DOF and partner NGOs;
- Development of tractability system to identify the sources of contaminants/banned antibiotics and other chemicals used for fish farming and fish processing times so as to take lawful and corrective measures to improve/ratify them. DoF should meticulously look into this;
- Increasing fish production by introducing different fish culture methods under the community enterprise approach in suitable habitats by conserving natural environment including rice-cum-/alternate fish culture;
- Extension support and research extension linkages will be strengthened;
- Biofloc system of fish production for landless and marginal farmers and also in the urban areas;
- Market driven community based innovative flood plain polyculture system of 'Daudkandi Model' may be expanded in flood plain areas throughout the country.

Open water capture fisheries: Open water capture fisheries are an important source of livelihood and protein for rural households. Productivity under open water capture fisheries has been mostly stagnant for several reasons including, among others, depletion of stock, shrinking of water bodies, and water quality deterioration. Involving local communities are critical in addressing issues like pollution and replenishment of stocks. Inland open water resources will be conserved in a sustainable way and an emphasis is given to improve productivity during the 8FYP. The following strategies will be implemented:

- Inland unused water resources will be conserved and developed for fish production. Pollution control of river and lakes will be a major focus for government agencies.
- Prevent further deterioration of water logging, blockade of water-flows and shrinkage of water-bodies because of unplanned infrastructures like embankments, roads, urban housing projects and industrialization. Any development projects must follow the environmental rules and regulations (and incorporate adequate mitigation measures in consultation with the Ministry of Fisheries and Livestock). Projects and programmes will be implemented to construct and maintain fish-passes and fish-friendly regulators.
- Fish and wetland sanctuaries which will be established with complete ban on fishing in certain eco-sensitive areas like the Sundarbans, parts of Kaptai Lake, and several sections of the river Halda, selected beels and haor areas and certain sections of the Bay of Bengal, etc.
- Fish conservation strategy will be developed and implemented. The strategy will include seasonal bans, gear restrictions, identifying genuine fishers by issuing ID cards, species restrictions, etc.
- For sustainable Hilsa fish production, Maximum Sustainable Yield (MSY) will be determined. Strong monitoring, Community-based Management Approach and other precautionary measures will be applied to avoid overfishing. Management of Hilsa sanctuary will be strengthened. Measures will also be taken to improve Hilsa marketing system and its value chain.
- The Fish Act 1950 will be strictly implemented, and, if needed, the act will be revised.

- Fishermen will have access to social safety sets like VGD and VGF and alternative livelihoods support during the restriction periods of fish catching.
- Proper insurance schemes for the fish farmers will be made available. Private insurance should be encouraged to come forward.
- The fishermen will be organized in sustainable community-based organizations and such organizations will be given management responsibility of khas 'jolmohal' on long term basis so that they conserve rather than just exploit resources.

Marine fisheries: Marine fisheries are an important component of the blue economy. Collaborative efforts will be undertaken to explore blue economy-related activities concerning the fisheries sector. The fishermen in Bangladesh hardly have capabilities of catching demersal fishes below 50 metres depth of water. Longline fishing is totally absent in deep waters. The capacity development of fishermen in deep sea will be a major focus of the 8FYP.

Harvesting of Maximum Sustainable Yield (MSY) of marine fishes is seen as a major element to sustain food security. It is true that marine fishes are not popular in Bangladesh. A national programme needs to be undertaken to popularize marine fish as part of the normal diet. The strategies for marine fisheries in the 8FYP plan are aligned with the perspective plan 2041 and the Bangladesh Delta Plan 2100. The following strategies will be undertaken:

- Restrict and control pouching of resources and illegal entry of foreign trawlers
- Introduce Vessel Tracking and Monitoring System (VTMS)
- Identify conservation needs and methods that can be effectively administered and regularly monitored
- Cooperate with the Coast Guard and Navy on the control of encroachment and breach of regulation, also by local vessels.
- Institutional capacity building of the concerned agencies, strengthening of monitoring, control and surveillance system (MCS) in the Bay of Bengal.
- Stock and maximum sustainable yield/total allowable catch (quota) must be determined thorough assessments on a regular basis.
- Digital Marine Fisheries Resource Mapping for the marine waters using digital cartography of the marine fisheries resources is an essential tool for efficient and sustainable harvesting of the marine resources. However, in all SAARC countries this is either absent or not in a state of art position. If a common DMFRM can be developed for SAARC countries that will be very useful to all the countries that at the same time will save the required investment in this respect.
- Collaborative effort for distant water fishing (beyond 200m of EEZ and ABNJ) to explore and exploit tuna and large pelagic fishes.
- Establish MPAs (marine protected areas) as breeding grounds.

Other strategies: The other important strategies specific to fisheries sub-sector are as follows:

- Private sector investment will be promoted for fish and fisheries product value chain.
- Motivational activities for farmers/ entrepreneurs will be taken to adopt advanced farming technologies.

- Application of Information and Communication Technology (ICT) will be promoted to disseminate fisheries information and modern technology in the remote areas of the country for facilitating fisheries activities particularly the aquaculture
- Promulgation of new acts, laws, rules, regulations, aligned with attainments of SDG targets.
- New development projects and programmes will be undertaken aiming the specific SDG targets.
- Developed skilled/trained manpower to operate modern laboratory as well as processing plants.
- As the fishermen, dependent on aquatic environment, are highly vulnerable to the effect of climate change, special importance/consideration will be given to their livelihoods.
- Regular and long-term study/research on change of biodiversity, impact of sanctuary, habitat restoration; physical, chemical & biological changes of haor basin, fish production, fish migration and socio-economic condition of fisher folk will be implemented
- Collaboration and coordination among ministries, department and agencies should be strengthened.

Besides, considering the huge demand for hygienic dry fish in the country and abroad, the Bangladesh Fisheries Development Corporation (BFDC) will take initiative to establish modern shutki (dried fish) mohal in different strategic locations of the country to produce hygienic dry fish. The shipbuilding industry in Bangladesh is getting a boost from the developments in the fisheries sector. A lot of fishing trawlers, barges, tugs and vessels are badly needed in docking/undocking/building and repairing facilities. BFDC has already established dockyard at the Chittagong Fish Harbours and Patharghata Fish Landing Centre. To enhance the existing facilities, another two-channel slipway has recently been constructed at the Chittagong Fish Harbour. In order to expand the docking facilities for fishing boats, more dockyards will be established at different strategic locations in coastal areas.

4.6 WATER RESOURCE MANAGEMENT

4.6.1 Performance of Water Resource Management under 7FYP

Agricultural practices in Bangladesh are largely determined by the hydrological cycle. Farmers need protection against flooding in wet seasons, irrigation in dry seasons, supplementary irrigation even in wet seasons, protection against saline water intrusion in coastal areas, proper drainage both in wet and dry seasons, protection against river erosion, and safeguard measures against the water-related hazards (storm surge/cyclone) in the coastal belt.

Bangladesh, being the lower most riparian country in the Ganges-Brahmaputra-Meghna basins and crisscrossed by around 700 rivers including 57 trans boundary rivers, shares its trans boundary water resources with the upper riparian countries like Bhutan, China, India and Nepal. Out of a total catchment area of 1.72 million square km of the Ganges-Brahmaputra-Meghna basins, only around 7 per cent basin area falls within the Bangladesh territory. Out of the 57 Trans boundary rivers of Bangladesh, 13 rivers fall under the Ganges basin fully or partially in the four Hydrological Regions; 11 rivers fall under the Brahmaputra basin lying fully or partially over the seven hydrological regions and 25 rivers covering six Hydrological Regions lying fully or partially in the Meghna Basin. The annual cross-border river flows entering the river systems are estimated to be 1,200 billion cubic meters (BCM), of which the three main rivers contribute some 981 BCM (i.e. almost 78 per cent of the total cross border flow), 85 per cent of which enters the country between June and October. Out of 981 BCM, some 54 per cent is contributed by the Brahmaputra, 31 per cent by the Ganges, nearly 14 per cent by the tributaries of the (upper) Meghna and 1

per cent is contributed by other minor rivers of the Eastern Hills. Only 15 per cent of the total trans boundary flow i.e. 148 BCM is available during the dry season where only 1 per cent (11 BCM) of the total flow (Ahmed and Roy,2004) is received in the critical month of February, thus showing the vulnerability of the trans boundary flow to meet the water demand during the dry season.

Efforts to implement integrated water management continued in the 7FYP with focus on flood control prevention of river bank erosion, and supply of irrigation water, River dredging to improve river navigability also continued. However, the adverse effects of climate change have continued to take a toll on the loss of income and livelihoods in the rural areas through regular episodes of flooding, river bank erosion, salinity, water logging and droughts. The government recognized that business as usual approach to water management would not do. So, given the importance of water for the Bangladesh economy and its strong links to natural hazards based on its interface with environment and climate change, Bangladesh did a comprehensive long-term study on water management integrated with land use, agriculture, environmental management and preservation of bio-diversity with a view to establishing best practice water management that minimizes the risks of natural hazards while protecting farm incomes and livelihood. This study known as the Bangladesh Delta Plan 2100 (BDP2100) was approved by the NEC in November 2018 for speedy implementation. BDP 2100 was a key input to the formulation of water management strategies in the PP2041 and the 8FYP will be the first step to implement BDP2100.

It is important to note that the BDP2100 involves water management in all its dimensions including flood control, sea-level rise, salinity, water logging, river bank erosion, irrigation, urban and rural water supply, water pollution, land reclamation, river dredging for inland water traffic, , environment protection, forestry, fisheries, and preservation of bio-diversity. Given this comprehensive approach to water management, the implementation of BDP2100 involves multiple sectors and multiple ministries. This section deals exclusively with water issues as related to agriculture including livestock and fisheries. Inland water transport issues are discussed in Chapter 6. Forestry and environmental management issues are discussed in Chapter 8. Urban sector water issues are discussed in Chapter 11; while disaster management issues are discussed in Chapter 14.

The Bangladesh Water Development Board (BWDB) is engaged in the development and management of the water resources of the country. Since its establishment, sixty years back, it has made a total of 6.5 million hectare of agricultural land free from flood and drainage congestion. It has created the necessary infrastructure of providing irrigation facilities to an area of 1.624 million hectares. It constructed 16,262 km of embankment of which 5,757 km are in the coastal area. It has been able to reclaim about 10,370 sq. km of land in the Meghna estuary through construction of cross dams. Its water management activities cover about 40 per cent of the country and 50 per cent of the total flood plain area. Moreover, BWDB has completed 96 projects under the Bangladesh Climate Change Trust Fund (BCCTF) of the Ministry of Environment and Forestry and Climate Change.

The three main Ministries involved with water management as related to agriculture are the Ministry of Water Resources, Ministry of Agriculture and the Local Government Division dealing with Rural Development and Cooperatives. The large flood control and irrigation project and river management issues are dealt with by the Ministry of Water Resources. The MoLGRD&C and MoA deals with minor irrigation and flood control schemes. Bangladesh Water Development Board, BADC, BMDA, LGED, DPHE, City Corporations are responsible for implementing water projects of the concerned Ministries. The Water

Resource Planning Organization (WARPO) is an executive institution accountable for water resource planning and management in Bangladesh. Water Act 2013 has been enacted by the government, which provides the legal framework for water management. The Act is designed for integrated development, management, extraction, distribution, usage, protection and conservation of water resources in Bangladesh. This is a comprehensive Act and covers well all aspects of water management as an integrated resource. The Water Act 2013 currently operates through the use of a number of operating principles defined by the National Water Policy of 1999 and the National Water Resource Management document of 2001. The Integrated Minor Irrigation Policy 2017 and the Uses of Groundwater Management Act 2018 in Agriculture are also helpful interventions. The government approved the Bangladesh Water Rules 2018 which will contribute significantly toward improving Integrated Water Resources Management (IWRM) and achieving the Sustainable Development Goals (SDG). The Groundwater Management in Agricultural Activities Bill 2018 will ensure the best possible use of water and its management for continuing the trend of development in the agriculture sector.

The National River Conservation Commission (NRCC) established in 2014 under the National River Conservation Commission Act 2013, is responsible for the prevention of illegal grabbing of river land, and conserving the river water and environment from pollution with all kind of waste, ensuring the multidimensional use of river system for inclusive development, and restoring natural flows of the river with proper maintenance and all season navigability. The Bangladesh Inland Water Transport Authority (BIWTA) is another organization engaged in river conservation and developing, maintaining and operating inland river ports.

The Honourable Prime Minister of Bangladesh was a member of the UN and the World Bank High Level Panel for Water, which prioritized Valuing Water (derived from the Total Economic Value of water along 3 dimensions) as the foremost action to achieving sustainable water resource management. The SDG Cell in the Prime Minister's Office took up the task of identifying and executing Valuing Water related projects due to its role in the inter-ministerial coordination and the strong linkages between Valuing Water and achieving the SDGs. In cooperation with the Ministry of Water Resources, the High-Level Valuing Water Committee and the Technical Valuing Water Committee developed a Proforma for Study Proposal (PFS) on a study to Develop Operational Shadow Prices for Water to Support Informed Policy and Investment Decision Making Processes. It was approved by the Ministry of Water Resources and is now being implemented by WARPO. Jointly with the Ministry of Water Resources, the High-Level Valuing Water Committee and Technical Valuing Water Committee are in the process to publish a Position Paper on Valuing Water in Bangladesh.

4.6.2 Challenges of Water Resource Management

There are several challenges affecting development and management of water bodies and their proper utilisation. The Bangladesh Delta Plan 2100 discusses existing and forward-looking challenges pertinent to water sector management, some of which are summarized below.

Flood risk: Bangladesh is one of the most flood prone countries in the world. Different hotspots and hydrological regions of the country face different types of floods at different times of the year. North-west, North-central and South-west regions are more susceptible to river flooding whereas North-east and Eastern-Hilly region as well as North-west and North-central regions are vulnerable to flash floods (during

April-May and September-November). Rainfed flooding and water logging occur in many parts of the country but are mainly prevalent in the South Western part of the country. Coastal flood mostly occurs along the coastal zone of Bangladesh. Every year, floods cause extensive damages of agricultural crops, endangering many livestock and leaving a huge economic loss for the country especially for the rural poor households. After flood, food crises cause hunger for many poor households.

Availability of water in the dry season: Water availability especially in the dry season and water quality are key issues for the agriculture sector. Agriculture sector is under pressure both because of increasing demands for food, and depletion of agricultural land and water resources. Besides, the impacts of climate change on food production are national as well as global concerns. In Bangladesh, several natural calamities occur throughout the years. Droughts primarily occur in pre-monsoon and post-monsoon seasons, but in some extreme cases the pre-monsoon droughts have extended in monsoon season due to delayed onset of the monsoon rains. The Southwest and Northwest Hydrology regions of the country are most vulnerable to droughts.

Early-season droughts are due to delayed onset or early breaks of monsoon rainfall. This is particularly relevant in the Barind. The onset of the pre-monsoon season, upon which farmers decide to start 'Aus' rice cultivation varies widely from year to year. A break in the pre-monsoon season may therefore lead to crop loss or complete crop failure. Mid-season droughts are caused by intermittent, short or extended dry spells. End of season droughts are caused by early withdrawal of monsoon rainfall, affecting the 'Aman' rice crop. High Yielding Varieties are particularly sensitive to these droughts. Droughts cause huge loss of crops every year. Several irrigation systems have been developed throughout the country to ensure irrigation during dry season and drought. Still the availably of water in the dry season and high cost of irrigation are considered as major challenges for agricultural production.

River water management: Most of the water related challenges are related to the mighty rivers. Reduction of dry season flows due to increasing upstream withdrawal is causing severe water shortage across the country. Only 15 per cent of the total trans-boundary flow i.e. 148 billion cubic meters (BCM) is available during the dry season where only 1 per cent (11 BCM) of the total flow is received in the critical month of February. Reduced stream flow is also accelerating salinity intrusion and environmental degradation. Restoration of major rivers and their off takes as well as enhanced regional cooperation in the Ganges-Brahmaputra-Meghna basins will ensure availability of more flow in dry season. Increased dry season flow will positively affect the entire country. However, these strategies will in particular help to mitigate the negative impacts such as droughts and water scarcity affecting the dry season irrigation initiatives, excessive extraction of groundwater and its depletion in North-central Hydrological region; salinity intrusion of South-central and South-west region as well as enhance domestic water supply sources of the North-west Hydrological region.

Coastal zone protection and management: The coastal zone covers the South-west, South-central and South-east areas of Bangladesh, which, is often subjected to inundation by high tides, saline water intrusion, cyclonic storms and associated tidal surges. In order to control flood and resist salinity intrusion towards agricultural activities, polderisation began in the 1960s. But over time, the polders have been dilapidated due to erosion and lack of proper maintenance and it began to affect the coastal rivers' drainage capacity and siltation in the delta region. Moreover, the coastal zone, especially the flat and unprotected areas will

severely be impacted due to cyclones and storm surge events and further climate change induced problems like sea level rise, heavy monsoon downpour, unavailability of fresh water and saltwater ingression. Due to sea level rise, the salinity frontier of the country will move upstream gradually over the years. Several areas in the coastal zone, especially Western part and Noakhali mainland suffer from extensive and permanent waterlogging. The problem of water-logging is also severe in the coastal polders, particularly in Satkhira, Jashore, Khulna, Bagerhat and Noakhali Districts. Reasons behind waterlogging are complex and differ between regions. Drainage capacity is a main concern. In some flood control embankments having inadequate drainage facilities and road construction annual flooding is observed inside the flood protection embankments.

Wetland conservation: Wetlands play a crucial role in maintaining ecological balance, flood management and work as retention basins in the wet season. Wetlands contain very rich components of biodiversity of local, national, and regional significance and it also supports millions of people's livelihood. Wetlands, which are locally called haors, baors (oxbow lake), and beels (depressions), are disappearing due to population pressure, unplanned infrastructures that prevent wetlands from maintaining their ecological and hydrological functions, etc. The total area of wetlands in Bangladesh is estimated to be 7 to 8 million ha, or about 50 per cent of its total land surface. However, wetlands are reducing at an alarming rate and it is important to conserve and restore these wetlands.

Climate change: The challenges of climate change and natural hazards have been discussed in the previous section of this chapter. Impacts of such climate change on the country's water resources are assumed to affect the most in the coastal zone. Availability of fresh water will decline and natural hazards like cyclone, storm surges and coastal flooding will increase. The salinity level of groundwater along with the surface water will rise rapidly due to the sea level rise as a direct impact of climate change. The local communities and their livelihood would be greatly vulnerable due to climate change.

Population growth: Domestic water demand is estimated to increase by up to 50 per cent by 2030 and 100 per cent by 2050 considering the population growth (BDP 2100). The population growth of Bangladesh will increasingly stress the water resources management of the country. Thus, it has the potential to be the dominant environmental and possibly the most important development challenges in the coming days. Significant investments in water resource infrastructure will be required to provide potable water to the expanding urban centres. Urban and industrial pollution around these urban centres will affect the fresh water quality. With the growing population, sanitation will become a major issue both in the urban and rural areas.

Upstream development: The country's water resources management will increasingly face challenges due to upstream river basin developments. Infrastructural developments in upstream countries particularly in India have significantly reduced the dry season flow of the Trans boundary Rivers. The reduction of the Ganges flows has severely affected the fresh water supply to the communities, agriculture, navigation, hydro-morphological dynamics, etc. in the South-western region of Bangladesh and especially on the ecology of the Sundarbans.

Institutional capacity and water resource management: Sustainability of water institutions is critical for water resources management. Resource mobilization for operation and maintenance activities and its execution are highly important. These crucial factors greatly depend on multidisciplinary participation, cooperation and partnership of the water related institutions. The country has more than 35 central government organizations, affiliated with some 13 Ministries/ Divisions, which are working for water sector planning, development and management. The capacities of most of these organisations in terms of human resources, technical knowledge, budget, etc. are inadequate to undertake their mandated tasks efficiently. Operation and maintenance (O&M) work of most of the existing structural interventions are not duly performed because of shortage of resources. Prevailing institutional arrangements are inadequate to respond to the needs of Integrated Water Resources Management (IWRM) implementation. There is limited consensus on the formulation and implementation of IWRM schemes in Bangladesh. Institutional and organizational versatility is an absolute prerequisite for integration across different sectors and spatial boundaries in considering interdependency of natural systems and social response to increasing demands.

4.6.3 Strategies for Water Resource Management in 8th Plan

The objectives and targets of the water sector for the 8th Plan have been set out in conformity with the PP2041 and the BDP2100. The objective of the water sector in the 8th plan is to scale up existing good practices of water conservation and management and apply more widely integrated water management, including flood control and prevention schemes, flood early warning systems, irrigation improvement, and demand-side management as advocated in BDP2100. The strategic objectives include:

- Continuing and strengthen river dredging to enhance navigability and to facilitate water transportation;
- Increasing water use efficiency in crop production and enhance the utilization of surface water irrigation;
- Protecting riverbank from erosion through integrated long-terms measures;
- Ensuring conjunctive use of surface and ground water for sustainable irrigation, securing groundwater conservation;
- Strengthening regional and international cooperation for basin-wide water resources development and management of trans-boundary rivers;
- Preventing of saline intrusion through augmenting the freshwater flow in the southwest region including the Sundarbans;
- Developing modern early warning systems to minimize economic losses from flood and other disasters;
- Adapting of climate change mitigation strategies;
- Rain water harvesting;
- Implementing integrated coastal zone management strategies;
- Strengthening capacities of the institution in the water resource management;
- Mainstreaming Valuing Water into Public Investment Decision Making in collaboration with Planning Commission to allow for future investment decisions which further support sustainable water resources management and thus sustainable economic development;
- Identifying and demonstrating options to incorporate Valuing Water into private sector decision making in order to lead to more sustainable investment and operational choices.

Table 4.11: Eighth Five Year Plan Targets for the Water Sector

Indicator	Targets (per year)
Bank protection work (KM)	2,356
Embankment construction/reconstruction (KM)	3,949
Coastal embankment construction (KM)	1,043
Dredging of river (KM)	2,817
Excavation/re-excavation drainage canal (KM)	17,042
Excavation/re-excavation irrigation canal (KM)	1,119
Water control structure/hydraulic structure (Nos.)	2,050
Coastal cross-dam (Nos.)	7
WMG/WMA/WMF formulation (Nos.)	363
WMG/WMA/WMF registration (Nos.)	581
Land acquisition (Hectare)	7159

Source: Ministry of Water Resources (MoWR) and Local Government Engineering Department (LGED).

Strategies

The BDP2100 and the PP2041 provide detail strategies for the water resource management. The BDP2100 water sectors strategies are based on the several broad pillars: flood risk management strategy, fresh water strategy, and strategies for six hotspots – namely, Barind and Drought Prone Areas, coastal zone, river systems and estuaries, urban area, haor and flash flood areas, Chattogram Hill Tracts. Consistent with the medium to long term programmes set out in the PP2041 and the BDP2100, the following strategies are considered for the 8th plan period.

Use of water resources and water economy: Water is a very essential input for increasing crop production and sustainable agriculture. Due to climate change and lifting groundwater in an unplanned way, a significant portion of the country is not getting irrigation water during the dry season. Therefore, a well-planned irrigation management system is essential for a gradual increase of cropping intensity as well as yield. Irrigation efficiency will be ascertained and modern water management technology will be promoted to enhance irrigation efficacy and water productivity through optimal use of available water resources. As part of the strategy, water reservoirs and rainwater harvesting in rainfed, coastal and hilly areas will have to be encouraged, and small-scale water resources systems would be developed along with monitoring the maintenance of the small-scale water resources infrastructure at local levels by ensuring community participation and taking care of environmental and social issues.

Develop and improve embankments, barriers and water control structures: Bangladesh has set up a national target of becoming a high-income country by 2041, for which lots of economic activities are on-going and several others are in the pipeline. However, due to the climate change, extreme flood may occur for which the economic strongholds including major urban cities need higher level of protection. Therefore, construction of new embankments and other water control infrastructures as well as strengthening and/or maintenance of the existing structures are needed at economic priority zones, major urban cities, etc. Moreover, building and maintenance of fish passes and fish friendly structures to ensure fish movement to facilitate seasonal migration of fish for breeding and grazing will be emphasized.

Restoration, redesign and modification of embankments and structures: There is lots of flood control, drainage and irrigation (FCDI) schemes in Bangladesh. But, due to lack of operation and maintenance (O&M), most of those schemes are not fully functional, raising the vulnerability to flooding. Many embankments and structures need to be restored, redesigned and modified. Flood management and flow maintenance measures have to take into account the prevalent of submerged chars that become more prominent during the dry seasons. Restoration, redesigning and modification of embankments and other such FCDI structures should be undertaken to fully accommodate the prompt and timely drainage of the excess water from upstream catchments, especially when subsequent peak flows converge.

Adopt spatial planning and flood hazard zoning: The spatial planning and flood hazard zoning are important to categorise the critical areas. Flood safety levels will be set up and protective measures will be implemented by these categories. Development of effective financial and legal instruments for spatial planning, zoning and implementation, including capacity building, flood hazard mapping and modelling will be implemented.

Extension of the flood warning lead time: The flood early warning system needs to be updated and the lead time needs to improve. The dissemination system will improve for delivering the warning to the local people with a higher lead time. Community based early warning services will be extended, including flood agents and networks for communication and action. A strong cooperation will be developed between institutions responsible for hydrology (BWDB), meteorology (BMD), modelling (institutes and centres), dissemination and early actions.

Improve operation and maintenance: The operation and maintenance of projects is a major problem due to lack of timely funding, for which many of the structures are becoming non-functional. So, improvements in the operation and maintenance system are a must for increasing the functionality of the schemes. The completed projects of water resources sector especially the flood control, drainage and irrigation project would be properly operated and maintained with the participation of stakeholders so that the targeted benefits of the projects are ensured. Institutional and financial capacity will be strengthened for these activities.

Restoration of water bodies and connectivity: Sedimentation and human interventions have made the rivers and khals congested for flowing water. Policies will be undertaken to restore water bodies and to improve connectivity between floodplains, wetlands and rivers.

River management, excavation and smart dredging: The rivers are silting up which reduces the efficient flow of water. Excavation and smart dredging are needed for the management of the river system. In addition, maintenance dredging will be needed to clear out submerged chars developed through years of siltation and decreasing conveyance capacity of flow as well as obstruct navigation routes of major rivers. Navigation routes have to be kept running perennially through regular dredging. Dredging dump locations or “balumohol” locations have to be circulated that they do not get struck in one location and management of this silt has to be well accounted for.

Basin-wide Water Resources Development Initiatives:

Regional cooperation is highly important for sharing of water resource of common rivers and for integrated river basin management. River Basin Organizations (RBOs) can help address the issue of common river basin management through implementation of Integrated Water Resources Management (IWRM) at river basin level and comprising representatives from the respective member riparian countries. Basin wise approach helps develop the basin as an integrated unit and minimize the investments cost in flood control and other water resources development projects. There are no basin wide organizations in existence for the South Asia region. The following framework has been proposed in the BDP 2100:

- Ganges River Basin Organization - comprising Bangladesh, India and Nepal;
- Brahmaputra River Basin Organization - comprising Bangladesh, India, Bhutan and China; and
- Meghna/ Barak River Basin Organization - between Bangladesh and India.

Ensuring safe water to sustainable drinking water and sanitation: Sustainable use and availability of safe water for drinking and sanitation purpose will be ensured. Initiatives will be undertaken to encourage rainwater harvesting where feasible. Besides, increasing storage in existing water retention bodies should be promoted.

Maintaining water quality for health and nutrition, livelihoods and ecosystems: This involves both protection of environmentally valuable and sensitive areas and the prevention of pollution by enhanced treatment. Urban drinking water and sanitation authorities are key actors in implementing proper interventions to ensure quality of freshwaters.

Increase drainage capacity and reduce flood risk at the coastal zone: The drainage congestion in the coastal zone is a big issue. It happens due to less capacity of the river and sedimentation with the tidal effect. Thus, increasing the drainage capacity will reduce the flood risk. Measures will be undertaken to restore rural rivers/canals and livelihood improvement in coastal districts. The flood risk is very high in the coastal zone and it becomes disastrous when flooding coincides with tidal surges. Therefore, flood risk prevention strategies and proper preparedness will be implemented in a timely manner.

Expansion of Surface Water Irrigation: Regional groundwater irrigation schemes have been developed in the north-western part of the country which sufficiently contributed to increasing productivity. Excessive use of groundwater for irrigation has longer term ecological consequences. The BDP 2100 emphasizes on the development of surface water irrigation schemes. The following measures are proposed:

- Augmentation of surface water for irrigation through development of water reservoirs recharges groundwater, and reduced use of groundwater. Key priority investment activities include:

    (i) The development of small-scale surface irrigation in the southern part of the country requiring new infrastructure and capacity building;
    (ii) Partially reduce reliance on deep well irrigation in the northern part of the country, reduce costs and mitigate the risk of depleting groundwater;
    (iii) Rehabilitate dykes and embankments particularly affected by previous cyclones to protect vulnerable households and production base against sea intrusion in the extreme south;

(iv) Improved drainage, saline intrusion control and flood management; and
(v) Increasing river water flow towards the south, in particular involving Major River dredging effort.
(vi) Initiative to create water reservoirs to retain water to fulfil dry seasonal water demands has to be taken.
(vii) Steps have to be taken towards construction of Brahmaputra Barrage, 2nd Teesta Barrage and Padma Barrage.

- Use water saving technology for improving efficiency of water and install facilities to reduce distribution losses. Activities include: reduce water losses in existing schemes through improved water management (capacity building of water management cooperatives); development of water saving techniques such as drip irrigation, buried pipe irrigation, 'fertigation'; or rehabilitation of existing schemes.

Reduce impact of saline water intrusion in the south and enhance river water flow. The focused activities that emerged from the BDP 2100 consultations are: rehabilitation of polders and their management; dredging of rivers; enhanced surface water irrigation; and improved brackish water resource management practices.

Reclaim new land in the coastal zone: Extensive research will be conducted on morphological behaviour to gather knowledge about the influence of land reclamation and to realise the potential of further development and artificial interventions for enhancing accretion process. Building cross dams at the strategic locations would be useful for accelerating land reclamation process for which potential cross dam projects would be undertaken with proper feasibility studies. Land reclaimed through accretion process need to be protected and developed with land zoning and other appropriate measures.

Strengthening river and estuaries management in the newly accreted char areas: Appropriate measures will be undertaken for the development of newly accreted char areas. The strategies will incorporate development of newly accreted char lands in the coast of the Meghna and all other rivers; integration of river management with urban development planning and programming; program for capital and maintaining dredging in the river Padma, Meghna, Jamuna, Brahmaputra, Dharla, Arial Khan, Kushiyara, Gorai, Manu and other important rivers; integrated urban and spatial planning for urban development in newly accredited areas; developing industrial parks and agricultural activities; and also salinity management in the southern rivers during dry season.

Protect agriculture and vulnerable communities in haor and flash flood areas: Pre-monsoon flash flood from the neighbouring hilly region is a common phenomenon in haor areas. As a result, the numerous large, deep depressions are flooded, causing damages to the Boro crop immediate before the harvest. A number of Flood Control, Drainage & Irrigation (FCDI) projects have reduced damages from flash floods particularly in Surma-Baulai and Kushiyara river systems. These existing FCDI projects should be maintained with developing integrated water control structures in response to the future climatic scenarios (rainfall intensity and peak discharges of the major rivers) developed by in the Bangladesh Delta Plan 2100. Also, increasing the conveyance capacity of the flashy rivers through strategic and maintenance dredging, and re-excavation is needed. To protect the post-harvest crop from rotting in haor and flash flood areas, private and public initiatives and investment in intensive agriculture should focus on areas where much higher returns on investment are possible through homestead gardening and intensive livestock production.

Mechanization needs to be promoted in the haor and flash flood area for quick land preparation, planting, weeding, harvesting, processing, drying etc. The raised platforms which are proposed to be built with dredged spoil may be utilized to increase cultivation of homestead vegetables, pulses, spices and fruits. This in turn will improve nutrition and increase household income.

Implementing NRCC recommendations for conversation of rivers, water and biodiversity: The NRC Commission has made 124 specific recommendations for the conservation of rivers water, environment and biodiversity. The specific recommendations will be implemented with the participation of and collaboration with all actors, organisations, departments and authorities at the local and national level. One notable suggestion is the implementation of 3R (Reduce, Reuse, and Recycle) technology to dispose of all kinds of urban as well as rural domestic and industrial wastes to protect river and water bodies. Under the close supervision of NRC Commission, ten committees have been formed to prepare master plans of ten regions of the country to free the rivers, canals, water bodies, haor-baor, and coastal areas from illegal grabbers; prevent river water pollution; conserve the environment, ecology and biodiversity of rivers; improve navigability; prevent river erosion; undertake flood control and river development multipurpose usages. These master plans will be approved and implemented in a timely manner, along with the existing master plans on the Buriganga, Turag, Shitalakshya, Dholeshwari, and Karnaphuli.

Strategy for water resources in Chattogram Hill Tracts: In the hotspot 'Chattogram Hill tracts', both the hills and related coastal plains are considered, as problems experienced in the hills, like landslides, are related to coastal plain problems like sedimentation and recurrent dredging. The strategies that will be considered for the development and management of CHT water resources include protecting economic zones and towns from floods and storm surges; developing cyclonic storm surge and tidal flood risk management; Ensuring water security and sustainable sanitation; integrating erosion management in the hills by creating green belt, eco-friendly structures, soil and water conservation, and reforestation; Developing catchment and sub-catchment management plans; protecting and restoring water-related ecosystems, including forests and hill sides; and promoting sustainable cultivation practices and regeneration of degraded areas.

Strategy for trans boundary water management: As Bangladesh is located in the low-lying delta of the Ganges- the Brahmaputra- the Meghna basins, water resources management is complex and highly sensitive to upstream developments. As the lowermost riparian recipient of water from the Ganges, the Brahmaputra and the Meghna, which also flows through India, China, Bhutan and Nepal, any intervening development upon the river dynamics and/ or morphology; either individually or bilaterally can further aggravate the already vulnerable scenarios Bangladesh is currently facing in terms of water availability.

Several developments have been made over the years in terms of trans boundary water sharing and management. Closer cooperation has to be ensured with neighbouring countries in view of the general understanding that joint cooperation outweighs individual development. Allocation of substantial amounts of water should be ensured for ecological maintenance of rivers, especially during dry season is required. The BDP2100 highlighted the following strategies for trans boundary water management on which substantial effort will be made during the 8th Plan period:

- Incorporation of multi-layered dialogues that will enable participating countries to initiate negotiations from new entry points and also link water related negotiations with other river interests and regional cooperation issues. They will be characterized by an open environment to enable participants to understand the viewpoints of other parties, where the contributors are not hampered

by political or other power-oriented position holders. Issues such as climate change and its consequences can be discussed in parallel in conjunction with other river basin management issues as it has a profound effect upon many aspects of water availability and management.

- Besides, multi-track water diplomacy has to be applied to prevent or peacefully resolve conflicts related to water availability, its allocation or use between and within states for better understanding of trans boundary issues and to ensure effective formulation and implementation of common river basin management schemes related to joint usage and equitable allocation of water resources that are centred on the concept of benefit sharing.

- It is imperative that environmental flow is maintained in the rivers and as such, necessary initiatives have to be taken both on a bi- and multi-lateral basis and enacted accordingly. Discharge and quality measuring stations need to be established and regularly monitored at different locations on the river.

- Simultaneous negotiation of multiple treaties has to be done to ensure that the benefits given up on one treaty could be used as leverage for another more significant treaty. Instead of attempting to agree on one treaty at a time, negotiation of multiple treaties would be a better approach to gain optimal outcomes for Bangladesh. By applying the negotiation of multiple treaties approach, both countries have more options to come to mutually agreeable and beneficial terms.

- Prioritization of rivers has to be done in implementing devised schemes regarding water sharing. Bangladesh and India have been sharing the Ganges water at Farakka since signing of the treaty in 1997. Discussions are also being held for augmentation of the dry season flows. Framework of agreement for sharing of Teesta needs to be developed as a treaty. Similarly, water sharing policy for the six other prioritized trans boundary rivers namely the Dharla, the Dudhkumar, the Manu, the Khowai, the Gumti, and the Muhuri need to be implemented at technical level.

- Demand based common river basin management schemes has to be initiated where the involved countries will weigh in their views regarding mutually beneficial river management and solve common issues both bi- and multi-laterally through construction of necessary infrastructure on optimal hydrological and ecological locations within the river basins.

- International approach can be implemented that will involve active participation of a third party, either an international organisation or a country. In order to ensure the effectiveness and acceptance of international involvement, both countries need to agree first to do so to ensure the legitimacy of the mediator to all concerned parties.

- Benefit-sharing “mutual gains” model has to be implemented that discourages unilateral actions and further encourages coordination between riparian countries. The concept behind mutual gains is to incorporate non-water issues into the negotiation process to augment the basket of benefits. The framework agreement has opened the opportunity for conducting negotiations through establishment of joint body river basin organizations in pursuing common river basin management. Involving various sub-regional cooperation issues such as in power sector or navigability and physical connectivity can greatly enhance the mutual gains basket.

- Legal and political-economy analysis has to be performed, focused on specific challenges to be encountered. Identification of key zones of possible effective cooperation can be done to develop concrete recommendations on how to foster effective cooperation.
- Strategies have to be devised to combat the implications of the adverse effects of climate change upon the river basins.
- Furthermore, knowledge building on hydro-diplomacy would be useful for the transboundary water negotiations.

4.6.4 8FYP Priority Public Investment Programme for Implementation of BDP2100

The Bangladesh Delta Plan Investment Plan (BDP2100IP) consists of a total of 80 projects: 65 are physical projects, and 15 are institutional and knowledge development projects. The total capital investment cost is BDT 2,978 billion (US$37 billion) in 2015 prices. All projects can be started within the next eight years, though given the scale and programmatic nature of some investments, construction in some cases may extend over decades.

The 80 projects were then grouped into the seven 'Hotspots' defined in the Delta Plan. These hotspots were developed from consideration of the Delta's distinct hydrological regions, and the type and magnitude of the natural hazards in each. There are six geographic hotspots: 1) Coastal Zone 2) Barind and Drought Prone Areas 3) Haor and Flash Flood Areas 4) Chattogram Hill Tracts 5) River System and Estuaries and 6) Urban Areas. A seventh, cross-cutting hotspot addresses common issues that cut across the six geographical hotspots. Where appropriate, similar projects in hotspots were further grouped together into sub-programmes, such as improved urban water supply and sanitation, irrigation in the Barind and Haor flood management. These subprogrammes promote scale, coordination, and learning economies in implementing these projects.

In the second step, the PIP is broken down into suggested programmes for 8FYP and the 9FYP. The details of the suggested program for the 8FYP are contained in Annex Tables A4.1 and A4.2. The summary features of the proposed new delta investment programmes for the 8FYP by hotspots, program objectives and indicative aggregate cost measured in 2015 prices are shown in Table 4.12. The total new Delta investments proposed for the 8FYP amounts to 47 new projects involving a total cost of BDT 1400 billion or US$17.6 billion in 2015 prices. These convert to Taka 1940 billion in FY2021 prices (US$21.7 billion).

Table 4.12: Proposed Delta Public Investment Programmes (PIP) for the 8FYP (2015 Prices)

Hotspot	Programme Name / Coverage	Cost (billion)
Programme 1 Urban Areas	***Flood Free Cities*** Improvement of Drainage Congestion, Canal Dredging and Flood Control for Dhaka, Chittagong, Barisal, Khulna Cities Investment Plan project codes: UA 1.2; UA 1.3; UA 3.1; UA 9.3; UA10.1; UA 11.1.	-- BDT 138.8 -- US$ $1.75
Programme 2 Barind and Drought Prone Area	***Barind New Food Belt*** Revitalization and Rationalization of Hurasagar / Atrai Rivers and Kurigram Irrigation Project Investment Plan project codes: DP 1.2; DP 1.21; DP 1.3; DP1.4/1.5	-BDT129.2 -- US$ 1.63

Hotspot	Programme Name / Coverage	Cost (billion)
Program 3 Chattogram Hill Tracts	***Facilitating Living in the Hills*** Rationalization of polders, Development of Catchment Management Plans and Kaptai Lake Rehabilitation Study with Pilot Project Investment Plan project codes: CH 1.10; CH 1.11; CH 26.2; CH 26.1	-- BDT16.7 -- US$ 0.21
Program 4 Coastal Zone	***Safe and Resilient Coast*** Integrated Coastal Zone Management (West-Gopalganj; Bhabadha Area; Bhola Island) and Polder Rationalization (Baleswar-Tentulia Basin; Gorai Passur Basin; Gumti-Muhuri Basin) Investment Plan project codes: CZ 1.8/1.21; CZ 1.11/1.38; CZ 1.26; CZ 1.3; CZ 1.48; CZ 1.41; CZ 1.44; CZ 1.40; CZ 1.45; CZ 1.47; CZ 1.30; CZ12.8	--BDT358.6 -- US$ 4.52
Program 5 Major Rivers	***Stable and Lively Rivers*** River Stabilization and Enhancement of Char Land Investment Plan project codes: MR 1.1; MR 1.5; MR 1.46; MR 3.1; MR 12.1	-- BDT 205.1 -- US$ 2.6
Program 6 Haor Area	***Restoring Haor Ecosystems*** Rationalization of Haors, Village Protection and Sustainable Wetland Management Investment Plan project codes: HR 2.1/2.2; HR 1.1; HR 14.1; HR 14.3; HR 15.4/5	--BDT 23.6 -- US$ 0.30
Program 7 Cross Cutting	***Safe and Clean Water Supply*** Climate Resilient & Holistic IWRM, Piped Water Supply and Ground Water Management Investment Plan project codes: CC 1.4; CC 1.3; CC 12.37; CC 16.19; CC 9.10; CC 1.43; CC 1.45; CC 1.46; CC 18.5; CC9.17	BDT 527.7 -- US$ 6.65
Total		**--BDT 1399.7** **--US$ 17.63**

Source: BDP 2100

The distribution of project costs by line Ministries/ Divisions is shown in Table 4.13. The large allocation for the Ministry of Water Resources is explained by the fact that BDP2100 is a water-centric program. The program priorities that emerged from the BD2100 strategy showed large gaps in key areas of water management and a catch-up effort is needed in the 8FYP. Similarly, the substantial allocation for the Local Government Division explains the primary role of LGD in urban flood control, urban drainage, urban water, and urban sanitation. These are critical elements in Delta management with huge backlog in services and investments. For some Delta Ministries, the investment projects are largely in the nature of knowledge building, capacity development, and institutional reforms (e.g. land, environment and climate change). In some others, the required investment project is not developed yet (forestry, Chittagong Hill Tracts).

Table 4.13: Distribution of Proposed 8FYP Delta PIP by Ministries/ Divisions/Departments

Sl.	Ministry/Division/Department	Million USD (2015 Prices)	Million BDT (2015 Prices)	Percent Share (%)
1	Local Government Division	5199	412779	29.5
2	Water Resources	8,982	713,072	51.1
3	Agriculture	889	70,621	5.1
4	Inland Water Transport	289	22,948	1.7
5	Fisheries & Livestock	137	10,890	1.0
6	Disaster Management and Relief	1,937	153,812	11.0
7	Environment, Forest & Climate Change	196	15592	1.1
	Total	**17,629**	**1,399,734**	**100**

Source: BDP-2100

The BDP2100 PIP for the 8FYP is converted into current prices and FY2021 prices using appropriate price deflators of the 8FYP macroeconomic framework and these are then allocated through the Ministry wise ADP allocation shown in Annex Tables A5.1 and A5.2 in Chapter 5, Part 1 dealing with ADP allocations. For all other Delta-related ministries / departments whose investments do not appear in Table 4.13, sizable ADP allocations are included in the Ministry / Division wise allocations for project development over the 8FYP plan period (Annex Tables A5.1 and A5.2, Chapter 5, Part 1)

4.7 CRITICAL DELTA-RELATED POLICY AND INSTITUTIONAL REFORMS IN THE 8FYP

The introduction of the new Delta-related PIP is only one aspect of the implementation of the first phase of BDP2100 in the 8FYP. The other two aspects relate to Delta policy framework and reforms of Delta institutions. The agenda is large and the details are contained in the BDP2100 Main Report.

4.7.1 Key Policy Reforms

On the policy front there are two types of policies: those which relate to the macro economy, financing of the Delta PIP and the role of private investment in Delta-related projects; and those that relate to sectoral policies. The sectoral policies mainly concern policies linked to environmental management, land management, water management (including cross-boundary river management), agriculture, forestry and fishery resource management, urban water, flood control and drainage, and inland water transport. These sectoral policies are discussed in the relevant sectoral chapters of the 8FYP.

Regarding the macroeconomic policies there are three critical policy reforms that are already built in the macroeconomic framework of the 8FYP:

- The government will dutifully implement the fiscal framework for the 8FYP, which builds on the approved fiscal framework of the PP2041. The most important policy assumption is that the government will undertake critical tax reforms to enable tax revenue to grow from 8.9% of GDP in FY2020 to 14% of GDP in FY2025. Without this critical reform the ability to implement the 8FYP PIP for BDP2100 will not happen.
- The government will institute cost recovery policies in urban water supply and in irrigation and flood control measures to allow revenues from cost recovery policies in these Delta programmes from 0.1% of GDP now to about 0.3% of GDP by FY2025. This is a modest target as the scope for cost recovery from better services is immense. However, this calls for major reforms in City Corporations and Municipalities for cost recovery in urban water supply and for the establishment of effective Water User Associations (WUAs) in rural areas. Explained below, both these institutional reforms are critical reforms for sound implementation of the BDP2100.
- The government will facilitate private participation in Delta investments. There is already a limited role played by the private sector. The BDP2100 highlights the many areas where private financing can be strengthened and accelerated.

4.7.2 Critical Institutional Reforms

The government has already instituted some important Delta-related institutional reforms. These include the initiation of the process for establishing the Delta Wing in General Economics Division (GED) of the Planning Commission and the process for establishing the Delta Fund led by GED. This process must continue and be strengthened within the first year of 8FYP. Along with this, the 8FYP must focus on improving the O&M and project implementation capacities of all Delta line ministries and agencies; lay the foundations for decentralized water management that is critical for long-term sustainability of the BDP2100 program; initiate Delta-related knowledge creation and dissemination channel; and lay the foundations for a comprehensive results-based Monitoring and Evaluation (M&E) System.

Establishing Sound O&M Practices

Along with investment in critical infrastructure on the O&M front, three actions are needed that must be done in the first year of the 8FYP. These are:

- To determine the current O & M practice and their adequacy, a quick review on existing O&M practices in relevant Delta Ministries / Departments can be done.
- Based on that review, establish good O&M practices in terms of sources of funding, institutional accountability, and monitoring and evaluation.
- Identify how the required institutional responsibility can be established, especially in the area of community role in O&M of local water-related infrastructure.

Strengthening Implementation Capacities of Delta Ministries

For effective implementation of BDP2100, it is imperative to strengthen the core delta institutions. This is a tough challenge and involves long term effort. Yet some core institutions require immediate attention in the context of the 8FYP. These include: the BWDB, WARPO, DOE, the municipalities (WASAs, City Corporations and Pourashavas), and all specialized institutions

The Ministry of Water Resources is the primary water management institution in the country. Its work is supported by a number of specialized agencies, particularly the two core institutions: BWDB and the WARPO. Both institutions need considerable strengthening in new technology, innovation, integrated planning, research, economic management and consultative processes. They will also need to help out with the establishment of the local water bodies and learn to work with them collegially as a complementary institution rather than as a competing institution. The evolution of decentralized water management will face major challenges and will have obvious teething problems. WARPO and the BWDB can make this process smoother and less costly through proper support and coordination.

The BWDB has a long history of involvement with water planning and implementation. BWDB has excellent water engineers, but is weak in areas of economic analysis, financing and institution building. These gaps will have to be addressed with proper staffing of experts in the missing areas. Additionally, BWDB must be encouraged to find innovative engineering solutions to water management problems in the same spirit as the Dutch Delta Works. Considerable interaction with water engineers in the universities and international training from countries like the Netherlands that have excelled in designing innovative technical solutions to coastal belt management, river management, flood control and irrigation. Attention should be given to designing and adopting "no regrets" engineering solutions to flood and irrigation management projects.

The functioning of water municipalities (WASAs, City Corporations and Pourashavas) suggests the need for substantial reforms. In particular, emphasis should be placed on converting these institutions into autonomous bodies with considerable scope for cost recovery from users based on service provided. The demand for water and sanitation services in Bangladesh far exceeds the capacities of the municipalities, especially in small towns. While some of the gap can be met through private participation, the capacity of the municipalities can be substantially strengthened by instituting sound cost recovery policies based on beneficiary and polluter pays principles. The transfusion of additional resources through proper cost recovery can provide the impetus for strengthening the capacity of the municipalities and providing additional services. This can also support innovative ways of encouraging good performance of municipalities by linking budget funding (block grants) with performance.

Towards Decentralized Water Management

Perhaps the most striking lesson from the Dutch experience with Delta management is the importance of decentralized management of the water resources. The Dutch delta management essentially emerged bottom-up as a decentralized water management system. Historically, water safety efforts emerged from the land-owners fighting for survival from recurring sea and river flooding. These land owners formed water management associations and funded investments from own resources. Over time, as the country developed, the role of state in flood safety and other water management expanded. Yet, this expanding state role preserved the historical decentralized approach and the result is the modern participatory flood control and water management institutions. They still are the dominant force for managing the waterways, the dikes and the water sewage plants and account for 50% of the annual water investment. The legal framework for the water boards is provided by the Water Boards (regional water authorities) Act. Four types of stakeholders have to be represented in these councils: (1) the residents or inhabitants of the area; (2) the owners of real estate (farmers) consisting of open land which does not constitute a reserve or state land; (3) owners of natural reserves; (4) businesses/industries. Since residents pay the largest share, they have the majority in the council.

Unlike the Dutch experience water management is heavily centralized. The absence of stakeholder participation in water management is a major weakness in Bangladesh that needs immediate attention. The government made several attempts in the past but these have not succeeded. Moving forward, what are needed are some bold and radical efforts to create truly participatory local water bodies in the same spirit as the Dutch water bodies. The long-term success of Bangladesh Delta Management hinges critically on the establishment of these local water bodies.

Local/ Regional Water User Institutions

The missing institution in Bangladesh holistic water management is the representation of beneficiary stakeholders linked with water use in various sectors including coastal management, river management, fresh water wetlands (haors and baors) management, large irrigation schemes and flood control as well as water supply and sanitation, inland transportation, industrial water use. Establishment of this missing link in water management is an essential reform for successful management of the Delta Plan.

These required water user institutions (or water bodies) fundamentally must represent the stakeholder's interests and usage and not government interests. The water bodies should be established based on: 1) a careful review of good practices and international experiences including the Dutch experience; 2) analysis

of the past approaches to establishing water user's groups and associations in Bangladesh and the reasons for their success and failure; 3) doing additional stake-holder consultations. The full governance principles including institutional design, membership, selection process, functions, financing and accountabilities will be provided in totality as a part of necessary legal arrangement.

The foundations for a more decentralized approach to water management must be initiated during the 8FYPicluding formation of local water management bodies as indicated in BDP 2100. Necessary studies can be undertaken for this purpose.

Laying the Foundations of a Delta Knowledge Bank

Building on the Dutch experience, BDP2100 noted that the creation of a delta knowledge bank is an essential pre-requisite for undertaking adaptive delta management. There are several ways of doing this. The knowledge agenda is discussed in detail in chapter 15 of the BDP2100. With the establishment of the Delta Wing, this responsibility accrues to them. The institutional requirement is to create a knowledge unit with three main responsibilities:

a) collate all relevant delta related knowledge globally and nationally into a digitized knowledge library;
b) establish a delta data bank;
c) develop and implement a comprehensive delta knowledge and data updating effort.

To initiate the implementation process for the Delta Knowledge Bank during the 8FYP, as a first step, the Delta Wing should undertake a quick stock taking of existing Delta-related research and data. This report should be shared with other delta-related public agencies and with private research institutions to develop a knowledge and data upgrading agenda. The Delta Wing should review this agenda to check for consistency and relevance with the needs of the delta management, especially in the context of doing a sound monitoring and evaluation of the Delta Plan, and develop a 3-5 years data and research work programme with annual targets. This report should be completed in the first year of the 8FYP and submitted to the Delta Council for review and approval.

Following approval, the knowledge work programme and budget, implementation may proceed. Data work can be implemented in conjunction with the Bangladesh Bureau of Statistics and other delta ministries. Research can be out-sourced to universities and local research institutions. The Delta Wing should be responsible for coordination and oversight.

Developing a Sound Monitoring and Evaluation (M&E) System

The practice of conducting M&E of government policies and programmes is a weak link in Bangladesh policy planning. Water related M&E is no exception. A solid M&E effort is essential for sound implementation of the delta plan in the context of adaptive delta management. The BDP2100 assigns institutional responsibility for M&E as follows.

- M&E for investment projects is the responsibility of the implementing agencies.
- M&E of sectoral policies and programmes should rest with the concerned sectoral ministry and IMED.
- Regarding M&E of the entire Delta Plan, this is a key responsibility of the Delta Wing.

The implementation of the Delta Plan level M&E should also commence during the 8FYP. As in the case of implementation of the knowledge agenda, the Delta Wing can draw on the technical capabilities of its knowledge partners including WARPO, CEGIS, IWM, BUET and private research institutions to help with the development of a Delta Plan level M&E. Needless to say, the M&E for the Delta Plan will need to be done consultatively, drawing on the analysis of the M&E at the project and sectoral levels and involving all inter-ministerial agencies dealing with delta issues and the IMED. A draft M&E proposal should be ready for approval by the government within the first 18 months of the 8FYP. Implementation can then start over the 19-48 months of the 8FYP with the first M&E Report ready for government approval by the beginning of the 5th Year (FY2025) of the 8FYP.

4.8 DEVELOPMENT RESOURCE ALLOCATION FOR AGRICULTURE AND WATER RESOURCE MANAGEMENT IN THE 8FYP

The agriculture sector in Bangladesh is overwhelmingly private sector driven. Yet, it is heavily dependent upon public investment in rural infrastructure (rural road, irrigation, flood control, environmental protection, land management), forestry and agricultural services such as research and extension, storage facilities. The adoption of the BDP2100 and the implementation of the associate PIP for the 8FYP will substantially rise the ADP spending, especially for water management where the gaps are large, especially in the area of flood control, river bank management and restoration of river courses to provide fresh water supply. These are all highly capital-intensive projects but are essentially to protect the water resources of Bangladesh and reduce the vulnerability of the poor from natural disasters.

Taking into consideration the implementation of the first phase of BDP2100 PIP as 8th Plan are provided in Tables 4.14 in current prices and in Table 4.15 in constant prices. Financing of large transformational water projects included in the BDP2100 PIP for the 8FYP will require support from multilateral agencies like the World Bank, JAICA and the ADB and from bilateral sources such as the Netherlands, which has vast state of the art technical experience in water management.

Table 4.14: ADP Allocations for Agriculture Sector in the 8th Plan

(Taka billion Current Prices)

Ministry/Sector	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Ministry of Agriculture	41.2	46.1	47.9	49.7	59.6
Ministry of Fisheries and Livestock	9.0	11.1	12.8	15.0	18.0
Ministry of Land	7.1	8.8	10.1	11.8	14.2
Ministry of Water Resources	108.6	156.9	228.7	276.2	346.4
Sector Total	**165.9**	**222.9**	**299.5**	**352.7**	**438.2**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 4.15: ADP Allocations for Agriculture Sector in the 8th Plan

(Taka Billion 2021 Constant Prices)

Ministry/Sector	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Ministry of Agriculture	41.2	43.8	43.2	42.8	49.0
Ministry of Fisheries and Livestock	9.0	10.6	11.6	12.9	14.8
Ministry of Land	7.1	8.3	9.1	10.2	11.6
Ministry of Water Resources	108.6	149.0	206.6	237.8	284.6
Total	**165.9**	**211.7**	**270.5**	**303.7**	**360.0**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 5:
POWER AND ENERGY

CHAPTER 5

POWER AND ENERGY DEVELOPMENT STRATEGY

5.1 BACKGROUND

The economic progress of past decade has seen rapid decline in poverty on the heels of rapid economic growth with more people enjoying improvements in their material wellbeing. This has gone hand in hand with its transformation from primarily an agrarian economy to that which now has service sector and industry holding dominating share of GDP. The rapid development of the energy sector during the 6th and 7FYP periods played a catalytic and enabling role in this, helping move forward the industrialization agenda. The energy sector consists of electricity, gas, coal, liquid fuel, wind energy, solar and other non-petroleum fuel. The critical role of assured supply of electricity at an affordable price for social and economic development is universally recognized, and government has also been trying to pursue this path. With more stable availability of electricity and primary energy, this period saw new factories being set up at increasing rate across the country, along with growing urban centres and cities; which in turn provide goods, jobs and homes, and amenities that make life more comfortable and enjoyable.

Bangladesh has now embarked on achieving a visionary goal of becoming a developed economy by 2041 and for which it has adopted the Perspective Plan (PP) 2041. Bangladesh will have to use its experience and success in traverse towards becoming a competitive manufacturing hub, with diverse export base. A more efficient and low-cost power infrastructure along with a competitively functioning transparent and well-regulated primary energy sector could help strengthen the competitiveness of Bangladeshi manufacturing and export products. Energy has always played pivotal role in emerging economies in accelerating growth, particularly during the rapid industrialization phase leading to quality job growth, as they move from middle-income to upper-middle income and developed stage of development.

During the Sixth FYP and Seventh FYP period's priority was given to increase generation capacity to meet demand; and at this point of time Bangladesh has surplus installed capacity. The policy and institutional support during these periods were geared up to help leverage private investments alongside public investments in energy and power sector. The financing strategy emphasized both public funding as well as financing based on public-private-partnership (PPP). Emphasis was also placed on improving efficiency and service delivery of relevant public agencies.

The Government will continue on this path, leading into the 8FYP, but with increased focus on energy efficiency gain, renewable energy and financial sustainability. This will enable Bangladesh to move to a competitive and environmentally sustainable least- cost power generation, transmission, and distribution system along with greater private sector participation and own resource mobilization so as to reduce the burden on limited fiscal resources. The 8FYP will also focus on timely implementation of all power and energy projects so as to optimize achieving the goals of Government's energy sector strategy, whose key elements are:

- A rapid growth in electricity generation.
- Development of transmission and distribution system in line with generation.
- Mobilizing private and joint-venture investment in power sector.
- Diversification of primary fuel for electricity generation, with special focus in increasing renewable energy generation.
- As part of its pursuit of the strategy of least cost power generation, continue to have some highly efficient least polluting coal plants
- Improving power sector efficiency and reducing transmission and distribution losses.
- Use of alternative sources of energy.
- Use of nuclear energy for power generation.
- Exploring electricity-trading options with neighbouring countries (India, Nepal, Bhutan and Myanmar).
- Use of alternative sources of financing (Export Credit Agency, etc.)

5.2 POWER & ENERGY SECTOR PROGRESS DURING 7FYP

Power & Energy sector that has been at the centre of the infrastructure development vigorously pursued both during the sixth and the seventh FYP periods, have been catalytic in achieving the high growth trajectory that Bangladesh has been enjoying. In the process it has also facilitated faster growing manufacturing and export sectors growth.

Achieving the Development Results Framework (DRF) Targets: The M&E targets set forth under the 7FYP, and depicted below in Table 5.1, provides a snapshot of the progress in achieving the strategic objectives of the energy sector, vis-à-vis the targets during the Seventh FYP period. It is clear that the M&E targets set forth under the 7FYP have broadly been achieved. Bangladesh power sector has been showing tremendous progress since 2011, and at present has generation capacity well above the demand. The Government which had been implementing the power sector programmes based on the Power System Master Plan (PSMP) 2010 during the 6th Plan period revised it to PSMP 2016, to help adapt to changing scenarios. This growth in generation capacity along with expansion of transmission and distribution networks have helped achieve substantial progress in both the indicators for the power sector: increasing growth of per capita consumption of electricity and improving the access of the population to electricity.

In FY2020 total installed capacity, inclusive of public, IPP, captive, import and renewable energy reached 23,548 MW, higher than the target (Table 5.1). Electricity coverage has been increased to 97%, which was 72% in the baseline FY 2015. This has resulted in increasing per capita generation of 512 kwh (including captive) from 371 kWh in FY 2015. During this period about 3.70 crore consumers got connected to the national grid with 5.67 lakh km. of distribution system. The overall system loss of electricity decreased substantially to 11.23 per cent in FY2019-20from 15.73 per cent in FY2009-10. However, the share of renewable energy (including hydro) to the total electricity generation declined from 3.6% in FY 2015 to 3.05% in FY 2020, which needs to be increased during the 8FYP.

Table 5.1: Progress with the DRF Targets for Power, Energy during the 7FYP

Performance Indicators	Data Source	Lead Ministry/ Division	Base Year 2015	(2018)		(2019)		(2020)	
				Target	Achievement	Target	Achievement	Target	Achievement
Electricity Generation Installed Capacity (MW)	PD	PD/ MoPEMR	13540	19249	18,753	20649	22,051	23000	23,548
Access to Electricity (% of households)	PD, BBS	PD/ MoPEMR	72%	90%	90%	94%	94%	96%	97%
Per Capita Generation of electricity (kWh)	PD	PD/ MoPEMR	371	454	464	483	510	514	512
Share of renewable energy to the total electricity generation (% including hydro)	PD	PD/ MoPEMR	3.6	7	3.15	8	3.25	10	3.05

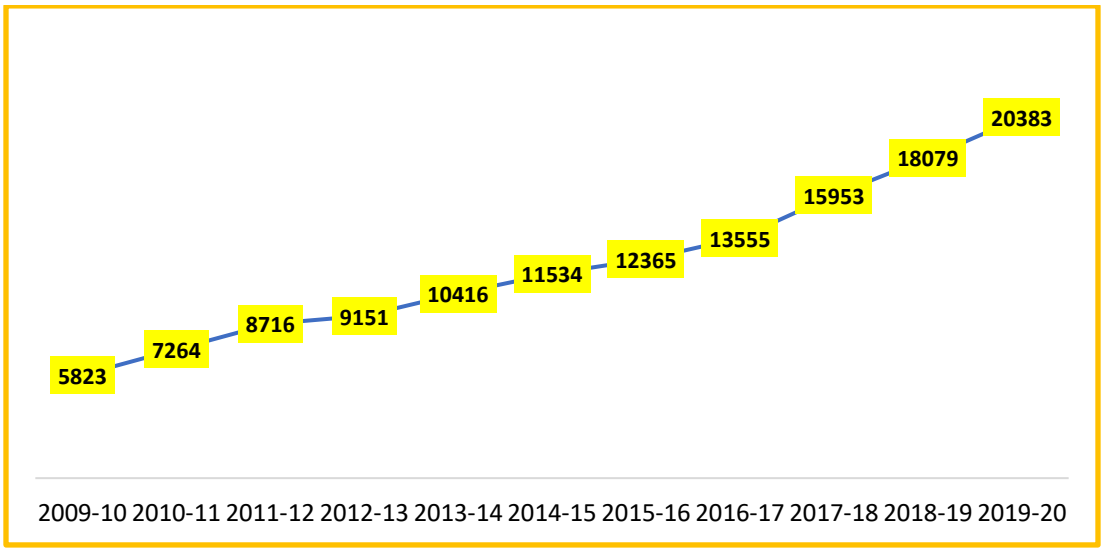
Source: Power Division.

The seventh plan period also saw progress in diversifying primary energy source through LNG imports, and progress in construction of large sized coal fired power plant. There have also been several price adjustments in all segments of the energy sector. However, the progress in expanding and diversifying primary energy supply, renewable energy, and in improving the energy sector finances has been limited. The areas of progress and concerns in electricity and primary energy are reviewed in greater detail below.

5.2.1 Power Sector

Electricity Installed capacity and generation: Bangladesh has been successful in overcoming the shortfall between power demand and its supply through ushering in private IPPs while also undertaking larger public investments which is evident from sharp upturn in installed capacity as depicted in Figure 5.1.

Figure 5.1: Trend in Grid Based Installed Capacity (MW)



Source: Power Division

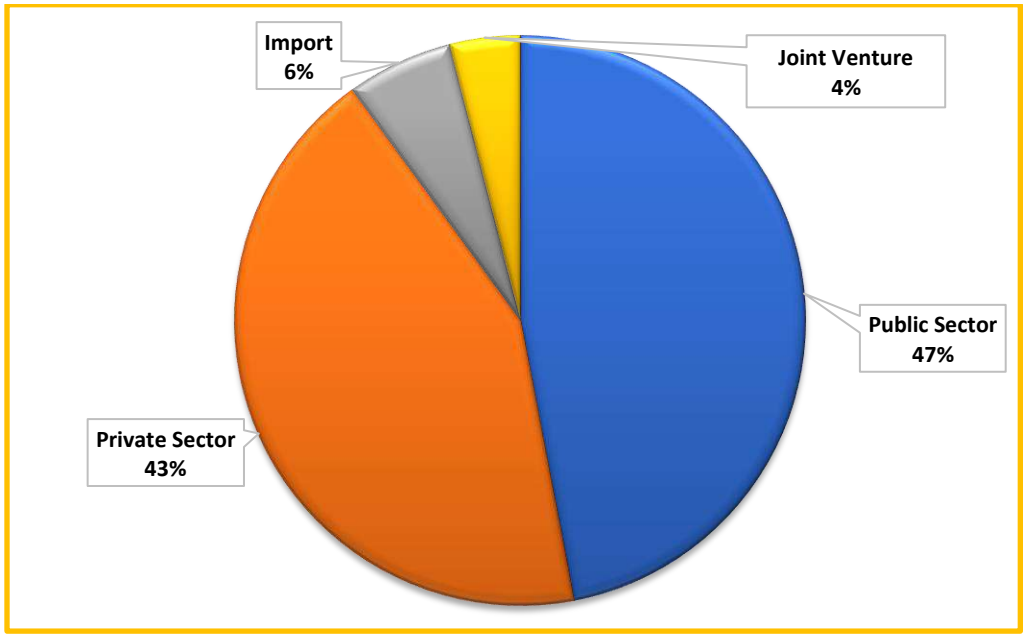
Installed Capacity: The available installed capacity (*exclusive of captive power and RE*), as depicted in Table 5.2 below, increased from 11534 MW in FY 15 to 20383 MW in FY 20; out of which the share public sector was 47% (9568 MW), that of the private sector (IPP) was 43% (8884 MW), joint venture was 4% (771 MW) and 6% (1,160 MW) was from power import (Figure 5.2). During this period the generation capacity has also been increasing (Table 5.2), and the highest generation reached a high of 12,893 MW in 2019 June before falling slightly to 12738 in June 2020. It should be noted that inclusive of captive sources and renewable energy, the total installed capacity is 23,548 MW.

Table 5.2: Installed Capacity (other than Captive Power and Off-Grid Renewable Energy) and Maximum Generation

Fiscal Year	Installed capacity MW	Maximum generation MW
2009-10	5823	4606
2010-11	7264	4890
2011-12	8716	6066
2012-13	9151	6434
2013-14	10416	7356
2014-15	11534	7817
2015-16	12365	9036
2016-17	13555	9479
2017-18	15953	10958
2018-19	18961	12893
2019-20	20383	12738

Source: BER 2019 & Power Division.

Figure 5.2: Installed Capacity - Sector Wise June 2020

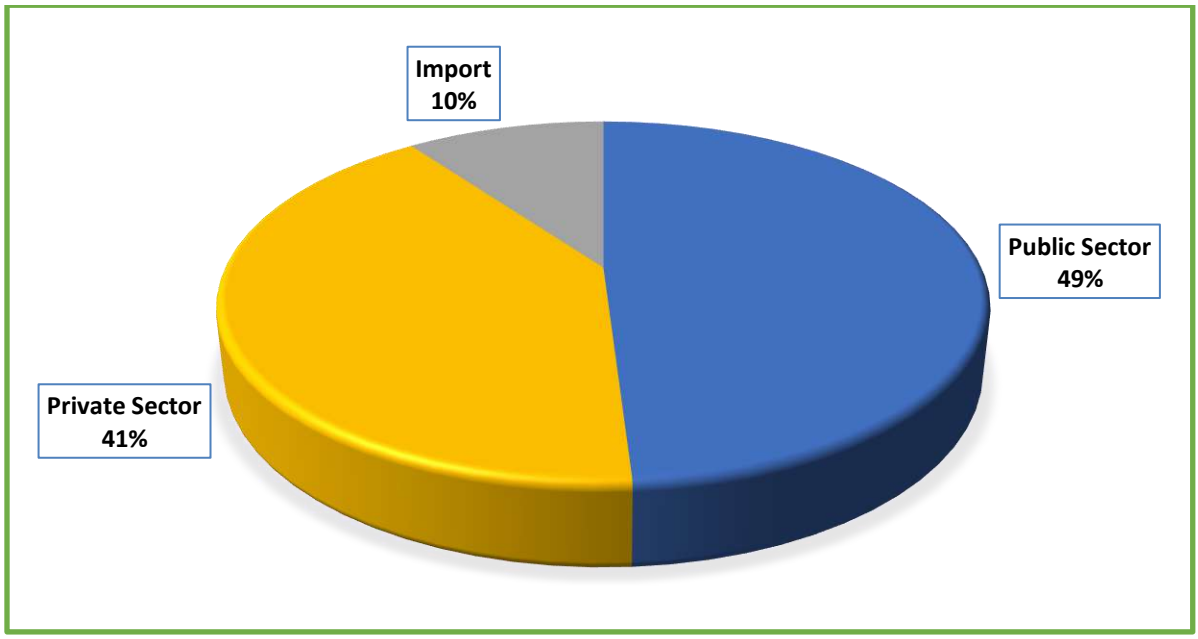


Source: Power Division

Maximum generation lags behind installed capacity: However, maximum generation each year has always been less than the installed capacity (Table 5.2 above), but the gap has been increasing over the years. All future generation plan needs to factor in this surplus generation position, as it will have implications on long-term sustainability of the sector, particularly in moving towards a least-cost generation scenario and increased use of renewable energy (RE) during the 8FYP period. In this context there should be review on the higher cost and less efficient rental and other power plants, and look for ways to closing those and replacing them with more efficient ones including increased generation from RE.

As of June 2020, out of total net generation (Figure 5.3), 49 per cent power was generated by public sector power plants, 41 per cent power from private power plants and 10 per cent from power import. During FY2020, a total of 71,419 million kWh of net energy was generated that included 35,316 million kWh from public sector and 29,429 million kWh from private sector power plants and power import 6674 million kWh.

Figure 5.3: Energy Generation- Sector Wise (FY 2020)



Source: Power Division

Mobilization of private investment in power generation: The Government, as part of the Private Sector Power Generation Policy (PSPGP) of Bangladesh of 1996, has been trying to increase share of the private sector in power generation since the 6FYP, being mindful of the financial constraints in the public sector. This has worked with substantial increase in new generation from private sources that started during the Sixth Plan, continuing into the 7th Plan period. Power generation has increasingly moved to the private sector (Table 5.3), which is helping reduced use of public investment funds. The share of private power, including 1160 MW of imports, increased to 49% in terms of installed capacity from 43% in FY2015. If included captive and renewable energy then the share of private sector installed capacity would be even higher; and total installed capacity would be 23,548 MW. This has been an impressive structural change in the power sector investments and supply, and a healthy development and reflects positively the strategy that had been adopted and implemented.

Table 5.3: Installed Capacity by Ownership Excluding Captive Power (MW) & Off-Grid RE, FY2010-FY2020

Fiscal Year	Public	Private	Import	JV	Total
2010	3719	2104	-		**5823**
2015	6022	5012	500		**11534**
2019	9507	8294	1160		**18961**
2020	9568	8884	1160	771	**20383**

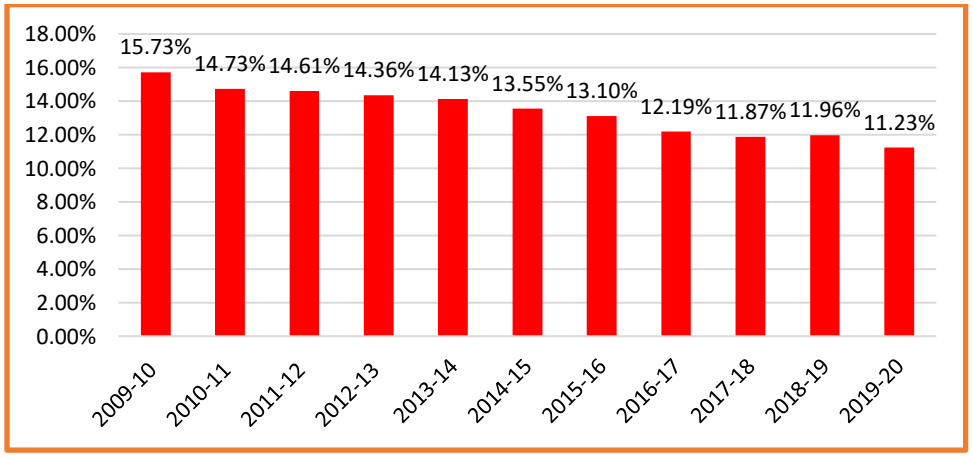
Source: Power Division

Power trade: Bangladesh has successfully been increasing participation in regional power trade and has been increasing electricity import from India. Bangladesh started with import 500 MW of power from Balarampur, India from 2013, and has now enhanced the import 1000 MW from Borhanpur after enhancement of the same grid substation capacity in June 2018. Besides 160 MW power is being imported from Palatana, Tripura state since March 2016, taking the total import of electricity from India to 1160 MW.

Bangladesh has also been taking concrete initiatives to help open up new avenues for cross border electricity trade with other neighbouring countries - Nepal, Bhutan and Myanmar - through bilateral cooperation. Efforts are being made for import of hydropower from Nepal. A MoU has been signed and LoI issued with GMR group of India and NTPC Vidyut Vyapar Nigam Ltd (NVVN) to facilitate import of 500 MW of electricity from Nepal. Power Purchase Agreement shall be signed among BPDB & GMR. There is also an initiative to facilitate import hydropower from Bhutan. In this regard, a tripartite MoU is at final stage between Bangladesh, India and Bhutan, which can help facilitate construction of a power plant through joint investment. A Memorandum of Understanding (MoU) between Bangladesh and Myanmar exists. Bangladesh is also using multilateral platforms like UN-ESCAP, SAARC, BIMSTEC, SASEC and D-8 for increasing regional cooperation in energy trade.

Power sector efficiency: There has been a visible improvement in power sector efficiency, which has also resulted in reduction in the incidence of power outages. One important indicator of power sector efficiency is the reduction in transmission and distribution (T&D) losses (Figure 5.4).

Figure 5.4: Transmission and Distribution Loss (%)



Source: Power Division

A portion of the T&D loss has been power leakage, which has been substantially curtailed. The T&D losses, which fell throughout the 6FYP period - from 15.73% in FY2010 to 13.54% in FY2015 – continued to do so during the 7FYP period and declined further to 11.23% in FY2020.

Declining distribution loss signifies improvement in sector governance. There has been particularly faster decline in distribution loss, which has helped the continuous decline in T&D losses over time. The distribution loss had come down from 13.49% in FY 2010 to 11.36% in FY 2015, and declined further throughout the 7th plan period to reach 8.73 % in FY 2020 (Table 5.4 below). While these have been excellent results within the time frame, there needs to be further improvement and brought to levels of better performing entities in our peer group of countries.

Table 5.4: Year- wise System Loss

Fiscal Year	Distribution Loss (%)	Total Loss (T&D) %
2009-10	13.49	15.73
2010-11	12.75	14.73
2011-12	12.26	14.61
2012-13	12.03	14.36
2013-14	11.96	14.13
2014-15	11.36	13.55
2015-16	10.96	13.10
2016-17	9.98	12.19
2017-18	9.60	11.87
2018-19	8.35	11.96
2019-20	8.73	11.23

Source: Power Division

Development of transmission and distribution system: Transmission of generated power from power plants to the load centres and then distribution to the end users' needs to be ensured to achieve the real benefits out of successful generation expansion program presented above. As of FY 2019-20, a total 12,283 km (Circuit Km) transmission lines and 577479 Km distribution lines had been connected to power system network. The improvement in T&D efficiency has been triggered by necessary investments resulting in substantial addition to the transmission and distribution capacity. The Power Grid Company of Bangladesh Ltd. (PGCB) has made substantial progress in setting up different transmission lines and substations during the 7th Plan period, and the progress with implementation of the transmission infrastructure is presented in Table 5.5.

Table 5.5: Transmission System and Substation Infrastructure

Fiscal Year	Transmission System (ckt km)			400 kV VDC Substation		400/230/132 kV station		230/132 kV Substation		132/33 kV Substation	
	400 kV	230 kV	132 kV	No	MW	No	MVA	No	MVA	No	MVA
2009-10	-	2647.30	5670.30	-	-	-	-	13	6300.00	75	7844.00
2010-11	-	2647.30	6018.00	-	-	-	-	13	6675.00	81	8437.00
2011-12	-	2647.30	6080.00	-	-	-	-	13	6675.00	83	8737.00
2012-13	-	3020.77	6080.00	-	-	-	-	15	6975.00	84	9705.00
2013-14	164.70	3044.70	6120.00	01	500	-	-	18	8775.00	86	10714.00
2014-15	164.70	3171.45	6358.83	01	500	01	520	19	9075.00	89	11964.00
2015-16	220.70	3171.45	6396.83	01	500	01	520	19	9375.00	90	12420.00
2016-17	559.75	3312.99	6503.95	01	500	02	1690	19	9675.00	91	13364.50
2017-18	559.75	3324.99	6795.89	01	500	03	2210	19	9675.00	91	15045.50
2018-19	698.00	3407	7545.00	02	1000	05	4220	26	13135.00	135	23640.00
2019-20	861.00	3658	7764.00	02	1000	06	5070	28	13985.00	145	26222.00

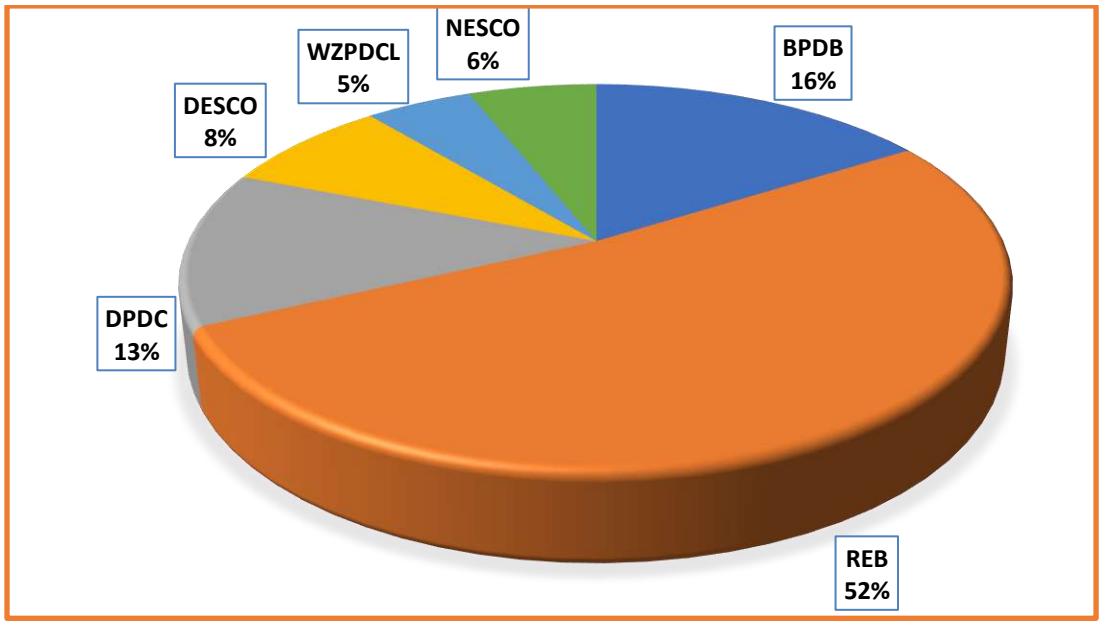
Source: PGCB.

As shown in Table 5.5 above, besides setting transmission lines PGCB has made major progress during the 7FYP period in setting up of 400 kV HVDC Substation, 400/230/132 kV station, 230/132 kV Substation, and 132/33 kV Substation. Now (as of June 2020) there are two HVDC back-to-back substation with total capacity of 1,000 MW, six r 400/230 kV grid substations of 5070MVA, one 400/132 kV grid substation of 650 MVA, 28of 230/132 kV grid substations of 13,985 MVA capacity, 145numbers of 132/33 kV grid substations of capacity 26, 222 MVA, 450 MVAR capacitor bank in 132 kV bus in 8 substations and 1,340 MVAR capacitor bank in 33 kV bus in 46 substations in the country.

***Power distribution system has been on track in the effort to provide access to electricity to all parts of the country*:** There are six different entities responsible for distribution of electricity to all consumers. The entities are: Bangladesh Power Development Board (BPDB); Bangladesh Rural Electrification Board (BREB); Dhaka Power Distribution Company (DPDC); Dhaka Electric Supply Company (DESCO); West Zone Power Distribution Company (WZPDC); Northern Electricity Supply Company Ltd (NESCO). The government, through those entities, has undertaken an integrated power distribution program to increase the distribution network so as to bring 100% of the population under electricity coverage by 2020, while also improving on customer service delivery. As of June 2020, about 37 million consumers were in position to get connected with the grid through construction of 0.567 million km. distribution lines.

Out of the total energy sales of 63, 364 MkWh, the BREB accounts for majority share (52%) of bulk sales (Figure 5.5). It is obvious that BREB has been leading the way to make electricity accessible to rural and peri-urban areas. Up to June 2020, Bangladesh Rural Electrification Board with its 80 Palli Bidyut Samities have connected 2.88 crore consumers. Among the consumers, 2.62 crore are domestic connections, 2.73 lakh irrigation, 17.7 lakh commercial, 1.78 lakh industrial, 3.63 lakh Charitable, 1974 construction, 1031 temporary, 10492 street light and rest are general. As many as 82305 villages have been electrified by constructing 5.27 lakh km distribution lines.

Figure 5.5: Utility Wise Bulk Sales (FY2019-20)



Source: Power Division

Target and achievement of line construction and consumer connection of BREB from FY2009-10 to FY2019-20 is shown in Table 5.6, and is evident that there has been acceleration in installing distribution lines and customer connections.

Table 5.6: Physical Target and Achievement of BREB

Fiscal Year	Distribution Line (km)		Consumer Connection	
	Target	Achievement	Target	Achievement
2009-10	2852	2713		461417
2010-11	2095	3533		259548
2011-12	7700	10049		723713
2012-13	10222	9842		304417
2013-14	16971	17965		758932
2014-15	18750	18910		1839064
2015-16	20000	31613	15,00000	3597883
2016-17	25000	36554	20,00000	3511573
2017-18	30000	54886	32,00000	3851143
2018-19	25000	71326	20,00000	3045593
2019-20	50000	50166	20,00000	2405312

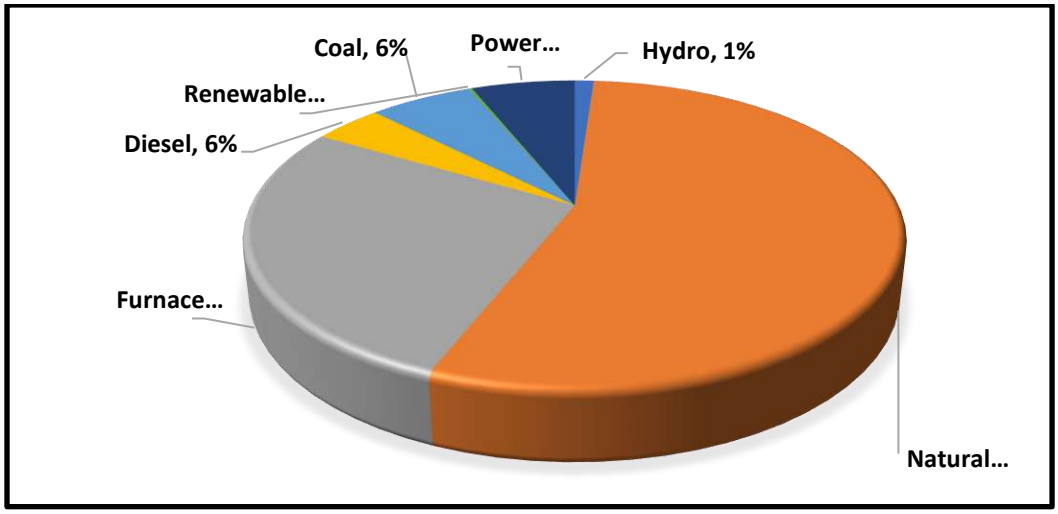
Source: Rural Electrification Board (REB)

BREB, which has been the pioneer of Solar Home System, continues its pursuit in providing renewable energy. BREB has so far installed 51,364 Solar Home Systems (SHSs), 37 rooftop/hybrid type rooftop solar power plants, 40 solar powered irrigation pumps, 14 Solar Charging Station and 40 Net Metering System. The total capacities of the installed plants are about 13.31 MWp.

Fuel Mix of Installed Capacity and Actual Generation:

The installed power now gets generated my multiple fuels, with two dominating – natural gas and liquid fuel. Natural gas accounted for 53.8% and liquid fuel (Furnace Oil (27.2%) and Diesel (6.3%)) accounted for 33.5% of the installed capacity. The installed capacity of power generation by fuel type as of June 2020) is shown in Figure 5.6 below.

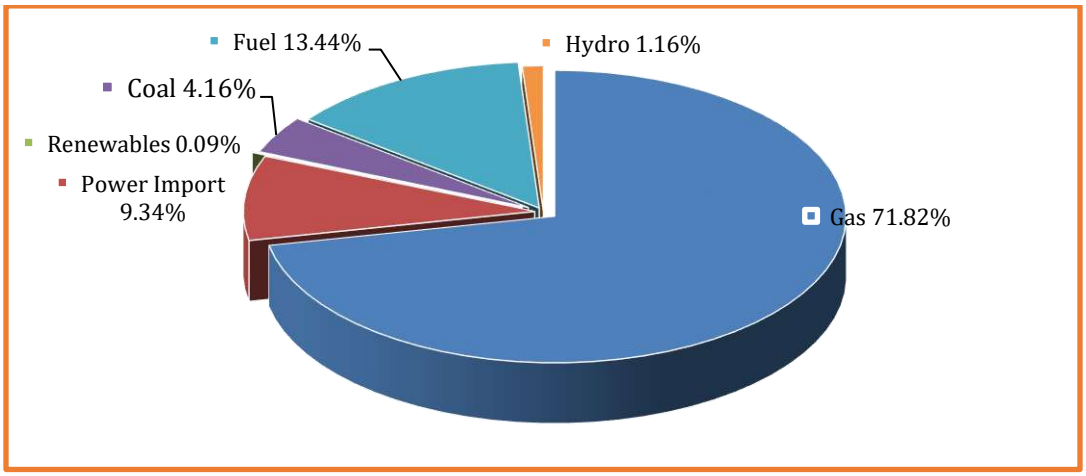
Figure 5.6: Installed Capacity Share Exclusive of Captive Power (by Fuel Type)



Source: Power Division

Actual generation increasingly falling short of installed capacity: Given that actual generation has been increasingly less than the installed capacity there has been always effort to use lees of the more expensive liquid fuel generation capacity. As a result, the share of gas in actual generation was higher at 71.82% (Figure 5.7) when compared to the installed capacity share of 54%, (Figure 5.6 above).

Figure 5.7: Energy Generation - Fuel Type (January 2019)



Source: Power Division

The share of imported power also increased to 9.74%, while the share of liquid fuel in generation got reduced to 13.44% from the installed capacity share of 33%. This was positive from efficiency point of view, given that there is a surplus generation. While some surplus will have to be generated as reserve margin to ensure unhindered quality power supply during the 8th plan period and beyond, this will be done in an optimum mode where efficiency of the reserve margin will also be considered.

While natural gas had been the dominant fuel in use, liquid fuel use continued to increase during 7th Plan Period: As natural gas shortage expanded, the use of liquid fuel (Furnace Oil and Diesel), increased in public sector power plants (Table 5.7), which exerted pressure on unit cost of power generation This will have to change to reduce average cost.

Table 5.7: Fuel Consumption by Public Sector Power Plants

Fiscal Year	Natural gas (Billion cft)	Coal (1000 Ton)	Liquid Fuel (Million Litre)	
			Furnace Oil	HSD, SKO & LDO
2009-10	166	480	91	125
2010-11	150	410	119	138
2011-12	151	449	172	60
2012-13	175	590	266	35
2013-14	183	539	424	175
2014-15	180	522	378	291
2015-16	207	489	439	238
2016-17	215	587	513	348
2017-18	211	825	615	795
2018-19	274	565	484	385
2019-20	267.76	1240	301.09	11.93

Source: Power Division

The development of coal-based generation lags behind: Both under the 6th and 7FYP there was a strategic decision to increase the share of coal in generation, but it continues to lag behind, and its share fell from the level of FY2015. Implementation and completion of planned coal fired plants has otherwise been very slow, though there are some large sized coal fired power plants now at different stages of implementation. Coal mining has not proceeded owing to the lack of a coal policy. The planned large-scale imports of coal have not moved fast enough owing to infrastructure constraints, particularly port and related transport and handling infrastructures.

Share of renewable energy: Bangladesh has made limited progress in increasing share of renewable energy sources in generation of electricity. This remains a key challenge in moving towards a more sustainable fuel mix. The share of hydro, which has been negligible (2%) in FY 2015 further declined during the 7FYP period. Besides, another renewable source, Solar PV, also remains extremely negligible at 2.03%. During the 8FYP the RE generation strategy will have to be aggressively pursued so that all that is planned gets implemented in time and where policy support is required should be given forthwith.

Electricity pricing policies: The rapid growth in the share of liquid fuel-based power supply from only 8% in FY2010 to 29% in FY2015 and over 30% in FY 2018 – continues to be a reflection of a major primary fuel constraint in Bangladesh. This has progressively increased the average supply cost of power and had strained power sector finances. The average cost of power surged from Taka 6.10/KWh in FY2015 to Taka 8.6/KWh in FY2020, which amounts to 41% between the periods. During past years, BERC made adjustments of bulk and retail tariff rate of electricity keeping in view the financial capability of the electricity distributors, protecting the interests of the consumers and above all, bringing increasing financial discipline in this sector. It appears that the increasing reliance on imported fuel oil (higher priced LNG and imported coal) will continue in the future, and so will increase the production cost of electricity, unless efficiency and other cost measures are taken.

Introduction of lifeline tariff for poor and low-income group: Considering the socio-economic condition of the poor and lower middle-income consumers, BERC has fixed the lifeline tariff for residential user at 1-50 unit of electricity. It remained unchanged in the latest tariff order. The electricity bill of poor and low-income residential subscribers has remained unchanged because of this regulatory step of BERC.

Power subsidy: Even so, the average bulk supply tariff of electricity is less than the average cost of production. The resulting financial losses continue to create pressure on the national budget. BPDB has received budgetary support from Government due to loss between bulk supply cost and bulk supply tariff (Table 5.8). Thus, the electricity budgetary support increased from Taka 44 billion in FY2016 to Taka 74 billion in FY2020. The recent decline in international fuel oil prices could provide some relief for the budget. Yet, in view of uncertainties of international oil prices, electricity pricing and subsidy could still continue to pose policy challenges during the Eighth Plan. Full cost recovery for all power and energy products is an important goal for the 8FYP. This will not only help lower the financial burden on the Treasury, it will help conserve energy and support the development of renewable energy.

Table 5.8: Power Budgetary Support (Taka billion)

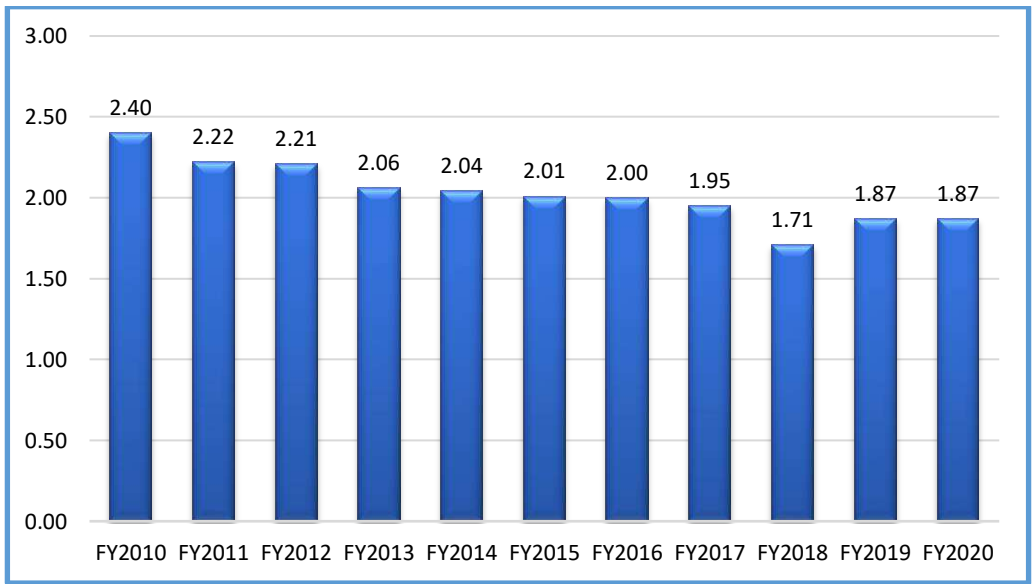
Fiscal Year	Subsidy (Billion Taka)
2015-16	44
2016-17	40
2017-18	45
2018-19	78
2019-20	74

Source: Power Division

Sector Governance: Improving Financial Viability of the Power Sector

To improve financial viability and efficiency of the sector, in addition to power tariff adjustments awarded by the BERC and reductions in T&D losses, the government has adopted a financial action plan to maintain power sector receivable at no more than 2 months' billed amount equivalent and reduce receivables from autonomous, public entities and private customers to an acceptable limit. As evident from Figure 5.8 below, the accounts receivable months has been below 2 months receivable since FY2015 and was 1.87 months equivalent in FY2020.

Figure 5.8: Year Wise Accounts Receivable (Equivalent months)



Source: Power Division

While there has been good progress, financial management capabilities need to further improve. Over time the cost of electricity will go up. There is a lot of effort that will be needed in the area of public interface and consumer service. Ensuring uninterrupted power service and responding to consumer issues with service quality, billing and payments requires substantial additional effort. The power sector needs to be run and managed as a commercial enterprise and not as a typical state-owned enterprise. The corporatization of the power sector and the associated improvements in billing, collection and arrears has already created a positive impact on power sector finances.

As reliance on inefficient high-cost rental power plants fall, the finances of power sector will further improve. Yet, the challenge of generating a surplus in the power sector will require substantial improvement in financial management capabilities of the power sector. In light of experience gained, an area that needs to be revisited is the IPP regime and the PPAs to see if improvements can be made, particularly in areas like possibility of further transferring commercial risks to the private producers.

Increasing Pre-Paid Meter use as a means to reduce distribution related system loss. As already discussed earlier that Bangladesh during the 7FYP period has made significant progress in reducing system loss and also in reduction of accounts receivable equivalent month to less than. The reforms for reducing system loss continue through installation of pre-paid meters. As of June 2020, all the six distribution entities (BPDB, BREB, DPDC, DESCO, WZPDCL and NESCO) have made good progress in installation of these pre-paid meters, and have installed 3.32 million prepaid meters. The list of installed prepaid meters up to June 2020 has been shown in Table 5.9.

Table 5.9: Installation of Prepaid Meters

Utility	Total
BPDB	1178505
REB	1110000
DPDC	498103
DESCO	303060
WZPDCO	217219
NESCO	18898
Total	**3321781**

Source: Power Division * up to June 2020

These improvements in T&D, other measures including price adjustments, pre-paid meters, along with increased efficiency in billing and collections and reducing the backlog of accounts receivable, have had a beneficial effect on the overall power sector performance. They also signify important improvements in sector governance and sector management.

5.2.2 Progress with Primary Fuel

The supply of primary energy comprising oil, gas and coal is to help meet energy demand of the country by undertaking exploration, production, development and appraisal of oil, gas, and coal fields and subsequent energy reserve enhancement, and to meet energy shortfalls through imports. Having adequate supply of low-cost energy is critical for all segments of society in general and in particular for having a competitive and sustainable industry and an efficient power generation system that can benefit from an optimal primary fuel mix. Another critical aim is to try and ensure energy security.

Gas Sector

Natural Gas Production and Sector-wise Consumption: Natural gas accounts for 71 per cent of the commercial energy fuelling power, fertilizer, industrial, commercial and domestic consumption of the country. Till now, 27 gas fields have been discovered in the country. The domestic gas production is divided between public (Petrobangla) and private producers (International Oil Companies). According to the latest

estimation of Petrobangla total initial gas in place (GIIP) is 39.82 trillion cubic feet (TCF), of which 28.23 TCF is recoverable in proven and probable categories. From 1960 to June 2020, total 17.79 TCF gas was produced cumulatively and leaving recoverable 10.43 TCF. Status of gas production and reserves is presented in Table 5.10. It is evident that gas reserves are depleting and will be requiring enhanced exploration in future.

Table 5.10: Current Natural Gas Situation, 2020

Sl. No.	Items	Quantity
1.	Total Number of Gas Fields (June 2020)	27
2.	Number of Gas Fields under Production (June 2020)	20
3.	Total Number of producing Wells (June 2020)	113
4.	Total initial gas in place (GIIP)	39.8 TCF
5.	Total Reserve of Extractable Gas (Proven + Probable)	28.23 TCF
6.	Total Consumption of Gas (up to June 2020)	17.79 TCF
7.	Total Reserve Remaining (Proven + Probable) (June 2020)	10.43 TCF
8.	Daily Gas Production (as of June 2020) including RLNG	3038.9 MMCFD
9.	Production by Petrobangla Companies	880.6 MMCFD
10.	Production by International Oil Companies (IOCs)	1644.5 MMCFD
11.	R-LNG	513.9 MMCFD
12.	Present Daily Gas Demand	About 3700 MMCFD
13.	Gas Production increased from 2009 to 2019 including R-LNG	About 1294.9 MMCFD

Source: Energy and Mineral Resources Division

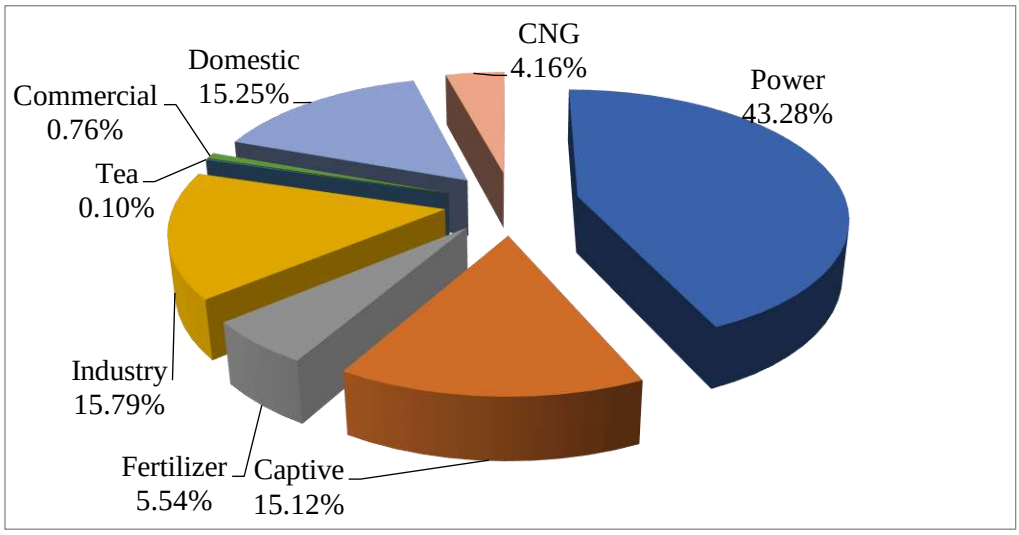
It is evident from Table 5.11 and Figure 5.9 that power sector is the major consumer of gas followed by industry sector (both industry and captive). The other major demand sources were domestic users, followed by fertilizer and CNG stations. The tea estates along with commercial users had also been using gas as energy source.

Table 5.11: Production of Natural Gas and its Consumption by Sector (in billion cubic feet)

FY	Production	Consumption									
		R-LNG	Power	Captive Power	Fertilizer	Industry	Tea Estate	Com.	Dom.	CNG	Total
2009-10	703.6		283.3	112.6	64.7	118.8	0.8	8.1	82.2	37.2	707.6
2010-11	708.9		275.8	121.6	58.9	122.1	0.8	8.5	87.4	38.5	713.6
2011-12	743.7		302.3	124.2	58.5	128.3	0.8	8.6	89.2	38.3	750.4
2012-13	800.6		328.8	134.1	60.0	135.7	0.8	8.8	89.7	40.2	798.1
2013-14	820.4		337.4	143.8	53.8	141.9	0.8	8.9	101.5	40.1	828.1
2014-15	892.2		354.8	150.0	53.8	147.7	0.8	9.1	118.2	42.9	877.3
2015-16	973.2		399.6	160.8	52.6	156.0	0.9	9.0	141.5	46.5	966.9
2016-17	969.2		403.6	160.5	49.1	163.1	1.0	8.7	154.4	47.0	987.3
2017-18	968.7		398.6	160.5	43.0	166.6	0.9	8.2	158.0	46.2	982.0
2018-19	961.7	116.0	450.9	157.5	57.7	164.5	1.0	7.9	158.9	43.4	1157.8

Source: BER 2019 & Petrobangla, Energy and Mineral Resources Division

Figure 5.9: Category-wise Gas Consumption FY 2018-19



Source: Petrobangla

Demand Forecast for Natural Gas

In the year 2017, the 'Gas Sector Master Plan of Bangladesh' has been prepared up to the year 2041, which is an update of the 2006 plan. The primary aim of the present GSMP 2017 is to update the GSMP2006 to align it with Bangladesh's current infrastructure development priorities and guide the development of the sector. As electric power sector is one of the major consumers of natural gas, in preparing GSMP coordination has been carried out with the Power Sector Master Plan of Bangladesh and the team behind it. According to the latest GSMP 2017, three Gas demand scenarios have been analysed considering different GDP growth. Among the scenarios, '**Scenario-C' is** considered as basis for further analysis. And according to Scenario-C, total gas demand will be 4,520mmcfd in 2020-21, 5257mmcfd in 2025-26, 6228 mmcfd in 2030-31, 7532 mmcfd in 2035-36 and 8346 mmcfd in 2040-41. However, connection for domestic and commercial users has not been allowing right now as per the Government decisions.

Table 5.12: Sector-wise Average Gas Demand Forecast (in mmcfd)

Sector	2020-21	2025-26	2030-31	2035-36	2040-41
Power	2197	2315	2468	2950	2991
Cap. Power	480	283	167	99	58
Fertilizer	316	316	316	316	316
Industry	925	1575	2302	2994	3613
Domestic	425	557	721	867	994
Commercial & Tea	38	38	38	38	38
CNG	139	173	216	269	335
Total	**4520**	**5257**	**6228**	**7532**	**8346**

Source: Gas Sector Master Plan Bangladesh 2017 (Scenario C)

Liquefied Natural Gas (LNG): In order to meet demand-supply gap and future growth of energy, the government has taken steps to import LNG. Two FSRUs (Floating Storage and Re-Gasification Units), each having storage capacity of 1,38,000 cubic meter LNG has already been installed. The re-gasification capacity of each FSRU is 500 MMSCFD. The first FSRU with a processing capacity of 3.75 million tons

per year was installed by US based Excelerate Energy Bangladesh Limited (EEBL) and it has already come into operation in August 2018. The second FSRU, with similar capacity, was installed by Summit LNG Terminal Co. Ltd. and was commissioned in April 2019. Both FSRUs are in the Bay of Bengal near Moheshkhali, Cox's Bazar. Government has also a plan to set up an onshore LNG Terminal at Matarbari, Cox's Bazar with a capacity of 7.5 million tons per year having an expansion provision up to 15 million tons per year. Before construction of onshore (Land Based) LNG terminal, Government has decided to conduct Feasibility Study to attract the investors in construction of the terminal on BOOT basis. Bangladesh has already signed a long term (15 Years) LNG Sales Purchase Agreement (SPA) with Ras-Laffan Natural Gas Company Limited (3), Qatar to supply 1.8 to 2.5 MTPA of LNG. Another long term (10 Years) SPA has been signed with Oman Trading International (OTI), Oman to supply 1.0 MTPA of LNG. Besides, Master Sales Purchase Agreement (MSPA) has been signed with 14 short listed LNG suppliers/traders to supply LNG on Spot basis.

Coal:

In Bangladesh 05 coal fields have so far been discovered. The total reserve in these 5 coal fields is about 7,962 million tons, and as of June'2020 total 11.78 million tons of coal has been extracted. 525MW electricity is generated and supplied to national grid, using this coal. At present, about 1 million metric tons of coal is being produced annually from the only coal mine at Barapukuria, Dinajpur. In March'2020; a feasibility study has been completed to develop another underground coal mine at Dighipara, Dinajpur with an average target production of 2.8 million tons of coal per year. To meet up the coal demand for power generation from domestic sources, Petrobangla has a plan to develop other two coal fields at Jamalganj and Khalaspir by the year 2041.

As part of strategy it has been emphasized under PP 2041 that it would be necessary to extract more domestic coal for long term energy security. Domestic coal is superior in quality compared to imported coal. Development of already discovered coalfield requires a large initial investment, which will yield a high return in future. On the other hand, the use of imported coal requires heavy investments in port, storage and transport infrastructure. So, a phased approach will be used. Several programmes are underway, like the Rampal Power Project using coal imported from India, and the Matarbari Coal Transshipment Terminal (CTT).

Issues in Oil Sector:

Petroleum Products: Bangladesh Petroleum Corporation (BPC) imports, acquires, stores and markets petroleum products. It develops and maintains storage facilities to preserve sufficient stock of petroleum products. The current storage capacity of petroleum products is around 1.33 million metric tons. BPC has taken several initiatives, including setting up a new unit of the existing refinery (ERL Unit-2) of the 'Eastern Refinery Limited (ERL)'. and initiating several pipeline projects to improve supply capacity. Information regarding imported refined petroleum products during FY2014-15 to FY2018-19 is shown in Table 5.13.

Table 5.13: Import of Refined Petroleum Products

FY	Diesel, Octane and Jet A-1 Quantity (Metric tons)	Furnace Oil Quantity (Metric tons)
2014-15	3403890	691705
2015-16	3337426	335150
2016-17	3871432	521199
2017-18	4892089	650540
2018-19*	2723289	230593

Source: BER 2019 & Energy and Mineral Resources Division *Up to February 2019.

Subsidy for Petroleum Products: Bangladesh Petroleum Corporation (BPC) imports crude and refined oil every year according to country's demand. The international petroleum market is volatile, and it is important to be able adjust prices accordingly. But, BPC had traditionally incurred losses due to non-adjustment of oil price in the domestic market in conformity with increases of oil price in the international market. As a result, government had to provide large annual subsidies for importing petroleum products during those periods. Since November 2014, the price of oil has fallen in the international market. So, government has not been giving any subsidy in the FY2015-16, FY2016-17 and FY2017-18. During, FY2018-19, however, BPC again started making loss in furnace oil and diesel as international oil prices gradually started to creep up. Recently because of demand collapse due to the COVID 19 crisis and also an unprecedented international price war saw collapse in international oil price. This is expected to continue in the forthcoming future, and strategies, including price deregulation needs to be pursued.

Issue of Adulteration in Imported Oil and negative on power plant efficiency: Currently, the power and transport sectors are the largest consumers of imported oil. The quality of the imported oil play is a critical factor in improving efficiency, as even very limited variation in fuel oil specifications such as specific gravity; viscosity and water content can have serious effects on the power plants output. Any substandard fuel for power generation can directly affect the tariff received from end consumers in terms of increased FO consumption and increased O & M cost owing to the deteriorated imported fuel oil. Similarly, substandard oil when used in transport sector will also cause increased wear and tear of engine, thus enhancing the O&M cost coupled with decreased mileage. Thus, lack of quality and quantity assurance in terms of procuring fuel oil is one of the serious concerns in this sector, and needs to be addressed and rectified during the 8FYP period. The PP2041, as part of long-term strategy, has expressed intention to broaden the role of the private sector in the development of the oil and gas markets through deregulation and pricing reforms. Private provision of these services while promoting investment, increasing competition and consumer choices, can also reduce scope of adulteration.

Develop the required infrastructure for primary fuel to bring efficiency in power production: LNG and imported coal will grow to be the key primary fuel source for generating power; and both are heavily infrastructure-dependent fuel options. Major investments will be needed in ports, storage facilities, rail and road infrastructure to connect these imported fuels to the power plant. Without proper coordination, the related power investments will fail to deliver.

Electricity through Renewable Energy (RE): There is a growing trend in the international arena to promote renewable energy, as part of energy security as well as greenhouse gas emission reduction. Many countries have adopted renewable energy promotion policies, such as feed-in-tariffs (FIT) and various

incentives. Bangladesh also has taken different steps to produce environment- friendly electricity from renewable energy. The Vision 2021 and COP-INDC also promise that Bangladesh's renewable generation capacity share will become 5% by 2015 and 10% by 2021. After the formulation and start of implementation of renewable energy policy from 2009, the government had established 'Sustainable and Renewable Energy Development Authority (SREDA)' in 2014 under Sustainable and Renewable Energy Development Authority Act, 2012 to facilitate sustainable energy i.e. renewable energy as well as energy efficiency. According to the law, SREDA had been established for effective utilization and conservation of RE both in public and private sector.

The 7FYP had recognized that need for continued effort to accelerate the implementation of scalable power generation through renewable energy, considering the challenge of primary fuel. Government has set target to generate 10% of the total generation from renewable energy sources by 2021. It was particularly emphasized to help meet the demand in areas where providing grid-based supply would not possible. The Eighth plan will continue on the seventh plan focus on two main areas of renewable energy: solar and wind power. There is already significant success in the area of solar energy in home lighting. The roof top solar PV systems have been successfully introduced in the country. Table 5.14 shows the plan that had been taken up by SREDA for adding renewable energy during the 7th Plan period and start of the eighth plan period.

Table 5.14: Electricity generation plans form Renewable energy source (MW)

Technology	2016	2018	2019	2020	2021	Total
Solar	200	350	250	300	250	1470
Wind	2.9	150	350	300	300	1153
Biomass	0	6	6	6	6	30
Biogas	5	0.5	0.5	0.5	0.5	7
Hydro	230	1	1	2	2	236
Total	**437.9**	**507.5**	**607.5**	**608.5**	**558.5**	**2896**

Source: SREDA

As of 2020, 649.51 MW of electricity was generated from renewable sources. Additionally, 543 MW renewable projects had been under construction and another 1416 MW renewable projects had been in the planning stage. Therefore, in all likelihood, the 7FYP target for renewable energy will not be met. Several factors have contributed to this including continued subsidization of fossil fuel use and inadequate incentives to renewable energy, both of which have adversely affected demand and supply of renewable energy. There will be renewed effort to improve the focus and implementation of the RE policy during the 8th plan period.

Energy Efficiency (EE) and Energy Conservation (EC): The Government continued to accord high priority to the promotion of Energy Efficiency (EE) and Energy Conservation (EC) programmes during the Seventh Plan, with aim of achieving energy conversation targets of 15% by 2020 and 20% by 2030; putting in place energy efficiency and savings programmes for electrical and electronic appliances; and implementation of energy standard and energy star labelling program by BSTI. The government has formulated 'Energy Efficiency and Conservation Master Plan up to 2030', and 'Energy Efficiency and Conservation Rules and Action Plan', and numbers of interventions have been identified for implementation within stipulated time. A few of the specific achievements in improving energy efficiency

are as follows:

- ‘Energy Efficiency and Conservation Rules 2016’ has been formulated
- ‘Energy Audit Regulation 2018’ has been formulated
- ‘Energy Efficiency and Conservation Promotion Financing Project’ has been started to promote energy efficiency in industries as well as in residential sector through introducing energy efficient equipment, appliances and electrical gadgets at 4 per cent interest loan
- Credit facilities have been created in Bangladesh Bank for environment friendly and green industries
- Provision of Energy Efficiency and Energy Conservation has been included in ‘Bangladesh National Building Code
- Preparation and implementation of Country Action Plan for Clean Cook Stove
- Implementation of Improved Rice Parboiling System
- Formulation of Net Metering Guidelines-2018
- Formulation of Guidelines for the Grid Integration of Solar Irrigation Pumps-2020

Energy Pricing and Subsidies

Fuel oil and gas also have major pricing issues; especially the big challenge is the pricing of diesel. Despite numerous adjustments, the gap between average cost and price is substantial. Bangladesh Petroleum Corporation (BPC) imports crude and refined oil every year according to country’s demand. There are ups and downs of refined and crude oil prices in international market. The government did not need to give any subsidy between FY 2016 and FY 2018 because of falling global oil price. However, during FY2019, the prices started to rise and BPC again started making loss in furnace oil and diesel. So, the challenge remains of being able to adjust the diesel, furnace oil and other products smoothly and regularly to the changing market conditions; as being effectively done in other countries including neighbouring South Asia.

In the case of gas, there has been no net financial loss because gas is produced domestically. But gas prices are very low in relation to the opportunity cost in terms of imported-fuel equivalence. However, in the coming years there will be increased use of imported LNG with domestic gas reserves depleting in production of electricity. The LNG price will face the international price volatility, and will be requiring regular price adjustments for sustainability. The 7th Plan had also encouraged use of LPG to reduce pressure on domestic gas. There is growth in LPG, replacing domestic piped supply of gas, working more on market principles.

Given the volatility of the international oil and gas markets, there will always be the high risk of falling back into the oil subsidy regime, unless there are regular price adjustments. With the added dimension of LNG imports and use of LPG, energy pricing will continue to be a major policy issue relating to proper pricing of electricity, fuel and gas. During the 8th Plan period price adjustments by BERC will need to be pursued so that need for subsidy can be avoided, and resources used for necessary investments in the energy sector. Proper pricing of fossil fuel energy products is also essential to promote production and use of clean fuel options and to meet the environmental goals of Bangladesh including its commitments to the Paris Accord on Carbon Emission Reduction.

5.2.3 Progress of Investment in Power and Energy

The Seventh Plan strategy for financing energy investments involved both public investment through the ADP and private investments. Regarding private investment in energy there has been significant success in the power sector, but less so in primary energy. As was noted in Section 5.2 above, there was considerable private investment in the power sector during the Seventh Plan. While rental power dominated the sixth plan, it was IPP during the seventh plan. Bangladesh Energy Regulatory Commission (BERC) has created three development funds in power and energy sector. These are (1) Gas Development Fund (GDF), (2) Power Sector Development Fund (PSDF) and (3) Energy Security Fund (ESF) in consultation with all the concerned stakeholders. The cumulative deposits in these funds up to May 2020 are Taka 36,894 crores (GDF 14,957 crores, PSDF 10,252 crores and ESF 11,685 crores). So far 39 projects (including partly financing to Pyra 1,320 MW Project and LNG bill payment) have been undertaken at a cost of Taka 22,502 crores. These funds are playing an important role in increasing the financing capacity of the energy sector. In primary energy, there were very limited new investments in offshore oil and gas exploration. Most new investments in primary energy were funded publicly through the ADP. There are implementation constraints, which need to be resolved during the Eighth Plan.

5.2.4 Progress with Institutional, Policy, and Regulatory Reforms in Energy

The energy sector is regulated by Bangladesh Energy Regulatory Commission (BERC) to look after the tariff of the consumer and industry. The Government has adopted polices and legislations to set up long-term power development plan in order to reduce electricity production cost and ensure sustainable development of power sector. BPDB is in the process of identifying Strategic Business Unit (SBU) for its generation and distribution sectors as a new reform initiative. Functional and financial performance of the SBUs will be operated like components of a corporate body and will be evaluated separately under the legal framework of existing BPDB structure.

***Benchmark Pricing System for increasing private participation in power generation*:** The BERC has now introduced *"benchmark pricing system"* for enhancement of private participation in the power sector. Benchmark pricing is determined for other fuels such as gas, furnace oil, coal, dual fuel (gas, furnace oil) etc. This system has been introduced so that domestic and foreign private sector can easily participate to power generation. This is a step, which is the first in South Asia. Along with higher levels of investment, there continues to be significant progress with power sector reforms.

The unbundling of electricity system along functional lines, substantially improved O&M practices, computerization of metering and billing practices, follow-up on bill payments and accounts receivables suggest considerable improvement in sector governance and management practices. The establishment and functioning of the BERC, the successful implementation of the IPP policy and the increase of power trade with India, and initiation of process for power import from Nepal and Bhutan are also important indicators of on-going institutional changes that have already a very positive effect on power sector performance over the longer term.

Government also has taken action to reduce the required documents and steps for getting electricity connection. As a result, it is possible to obtain electricity connection by 7 days for domestic connection and 28 days for industrial connection. In order to maximize operational efficiency" Government has also

prepared a draft policy for private participation in transmission sector. Government has also formulated net metering policy to encourage consumer to sell surplus electricity generated from rooftop solar system.

The following two Acts, have been adopted during the 7FYP

1. Electricity Act, 2018 has been enacted in the Parliament.
2. Quick Enhancement of Electricity and Energy Supply (Special Provisions) Act, 2018 (Ammended upto 2021).

Nevertheless, there are several areas where reform efforts need to continue, including: further unbundling where feasible along the functional line; strengthening generation and distribution companies already in place to improve operating performance and customer satisfaction; implementing the power sector restructuring plan; adjusting electricity price gradually to average cost level; and strengthening BERC to be able to perform its agenda on licensing, energy pricing, quality of utility performance including energy efficiency, and consumer satisfaction/dispute resolution.

In the area of generation, the power generation expansion strategy (PSMP 2010) was updated to PSMP 2016. There is a need to continue revisiting that plan to check for relevance in light of implementation experience of the past 4 years and the realism of the generation plan in the context of realities in the primary energy sector. Given the uncertainties in the supply side of primary energy, contingent planning will be necessary to have back-up power generation plans that respond to these uncertainties.

5.3 EIGHTH PLAN STRATEGY FOR POWER SECTOR

The development of the power sector, which continued to remain on top priority during seventh plan, will continue to remain so during the Eighth Plan period. In particular, it had received the necessary ADP allocations and the amount of resources increased progressively during the seventh plan, with positive results as shown in Section 5.2 above. Important successes have been achieved in the power sector in terms of new installed capacities and associated supply of power. In primary energy new investments were modest, but the progress with diversifying and increasing the supply of primary fuel has been very limited, though some large-scale coal fired power plants are under different stages of implementation and that imported LNG having been added to the pipeline.

The strategy for the power and primary energy sector during the Eighth Plan will build on the lessons of experience of the implementation of the Seventh Plan. An important priority will be to address any implementation gaps of the Seventh Plan. During the eighth plan period the effort will be to build a fiscally sound efficient least cost power generation system, with increasing renewable energy as a source for power production. In this pursuit of least-cost generation, the priority should be efficiency gain and rightly balanced fuel mix. As pointed out earlier, there has been a growing surplus generation capacity. The government wants to move towards least-cost generation scenario and has been implementing a number of large size power plants that includes coal that is cheaper than HSD and Furnace Oil (Table 5.15 below). There are both a number public and private rental plants that use HSD and Furnace Oil-type high cost fuels. Besides, there is also small scale IPPs, which may not be efficient. These need to be replaced by not only more efficient and least cost fuelled power generation, but also by higher use of renewable energy-based power generation. A big challenge to overcome will be ways to retire inefficient power generation and

taking a fresh look at the PPA's because of the huge payment of capacity charges, and also the large gap that now exists between available capacity and actual use of that capacity. One big challenge in the primary energy sector continues to be the absence of a strategic long-term view about how the growing needs of primary fuel will be met in the next 10-20 years. Policy on primary fuel, particularly coal policy is urgently needed. The other important priority will be to address some of the major institutional constraints that have hampered implementation of energy projects. There also needs to be reform of the PPP strategy with a view to achieving stronger progress with investments in primary energy during the Eighth Plan. Despite progress, power and energy pricing policies continue to be managed administratively. This will need to change as country moves towards with greater reliance on market forces that will promote greater private investment in the oil market, conserve energy, eliminate the fiscal burden and support the production and use of clean energy.

5.3.1 The Strategy for Power Sector

The 8FYP follows the growth path of the PP2041 that calls for a further acceleration in GDP growth during the 8FYP. Although COVID-19 has put a temporary halt to growth acceleration, it is expected that the growth momentum will resume from early calendar year 2021 as global growth also resumes. So, the demand for power will continue to grow at 8% plus rate during the Eighth Plan period. Country has invested heavily in power generation capacity, leading to surplus situation compared to demand, improvement in transmission and distribution resulting in more than 97% of population's access to electricity. This progress was achieved through a strategy that combined greater public investment in electricity, encouraging private supply of power, engaging in power trade with India and improving sector efficiency by sharply reducing T&D losses.

While Bangladesh has definitely made major strides in making substantive and visible improvements in power generation and supply, there continues to be challenges which will need to be addressed in the 8FYP, particularly the need for improving efficiency and reducing costs so that power can competitively be supplied to its industries, particularly export industry, along with agriculture and other commercial use. In this context Bangladesh has to consistently improve on its global standing in overall infrastructure supply quality and in particular the electricity access quality, compared to some of its competing countries, as reflected in the Global Competitive Index (GCI) published by WEF.

The strategic framework for power sector: Two major performance gaps in the power sector are: (a) increasing cost of electricity production and (b) continued operational deficits in the power sector. The Eighth Plan strategy needs to recognize these areas of concern and take adequate measures to correct them. So, the strategic focus needs to not only having a generation pipeline that will be meeting the demand, but also to ensure better quality and efficiency in (a) generation through ensuring optimal primary fuel mix, including efforts to make increased use of domestic coal and gas through mining and exploration; (b) transmission and distribution of electricity through further reduction of T&D losses; and (c) maximizing use of renewable energy and energy trade. The target will be to achieve an efficient least- cost production in the long run, transmission, and distribution system. These factors also played an important role during the 7FYP. So, the 8FYP will broadly continue the strategy adopted during the 7FYP, but with focus in bridging all identified gaps so that these are supportive of goals and strategies laid out in PSMP 2016 and PP 2041.

The 8FYP strategy comprises of following components:

1. Move to an efficient least-cost power production structure based on (a) an optimal and efficient primary fuel mix; and (b) transmission, and distribution of electricity through further reduction of T&D losses;
2. Continue to enhance the generation capacity to match expansion of demand from all segments of the economy, particularly industry and manufacturing, so as to ensure supply of unhindered quality power from the grid, with 100% population connected to quality electricity supply.
3. While moving to a least-cost power production system, have regular power tariff adjustments to ensure long term sustainability of power generation and moving away from budgetary subsidy that is now prevalent.
4. In order to leverage higher levels of investments, undertake necessary reforms that can create a more conducive and healthier environment for the participation of private sector (IPPs and PPPs), domestic and foreign, in energy sector development under the supervision of effective regulatory authority.
5. Enhance the exploitation of gas, coal, renewable resources, increased energy imports particularly hydropower from neighbouring Bhutan and Nepal in order to optimize the energy mix and reduce the dependence on imported furnace oil and HSD. In this regard hydropower, given its abundance in the neighbouring countries and expected cheaper cost of production, will be given prime importance among other renewable resources. The other renewable resources include wind power, solar energy, biomass and waste to power, where the core strategic goal will be to make the energy available at optimum rate to all consumers.
6. Address the identified issues including gas crisis, poor thermal power plant efficiency, and adulteration in furnace oil, fiscal prudence and sustainability.
7. Improve Energy Efficiency & Conservation through demand side management.
8. Establishment of supply line network for the transportation of petroleum in quick, safe, efficient and environment friendly way all over the country.
9. Establishment of a number of energy hubs in the country including Matarbari Ultra supercritical Coal-fired Power Plant centric energy hub.

Government had also set target to generate 10% of the total generation from renewable energy sources by 2021 with total electricity generation capacity now being over 23,548 MW (including captive and offgrid renewables), and electricity coverage reaching 97% of the population with per capita generation increasing to 512 kwh. The Government earlier through its PSMP 2016set the stage to build on these achievements and put in place a strategic plan under which power generation capacity target was set at 24000 MW by 2021, 40000 MW by 2030 and 60000 MW by 2041. A revised "Power Generation Plan 2030" has now been prepared from 2020 to 2030 considering PSMP-2016, progress during the 7FYP, Sustainable Development Goals (SDG) and change of planning perspective of the power sector. The power generation targets for the 8FYP have been prepared based on the revised Power Generation Plan up to 2030. The PSMP-2016 shall soon be updated by JICA considering demand, generation capacity, reserve margin etc.

Move towards the strategy for achieving the least cost energy mix for generation during the 8th plan period. The effort during the 8FYP will be in getting to a position of having an efficient fuel mix, following guidelines of PSMP 2016, to bring more efficiency while reducing average cost of power generation, with the more efficient larger plants running while closing out the less efficient plants, particularly the inefficient liquid fuel rental plants and the small sized IPPs. The choice of primary energy has a determining influence on the unit cost of electricity. As shown in Table 5.15 below, the unit cost (Tk./KWh) for both Diesel and FO stands way out; and any reduction in liquid fuel generation capacity will impact positively in reducing the average unit cost. The PSMP 2016 has proposed an optimum energy mix scenario by way of maximizing what has been termed as the 3E value (the total of the economic, environmental and energy security values) of the power source composition of the energy mix. Since least cost domestic power generation depends upon choice of primary fuel, the success of least-cost power generation strategy depends critically upon the availability of primary fuel.

Table 5.15: Unit Cost of Generation (Tk./per kWh)

Fuel Type in Generation	Unit Cost (Tk./KWH)
Furnace Oil (FO)	17
HSD	26
LNG	13
Imported Coal	8.1
Domestic Coal	6
Domestic Gas	2.57
Hydro	1
Solar Power Plant	12
Imported Power	6.48

Source: Power Division

Broadly speaking gas-based units and coal-fired plants tend to have much lower average unit cost of production than those based on fuel oil (furnace oil and diesel). Imported power is also a very attractive option, which has been growing during the 7FYP, is expected to further increase during the 8FYP.

The PSMP 2016 strategic focus is the systematic expansion of relatively inexpensive large-scale coal power generation and international connection with the neighbouring countries as an exit strategy from the reliance on expensive oil-based rental power. However, due to limitation of transmission capability among the zones/regions, liquid fuel-based power plants continue need to be constructed in deficit areas, which is costly and detrimental to the environment. It is of utmost necessity to enhance grid connectivity among the zones/regions to get rid of such situation. The plan also assumes nuclear-based power and optimizing of available renewable energy source in its power generation strategy. Renewable energy is increasingly becoming cheaper to produce and so should form important part of future fuel mix strategy.

Another strategic action that will be untaken during the 8th plan will be to improve financial viability of all the power utilities through regular prices adjustments. All aspects of cost reductions including further reduction in T&D system losses and achieving the strategic goal of least- cost power generation will help contain the cost of power generation and power prices.

Mobilizing adequate financial resources, both public and private though IPPs will be critical to achieving the strategic goals: Timely access to adequate financing will be critical to achieve the power generation targets. This will have to come from both public and the private sector. The success in mobilizing private finance for investments in the power sector through IPPs should be further leveraged. While under the 7th Plan it had been expected that larger and efficient power plants will be built (particularly by the private sector), this has not happened; and Bangladesh continues to have to keep the power supply services from the expensive rental plants at a high cost. During the 8th Plan period and beyond focus would be to completely move out of the rental plant contracts and also the inefficient small scale IPPs, and move the desired least-cost power production regime where efficiency and economy of the power plants will the only consideration. This will also mean that there needs to be good competition in the bidding process so that incentives can be built in for ensuring increased efficiency.

***Power Generation Program now under implementation and some to be completed during the Eighth Plan Period*:** In order to meet future demand 44 new power plants have been under various stages of construction with a total capacity of 15924 MW. Some of these will be completed during the Eighth Five Year Plan. As presented in Table 5.16 below, 16 of these power plants are public sector with 9065MW capacity, and 28 are in the private sector with 6,859MW capacity. It is expected that most of these power plants will go to power generation by 2023.

Table 5.16: Power Generation Projects (Under Construction)

Sector	No. of Projects	Capacity (MW)
Public Sector	16	9065
Private Sector	28	6859
Total	**44**	**15924**

Source: BER 2019

Proposed New Generation during the 8th Plan period:

During the 8th Plan period, the Power Division plans to generate approximately additional 15,700 MW (inclusive of imports but exclusive of renewable energy) of power. The Government has set in the following targets for the 8th Plan.

Table 5.17: Power Generation Targets during 8th Plan (including Captive and RE)

	Baseline (FY2020)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)
Installed Generation Capacity (MW) (including captive and RE)	23548	24000	26000	28000	29000	30000

Source: Power Division

New projects with diversified fuel-mix identified for implementation during the 8th plan period. An important feature of the power generation plan during the 8th Plan period the changing share of fuel mix used for generation. While there will be numbers of gas-based plants, there are also large sized coal fired plants both in the public and private sector**.** The share of imported coal will be increasing during the 8th Plan period and that of liquid fuel declining, though it will still be at a substantial level. The share of gas,

however, will continue to be the largest fuel source, with imported LNG being recently added to the system augmenting gas- based power generation capacity. LNG, while is less costly than liquid fuel and also relatively cleaner source of energy, is still relatively expensive than domestic gas and coal.

The increased use of coal raises environmental challenges. The government is very much aware of it taking measures to ensure environment rules and regulations are followed in case of power generation. In order to minimize environmental impact and thereby reducing carbon emission, coal-fired power plants will be using latest ultra-super critical technology. In spite of minuscule contribution to GHG emissions, considering significant impact of climate change to Bangladesh, Government has a strong commitment to play its part in reducing emission now and in the future.

The increased reliance on imported coal and LNG options also has challenges in terms of availability, investment costs and domestic handling logistics. In order to derive the maximum cost advantage from coal, it will be important to also start accessing the domestic coal base; though the most important constraint in this regard is the inability to adopt and implement a domestic coal policy. This period will also witness increase in import of electricity from neighbouring countries. While, prospects for power trade are good, but there are also challenges as had earlier been discussed that will be factored in.

Nuclear Power: A major addition in fuel use will be nuclear power whose generation is expected to start by end of the 8th plan period. Rooppur Nuclear Power Plant is one of the top priority projects of the government. Considering geological, geophysical and meteorological data of Rooppur Nuclear Power Plant site, the Bangladesh Atomic Energy Commission (BAEC) has conducted feasibility studies. Meanwhile, the First Concrete Pouring (FCD) of Unit 1 and Unit 2 of the Rooppur plant have been completed, with the expectation that the Unit 1 will be able to generate 1200 MW of power and the Unit 2 another 1200 MW at a later date, adding a total of 2400 of nuclear power by 2024. There is also plan for adding 2,362 MW renewable energy, which is given in Table 5.18 below.

Table 5.18: Grid based Major Renewable Energy Projects

	Target (FY 2021)	Target (FY 2022)	Target (FY 2023)	Target (FY 2024)	Target (FY 2025)	Total
Solar	127	542	895	400	50	2,014
Wind		60	230		10	300
Waste-to-Energy		6	42			48
Total	127	608	1,167	400	60	2,362

Need for rationalizing power production to increase capacity usage. It is necessary for power sector utilities to strategically maintain reserve margin, which would mean always having more power available than requirement so as to ensure system reliability. Having in place adequate reserve margin becomes a necessity because of the difficulty of accurately forecasting future electricity demand, and also because adding new generating capacity can take several years. However, there is also a negative side to it, as more reserve margin will require huge amount of investment for not only for constructing power plants, but also for paying capacity and other applicable charges. If it is too far off the actual demand, then there is the large opportunity cost arising from unused reserve margins. So, reserve margin should be determined through meticulous demand forecast and financial analysis.

It has already been shown in Section 5.2 above that over the years the actual generation has been increasingly falling short of the installed capacity. This has resulted in large sized capacity payments to private power producers for not buying their power. This can have serious adverse financial implication on PDB that could challenge the sectors long-term financial sustainability. As an example, according to PDB website, while the actual day peak on 02/06/2020 was 9165 MW and the evening peak was 10,228 MW, that is averaging less than 10,000 MW, the power generation capacity was 19,570 MW (exclusive of captive and RE power). With inclusion of captive and RE the total installed capacity is 22,787 MW. This means that actual generation has been about 50% of installed capacity relative to the peak demand points. This gap, which has been increasing between the years, as evident from Table 5.1, is likely to grow bigger with some large sized power plants nearing completion. By 2021 the generation capacity has been projected to increase to 24,000 MW (Table 5.17) and demand to 19,000 MW, given the present peak demand of around 10,000 MW.

One important area will be to look into the possibility of retirement and of the higher cost and less efficient rental and SIPP power plants, as well as any inefficient public sector power plants. The total rental, and SIPP capacity is 1,754 MW, which could be actively considered for retirement. The government plans to increase capacity to 30,000 MW by end of 8th Plan period (Table 5.17).

8FYP for Renewable Energy: Climate change is a global problem due to high levels of greenhouse gas emissions and almost every country in the world has moved away from conventional energy sources to encourage renewable energy based power generation in order to find sustainable solutions. There is a general consensus around the world that there is no alternative to renewable energy- based power generation to ensure long-term development.

Accordingly, achieving a more sustainable energy program is a desired goal of the government and efforts underway to increase share of renewable energy (RE) in share of fuel mix during the 8th plan and beyond. With growing share of coal in generation, the exploitation of renewable energy resources with low environmental burden will be needed to help counter balance negative impacts from climate change perspective. The progress with implementation of RE, however, has been limited during the 7th Plan period. The government has set an ambitious target of achieving 10% of total power generation capacity from renewable energy. This is an important target and a necessary of sustainable development. Strong efforts will be needed to secure this as the performance on RE was very weak in the 7FYP.

Regulatory and policy support for RE: In this regard, the government has been taking different policy and regulatory actions to facilitate scope for increased production of environment- friendly electricity from renewable energy. Besides formulation of renewable energy policy in 2008, the government had the 'Sustainable and Renewable Energy Development Authority (SREDA)' established in 2014 under Sustainable and Renewable Energy Development Authority Act, 2012. One key strategic focus proposed under the PP2041 strategy will be the encouragement of RE supply by private producers, including supply to the grid as well as direct sales to households. SREDA has been facilitating and regulating private and public investments in renewable energy. There is a decision that the commercial RE projects were to be implemented by the private sector (IPPs), while social projects by the different ministries and agencies as a part of social responsibility of the Government.

Some of the identified commercial projects that can be implemented by the private sector are: (a) Solar Park (grid connected); (b) Solar Irrigation; (c) Solar Mini-grid/micro-grid; and (d) Solar rooftop. The social projects are: (a) Rural health centres; (b) Remote educational institutes; (c) Union e-Centres; (d) Remote Religious Establishment; (e) Off-grid Railway Stations; and (f) Government and Semi-Government Offices in the off-grid areas. This will then be setting stage for a more visible shift to the active use of renewable energy and a concomitant reduction in the consumption of fossil fuel, following the global trend, with the aim of increasing the use of zero-emission power sources.

The solar housing schemes and solar irrigation supported by IDCOL are identified as important examples of non-grid supply of renewable energy. At present, 649.51 MW of electricity is being generated from renewable sources. Furthermore, 543.08 MW renewable projects are under construction and 1416.41 MW renewable projects are under planning. For the 8th Plan period effort will be made to meet the target of 10%through IPPs for commercial projects. Bangladesh is currently preparing the competitive bidding by IPPs, drafting FIT and providing other incentives (mainly financial ones) for renewable energy businesses. As Bangladesh increases the grid-connected renewable generation capacity, network and operation capacity will also need to be improved.

There have also been initiatives by BPDB and through IPPs to increase renewable energy generation, by way of solar power projects, utility scale PV projects, and wind energy projects.

Waste to Energy: There is no alternative to science-based waste management in building every city corporation and major municipality of the country as a modern, healthy and liveable city. Thus, BPDB has undertaken the adoption/implementation of waste-to-energy (WTE) projects in various city corporations / major municipalities in the IPP sector as a ground-breaking step of the government for power generation from waste with utmost importance on waste management. The waste-to-energy (WTE) project proposal in Narayanganj City Corporation has already been approved by the government and the contract is in the process of being signed. Negotiation of WTE project under Dhaka North City Corporation has been completed and negotiation of WTE project under Dhaka South City Corporation is under process.

Power Trade: Use of power trade will continue to be a major element of the electricity generation strategy for the Eighth Plan. The potential for power trade between Bangladesh and its north-eastern neighbours is large, and MOUs already exist in this regard. Bangladesh has already made encouraging beginning with power trade with India. Building on this experience, the Eighth Plan will further expand trade with India and also explore hydropower import opportunities with Nepal and Bhutan.

Bangladesh is in a good position to exploit the ample regional hydropower potential and import it through the cross-border transmission network. On-grid large-scale hydropower development can be an effective measure to increase share of renewable energy source for power. A JICA survey shows the cross-border hydropower potential available to Bangladesh is 3,500-8,500MWin 2030, mainly from Nepal and northeast India. Thus, it is expected that Bangladesh import electricity out of such hydropower generation. A road map to increase and stabilize the imported power has been proposed in PSMP 2016, which will be strategically considered and implemented during the 8th Plan period. There are, however, certain challenges/risks, linked to power import, and will need to be addressed, and risk-mitigating measures will have to be put in place. In this context some of the measures suggested in the PSMP 2016 document will be considered.

Coordinating Transmission and Distribution Programmes with Generation: During the 8th Plan period the Government will continue to maintain proper coordination of investment in transmission and distribution to ensure that the benefits of generation investments reach the people. Efforts will also continue to further reduce distribution system losses from 9.35 % in FY2019 to below 7.5 % by FY2025. To this end, improvement of the quality of the power supply, such as stabilization of network voltage and frequency, is a prerequisite, and so, large transmission and distribution development programmes will be needed to ensure uninterrupted power distribution and achieve the target of quality 24/7 power supply for all. The operating voltages of the Bangladesh power network system are below 230kV and 132kV, except for the 500MW HVDC link to India that started operation in 2014 at Bheramara. In the case of power transmission from hydropower stations located in Bhutan or Nepal through India, HVDC interconnections with a capacity of around 500–2,000 MW will be required in the north western part of Bangladesh. PGCB has made major progress during the 7FYP period in setting up of 400 kV HVDC Substation, 400/230/132 kV station, 230/132 kV Substation, and 132/33 kV Substation, specifically, up to 2025 about 3358 ct.km of new transmission lines. Required projects have been taken by the concerned utilities.

Electricity Transmission Plan: Electricity demand of Bangladesh is growing very rapidly. For meeting growing demand, the Government is giving priority for transmission network development as well, and in this regard plans to construct 3358 ct.km. This will include enhancing the transmission capacity from 132/230 kV to 400 kV, and about 1120 ckt km transmission line to be constructed for it during FY 2021-25, for or maximum power transfer. Besides, it has been planned to construct new 700 ct.km transmission line of capacity 765 kV from power hub being developed at Moheskhali to Dhaka, which will be completed by 2025

Distribution: A reliable distribution network is critical to provide desired quality of power to the end-user 24/7. It particularly is important for the manufacturing sector where sustained quality power supply from the grid can enhance productivity and competitiveness. Industry in general and manufacturing sector in particular will be a key driving force in forward the growth agenda as set out under the PP 2041. An integrated power distribution programme will need to be undertaken to increase the distribution network in order to bring 100% population under electrification by 2020 as well as improving the customer service. Government also wants to further reduce system loss and collect the outstanding bills, and provide 100% access to electricity to households.

Distribution utilities are now implementing computer-based technologies to modernize their design, planning, and maintenance and analysis applications in an un-integrated way. DMS (Distribution Management System), GIS (Geographical Information System) and SCADA (supervisory control and data acquisition) are appearing at an increasing rate in the language of the power distribution community. GIS integration with SCADA/DMS system requires a considerable investment in software development for system modernization and overcoming challenges. Additional business improvements would also be possible with the real-time SCADA data available along with critical data maintained by GIS. At present, all generation, transmission and distribution entities work separately to have GIS and SCADA, and it is recommended under PSMP 2016 the need to integrate all GIS and SCADA into single system and exchange information in a coordinated way. Moreover, it is further recommended to establish Smart Grid; for which, GIS and SCADA are the building blocks. These can ensure uninterrupted and quality power supply to the customers, as well as reduce system loss, pilferage and wastage. It is also recommended to convert the whole power system to Smart Grid. These are areas that will be pursued under the 8th plan and beyond.

To fulfil the demand linked to the SDG goal 7 a number of distribution projects have been identified for implementation during the period FY 2021-25, which include expansion of network, GIS implementation and SCADA installation. Besides there are also 36,590 MVA substations and 955 MVAR capacitor banks for reactive power compensation. The total investment estimated by Power Division for this is Taka 1150 billion during FY 2021-2025.

Rural electricity access and service delivery being improved: In order to achieve 100 per cent electrification, Bangladesh Rural Electrification Board (BREB) has been investing in development, expansion and up-gradation of existing distribution system to help achieve 100% access to electricity. As part of it, BREB has taken three projects on system up-gradation, one project for pre-payment e-metering, one project for overloaded transformer replacement, and another ten for Line Construction and Consumer Connection. These projects besides constructing/renovating 38,379 km new distribution line, and construction/ augmentation of 198 sub-stations, will help connect 21.4 lakh different category consumers and install 10 lakh pre-paid meters under rural electrification category.

Improving Operational Efficiency of Generation Plants:

Even though the 7FYP had laid emphasis, efficient operation and maintenance (O&M) of the running power plants continues to be a critical challenge. As pointed out in the PP2041, for a range of reasons, actual installed capacity has been higher than maximum power produced in any year. It is well recognized that for efficiently managed utilities excess capacity would be about 20%. In Bangladesh, this is now more than 33%, which is on the high side. This has impact of necessity of higher investment costs and higher average electricity prices. This larger gap between installed capacity and capacity required to produce maximum power in any year is explained by shortages in the availability of primary fuel, particularly gas, difficulties in coordinating maintenance schedule and other operating obstacles. The PP2041 has sought to address these concerns by improving operating practices in terms of timely availability of primary fuel, efficient maintenance practices and better management. The objective of PP 2041 would be to reduce the gap to 70% by FY2031 and to 80% by FY2041, so as to help lower the investment cost of power generation and the average electricity prices. During the 8FYP this PP2041 strategy will be implemented and a key target will be to improve the efficiency of the power plants with increased focus on O&M. Adoption and implementation of a proper O&M will continue to be of highest priority.

The Government recognizes that a unit of saving is easier than one unit of electricity production, and several new policies have been adopted to conserve power and improve the operational efficiency of the power sector. It has also undertaken a number of initiatives to ensure efficient use of energy, which will get implemented during the 8FYP. As part of meeting this objective, the Government has set the target of saving l5% of total energy consumption by 2021. Government has prepared Energy Efficiency & Conservation Master Plans up to 2030, Energy Efficiency & Conservation Rules 2016, Energy Audit Regulation 2018 and Action Plan to ensure Energy Efficiency & Conservation both at supply & demand side.

Improving Procurement: In the coming years there will be need to increase commissioning of larger sized power plants to help achieve the massive generation expansion strategy now under implementation, and to help bring efficiency and reduction costs of generation. So, efficient procurement decisions will be critical to ensuring timely implementation of new electricity investments, and the power utilities will need to

acquire the capability to timely and efficiently implement large power plant contracts. Rapid conclusion of procurement/contracting can help leverage cheaper and more efficient financing and bringing in large investments for both public and private sector implemented power projects. Having in place an institutional set up with a transparent and efficient procurement system is a sensitive issue for getting cheaper finance from multilateral donor sources. It is also equally important to get more competitive bids for IPPs. These will lead to building up power generation capacity based on efficiency and least cost considerations.

Capacities need to be strengthened to negotiate and monitor implementation of energy trade contracts with neighbours. Regional opportunities should be explored intensely to secure the energy requirement of the economy. Hydro-electricity of Bhutan and Nepal can be imported by Bangladesh. Bangladesh can invest in the power sectors of Nepal and Bhutan and arrange trans-border electricity trade.

Pricing Policies and Cost Recovery: Sound energy pricing policy is essential to ensure efficient use of this expensive and critical resource, to finance public investment, provide high-quality service to consumers, to promote private investment, and to ensure environmental protection. The establishment and functioning of the BERC has been a major positive institutional reform that has tended to depoliticize electricity pricing. This has been helpful in periodic price adjustments based on cost. In the absence of competition, cost-based pricing is not always efficient. During the 8FYP some large coal fired plants as well as gas fired through imported LNG are expected to be on line, which could have impact on reducing costs. Even so, the average cost can be expected to rise being impacted by price volatility from imported LNG and imported coal, unless exploration and mining for increasing domestic gas and coal supply is made. It will be important to enable the power sector to be financially sustainable and earn a reasonable rate of return on assets, so as to finance the huge investments that will be required. To achieve this objective, power prices will have to be set in ways that enables enterprises to recover the cost of production and earn a reasonable rate of return on assets. The strategy to produce power on the least cost option basis noted above in terms of technology, the scale of operation and choice of fuel could ensure that this pricing policy is efficient and protects consumer interests. As a means for reducing carbon emission**,** the importance of proper energy pricing policy for environmental protection cannot be over-emphasized; and proper pricing and taxing can encourage the adoption of clean technology and investments in renewable energy.

Demand-side management (DSM), is being actively pursued by power sector as a means for modifying energy use to maximize energy efficiency, so as to get maximum benefit out of existing energy generation. DSM involves changing energy use habits of consumers and encouraging them for using energy efficient appliances, equipment etc. at their premises, and the cost savings in terms of investment in new capacity would be much higher than the cost of implementing the DSM. The Government, on its part, will continue its emphasis on energy conservation by working on both supply and demand sides. In the area of demand management, proper pricing of electricity will also help conserve power. More broadly, a well-articulated demand side management (DSM) policy can also be an extremely cost-effective way of curtailing peak demand, and effectively control load shedding.

In this context, SREDA, which has been set up to support bring efficiency in the energy sector, has been entrusted with following major responsibilities: (1) Energy Management program, which includes (i) certification mechanism of Energy Manager and Energy Auditor, and (ii) designation of large energy consumers in industry and building sectors, those who are obligated to appoint/ nominate energy managers, implement the energy management for energy saving, prepare and submit annual energy reports and

improvement plan to SREDA, and implement the energy audit periodically; (2) Energy Efficiency Labelling Program, which intends to promote sales of high efficiency products in the market, mainly home appliances such as room air-conditioner, refrigerator/ freezer, TV, motors, lighting, and fan, through officially certified star rating labels on them; (3) Energy Efficiency Building Program which intends to promote energy efficiency in public and private buildings; (4) Awareness raising program that intends to induce behavioural change among people so that they are motivated to save energy and hence build an energy conscious nation.

Full implementation would require clear incentive and promotional mechanisms. A range of incentives has been proposed including preferential taxation, subsidy and low-interest financing. Concerted efforts will be needed to make SREDA fully functional with a clear mandate to implement the Government's energy conservation strategy.

5.3.2 The Strategy for Primary Energy Sector

Supply of Primary Energy

In recognition of the energy challenges faced by the country, the Bangladeshi Government had set out a National Energy Policy (NEP) in 2005. A revision was issued in 2008 adding a particular focus on renewable energy. Currently, there are no further updates on the NEP. The 7th Five Year Plan had recommended formulation and implementation of specific gas sector policies, as Bangladesh continues to face growing shortage in domestically produced primary energy with resultant increased reliance on higher cost imported LNG and imported coal. Therefore, the most important strategic issue facing relating to energy in the Eighth Plan, as had been during the Seventh plan, is achieving efficient supply of primary energy. A judicious combination of choices relating to domestic supply options and import options will need to be made to ensure the efficient and cost-effective supply of primary energy. The other strategic issue that government wants to pursue is increasing access to the citizens the chance to get access to cleaner fuels. The strategic target of the government is to try and achieve increase in proportion of population with primary reliance on clean fuels and technology from 19% in FY 2019 to 30% by FY 2025.

Gas Sector Policy

Bangladesh has now adopted the "Gas Sector Master Plan Bangladesh 2017 (Final Report February 2018)", which along with the PSMP 2016 creates a good analytical base for developing the energy sector as a whole including adopting necessary policies, regulatory interventions and investment needs to develop the gas sector. However, there is yet no clearly defined gas sector policy in Bangladesh. The 7th Plan had identified the following policy actions that are needed in the primary energy sector: i) Gas Allocation Policy, ii) Domestic gas exploration policy, (iii) Domestic coal utilization; iv) Energy import v) Demand side management and energy conservation, vi) Improved Cooking Stove (ICS); and vii) Energy subsidy and pricing. These need to be pursued during the 8th plan period.

i) Gas Allocation Policy: During the 8th plan period the Government will be encouraged to adopt a gas allocation policy in line with what had been proposed under the 7th plan, so as to best utilize the limited domestic reserve. The gas allocation policy should direct allocation for more energy-efficient users even within one sector, so as to help reduce unit costs. Part of this policy should be on ways and means for disseminating gas prepaid meter and LPG. The policy should help promoting and incentivizing replacement

of domestic use and CNG by increased use of LPG; for which energy tariff (gas and LPG) reform should simultaneously be applied. The tariff reforms should help adjust prices in a way to help minimize the difference between LPG and pipelined gas tariffs. Currently, LPG users are facing a more than 9 times higher tariff (at per calorific value) than that of pipelined domestic gas, where one 12.5 kg cylinder costs at 1200BDT. In addition to LPG, the use of Biogas will have to be incentivized through the gas use policy as the alternative of pipeline natural gas. Similarly, to the LPG utilization policy, Biogas utilization policy may also define how Primary Energy, namely pipeline gas, LPG and Biogas can be best mixed.

ii) Domestic Gas Exploration Policy: Bangladesh still has untapped gas resources, while import of LNG increases to ensure smooth supply of natural gas. Two LNG FSRU terminals (Excelerate and Summit) are now in operation with a nameplate capacity of 500MMCFD for each terminal. The cost of exploration and development of untapped resource is likely to be lower than the cost of LNG import. Therefore, Bangladesh will need to focus on investment for exploration and development. Furthermore, in order to implement exploration and development of undiscovered resources, external resources may be required. The untapped resource is likely to lie in coastal/transitional areas, hill tract areas or in the offshore areas, which will require high technology and huge capital. To address such technical and financial issues, Joint Venture or "Strategic Partnership" between BAPEX and foreign companies may be sought or Production Sharing Agreement with IOCs. With the delineation of maritime boundaries with Myanmar and India, a new opportunity has opened up for offshore exploration. Therefore, both onshore and offshore oil and gas options could be pursued.

iii) Domestic Coal Utilization: Bangladesh is endowed with rich bituminous coal deposit, with the measured and probable coal reserves total of 7,962 million tons. Out of five identified coal fields, namely Barapukuria, Phulbari, Khalaspir, Dighipara and Jamalganj, only Barapukuria is currently in production. Barapukuria's measured and probable reserve is 390 million tons. This mine has capacity to produce one million tons per year. Coal produced from Barapukuria has good heating value, more than 6,072kcal/kg (25.68MJ/kg). This level of quality coal can be used for coking coal. Currently, the Barapukuria coal is fuelled for the mine-mouth Barapukuria Coal Power Generation and brick kilns. However, with such good heating value, Barapukuria coal could be used for higher energy efficient use, such as higher efficient coal-fired power plant (Super-critical or Ultra Super Critical) power plant, or for more energy-intensive industry use such as steel production (coking coal). As proposed in 7th plan, it is important to explore the scope of exporting the high quality Barapukuria coal as higher valued coking coal or steam coal, and import lesser quality coal for Barapukuria Coal Power Generation. Such utilization would contribute to the higher value-added economic activities, and should be directed by the articulated Domestic Coal Utilization Policy, as had been proposed in the 7th plan.

iv) Energy Import

(a) Import LNG/Gas pipeline: Bangladesh's need to import LNG will continue to increase. As already proposed under the 7th plan, in order to mitigate the very high unit price and to have bargaining power, it will be critical for Bangladesh to take various measures, such as diversification of gas suppliers, and co-purchasing of natural gas with other countries. In particular, Bangladesh may pursue alternate sources and scope of supply in addition to the current sources. In order to obtain extra buying power, a possible process could be co-purchasing with India or other South Asian countries could be sought; and periodic contract review to seek more favourable conditions of a contract, while domestic resource development is actively pursued.

(b) Import Coal: The Government has launched its program to change power mix ratios and rapidly develop coal-fired power plants. Given the present status of domestic coal, the implementation of these projects will require imported coal for fuel. This will require huge port, rail transport and coal stocking infrastructure. However, so far there is only one on-going deep-sea port project in Matarbari Island, which will be able to cater ships having 80,000-ton capacity. This is currently dedicated for Matarbari Ultra Super Critical Coal-fired Power Plant. In the near future, however, the Government intends to expand this deep-sea port and develop a coal Centre as "An Energy Hub".

v) Demand Side Management (DSM) and Energy Conservation. In view of the severe gas constraint and its high value to the Bangladesh economy, a strong effort is needed to conserve gas use in Bangladesh. Energy efficiency and conservation has been recognized as an urgent policy priority under the 7th Five Year Plan. The policy effort involves substitution of low thermal efficient gas-fired power plants with more energy efficient plants; incentives for adoption of improved fuel use efficiency and energy conservation technology in industry; and conserving gas consumption by households through proper metering and pricing based on volume of gas consumed rather than a monthly flat rate per stove. The potential for conserving gas through these steps is enormous and the value of gas saved much exceeds the financial cost of implementing these policies.

vi) Improved Cooking Stove (ICS). The 7th plan strongly recommended in making use of the "Improved Cooking Stove (ICS)" among the population by providing appropriate financial incentives removing of impediments through proper regulatory schemes. The impediments include tax barriers and access to loan, which are quite similar to what were experienced in Solar Home Systems (SHS) dissemination in Bangladesh. During the 8th plan the on-going efforts of the 7th plan will continue with increased focus on implementation of financial incentives and regulatory schemes.

vii) Energy Subsidy and Pricing: As already witnessed during the 7th plan, between FY2021 to FY2025, the energy import will further increase, mainly because of LNG, coal and oil import for power generation. As a result, energy costs can be expected to grow at a fast pace. Therefore, the Government needs to determine the extent to which Energy Subsidy could be allowed in high priority sectors that also maintains budgetary discipline. The subsidy policy will need to be coordinated with pricing of energy products both for fiscal sustainability but also to promote efficient energy use in total as well as by product categories.

5.3.3 Financing Strategy for Power and Primary Energy

The investment requirements for power generation alone will be overwhelming; and when the costs of transmission and distribution are added, they present a major financing challenge. Total required power sector investments would add up to 2% of GDP per year during the Eighth Plan period. Even after allowing for a substantial contribution of private power investment and power imports, the public power sector investment requirements will be about 1.2% of GDP per year on average. Investments in primary energy (oil and gas exploration and development) will be funded by foreign investments and public investments in primary energy will be modest. Total public investment in energy (power plus primary energy) will be about 1.4% of GDP per year on average.

Given these large financing requirements and the multiple claims on the budget, especially the need to invest in health sector and social protection in response to COVID-19, a sound financing strategy for the energy sector is essential. This will be a combination of PPP financing for power generation plus measures to contain energy subsidies. The Eighth Plan assumes that the subsidy on power will be reduced gradually.

For primary energy, the Eighth Plan assumes that the level of subsidy will be capped at around 0.2% of GDP throughout the plan period. The subsidy will be targeted to the poor and for supporting the expansion of renewable energy programmes. This will require that energy prices are managed properly in line with long-term trends in primary fuel oil. In power the Government will ensure that the average price of electricity must be at least equal to the average cost of production.

5.3.4 Institutional Reforms in the Power Sector

Past reforms have yielded good dividends. Nevertheless, there are several areas where further efforts are needed. These include: continue unbundling along the functional line, carry out corporatization of generation and distribution, strengthen generation and distribution companies already in place to improve operating performance and customer satisfaction, implement the power sector restructuring plan; upgrade electricity price gradually to cost level and strengthen BERC to be able to perform its agenda on licensing, energy pricing, quality of utility performance including energy efficiency, and consumer satisfaction/dispute resolution. The challenge is particularly serious in the area of planning and implementing new generation capacities

In the area of generation, although there is a power generation expansion strategy (PSMP2010), which is under implementation since 2011, there is a need to revisit the PSMP 2016 and that plan to check for relevance in light of implementation experience of the past 4 years and the realism of the generation plan in the context of realities in the primary energy sector. The PSMP 2016 needs to be revised in light of the experience during the 7th plan period and also to account possible changes in demand situation, particularly in the aftermath of COVID shock and also any uncertainties in the supply side of primary energy. Based on the findings contingent planning is necessary to have back-up power generation plans that respond to these uncertainties.

Several new policies have been adopted to conserve power and improve the operational efficiency of the power sector. In this regard, the proper implementation of SREDA will be a major institutional challenge.

The power sector needs to be run and managed as a commercial enterprise and not as a typical state-owned enterprise. As reliance on inefficient high-cost rental power plants fall, the finances of power sector will further improve. Yet, the challenge of generating a surplus in the power sector will require substantial improvement in financial management capabilities of the power sector. Over time the cost of electricity will go up. While the de-politicization of power pricing through the BERC has been a positive step forward, the ability to justify continuous increases in power prices without appropriate improvement of service standards and a positive interface with consumers will challenge the power sector and the government. There is a lot of effort that is needed in the area of public interface and consumer service. Ensuring uninterrupted power service and responding to consumer issues with service quality, billing and payments requires substantial additional effort.

Legal framework related reforms: Amendment to the Electricity related Acts could be undertaken regarding several kinds of obligation rules and their penal provisions in order to enhance effectiveness, and thus help with improvement in customer service and ensuring regular quality supply of electricity to end users. There are challenges to ensuring to suspending operations of power generation facilities and inspect them regularly. This had been acute when there had been shortage of power supply, and the legal framework

for the preventive maintenance and O&M of these facilities has been insufficient. Because of these reasons, the power generation facilities are not operating at their design performance level (in terms of power output, thermal efficiency, etc.). Since periodic inspection is not stipulated by law in Bangladesh, these tend to be postponed due to reasons such as budget shortages or tight electricity demand, thus resulting in unplanned and undesirable shutdown. So, there is necessity of institutionalization of periodic inspections. There is also necessity of institutionalization of technical standards, so as to regulate and help reduce the amount of accidental trouble and disasters. So, there should still be in place an O&M Legal Framework to ensure that this is achieved.

Effective coordination mechanism to synchronize power and primary energy needs. There is also an urgent need to consider putting in place a new institutional structure that can comprehensively reflect the primary energy needs to support power development plan that synchronizes effectively with the energy supply plan in a dynamic way. The power sector and primary energy sector related plan and strategies are responsibility of the Power Division and the Energy and Mineral Resource Division under MoPEMR. However, there is no organizational structure that supervises the overall energy supply and demand in Bangladesh comprehensively. As the domestic production of natural gas in Bangladeshis expected to deplete whereas the energy demand will continue to increase rapidly, the country will need to depend more on imported energy sources. Considering this situation, the importance of developing an energy supply plan from a comprehensive viewpoint can be expected to gain importance for determining how to appropriate the limited domestic energy production among various sectors and which energy sources to import for supplying to which sector and in what quantity. These power development plan and energy supply plan in future will have to be better coordinated and synchronized and updated regularly by reflecting the conditional changes. Therefore, establishing an institutional framework is necessary to develop and implement both plans comprehensively by involving all the relevant stakeholders for these plans to share information.

Need for strengthening data management of the energy sector to support evidence-based policy making. In order to have better access to data for overall energy policy making it has been suggested by a JICA Study team the need for establishment of what could be termed as "Integrated Statistics Bureau" in MoPEMR for the centralized management of all the data from the organizations under the jurisdiction of the Power Division and the Energy Division with the need to revise the power and energy master plan periodically taken into consideration. For example, there is no energy related exclusive government agency responsible for catching data how each sector (residential, commercial, industrial, transport etc.) utilizes energy as the combination of various sources of energy supply such as electricity, natural gas, LPG, oil products, non-commercial fuel (bio fuel) etc. So, when there is shortage of gas creeping up and demand for it is increasing, there is tendency to try and adjust the gap by ad-hoc decisions like restricting new supply of natural gas to residential sector and transport sector, and instead inducing these sectors to use LPG instead. However, if this idea is actually implemented without long-term perspective of energy supply and demand, it may result in the rapid increase of LPG procurement that is apt to be costlier than LNG, and the burden of nationwide energy cost may become heavier. In order to realize the long-term optimization of nationwide energy balances, GoB needs to strengthen the function to consider and coordinate the national energy policy comprehensively. This can be done if there is centralized management of all the data from the organizations under the jurisdiction of the Power Division and the EMRD.

5.3.5 Institutional Reforms in Energy

The challenges in the energy sector are substantial. The successful implementation of an efficient power generation strategy is critically dependent upon the implementation of these reforms relating to primary energy. The growing reliance on imported primary energy requires strong skills and knowledge about global energy markets and future outlook in order to negotiate the best prices and assured timely supply of primary energy. There will be need for improvements in the technical and negotiation capacity of the Ministry and associated energy agencies. Administrative and technical capacities also need to expand in a number of areas related to domestic gas exploration, negotiation of IOC investments, development and implementation of renewable energy programmes and the implementation of DSM initiatives. The implementation of DSM initiatives will require proper dialogue and coordination with the industry and transport sector.

The financial requirements in primary energy are huge. PPP programmes can be a major source of such financing, any business environment type bottlenecks that impacts slow off take of PPP projects will have to be overcome.

5.3.6 Annual Development Plan Allocations for Energy Sector during the Eighth Plan

The ADP allocations for the energy sector in constant (2020/21 prices) and current prices are shown in Table 5.19 and Table 5.20. Consistent with the allocations in the 6th and the 7th plan and in view of GDP growth acceleration that requires considerable power and energy investments, the ADP provides substantial and growing allocations for power and energy in both current and constant prices. The allocations also assume continued progress with mobilizing IPPs in the power sector and greater mobilization of FDI in the energy sector.

Table 5.19: Eighth Plan ADP Allocations for Power and Energy Sector (Taka billion current prices)

Ministry	FY21	FY22	FY23	FY24	FY25
Energy and Mineral Resources Division	20.0	24.7	28.4	33.2	39.8
Power Division	245.1	264.5	362.4	419.0	502.8
Total	**265.1**	**289.2**	**390.8**	**452.2**	**542.6**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 5.20: Eighth Plan ADP Allocations for Power & Energy Sector (Taka billion FY2021 constant prices)

Ministry	FY21	FY22	FY23	FY24	FY25
Energy and Mineral Resources Division	20.0	23.4	25.7	28.6	32.7
Power Division	245.1	251.0	327.4	360.7	413.2
Total	**265.1**	**274.4**	**353.1**	**389.3**	**445.9**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 6:
TRANSPORT AND COMMUNICATIONS

CHAPTER 6

TRANSPORT AND COMMUNICATION DEVELOPMENT STRATEGY

6.1 OVERVIEW

In today's globalized economy, low-cost and efficient transport service is a major determinant of the competitiveness of the economy that influences trade and investment flows both internally within a country and externally. Efficient transport system also impacts on the pattern of regional development within a country and the location of poverty. Development of an efficient and low-cost transport network is, therefore, a key determinant of the ability to achieve the growth and poverty targets of PP2041.

Recognizing the important role of transport, Bangladesh has put top priority to the development of its transport network. Bangladesh witnessed rapid growth of transport sector since independence. The overall annual growth rate was nearly 8.2 per cent for freight transport and 8.4 per cent for passenger transport. Even so, the demand for transport services continues to grow very fast, especially as the economy gets internally integrated and economic transformation away from agriculture and rural economy to urban-based industrial and modern services gathers speed. The relative roles of transport modes are evolving with road transport continuing expanding to dominate because of its inherent technical and cost advantages.

Transport system in Bangladesh comprises a number of distinct modes and services, notably railways, roads, road transport, land ports, inland water transport, coastal shipping, airports and airlines. Roads and inland water transport are the dominant means of transport carrying more than 90% of total traffic generated in the country. Although other modes like railway, coastal shipping would play a greater role, roads and IWT would continue to dominate the transport landscape in the foreseeable future. Presently there are about 55,000kms of paved roads; 2,877 route-kilometres of railways, 3,800 km of perennial waterways which increases to about 6,000 km during the monsoon, 2 seaports, 3 international airports (i.e. Dhaka, Chittagong and Sylhet) and 8 domestic airports.

Public sector is mainly responsible for development and maintenance of transport infrastructure in Bangladesh. The public sector is involved in transport operations in road, railways, inland water transport (IWT) and ocean shipping alongside the private sector. In the road transport and IWT sub-sectors, the private sector is dominant. In ocean shipping, however, public sector still predominates, although the private sector has considerably increased its role in recent years. Recently private sector has also become important operator in air transport, both domestic and international. Involvement of the private sector in railway operation, however, is very limited.

6.2 TRANSPORT SECTOR PROGRESS UNDER THE 7FYP

GDP growth targets of the 7FYP and goals of improved living standards called for a vibrant and effective transport network. Securing improvement in the transport system was, therefore, a major strategic objective of the 7FYP. The transport sector vision for the 7FYP was to develop an efficient, sustainable, safe and regionally balanced transportation system in which various modes complement each other, interface

appropriately and, where possible, provide healthy competition to each other. Special emphasis was placed on the introduction of modern technology for increasing capacity and improving quality and productivity of the system, development of the two seaports with smooth transport links to Dhaka, establishment of effective railway linkages between the east and west zones of the country, integration of road, rail and inland water transport, and participation in global and regional transport connectivity initiatives that help to develop the land route links between South Asia and East Asia through Bangladesh.

On the investment side, a conscious decision was taken to prioritize transformational transport infrastructure projects that helps modernize the Bangladesh transport network so as to improve the mobility of goods and services across the nation, facilitate international trade, reduce cost and improve competitiveness. These transformational projects are highly capital intensive, are multi-year in nature, and require strong supervision to avoid cost over-runs and delays. Recognizing the special challenge posed by growing urbanization and urban traffic congestion, the 7FYP sought to introduce Mass Rapid Transit (MRT) starting with the capital city Dhaka and its adjoining, with a targeted completion of MRT Line-6 (the first elevated Metro Rail of Bangladesh) in December 2022. Mindful of the resource constraints and high investment costs, the 7FYP strategy was to combine ADP allocations with a strong public-private-partnership (PPP) effort. The plan also intended to improve the inter-modal transport balance with greater emphasis on rail and inland waterways that are low-cost in nature and are environmentally friendly compared to other mode of transport. The importance of transport, especially air transport, for tourism was recognized with a focus on improving inter-district airline connectivity. Efforts were also to be made to improve resource mobilization through the introduction of user charges and fees for a range of public transport services including road user charges, port fees, inland water and rail fares.

The objectives and strategies of the 7FYP for the transport sector were sound. The emphasis on intermodal transport coordination, development of the national highways, inter-city connectivity, regional connectivity, lowering the cost of trade logistics and improving transport network asset maintenance are all well placed. The idea of instituting road user charges and sensitivity to environmental sustainability is also appropriate. Similarly, the strategy to improve incentives for private sector participation in both transport sector service and infrastructure development is well placed.

Consistent with the 7FYP strategy, the transport sector received high priority in budget allocation. The ADP allocated resources for all major projects in line with the 7FYP strategy and priority. Significant new transport infrastructure has been added over the plan period for roads and bridges. Services have expanded for all modes of transport. Private participation in air transport has grown significantly and most large cities are now connected with air services. These are major achievements that laid a strong foundation for consolidation under the 8FYP.

6.2.1 Progress with Road Transport

A good road network is a critical infrastructure requirement for rapid growth. It provides connectivity to remote areas; provides accessibility to markets, schools, and hospitals; and opens up backward regions to trade and investment.

Highways and district roads: The Roads and Highways Department (RHD) is solely responsible for the development, maintenance and management of arterial highway network in the country with a vision to provide seamless mobility through building sustainable, safe & quality road infrastructure and integrated modern transport system for achieving desired socio-economic development. A well-planned and sustainable road transport system has already played a unique role to achieve the government target set for Vision 2021. Presently, RHD manages about 21596 km of roads out of which 18% per cent is national highway, 20% is regional highway, and 62% is zila highways (Table 6.1). The roads expansion program during the 6FYP and the 7FYP was guided by the Road Master Plan 2010-2030. The focus of RHD program in the 7FYP was less on expansion of total road network length and more on enabling better traffic mobility on heavily used inter-city road corridors. Thus, the emphasis was to increase the capacity of heavily trafficked roads by widening them to four lane/six lane along with service road for local traffic. This was a sound strategy aimed at maximizing the benefits and better use of the road network. Progress with completion of major Road Sector Mega Projects is shown in Box 6.1.

Table 6.1: Various Categories of Roads under RHD (in km)

Year	National Highway	Regional Highway	Zila Road	Total
2016	3813	4247	13242	21302
2017	3813	4247	13242	21302
2018	3813	4247	13242	21302
2019	3906	4281	13207	21596
2020	3944	4883	13536	22363

Source: www.rhd.gov.bd

Box 6.1: Progress on Mega Projects under RHD

- Four laning of Dhaka-Chittagong road, Dhaka-Mymensingh road, and Dhaka Mawa Expressway is complete.
- Dhaka -Tangail 4 lane Highway expected to be completed in 2021.
- Work on Elenga-Rangpur road network underway.
- Work on Dhaka-Sylhet road has not started yet.
- Upgrading of the Madanpur-Joydevpur road to 4- lane through PPP underway.
- Dhaka-Chittagong expressway feasibility study completed.
- Work on the Hatirjheel-Demra Expressway underway
- Work on the Gabtoli-Nabinagar Expressway underway.
- Upgrading into 4-Lane of Ashuganj River Port-Akhaura Landport Highway; Feni-Noakhali National Highway; and Comilla-Noakhali Highway underway.
- Construction of 4-Lane Payra Bridge over the river Payra on Barisal-Patuakhali National Highway underway.
- Work on 17 Bridges including Kalna Bridge under Cross Border Road Network Improvement Project underway.
- 82 Bridges under Bangladesh Bridge Improvement Project underway.
- Work on 317-kilometer border road in the Hill Tracts districts of Bandarban, Rangamati and Khagrachari is underway
- Construction of Itna-Mithamoin-Ashtogram Road Project is completed.
- Father of the Nation Bangabandhu Sheikh Mujibur Rahman Highway (Sylhet-Bholaganj Road) is expected to be completed by FY2021.

Source: RHD

The Bridges Division: The Bridges Division is responsible for implementation and maintenance of bridges and tunnels of 1500 m or more, flyover/overpass, expressway, causeway and ring road etc. As noted, during the 7FYP a strategic decision was taken to put emphasis on the major transformational projects many of which are under the Bangladesh Bridges Authority (BBA), Bridges Division. The major on-going projects during the 7FYP are: Padma Multipurpose Bridge Project; Dhaka Elevated Expressway PPP Project; Support to Dhaka Elevated Expressway PPP Project; Bangabandhu Sheikh Mujibur Rahman tunnel under the river Karnaphuli; Dhaka-Ashulia Elevated Expressway; and BRT (Gazipur-Airport) (4.5 km elevated section) along with Bangladesh Bridge Authority taken initiative for Feasibility study of construction of Subway in Dhaka city and feasibility study for construction of bridges on Putuakhali- Amtoli-Borguna road over the river Paira, on Bakergong-Baufal road over the river Karkhana, on Bhulta- Araihazar-Bancharampur road over the river Meghna, On Barisal –Bhola road over the river Kalabadar and Tetulia and Borguna-Patharghata road over the river Bishkhali.

The projects are being implemented on a fast-track completion program and are expected to be completed by June 2022. The construction of the most important Padma Bridge is scheduled to be completed in June 2021. The first underwater tunnel of Bangladesh named Bangabandhu Sheikh Mujibur Rahman Tunnel (Karnaphuli Tunnel) is expected to be completed by 2022.

Rural roads: The importance of rural road connectivity to market centres (rural and urban) was preserved in the 7FYP. The LGED has developed the rural transport infrastructure based on long term Master Plan (2005-2025). The progress during the 7FYP is summarized in Table 6.2. A major focus of LGED was on improving the quality of the rural road network by paving of existing road and reconstruction of damaged paved road. Each year on average about 5000 km road has been upgraded and 30000 meters bridge/culvert has been added. The focus on rural road quality is appropriate in view of damage caused by monsoon rain and flooding. Rural road connectivity has played an important role in helping productivity of rural activities and reducing poverty.

Table 6.2: Development of Rural Transport Infrastructure under LGED

Component	FY2015-16	FY2016-17	FY2017-18	FY2018-19	Total
Earthen road (km)	-	-	-	-	32500
Paved road (km)	4813	5220	5300	4663	21721
Bridge/culvert (m)	28500	29000	29500	9933	96933

Source: Ministry of Finance, Bangladesh Economic Review 2019

The performance of roads and bridges subsector in relation to targets set during the 7FYP is shown in Table 6.3. Overall, the physical targets were met, which is commendable. Progress was also made to improve the safety of road transports. Under the United Nations Decade of Action for Road Safety 2011-2020, RHD is working to reduce road accident fatalities by 50% within the year 2020. The five pillars of road safety are road safety management, safe road and traffic, safe motor vehicles, cautious road users and the implementation of post-accident activities. Accordingly, RHD has formulated the National Road Safety Strategic Action Plan (NRSSAP) 2017-20, which is being implemented in accordance with the road safety related targets set forth under SDG. However, notwithstanding good progress, a major constraint in the road and highways subsector has been implementation capacity that has contributed to project completion delays and cost overruns. Further efforts are needed to strengthen implementation of road safety measures.

Table 6.3: Roads and Highways Targets for the Seventh Five Year Plan (2015/16-2019/20)

Physical Activities	Unit	7FYP Targets	Actual Performance
Construction of 4 lane roads	km	300	393
Construction of roads other than 4 lanes	km	340	350
Improvement/ Rehabilitation of roads	km	2,500	4925
Construction of Flyover/Overpass	meter	7,000	7580
Construction of bridges/culverts	meter	14,800	24254
Reconstruction of bridges/culverts	meter	6,800	6830

Source 7FYP and Ministry of Road Transport & Bridges

6.2.2 Progress with Railway Services

The improvement of rail communication was accorded high priority in the 7FYP.The Railway investment program was guided by the Railway Master Plan 2010-2030 that was approved in 2004 and updated in 2017. It also drew inspiration from the National Integrated Multimodal Transport Policy (NIMTP) of 2013. A total of 230 projects with TK 5537 billion were taken up in the development plan, which included construction of new line, procurement of rolling stock for passenger and freight, and rehabilitation of existing railway station and signalling system. Implementation of the development plan has yielded significant improvement in the overall performance of Bangladesh Railway in terms of service delivery (both passenger and freight) (Table 6.4). However, the financial performance is an area where further attention will be needed.

Table 6.4: Overall Performance of Bangladesh Railway in the 7FYP

Fiscal year	Passenger km (million)	Freight Ton-km (million)	Total operating revenue (Tk in million)	Total operating expenses (Tk in million)
2013-14	8134	677	8000	16010
2014-15	8711	693	9350	18080
2015-16	9167	675	9040	22290
2016-17	10040	1052	1300	28350
2017-18	12883	1236	12760	29180

Source: Ministry of Finance, Bangladesh Economic Review 2019

6.2.3 Inland Water Transport (IWT)

Inland Water Transport (IWT) is an extremely energy efficient, environmentally clean and economical mode of transport. But it has not been able to realize its full growth potential partly because of the excessive attention to the road sector. Bangladesh has about 14,000 km of waterways (rivers/canals) of which about 5,968 kms remain navigable during monsoon and 3865 km of rivers/canals are navigable during the dry season. The water transport network of the country not only caters to the inland movement of freight and passengers but also plays an important role in the transportation of import and export items through the ports of Chittagong and Mongla. During the monsoon season when roads become impassable, riverboats are the only mode of transport for an important part of the Bangladesh's rural population. The country boat plays significant role and provides for about 50% of the total employment in the transport sector as a whole. They are also the main mode of transport in the south coastal areas where the road network is little developed. Currently, most of these waterways suffer from navigational hazards like shallow water and narrow width of channel during dry weather, siltation, bank erosion, absence of infrastructure constrained by the absence of proper surface road links to facilitate the smooth transit of cargo.

Recognizing the high potential of inland water transport, the Government completed an Inland Water Transport Master Plan (IWTMP) in 2009. This was a comprehensive study of the major constraints and made very useful recommendations on reforms and investments. However, implementation has not progressed much. The 7FYP sought to push forward these reforms by placing strong emphasis on IWT. The 7FYP strategy emphasized 4 key elements: development of new waterways and navigability of existing channels; focus on operations and maintenance and establishment of landing stations and river ports for bulk cargo and containers; digitization of services related to IWT system; and facilitating maritime education and training. Progress with implementation of the 7FYP strategy has been mixed due to a number of constraints including inadequate resources, high-cost dredging operations to improve navigability of river routes, institutional weakness and inadequate inter-agency coordination. The 8FYP will seek to offset these constraints and improve the role of inland water transportation to improve the inter-modal balance, reduce transport cost, and protect the environment.

6.2.4 Shipping Subsector Progress

With the expansion of international trade, the importance of shipping as a major source of non-factor service (NFS) export earnings has increased. Bangladesh presently has a huge deficit on the NFS account that could be lowered substantially through the expansion of international cargo shipping capabilities. The prospective returns to this investment are high. The Shipping industry is managed and regulated by the Department of Shipping (DoS). The DoS is a regulatory body under the administrative control of the Ministry of Shipping. It administers maritime and shipping laws of the country. It deals, among others, safety, security and prevention of marine pollution through implementation of maritime laws and regulations.

On the operation side, majority of shipping business is operated by the Bangladesh Shipping Corporation (BSC), a state-owned, autonomous corporation in Bangladesh. There are also private shipping operators. The BSC owns a number of ships and oil tankers, and also charters sea-going vessels from other operators. The vessels are used to carry ready-made garments and other export items, and also to import crude oil and other commodities from abroad.

The 7FYP sought to expanding shipping capacity, improve automation and increase export earnings. Earnings from shipping have grown from $ 300 million in FY2015 to $500 million in FY2019, but this is far below potential and the gap between Bangladesh earnings from shipping freight and payments to the rest of the world is huge. Some of the main constraints include inadequate shipping capacity, shortage of resources, inadequate technical capabilities in an environment of changing global technology in shipping, staffing problems and management. So, stronger efforts are needed to make this an important source of export earnings. The 8FYP will put emphasis on boosting the role of international shipping and will emphasise on commercial viability.

Table 6.5: Shipping Sector Performance in the 7FYP

Development activities	7FYP Target	7 FYP Achievement
Procurement of ships.	Procurement of 6 new vessels (3 new Product Oil Tankers and 3 new Bulk Carriers of about 39,000 DWT each).	All six vessels have constructed, launched and taken delivery. All vessels are now in commercial operations worldwide.
Procurement of Cellular Containers	Procurement of 4 Nos. cellular Container vessel of about 900-1200 TEUs each.	4 Nos. cellular Container vessel of about 1200-1500 TEUs each is likely to be acquired from G to G through Danish loan assistant.
Computerization of the overall activities.	Automation programmes to computerization of the overall activities of Bangladesh Shipping Corporation (BSC).	Automation programmes to computerization of the overall activities of BSC has been done in different aspect/segment: i) Implementation of e-Nothi. ii) Online shareholder's dividend distribution (BEFTN) iii) Online payment system iv) Digital attendance system
Increase earnings from international shipping	No target set	Yearly earnings from shipping increased by 8% per year from $300 in FY2015 to $500 in FY2019

Source: Bangladesh Shipping Corporation.

6.2.5 Progress with Civil Aviation

The demand for air services has grown substantially during the last two decades because of increase in per capita income, exports of worker services and expansion of tourism. The Civil Aviation Authority of Bangladesh (CAAB) functions as the regulatory body for all aviation related activities, serving as the custodian of all airfields and allied facilities including air navigation facilities. It is now maintaining 3 international airports and 7 domestic airports and 2 Short Take-Off and Landing (STOL) ports. Out of these, 8 airports (3 international and 5 domestic) are in operation. Due to inadequacy of passengers, no flight is operating at 2 other domestic airports and 2 STOL ports.

Hazrat Shahajalal International Airport (HSIA) at Dhaka is the busiest airport in Bangladesh through which 80% of the total air traffic flow takes place. The airport has a capacity of handling 8 million passengers annually, and in the meantime it is already saturated. Air traffic volume has increased at 8% during last 3 years. In 2019, it handled 13.09 million passengers, and 0.412286 Million tonnes of cargo. Average aircraft movement per day is around 260 no. of flights. The opening up of air traffic to private domestic carriers has also paid dividends in terms of quality and frequency of air services. With growing income, the demand for international and domestic air services continues to grow. The existing terminal and runway are not A380 or B747-8F compliant. It has become necessary for upgrading and expanding HSIA, to meet the growing air traffic demand and to accommodate Code F Aircraft (A380, B747-8F).

The 7FYP adopted a comprehensive strategy to strengthen the operational capabilities of existing facilities and develop new airports. The main elements included: (i) Expansion of operational capabilities at HSIA; (ii) Conversion of the Cox's Bazar Airport into international airport with capabilities to operate wide-body jets; (iii) Enhancement of cargo facilities at the Chittagong Shah Amanat International Airport (SAIA); (iv) Strengthen runway infrastructure at SAIA; (v) Strengthen runway at the Sylhet Osmani International Airport (OIA); (vi) Construction of a new airport at the Southern region of Bangladesh; (vii) Improvement of communications system between the coastal belt airports and the capital city of Dhaka and (viii) Complete feasibility study for the construction of the Bangabandhu Sheikh Mujib International Airport (BSMIA).

Progress shows mixed performance, especially in the area of new airports. The capacity of HSIA has been substantially expanded and its layout and service quality has significantly improved. The air cargo handling capacity has expanded. The quality and safety standard for air traffic management has increased. Progress was also made to expand and upgrade facilities at the Chittagong and Sylhet airports. Facilities at the local airports have expanded that has enabled handling of a growing volume of domestic air traffic and services to private airlines. Inter-district air traffic management has also improved along with better communication facilities with Dhaka HSIA. The feasibility study for BSMIA has not yet completed and progress in converting Cox's Bazar domestic terminal to international terminal has lagged. The proposed construction of a new airport in the Southern region of Bangladesh has also not happened.

The major constraints faced by the Ministry of Civil Aviation and Tourism include procurement problems, project implementation capacity constraints and financing, especially in the matter of negotiating foreign transactions. The efficiency and service capacity of the national air carrier, Bangladesh Biman, has increased but the performance remains much below the competitors from the major competitors like Qatar Airways, Emirates and Thai Airways. As a result, earnings from BB are much lower than true potential.

6.2.6 Maritime Ports Subsector Progress

The maritime port sector plays an important role in the country's development, especially growth of GDP through sea borne trade. Total tonnage of sea borne trade is presently over 45 million tons, growing over 10 per cent per annum. Chittagong and Mongla are the only two sea borne trade ports in Bangladesh, although the functioning of a third port, the Payra Port, is underway.

Chittagong Port Authority: The Chittagong Port is the principal maritime port and handles about 92% of the country's sea borne export and import trade. As a port it acts as the linkage between the inland and sea transportation of goods. In future the port may also provide international transit facilities to neighbouring countries mainly Nepal, Bhutan and other eastern states of India.

During the 7FYP, the Chittagong Port Authority (CPA) achieved enormous progress in cargo and container handling as well as in development works (Table 6.6). The CPA carried out capital and maintenance dredging to keep the navigability of the Karnaphuli channel in expected level.

Table 6.6: CPA Traffic Performance in 7FYP

Fiscal Year	Projected Traffic				Actual Traffic			
	Import (Mill. M. Ton)	Export (Mill. M. Ton)	Total (Mill. M. Ton)	No. of Containers (In TEUS)	Import (Mill. M. Ton)	Export (Mill. M. Ton)	Total (Mill. M. Ton)	No. of Containers (In TEUS)
2015-16	46.67	6.04	52.71	2,051,759	58.32	5.97	64.29	2,189,439
2016-17	49.45	6.35	55.80	2,256,935	66.46	6.71	73.17	2,504,476
2017-18	52.23	6.64	58.87	2,482,629	78.05	7.00	85.05	2,809,352
2018-19	54.76	6.94	61.70	2,730,801	83.11	6.85	89.96	2,919,023
2019-20	57.00	7.24	64.24	3,003,981	--	--	--	--

Source: Chittagong Port Authority

A major strategy of the 7FYP was the expansion of CPA operational capacity to meet the growing demand. Major progress has been made. The CPA also procured 150 cargo and container handling equipment including 10 Ship to Shore Gantry Cranes to cope with the ever-growing demand. The CPA expanded its

container holding capacity from 37,000 TEU's to 50000 TEUs facilitate trade, the Government and CPA encouraged private sector to establish ICD (off docks) to ensure door-to-door services. During 7FYP plan two new private ICDs were established. Presently, a total 18 private ICDs are in operation.

In the meantime, CPA has extended its port limit up to Kutubdia in the South and Sitakunda in the North. As a part of its extended logistic support, CPA procured one Tug boat (3200 BHP), one seagoing low freeboard harbours Tug boat (2000 BHP) and two mooring launch. CPA increased its permissible draft from 9.14 meter to 9.5 meter and permissible length 186 meter to 190 meters during the 7FYP. The CPA has completed the construction of one CFS (Container Freight Station) shed, one car parking shed and one Custom Auction Shed to enhance its operational capacity. The construction of the Patenga Container Terminal (PCT)" project is underway and it is expected to become operational by June 2021.The Chittagong Port Expansion project has been planned to increase the yard facilities of Chittagong Port. The project location is near the Bay Terminal and within the land area acquired for by Terminal. Moreover, the government of Bangladesh with the Japanese support will implement 34 projects in Maheshkhali-Matarbari area to accelerate the pace of economic development in Bangladesh. Besides, deep sea port with coal-based power plant, special economic zones, coal jetty and LNG terminals will be built in Matarbari. Upon completion of the Matarbari Port Development Project, which is being implemented under the Chattogram Port Authority, it will be treated as a commercial hub of the region.

The CPA has continued its leadership role in terms of being amongst the most financially profitable public authority during the 7FYP (Table 6.7). Overall, the CPA performed very well during the 7FYP, meeting or exceeding its planned targets and sets an example for other state-owned enterprises (SOEs) to emulate.

Table 6.7: CPA Financial Performance during the 7FYP (Tk. billion)

Year	No. of Ships Handled	Revenue Income	Revenue Expenditure	Revenue Surplus
2015-16	2875	20.3	10.7	9.6
2016-17	3092	24.1	13.5	10.6
2017-18	3664	26.6	13.9	12.7
2018-19	3699	29.3	15.9	13.4

Source: Chittagong Port Authority

Mongla Port Authority (MPA): Mongla Port, the second gateway of Bangladesh is the eco-friendliest seaport of the country. The port is well-protected by the largest mangrove forest, the Sundarbans. Since 1950, Mongla Port Authority is functioning as an international sea port. It has substantial unused capacity and has huge potential advantages in terms of turn-around time. The Mongla port is also capable of facilitating trade between north-west part of Bangladesh, Nepal, Bhutan and places adjacent to the Indian border.

In view of its great potential to provide an alternative shipping route to the heavily congested Chittagong Port, efforts were made in the 7FYP to expand the traffic through the Mongla Port. Through a major dredging project, the navigability issue was addressed that increased the water depth of the outer bar of the Passur River, enabling vessels with drafts over 10 meters to berth at the port. This investment allowed a rapid expansion of port activities. Total cargo handling expanded at an average pace of 20% per year, growing from 4.5 million metric tons to 11.3 million metric tons in FY2019.

Payra Port Authority (PPA): The Payra Port Act 2013 established the third sea port of Bangladesh located on the bank of the Ramnabad Channel in Kalapara, a sub district of Patuakhali. The main task under the 7FYP is project implementation, using a phased approach. Limited scale operational activities of Payra Sea Port started on August 13, 2016 developing some basic infrastructures and transferring the goods through sing barges by inland waterways. The Payra Port Authority has already implemented a Service Yard of 48 acres of land connected by 4 lane road to National Highway. This Service Yard consists of RCC Service Jetty, various Supporting Buildings, Water Treatment Plant, Warehouse etc. Some 6,500 acres of land is under acquisition for development of core port infrastructures. Among those amount of land 3,100 acres has already been acquired. It is expected that by 2023 Payra will be fully operational as an international sea port through completion of capital dredging project and constructing at least three terminals with 12 berths and channel depth (CD) of 10.5 m. According to the "Traffic Forecast Study Report" prepared by Royal Haskonning DHV, total volumes of cargos are projected to grow at Para Port from 11.1 million MT in 2021 to 33.6 million MT in 2025. As per long-term plan, it is expected that by 2035 the Para Port will be able to function with at least 14.0m CD through a second phase capital dredging and capacity to handle about 89.8 million MT cargos and 5.1 million TEUs container.

Bangladesh Land Port Authority (BLPA)

Bangladesh Land Port Authority (BLPA) was established in 2001 under the Bangladesh Land Port Authority Act 2001 as a statutory regulatory body with a vision to expedite and facilitate export-import activities through land ports. Bangladesh Land Port Authority started its activities through declaration of 12 land ports in 2001. Afterwards, 12 more land customs stations have been declared as land ports. At present, total number of land ports are 24. Among them, Benapole, Bhomra, Akhaura, Burimari, Tamabil, Nakugaon and Sonahat Land Port are being operated by own management of BLPA. On the other hand, Sonamasjid, Hilli, Teknaf, Banglabandha & Bibirbazar Land Ports are being operated on Build Operate Transfer (BOT) basis. With a view to start operation of the remaining land ports, the process for acquiring land along with the construction of necessary infrastructures are going on. The remaining lands ports will be developed and operated by government own management.

In view of the growing importance of land port-based trade with India, the 7FYP put emphasis on improving the capabilities of the various land ports through better facilities and staffing and improving efficiency and turn-around time through digitization. Considerable progress was made. The Sonahat and Tamabil land ports have been developed with a cost of Tk. 110.00 crore and they started their operational activities. Also, improvement & modernization of Benapole & Burimari Land Ports has been completed under SASEC Road Connectivity Project with assistance from ADB. Construction of modern warehouses, transhipment shed and improvement of roads & yards, drainage system and other necessary infrastructure have been developed under this project. To enhance connectivity and trade with neighbouring countries, BLPA has taken steps for development of Sheola and Ramgarh land ports along with extension & modernization of Bhomra and Benapole Land Ports with a cost Tk. 693 crore with the financial assistance of World Bank. This is an on-going project which is expected to be completed by June 2023. BLPA has taken initiatives for upgrading of remaining land ports. Necessary steps have already been taken for digitalization of land ports.

As a result of these efforts to expand and upgrade the land ports in the 7FYP, the total trade (exports and imports) passing through land ports was 34.26 lac metric tons in FY2009. It grew to 216.63 lac metric tons in FY2019, indicating an average yearly growth rate of 29 %. The revenue income of BLPA was Tk. 26.74 crore in FY2009. This expanded to Taka 210.93 crore in FY2019. The revenue growth was particularly large in the last 5 years, growing by 31.2%.

6.2.7 Urban Transport

Rapid urbanization in Bangladesh during the last few decades increased transport demand quite significantly leading to manifold increases in the number of motorized and non-motorized vehicles on city streets. The increase in the number of vehicles relative to road facilities has led to severe congestion on roads and deterioration in urban environment. Such trends are likely to continue as further urbanization takes place.

In urban areas, road transport system is the main means for carrying passengers and commodities. However, all urban centres face major traffic congestion due to the absence of Mass Rapid Transit (MRT) options. Among the six city corporations, Dhaka is confronted with the most serious transportation problems. The transport sector of the city is comprised of many different modes of travel-both motorized and non-motorized-often using the same road space – resulting in a high level of operational disorder, which significantly diminishes the efficiency and effectiveness of the existing transport uses.

To address the urban transport challenge, the 7FYP undertook a major initiative to develop a long-term plan. A Revised Strategic Transport Plan (RSTP) was prepared by Dhaka Transport Coordination Authority (DTCA) for greater Dhaka area. In RSTP, a series of rapid rail transit and rapid bus transit options are proposed to address the massive congestion problem of Dhaka and its adjoining areas. The Dhaka Mass Transit Company Limited (DMTCL) has been established for construction, operation & maintenance of the Mass Rapid Transit (MRT) Lines/Metro Rails in Dhaka city and its adjoining areas. The Government has formulated a Time-bound Action Plan 2030 in order to establish a state-of-the-art Network of public transport system to be implemented by Dhaka Mass Transit Company Limited (DMTCL) consisting of 6 Mass Rapid Transit (MRT) or Metrorail Lines covering the distance of 128.741 Kilometres (67.57 kilometres elevated and 61.17 kilometers underground) having 104 Stations (51 elevated and 53 underground) in Dhaka and its adjoining areas. Based on this action plan, the targeted completion of the first elevated Metro Rail of Bangladesh, known as MRT Line-6, has been set for December 2022. Substantial progress of construction works of four more MRT Lines (Line-1; Line-5: Northern Route; Line-5: Southern Route and Line-2) are also underway within the 7FYP (Table 6.8). Work has also started on the first of the three proposed rapid bus transit (BRT) alleviated expressway. The first BRT route (BRT Line 3) is scheduled for completion in CY2020. While these are all excellent initiatives, a major challenge is their time completion. Progress was also made in addressing road safety and enforcing traffic laws and regulations. Besides, Bridges Division has undertaken a feasibility study project for the construction of subway across 238 km covering the entire Dhaka city. The study will be completed by June 2021. Nevertheless, given the massive traffic management challenge, there is a long way to go.

Table 6.8: Progress with Dhaka Urban Mass Rapid Transit Options

MRT/BRT	Length (km)	Type	Completion Date	Project Status	Source of Finance
MRT Line-6	20.10	Elevated	**2022**	Under Construction	JICA & GoB
MRT Line-1	31.241	Elevated (11.369 Km) Underground (19.872 Km)	2026	Detail Design on-going	JICA & GoB
MRT Line-5: Northern Route	20.00	Elevated (6.50 Km) Underground (13.50 Km)	2028	Basic Design On-going	JICA & GoB
MRT Line-5: Southern Route	17.40	Elevated (4.60 Km) Underground (12.80 Km)	2030	Appointment of Consultant is at final stage	ADB & GoB
MRT Line-2	24.00	Elevated (15.00 Km) Underground (09.00 Km)	2030	Full Scale Study on-going	G2G(Japan) through PPP method
MRT Line-4	16.00	Elevated	2030	G2G through PPP Method	Underway
Total	**128.741 [Elevated 67.57 km and Underground 61.17km]**				

Source: Ministry of Road Transport & Bridges

6.2.8 Transport Sector Issues and Challenges during the 7FYP

Overall substantial progress was made in improving the transport network, especially in the area of road network, Sea and Ports, and Railways. Progress was somewhat slow in inland water, airport and Bridges. This progress was facilitated by adequate allocation of financial resources. As a result of the priority accorded to transport, financing was not a constraint. A useful way to assess this progress and its adequacy in relation to the competitiveness of the Bangladesh economy is to compare the progress with competitors. The World Economic Forum (WEF) publishes on an annual cycle updates of global competitiveness ranking for countries based on a global competitiveness index (GCI) and the associated infrastructure quality rankings. The latest GCI and Infrastructure Quality rankings are available for 2019. These are shown in Table 6.9.

Table 6.9: Bangladesh's Global Competitiveness Index and Infrastructure Quality 2019 (Scores out of 100; Number of Countries 141)

Country	Global Competitiveness		Transport Infrastructure		Quality of Roads	Quality of Railway	Quality of Port	Quality of Air Transport
	Score	Country Ranking	Score	Country Ranking	Ranking	Ranking	Ranking	Ranking
Bangladesh	52.1	105	42.1	100	108	65	92	109
India	61.4	68	66.4	28	48	30	49	59
Turkey	51.6	108	64.9	33	31	56	41	34
Pakistan	51.4	110	51.1	69	67	47	70	93
Srilanka	57.1	84	57.7	50	76	72	68	72
Thailand	68.1	40	56.8	53	55	75	48	73
China	73.9	28	68.9	24	45	24	52	66
Vietnam	61.5	67	52.2	66	103	54	83	103

Source: The Global Competitiveness Report 2019, World Economic Forum.

Comparisons with past rankings show that Bangladesh has gained in overall competitiveness ranking and especially transport infrastructure performance ranking. This suggests that the progress made in the 7FYP in transport infrastructure has helped improve its global competitiveness. However, other competitors have performed more strongly in improving the transport infrastructure services. Bangladesh does well in the area of railway services, but relative performance falls short of performance in other countries that compete with Bangladesh in the export market, especially the RMG competitors in China, India, Pakistan, Sri Lanka, Turkey and Vietnam.

A review of performance in the 7FYP shows that there are a number of areas where greater policy attention will be needed in the 8FYP.

***Implementation capacity constraint**:* A major challenge that continued during the 7FYP has been the implementation capacity constraint. Consequently, while projects have started, completions have lagged behind. Progress in implementation has been most serious in the road and bridges sub-sector where project implementation delays and cost over-runs have lowered the economic rate of return for many investments. In civil aviation subsector, project completion has suffered from procurement and international financing negotiation constraints.

Transport sector policies: On the policy front, progress on PPP based transport network development has lagged behind the target. The PPP activities have shown some recent signs of recovery, which is encouraging. But stronger efforts are needed to fast track, the idea of introducing cost recovery from road users through the institution of a well-designed road user charges still remains to be made effective. In railways, progress with capacity expansion and service efficiency improvements has not been matched with tariff increases and cost recovery, which has led to the inability of railways to cover operating costs.

***Inter-modal balance**:* Improvement in rail performance has improved the inter-modal transport balance but the inadequate progress with expanding water transport services remains a major concern. IWT is a low-cost mode of transportation and greatly facilitate inter-city transportation while lowering the pressure on the high-cost road transportation. Importantly, the inland water transport is the most environmentally friendly transport mode, yet its shares in passenger and freight services are small and falling. The challenges faced by IWT are manifold including the issue of navigability, inadequacy of safety standards, inadequate of port facilities, weak finances and management problems. A strong push will be needed in the 8FYP to unlock the full potential of this great transport asset.

***Efficiency of port use**:* In response to growing demand, the government has sought to increase port capacity by launching the Pyra port and a program to expand the Chittagong Port. These are important. Yet, despite efforts, the Mongla Port remains under-utilized. Progress in addressing the CD issue of the Passur River through strategic dredging is a welcome move, but stronger efforts are needed to enhance the use and productivity of this underutilized asset through strategic planning and greater resource allocation. Opening up the port to neighbouring countries is a smart move, but this must be facilitated by coordinated investments to enable the full use of the potential of the Mongla port.

***Port to factory connectivity**:* The further acceleration in growth under PP2041 and the 8FYP and the associated diversification of the export basket will require strong improvements in trade logistics related to factory to port movements and timely inflow of imports of capital machinery and intermediate imports from

ports to factory gate. The capacity and efficiency of the sea- and airport services and the ease of internal transportation are critical to the success of the export diversification strategy, for the ease of procuring imported inputs, and for transporting goods and services from the production centres to the consumption centres.

***Upgrading of airport services**:* Rapid growth in income has generated a huge demand for air transport services at the national and international levels. Bangladesh also has good prospects for strengthening its tourism capabilities. Bangladesh civil aviation has made important progress during the 7FYP but there is a large unfinished agenda that remains to be addressed. The airport capacity for both passenger and freight need urgent upgrading. Project implementation constraints have slowed capacity expansion Upgrading of airport services will be an important challenge for the 8FYP.

6.3 8FYP VISION FOR THE TRANSPORT SECTOR

The 8FYP Vision for the transport sector is linked to the PP2041 Vision that envisages a Bangladesh where:

- There is seamless flow in passenger and goods traffic and transport facilities are available on demand.
- People have efficient choices between different modes of transport facilities at affordable cost and time.
- All transport services are provided competitively with no barriers to entry and exit for service providers.
- There is strong inter-district and inter-regional connectivity with neighbouring countries for passengers, goods and services with choices of alternative transport modes.
- The safety standards are well established and the transport system is accountable through legal provisions for full compliance with safety standards.
- Urban traffic flows are well managed through a combination of Mass Rapid Transit (MRT) /Metro Rail Network, BRTC Double Decker/Articulated Bus Service and private options that balance commuter needs for easy transit with avoidance of massive congestion.
- All parking and traffic laws are enforced with appropriate sanctions for non-compliance irrespective of political or administration connections.
- Developed seaports to cope with International Maritime Transport Sector.
- 3R (Rail, Road and Riverine) intermodal connectivity to support the hinterland connectivity of all ports of Bangladesh.
- Road safety issues (loss of lives and damages of wealth due to road accidents) arising out of use of motor vehicles and human traffic in roadways are well resolved.
- Crash data are timely and rightly managed through integrated and well managed digital system.
- Vehicle road worthiness (fitness) is well tested through automated vehicle inspection centres.
- Road users are well aware of safe use of road ways.
- Motor vehicles drivers are well trained to negotiate safe drive.

The PP2041 converted this Vision into a broad long-term strategic framework with long-term goals and targets. The 8FYP goals, targets, strategy, policies and investment program are all inter-linked with PP2041.

6.4 8FYP TRANSPORT SECTOR TARGETS

The transport sector PP2041 Vision is very challenging in the context of the present situation but is very much consistent with the transport environment in a high-income economy. Consistent with that Vision, the transport sector targets of PP2041 are also very demanding. As a first step towards realizing the PP2041 transport sector vision, the 8FYP draws on the PP2041 targets and outlines the first phase of the four-phased medium-term program targets. The related targets are indicated in Table 6.10. The targets show both the massive growth in the demand for transport services to meet the needs of a growing and transforming economy and major changes in inter-modal transport that is needed to improve the efficiency and cost-effectiveness of the transport system. For domestic travel, the balance of transport services changes in favour of rail and inland water and away from the excessive reliance on the road network. This happens for both passenger movements and freight, but especially for freight. Port and air traffic capacities are projected to grow rapidly to meet the growing demand from higher GDP growth. Urban transport changes are particularly dramatic as Mass Rapid Transit (MRT)/Metro Rail Network transit options are introduced initially in the capital city of Dhaka and its adjoining areas. Additionally, it is expected that as the roadways expand, quality of road infrastructures gets improved, road worthiness of on road vehicle fleets are ensured both mechanically and environmentally, drivers are well trained and road users are well aware of safe uses of road ways.

Table 6.10: 8FYP Transport Sector Targets

Indicators		FY2019 (base Year)	FY2025
Passenger Traffic (billion passenger kilometres)	Roads	169	246
	Inland Water	16	23
	Railways	10	15
	Total	195	284
Freight Traffic (billion-tonnes kilometres)	Roads	24	31
	Inland Water	5	7
	Railways	2	3
	Total	31	41
Air Traffic (million passengers / million tons)	Passenger	13.09	14.63
	Freight	0.41	0.50
Sea Port Cargo Traffic (million numbers /million tonnes)	Container	2.9	3.6
	Tonnes	98.24	122
Urban mass transit	No of cities	0	1
Transport Infrastructure quality	Country ranking	100	80
	Score	42	47
Road safety accident death rate by country (WHO 2018)	(Per 100,000)	14.43	13.0

Source: GED Projections.

6.5 TRANSPORT SECTOR STRATEGY FOR 8FYP

The transport strategy for 8FYP will build on the lessons of experience of the implementation of the 7FYP and the PP2021. An important priority will be to address the implementation gaps of the 7FYP strategy. The other priority will be to address the major institutional constraints that have hampered implementation of transport projects. A third priority is the reform of the PPP strategy with a view to achieving stronger progress under the 8FYP.Finally, one of the important lessons of the 7FYP is that Bangladesh needs to be more strategic about identifying major transport projects and then allocating resources accordingly. The priority should be what is deemed as *transformational infrastructure investment*. This initiative already started under the 7FYP. The 8FYP will further reinforce it to ensure the timely adoption and completion of the highest priority transport projects.

***Strengthening long-term planning and priority setting**:* The physical targets for the transport sector are large as reflected in Table 6.5. These involve large investments and strong implementation capacity. Both are scarce in Bangladesh. So, careful planning and priority settings are critical elements of the 8FYP transport strategy. Bangladesh has experience in developing long-term transport planning. For example, the road network expansion program is guided by the 2004-2024 Road Sector Master Plan; there is a Rural Road Master Plan of 2005-2025 that guides the expansion of rural roads; an Inland Water Transport Master Plan was completed in 2009 that provided a 20-year investment program; the railway master plan 2010-2030 was approved in 2005; and the National Integrated Multimodal Transport Policy was approved in 2013.The implementation of these plans has been uneven and halting. Building on these plans and implementation experiences, a fresh look will be taken to develop a long-term Transport Sector Master Plan 2041 (TSMP 2041) with international technical assistance. There are several good practice transport planning and development experiences in East Asia, especially Japan, Korea and China. Bangladesh can learn from these experiences. The TSMP 2041 will focus on the major transport investments for Bangladesh for the 2021-2041 periods, provide a picture of the optimal inter-modal transport balance, and identify priorities and a phased approach to their development.

***Creating balanced inter-modal seamless transport facility**:* While roads will continue to dominate the transport network, land constraints, social disruption, environmental concerns and unit cost considerations will require a much more balanced development of the transport network with greater emphasis on inland water transport and railways. Both these modes are under-utilized. The 8FYP will give priority to developing these modes to reduce the pressure on roads and also to strengthen inter-modal coordination. The Port to factory gate connection and vice versa via river routes, for example, can be a major improvement in trade logistics. These and other options to improve the intermodal transport balance will be adopted based on an integrated transport planning process that will be regularly updated to reflect the changing traffic dynamics.

Strengthening implementation capacity: Implementation constraints slowed down the implementation of many large transport projects causing cost overruns and delays in project completion. This reduces the quality and rate of return for these investments. The government has put top priority to timely completion of all on-going projects. The 8FYP will further strengthen this by closely monitoring completion of all large transport projects, ensuring timely release of funds, linking new investment approvals to the record of project implementation, improving procurement policies, paying greater attention to project design before project approval, ensuring project implementation readiness as an important criteria for project approval, and strengthening capacities of line ministries and public agencies through improvement in technical capacities based on training and also through recruitment of special skills from private sector on contractual

basis. For large and complex projects, international competitive bidding process will be followed and emphasis will be given for turn-key project contracts with strict monitoring and penalty clauses for timely delivery of projects in agreed quality and price.

Ensuring sustainable financing of transport infrastructure: The massive expansion in transport infrastructure implied by the targets set in Table 6.5 will require huge investments. In the 7FYP the government put top most priority to the development of transport infrastructure and provided adequate funding from the budget. Owing to implementation capacity constraints, funding was often not fully used. As noted above, the 8FYP will assign priority to strengthening implementation capacity. Nevertheless, the volume of funding required is massive and would average around 5% of GDP per year over the FY2021-FY2025 periods. Such large funding cannot be provided by the budget alone. The government recognized this early on and identified Public-Private-Partnership (PPP) initiatives as an important source of transport infrastructure financing during 7FYP. As noted, this initiative has been slow to start. Although this has gained some momentum in recent years, the full potential of the PPP initiative remains to be seen. To achieve sustainable financing of this large transport infrastructure programme, the 8FYP will seek to sharply strengthen the PPP initiative with quality international level staffs and address required legal and incentive issues to draw international financing from best possible sources. Attention will be given to proper risk-sharing between public and private sectors in developing financing plans and performance standards, drawing on the lessons of good practice experience.

Developing and implementing key policies for ensuring quality and reliability of transport services: Despite progress, the global ranking of the quality of overall transport infrastructure and individual components is low, which lowers the global competitiveness of Bangladesh and is an important constraint to export diversification and foreign direct investment. The 8FYP will place a strong emphasis on improving the quality of transport infrastructure and related transport services. Several constraints reduce quality relating to inadequacy of O&M, lack of service standards, weak safety standards and monitoring, poor accountability for service quality and inadequate monitoring of transport sector related environmental standards. The 8FYP will seek to adopt a number of policies to improve infrastructure and service quality. A proper road user charge will be developed that also accounts for congestion, risk of traffic accidents and environmental pollution and implemented in a phased manner. These resources will be used to improve the maintenance of roads, bridges and highways. The government has already taken a number of policy initiatives to reduce road accidents and enforce them with legal sanctions for non-compliance and liability for accidents. These will be rigorously enforced. Safety standards for inland water transport, rails and airlines will be reviewed and strengthened as appropriate and fully monitored with legal provisions for non-compliance. Environmental considerations will be given emphasis in developing transport network including roads. Fossil fuel will be priced efficiently and consideration will be given to the introduction of a carbon tax. Clean energy transport options such as electric inter-city trains, electric elevated Mass Rapid Transit (MRT)/Metro Rail and Underground MRT/Metro Rail, electric buses, electric cars etc. will be promoted. Service standards will be set for port clearings and rail services in terms of timeliness, online user-friendly ticketing and clearance documentation options, and in-transit services.

Vehicle exhaust emission standards will be set in line with similar standards as of neighbouring/ similar countries. Policy initiatives will be taken to establish automated vehicle fitness test centres. Considering, motor vehicle driver as a key player, drivers training along with mass road safety awareness programmes will be performed on priority basis.

Strengthening management capabilities and efficiency of public transport authorities: The proper implementation of the proposed transport infrastructure strategy will require substantial institutional reforms in the transport sector. A particular challenge is to build a quality staff that combines civil servants with special technical skills and strategic professional staff. Another challenge is to establish accountability for performance. This is a generic challenge for overall public administration during the 8FYP as noted in Chapter 2 Part 2 of the Plan dealing with public administration and governance issues. Several initiatives introduced during the 7FYP are underway to strengthen public administration including better staff recruitment, training, incentives and performance evaluation. These initiatives will be further strengthened during the 8FYP. Over time, as Bangladesh develops and improves the education and skill base of the labour force, the quality of public administration will also improve.

6.5.1 Sub-sectoral Strategies

Strategy for road transport

The specific targets for the road and bridges subsector are shown in Table 6.11. The main elements of the 8FYP strategy for road transport are briefly highlighted below.

Table 6.11: RHD Physical Targets for the 8FYP

Physical Activities	8FYP Targets
Construction of 4/6/8 lane roads	550 km
Construction of new roads lane	150 km
Improvement/ Rehabilitation of National Highways	1800 km
Improvement/ Rehabilitation of Regional & Zila Highways	12,700 km
Construction of bridges/culverts	37,500 meters
Reconstruction of bridges/culverts	4,100 meters
Construction of Flyover/Overpass	11,000 meters
Construction of Rigid Pavement	375 km
Weigh Bridge/ Axle Load Control Station	30 number

Source: Road Transport and Highways Division

Strengthening project implementation capacity*:* The top most priority is to strengthen implementation capacity by focusing on the implementation of core transformational projects under RHD and ensuring their timely completion (Table 6.2). Considerable scarce national resources are tied up in these huge capital-intensive projects and their timely implementation us critical to ensure that the economy benefits from these projects as planned and to avoid cost over-runs. Project implementation capacity of the RHD will be strengthened through project implementation capacity of the RHD will be strengthened through organizational expansion, employment of qualified engineers & project professionals, through training and technical assistance. Project progress will be reviewed at the Ministerial level on a monthly basis and a 6-month basis at the NEC level.

As stated in perspective plan, RHD will actively participate in Transport Sector Master Plan 2041. Accordingly, RHD Road Master Plan 2009-2029 has to be updated & harmonized with these national policy documents for ensuring the proper identification of transformational projects that will achieve the best value for public money.

***Consolidation and upgrading of the National Highway Network**:* The PP2041 Strategy calls for consolidating and upgrading of the National Highway Networks through multi-laning of existing highways, by establishing access-control long-distance expressways, and by creating service lanes to ease connectivity to local roads. Consistent with this strategy, the first priority would be to ensure the timely completion of the above-mentioned national highways and ensuring that these roads provide the required service road connectivity to local roads. New 4-laning highway project up gradation will be undertaken selectively based in implementation capacity and available resources.

***Road damage control and ensure efficient use**:* National road networks are a national asset that needs to be efficiently used with minimum damage. Accordingly, strict axle load control policy would be established and enforced to reduce road damages caused by overloading. Attention will be given to develop quality infrastructures with hallmark attribute of high-speed mobility facilities. The target would be to achieve 80-110 kmph design speed with a level of Service 'B' for 900 kilometres of important highway corridors, which are now operating merely at 30-35 kmph. For achieving this, the strategy would be to optimize the intersections to be conflict free on major economic corridors. To ensure better riding quality, the share of Fair to Good road surfaces will be increased from 81% to 90% for overall RHD Road Network. Bypasses around towns would be planned and provided as access-controlled expressway type facilities with entry/exit at predetermined locations. For longevity of road infrastructures, sustainable as well as innovative technologies will be adopted. For example, concrete pavements are encouraged to use in waterlogged sections of highways.

***Establishing road connectivity with major development points**:* Connectivity with South Asian regional highways, the economic zone areas, ports, airports, power stations, inland water transport facilities, rail stations and rail freight centres and major tourist resorts is essential to maximize the benefits of the highways system. These factors are already playing an important role in the selection of road network development projects. The emphasis on these linkages will be further sharpened during the 8FYP.

***Lagging district connectivity**:* The poverty discussion in Chapter 4 of Part I showed huge gap in the poverty incidence of districts. One important factor is the inadequate connectivity of the lagging districts with the growth centres in leading districts. So, ensuring inter-district connectivity for all districts that are not connected through the national highway system is an important priority. This can be achieved by upgrading existing roads and bridges and where necessary by creating new expansions. The RHD Road Master Plan would be used as the guiding document for prioritizing the replacement of PSB, Narrow Bridges & Vulnerable Bridges. As indicated in PP2041, all inter-district roads would eventually be upgraded to at least 4-lane facilities. For prioritizing this task, the updated Road Master Plan should be the starting point. Investment program for the district roads for the 8FYP will seek to keep this consideration as a priority. Additionally, to reduce the risks of accidents, there should be a separate lane for slow-moving vehicles.

Ensure highway and inter-district road side services: To ensure proper use and comfort of road users, the 8FYP will put emphasis on creating highway and inter-district facilities to provide restroom and food facilities for travellers and essential services such as gas stations, emergency repairs, for facilitating highway mobility. While the private sector will make the investments, government policy will facilitate through land allocations, necessary permits and security facilities.

***Upgrade Zila and Upazila roads**:* The lagging districts are also constrained by inadequate connectivity between Zila and Upazila roads. So, the upgrading of all zila and upazila roads to facilitate easy transport connectivity between production and consumption centres is an important priority in PP2041 and for the 8FYP. This will also motivate and influence location decisions for manufacturing enterprises and facilitate labour mobility. These roads would be at a minimum 2 lanes, but in some areas where traffic pressure is intense, they would require 4-lanes ensuring enough load bearing strengths. To incorporate the non-RHD roads with inadequate pavement sub-structures/road geometry, handed over/transferred to RHD road network, will be given priority for upgrading to appropriate level & standard as per RHD specifications. The on-going effort to upgrade the sub-standard RHD Zila Highways to appropriate level & standard will be continued throughout the 8FYP.

***Up-grading of rural roads**:* This is an on-going program and its implementation will be further intensified under the 8FYP. The PP2041 target is that all village roads would be converted to asphalt standard with at least one lane to facilitate rural mobility of passengers and products. The 8FYP will make major efforts to push this important investment consistent with available funding. The road connectivity will be a major investment for reducing poverty, improving human development, and promoting rural investment in micro and small-scale non-farm enterprises.

***Improve road maintenance**:* O&M of highway, bridge, culvert and roads are a high priority strategic element for the road sector. Financing is always a constraint. The development and implementation of a well-designed road user charges will be instrumental in providing resources for road network upgrading and maintenance. For maintenance of different road network components like highways, bridges, culverts and other road furniture, modern technologies and innovative approaches need to be introduced in order to ensure best value for money. For highways and major bridges, the use of tolls will provide funding for O&M. The 8FYP will place emphasis on implementing both these policies through focused studies to determine the proper road and toll user charges based on economic principles as well as affordability concerns.

***Strengthen road safety**:* As noted, the 7FYP took some major policy initiatives to improve road safety consistent with SDG targets. The full and proper implementation of the National Road Sector Safety Action Plan (NRSSAP) 2017-20 will be an important priority for the 8FYP. Furthermore, in accordance with SDG Target no. 3.6 the number of fatalities due to road traffic accidents on national highways will be reduced by 25% at the end of 8FYP.

Bus route Rationalization: To bring discipline in public transportation (Bus) sector Dhaka Transport Coordination Authority (DTCA) takes an initiative to implement bus route rationalization and company-based bus operation in Dhaka city.

Integrated Traffic Management: In order to reduce traffic congestion in Dhaka city through intersection improvement and Intelligent Traffic System (ITS) is being implemented by DTCA. Pilot operation will be started very soon. Under this project, the following Action Plans and Manuals will be prepared by the Japanese expert team which will be finalized based on the information obtained after setting up ITS.

1. Intersection Improvement Manual
2. Guideline for Operation and Installation of Traffic Signal System
3. Guideline for Operation and Installation of CCTV System
4. Comprehensive Traffic Control System Plan
5. Action Plan for Road Traffic Safety Programmes for Drivers and Pedestrians
6. Action Plan for Design and Enforcement Mechanism of Road Traffic Regulation

Strategy for the Bridges Division

The strategy for the Bridges Division will be basically similar to that under Road Transport Division. Given the highly capital intensive and high-cost nature of the underlying investments that often involve international contracts and financing including PPP, the three most strategic considerations that will guide the Bridges Division's work program in the 8FYP are:

1***) Timely completion of all on-going projects****:* There are 7 transformational projects in different stages of implementation including the Padma Bridge; Dhaka Elevated Expressway PPP Project and the linked PPP-based Support to Dhaka Elevated Expressway Project; the Bangabandhu Sheikh Mujibur Rahman tunnel; the Dhaka-Ashulia Elevated Expressway; and the Bus Rapid Transit (BRT) Gazipur-Ashulia 4.5-kilometer elevated expressway Feasibility Study for the Construction of Subway in Dhaka City. These are all expected to be completed by CY2022.

All efforts will be made to ensure their timely completion. A new project was approved at the ECNEC meeting on March 10, 2020, at a total cost of Tk 1,042 crore for the construction of a 1,690 meter long bridge over the Paira River on Kachua-Betagi-Patuakhali-Lohalia-Kaliya road as part of the development of road communication network in southern region of the country.

2) Turnkey project contracts for internationally funded projects*:* Given the fact of capacity constraints leading to delays and cost overruns for these expensive projects, the government will increasingly adopt a strategy of negotiating project implementation for all donor-funded projects on a turnkey basis. The contracts will have specific performance criteria to prevent delays and cost over-runs.

3) ***Sharply expanded PPP capabilities****:* The capabilities to negotiate PPP projects involving domestic and foreign funding will be sharply strengthened through upgrading of the PPP cell with internationally qualified and experienced staff.

The Bridges Division has identified a number of new high priority transformational projects for the 8FYP including Railway Bridge over the Jamuna river, Barisal-Bhola bridge. These project proposals will be reviewed carefully for possible adoption in the 8FYP and beyond depending upon a proper review of the quality and relevance of these projects for our development, availability of funding, and implementation capacity. To conserve resources and avoid cost over-runs the policy of not adopting new expensive projects until satisfactory progress with implementation of on-going projects is firmly established.

Strategy for Railway Development

The 8FYP will build on the progress achieved under the 7FYP. Buoyed by this success, the Bangladesh Railways has adopted ambitious development targets to play its dynamic role in the Bangladesh development. The targets for the 8FYP are shown in Box 6.2.

Box 6.2: Bangladesh Railways Target for 8FYP

- Construction of 798 km new rail line.
- Implement dual gauge double tracking of 897 km to increase line capacity.
- Rehabilitate/ Upgrade 846 km existing rail line.
- Construct 9 important railway bridges
- Procure160 locomotives to enhance the efficiency, ensure reliability & punctuality of running trains and to introduce new trains.
- Procure 1704 passenger coaches and 2000 wagons to improve passenger service quality
- Procure adequate equipment to modernize railway maintenance
- Modernize Railway Workshop and other infrastructure.
- Improvement level crossing gates, other infrastructures and rolling stocks
- Construct new ICDs
- Modernize signaling system of 222 stations to ensure safety.
- Increase efficiency and improve performance of Bangladesh Railway
- Ensure full operational cost recovery by FY2025.

Source: Bangladesh Railways (BR)

To expand capacity and improve service, the BR has updated its Master Plan to align it in line with the PP2041 Vision and also aligning with the government's plans & policy statements like 7th Five Years Plan, Vision 2021, Delta Plan 2100 etc. to enhance operational capacity, increase market shares and improve its services. The updated master plan (July 2016-June 2045) is divided into six phases of five years each. A total of 230 projects with an estimated cost of BDT 5,53,662.00 crore is included in the railway master plan. The targets of the 8FYP shown in Box 5.3 are consistent with the second phase implementation of the approved master plan. The implementation of the associated investment and operational programmes of the BR during the 8FYP will be guided by the following strategic considerations that are consistent with the PP2041

- The railway expansion program envisaged in Box 6.2 will be undertaken with due regards to projected demand for passenger and freight services with a view to maximizing the use of associated capacity expansion. A critical outcome of the expansion program should be to ensure a higher market share of railways in passenger and freight traffic as envisaged in Table 6.1.
- Connectivity to regional train services involving neighbouring countries will be a priority.
- Introduction and/or up gradation of modern signalling system with relevant safety measures of international standard and introduction of a proper telecommunication system.
- Introduction of mechanized track maintenance system.
- Strengthen O&M practices following internationally recognized safety standards.
- Introduction of high-speed train for passenger transportation for connection among important cities.
- Reduction of turnaround time for the port bound freight trains.
- Introduction of a modern train management system with the Centralized Traffic Control System.
- Redevelopment of stations for smooth flow and comfortable experience of passengers as also with ensuring cleanliness and hygienic environment.
- Ensuring safety and comfort to the passengers and freight transport.
- Up gradation of railway human resources aimed at commercializing services.
- Redesign of coaches to enhance travel comfort and safety.
- Lower port turnaround, loading and unloading times.

- Competitive pricing, ease of ticketing through online purchase and timeliness of service with a view to making a profit.
- Increased capacity on key corridors.
- Increase new train service based on demand.
- Development of new modern Inland Container Depots with the increasing number of block train to carry container from port to destination.
- Ensure railway connectivity to every district of Bangladesh.
- Reconstruction, modernization and extension of missing links for national, regional and Trans Asian Railway Network.
- Development of dedicated freight corridors.
- Introduction of Commuter Train Services for reducing traffic jam in megacities.
- Introduction of electric traction in Bangladesh Railway.
- Development of new Workshops. Procurement of modern equipment for rolling stocks maintenance.
- Introduction of Intermediate Block System and Installation of Automatic Train Supervision (ATS) including Automatic Train Protection (ATP) with existing CBI and CTC system in the selected corridors.
- Creation of two additional zones and four additional divisions in Railway for better and effective management of railway services.
- Improved custom clearance arrangements for inter-regional services with neighbouring countries.
- Quality transfer facilities to road transport.
- Strengthen business planning to capture a higher market share of passenger and freight traffic including special services for tourist and high-end users.
- Up gradation/construction of railway training academy.
- Bangladesh Railway to act as a multi-modal transport operator.
- Railway tariffs will be modernized so as to cover full operating cost by FY2025.

Strategy for Developing Inland Water Transport (IWT)

The geography of Bangladesh connects almost all 64 districts to each other by an interconnected system of major and minor rivers. The major rivers, in turn, provide convenient access to the sea. This massive internet of water connectivity if properly harnessed and nurtured can provide a major development advantage for Bangladesh. The Bangladesh Delta Plan 2100 (BDP2100) examined in detail the constraints faced by the IWT and laid down a detailed strategy and policy framework for unleashing the true prospects of the IWT subsector. Consistent with BDP2100 and the PP2041 strategy, the 8FYP will seek to harness this potential for both passenger and cargo traffic. The main elements of the strategy for inland water transport include:

- Establish priority routing based on potential passenger and freight traffic flows and develop those navigability improvements and river port infrastructures.
- Sharply improve the navigability of river routes through strategic dredging, river training, and bundling as emphasized in BDP2100.
- Give priority to inter-regional river connectivity to facilitate trade, commerce and tourism.
- Integrate IWT with other transport modes to maximize the benefits of IWT.

- Strengthen river transport safety standards by setting proper standards and ensuring full compliance. Particular attention would be given to ensure the river-worthiness of vessels, adequacy of safety equipment including radio communications, and compliance with passenger load regulations.
- Vessel worthiness licensing would ensure minimum service facilities and standards of all vessels.
- Bangladesh Inland Water Transport Authority (BIWTA) will be strengthened with technical staff and qualified inspectors to administer all licensing functions efficiently and on time. Special attention will be given to governance improvements.
- The capacity of BIWTA to undertake hydrological surveys, conduct river training and implement dredging operations will be expanded through upgrading the managerial and technical staff and international training. Side by side, the private sector will be invited to participate in these operations on a PPP basis.
- Given the large need for resources, a proper balance between the public and private sector will be maintained. Much of the infrastructure will be provided by the public sector but most of the passenger and freight services will be provided by the private sector. ADP allocations will give priority to the development of IWT infrastructure
- River port facilities will be sharply improved with modern service standards for passengers, docking and unloading services for cargo including container cargo, storage facilities and security and rescue services. International river ports of call will also provide customs and inspection services as relevant.
- Pricing policies for passenger and cargo will be commercially determined with a view to enabling a reasonable rate of return on investment.

Strategy for Shipping

The main objective of the shipping sub-sector during the 8FYP is to expand the capability of the Bangladesh Shipping Corporation to handle a larger share of the Bangladesh international trade than presently. Bangladesh international trade has been growing and linked to that shipping demand has grown manifold. Yet the BSC capacity to provide efficient shipping services has been limited. Given the need to diversify the sources of export earnings, the export diversification strategy of the 8FYP envisages a growing share of Non-factor exports in total exports. An important component of that are earnings from shipping. To achieve this target, the BSC has to be modernized with an expanded fleet, competent management and quality staff. A combination of purchase and lease operations will be used to expand fleet capacity. Through the Chittagong Marine Academy, Bangladesh produces internationally qualified merchant navy professionals who are in demand in international shipping lines. The 8FYP will strive to encourage these qualified personnel to seek employment in BSC fleets at internationally competitive salaries. BSC management will be upgraded with technical competent and business-oriented professionals to be able to handle international shipping consignments efficient and effectively. Staff training will be emphasized. In international shipping private sector may also be encouraged to participate.

Strategy for Air Transport

The growing demand for domestic and International air and cargo traffic calls substantial investments in construction of new airports, expansion and modernization of existing airports, improvement in connecting infrastructure (road, metro, sea link, etc.) and better airspace management. The performance in the 7FYP was mixed owing to financing and implementation capacity constraints. The 8FYP will seek to substantially strengthen and upgrade the air transport industry as Bangladesh seeks to attain UMIC status. Consistent with PP2041strategy, the 8FYP will adopt the following strategies to deal with the emerging situation in the aviation sector:

- Build a new international airport to serve the growing air traffic demand of the country.
- Upgrade and modernise all existing airports by creating additional runways and taxiways; augmenting gate and apron capacity to accommodate more aircraft; increase terminal capacity to accommodate more passengers; improve ground traffic management and ancillary aviation processes to ensure quick aircraft turnarounds; improve air traffic and air space management practices and new radar technology; and provide complementary services such as fuel supply, passenger and luggage handling, warehousing, workshop facilities, hangars etc.
- Strengthen security in the airport through the introduction of a modern and smart security system.
- Upgrade non-operational air-strips in the places of economic significance such as ports, tourist places and industrial clusters.
- Strengthen land transport connectivity to the airports to maximize the benefits of air services.
- Establish a specialised air cargo terminal to handle growing air cargo volume and reduce congestion and delays. This will particularly benefit urgent shipments of exports and imports.
- Upgrade air navigation services (ANS) to build seamless air space with expanded capacity and safety. Future ANS infrastructure would move towards greater integration and automation with the implementation of state-of-the-art technologies.
- Improve maintenance, repair and overhaul facilities and services to save cost and time in a highly competitive market.
- Strengthen human resource development in this skill-intensive and competitive line of business.
- Attract private sector participation in airport development.
- Institute appropriate cost recovery policies for airport services. Airport like seaport is a commercial enterprise and will be run and managed on a commercial basis.
- Strengthen the performance of the national carrier Bangladesh Biman through professional management and technically qualified staff who understand the airline business with a view to operating BB as a truly commercial enterprise and earn sizable profit.

Strategy for Maritime Port Development

The trade to GDP ratio is projected to expand further substantially during the 8FYP, requiring strong attention to expanded and efficient port services. The Chittagong Port Authority has built up a strong record of performance improvement including financial performance that sets it apart from other SOEs. Even, so the global trade logistic performance comparison shows that the efficiency of port services is lower than in competitor countries thereby lowering trade competitiveness. The 8FYP will put strong emphasis on further

improving the efficiency of the port performance to improve the competitiveness of the Bangladesh economy. Specifically, the 8FYP strategy for the maritime port subsector would involve the following steps.

- Emphasis will be placed on removing all the constraints to the use of the Mongla Port to its full capacity through a combination of investments in strategic dredging and investments in port equipment and facilities to support expanded and efficient cargo handling.
- The investment programmes for the expansion of Chittagong Port capacity will be fast tracked along with other investments for expanding container traffic handling and management.
- Completion of minimum 16.0 meter draft deep sea port at Matarbari, Cox's Bazar.
- The investment programmes for the Pyra Port will be fast tracked for speedy completion of all required physical work to enable service by 2022.
- Each port would focus on the improvement of productivity – both ship berth-day and gang-shift output further through modernisation, induction of more sophisticated equipment in handling cargo, etc.
- Handling operations in selected areas will gradually be outsourced/ privatised for injecting more competition and increasing output.
- Efforts would be made for full mechanization of cargo handling operation and movement in major Ports.
- The storage area in the ports will be expanded.
- Formulation of Private Sector Port Policy.
- Efforts would be made to reduce pre-berthing detention and to improve turn -time of vessels through minimization of both port and non-port related factors.
- Required dredging to allow handling of bigger shipping will be carried out.
- Terminal capacity for handling higher cargo off-loading will be expanded.
- Capacity to handle large container traffic will be expanded by constructing deep water-container hub ports.
- Inter-modal transport connectivity with ports will be ensured for speedy forward transport to the final destination of imports as well as easy transit factory gate to port for exports.
- Modern cargo handling techniques would be introduced to improve port performance in the major ports, particularly in the dry bulk cargo, conventional and unitized general cargo trades.
- Port service efficiency and productivity will be enhanced by introducing of state-of-the-art technology/internet to implement integrated Port Operations System and to move towards paperless regime so as to reduce dwell time and also reduce transaction cost to the users. The major areas where such automation is aimed at include: Vessel Traffic Management System (VTMS); Information Technology in Scientific Application, the Cargo/Container handling operations and non-operation area; Surveillance System and Safety & Security System; and Electronic Commerce (EC)/Electronic Data Interchange (EDI).

Strategy for Land ports

Given their importance for regional trade with neighbours, especially India, the 8FYP will seek to build on the progress made in the 7FYP and further improve the quality and lower transaction costs of land port freight. The upgrading effort of exiting land ports with modern facilities and use of digital technology will continue. Freight clearing time lines will be reduced through governance improvements, stronger supervision, reduction in paper work and use of ICT. Land port clearance procedures in Europe and North America will be studied to see how these experiences can be used to improve land port efficiency

Strategies for Urban Transport Development

The main objective of the 8FYP urban transport strategy will be to support sustainable urban development. The strategy for urban transport would aim at reducing the traffic congestion and to improve the environment, improving transport and traffic infrastructure so as to meet existing and potential demands, and developing an integrated and balanced system in which all modes (motorized and non-motorized) can perform efficiently and each mode can fulfil its appropriate role in the system. The main elements of an urban transport strategy are:

- Completion of Mass Rapid Transit (MRT) Metro Rail, both elevated and underground rail, initially in Dhaka City and its adjoining areas.
- Provision of Bus Rapid Transit (BRT) that is characterized by dedicated lanes for rapid movement of buses for all divisional cities.
- Provision of large electric bus/pollution free bus operated by BRTC phasing out other small buses from the cities for rapid movement in all divisional cities.
- Creating special lanes for pedestrians and cyclists.
- Promoting high efficiency and alternative fuel vehicles.
- Introduce Intelligent Transportation Systems (ITS) initially in Dhaka and then extend to other metropolises. The major application areas of ITS technology include electronic road pricing, traffic management, integrated ticketing systems for different public transport modes, and traveller information. By 2031, all the major cities and the national highway networks of Bangladesh should be brought under Intelligent Transportation Systems.
- Strengthening linkages with cities and towns around Metropolitan Areas through Bus Rapid Transit (BRT) and Mass Rapid Transit (MRT /Metro Rail). The emphasis would be placed on coordinated development of land use and transportation planning in order to facilitate access to such basic necessities as workplaces and socio-economic facilities.
- Commercial parking facilities will be encouraged through private investment. All parking regulations will be strictly enforced with penalties for non-compliance.
- Time of day use restrictions will be introduced in heavily congested roads. Consideration will be given to introduce entry fee during peak hours for heavily travelled roads.
- The emphasis would be given on the introduction of pedestrian roads in Dhaka City and then extend to other Metropolises.

6.6 TELECOMMUNICATIONS AND POSTAL SERVICES

The entire world is passing through a digital revolution where every facet of the citizen's individual and collective activities are dependent on digital connectivity and services. The intelligent networks and terminals, ultra-reliable low latency communication, real time processing and the capacity of managing communications of trillions of devices and endpoints are the key drivers of worldwide digitization. As the world is forwarding to the Fourth Industrial Revolution (4IR), the role of digital technology is rapidly shifting from a driver of efficiency to an enabler of fundamental innovation and disruption. The telecommunications industry is at the forefront of this transformation through the digital ecosystem which is providing the fundamental building blocks i.e. access, intelligence, interconnectivity and applications that are enabling digital revolution to take place. The Covid-19 pandemic has shown the utmost necessity

of being digital. At present all the social, cultural, economic and governance activities has been forced to shift in the digital world. Though globally the wave of digital transformations in the enterprises and governance began several years earlier, the unprecedented experience of Covid-19 will further accelerate the transformation. Undoubtedly digital connectivity and services would be the prime factor for socio-economic development in the post pandemic world.

The visions associated with 5G have initiated a total paradigm shift of using digital devices, computing and connectivity which redefined the way of building an innovating knowledge economy.[4] Total digitalization is required in every sector to harness the full potential of technological advancements and to integrate the country with 4IR. On-going disruptive innovations have already blurred the boundaries between the physical, digital, and biological worlds. Therefore, a complete fresh look in the policies, plans, legislations, procedures, management criteria, Human resources development and institutional framework is required for the future connectivity and holistic adoption of digital technologies and processes.

Posts and Telecommunications division is playing the pivotal role in achieving 'Digital Bangladesh' by ensuring the development of modern infrastructure and services as well as the appropriate governance of the related sectors. The division works closely with the associated departments, regulators, infrastructure and service providers, Over the Top service providers, Content providers, device and equipment importers and manufacturers, retailers, value chain players including distributors, investors, academia and various other stakeholders both in public and private sectors. The legacy notion needs to be changed considering the sector's all-encompassing contribution to other sectors and as the backbone of the upcoming 4IR.

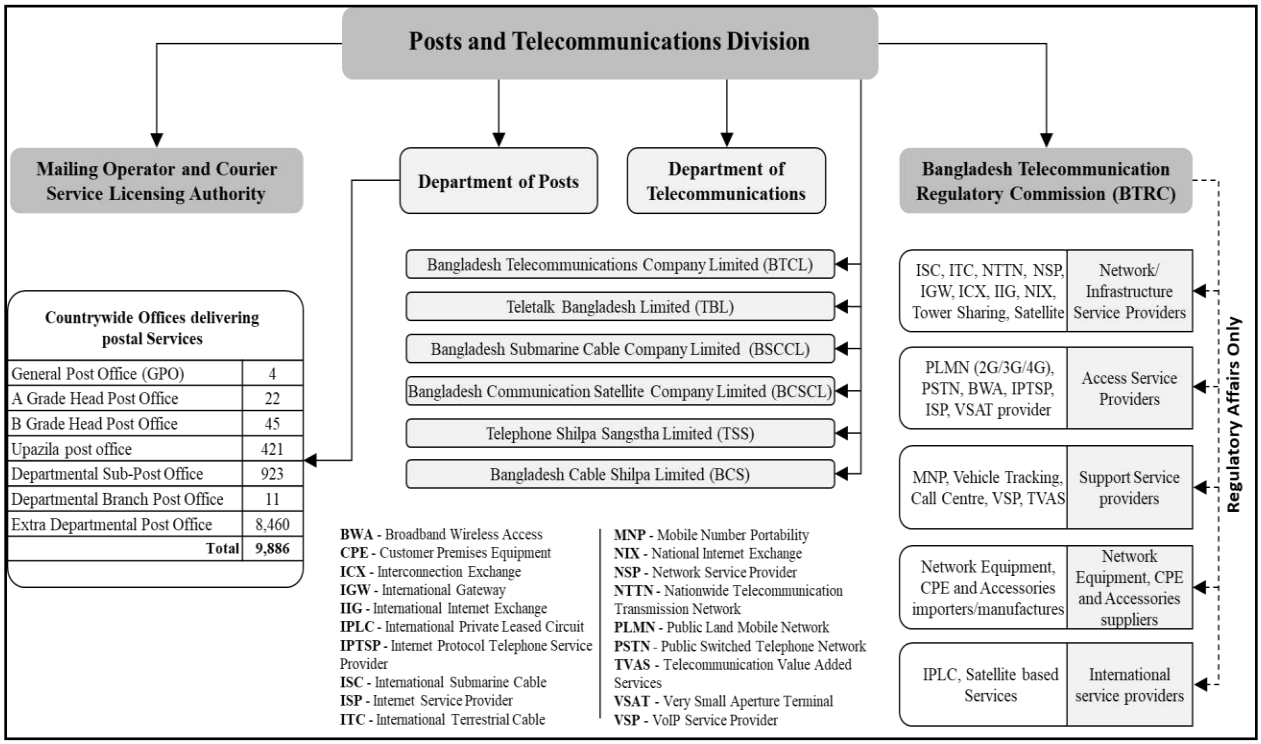
It is expected that the digital infrastructure and services will have at least 6% direct contribution in the GDP of Bangladesh during 2041. It is foreseen that 100% digital device will be manufactured in Bangladesh and will contribute in country's export earnings. The contribution of Digital products and services will be 10% of the total national export earnings as Bangladesh will be a major shareholder of the global knowledge economy by 2041. The development objectives, plans and strategies stipulated in this chapter have been set out to achieve the telecom sector targets as well as to support other sectors integrating with the Fourth Industrial Revolution through a true digital transformation.

6.6.1 Organization of Posts and Telecommunications Division (PTD)

The Posts and Telecommunications Division carries out its duties through various departments, regulator and different organizations in private and public sector. A glimpse of the institutional framework of the posts and telecommunications sector is presented in the Figure 6.1.

[4] ITU, 2017. 5G Basics.

Figure 6.1: Institutional Framework of Postal and Telecommunication Infrastructure and Services in Bangladesh.



a) Institutional framework of the postal sector:

The postal department formally started its journey in 1898 in the British ruled India through the Post Office Act. The Act is adopted in the independent Bangladesh to run the activities of the Department of Posts. At the time of the creation of the postal service, the main activity of the Department was to collect, transport and deliver personal and official letters. Subsequently Money Order and various other modern services were introduced. Now the Department of Posts is gradually updating and upgrading the traditional postal services through ICT based modernization process. At present the organization provides services through countrywide 9,886 post offices including the hard to reach areas.

In order to regulate the operation of the Courier Service business and to issue licenses for Courier Service operators, the sections 4 and 58 of the Post Office Act, 1898 were amended in 2010. The Mailing Operator and Courier Service Licensing Authority are formed in 2013 following the amendment of the Act.

b) Institutional framework of the telecommunication sector

Department of Telecommunications was established in 2015. The function of the department is to support the government in policy formulation and implementation and creating an environment for providing affordable and quality telecommunication services in the country through incorporating institutional development and modern technology.

A new national telecommunication policy has been formulated and published in 2018 after 20 years of the first one. The vision of the policy is to provide affordable and universally accessible quality telecommunication services to support the nation's sustainable development goals and to integrate the

country with the global knowledge economy. Some major institutional reform envisioned in the policy which will be implemented gradually to support the growing needs of the sector.

6.6.2 Progress during the 7FYP

Posts and Telecommunications infrastructures and services are growth drivers and input to the other sectors of the economy. The achievements in these sectors were beyond the goals specified in the seventh five-year plan. The sectoral development policies and programmes were undertaken as per need of the market and global technology trends to fulfil the 'Digital Bangladesh' goal anticipated in 'Vision 2021'. Some of the notable achievements during 2015 to 2020 include-

a) Ensuring connectivity, affordability and quality of service

The tele density of the country has exceeded 100% during the last five years. In this period the internet users have been doubled by adding more than 5 crore subscribers. At the same time, the international bandwidth usage has been increased by about 7 times which confirms the greater participation of the people and businesses in the global knowledge economy. At present Bangladesh is the fifth largest mobile market in Asia-Pacific region and ninth in the world in terms of unique subscribers.[5]

Table 6.12: Improvement in Digital Connectivity and Affordability

Indicator	June 2010	June 2015	February 2020
Teledensity	41.2%	81.93%	101.41%
Cellular Mobile subscriptions (2G/ 3G/4G)	5.99 Crore	12.68 Crore	16.61 Crore
Internet Subscriptions	0.7 Crore (mobile internet 98%)	4.83 Crore (mobile internet 97%)	9.99 Crore (mobile internet 94%)
Internet Density	2.5%	30.56%	58.91%
Internet Bandwidth Charge/Mbps	18,000 BDT	625 BDT	285 BDT
Use of International Internet Bandwidth	7.5 Gbps	234 Gbps	1,600 Gbps

Source: BTRC, PTD

b) Infrastructure development and adaptation of new technologies

i) ***Communication Satellite:*** The first communication satellite of Bangladesh 'Bangabandhu Satellite-1' was launched successfully on 12 May 2018 using the Falcon 9 launch vehicle from the launch-pad LC-39A at Cape Canaveral, Florida, USA. With this, Bangladesh emerged as the 57th country in the world having its own satellite. The satellite is providing telecommunication and broadcasting services as well as a variety of sophisticated digital services across the country including the hilly regions, the riverine chars and the islands. There are opportunities to extend services of BS-1 in other countries of South Asia, portion of south-east Asia and Stan-countries. Significant amount of foreign exchange is being conserved as 33 private television channels and 4 channels of Bangladesh Television have started broadcasting through 'Bangabandhu Satellite-1' instead of foreign satellite service providers. Moreover, the native DTH (Direct to Home) operators are providing services using BS-1. Besides, two ground control stations and satellite ground stations

[5] GSMA. (2018). Country Overview: Bangladesh, Mobile Industry Driving Growth and Enabling Digital Inclusion.

have been set up in Gazipur and Betbunia for satellite management and related services. Bangladesh Communication Satellite Company Limited has been formed in 2017 to operate the satellite and provide services at home and abroad.

ii) ***Fourth Generation Cellular Mobile Service:*** 4G licenses have been issued to four cellular mobile service providers in 2018 in order to provide high speed mobile broadband throughout the country. For the purpose, technology-neutral spectrum from 1800 MHz and 2100 MHz band have been allotted in favour of the service providers at a price 31 million USD/MHz and 27 Million USD/MHz, respectively. At present, 4G service has been extended to all Upazila levels and rural areas with more than 21 million subscriptions.

iii) ***Domestic transmission backbone:*** The project titled "Optical Fibre Cable Network Development Project in 1000 Union Parishads" has been completed in December 2016 by BTCL. Through this project, about 8000 km of optical fibre cable has been laid in 1,212 unions from 114 Upazilas in 64 districts. More than 9000 km optical fibre cables and related equipment have been installed in 349 Upazilas of 64 districts under the "Upazila level optical network development" project of BTCL.

iv) With the goal of expanding high speed internet service in marginal rural areas, Info-Sarkar (Phase-3) project has been undertaken by the government. The infrastructure development activities under this project include establishing 19,500 km optical fibre network in 2,600 Unions; establishing/expanding DWDM network in 63 Districts and 48 Upazilas; ensuring transmission networks of 10 Gbps at Upazila level and 100 Gbps at District level; establishing Point of Presence (POP) in 2600 Unions and VPN / MPLS service in 1600 offices at different levels of Bangladesh Police; and establishing Network Monitoring System (NMS) for network monitoring and operations. In addition, the project titled 'Establishment of ICT Network to Remote Areas (Connected Bangladesh)' is being implemented to provide internet connectivity in further 777 Unions. The project is set to be completed within December 2021.

v) ***International transmission network:*** The cable landing station of country's second submarine cable SEA-ME-WE-5 has been set up at Kuakata of Patuakhali District. At present the total bandwidth capacity of the existing two submarine cables is 2,750 Gbps. About 60% of the country's international bandwidth demand is currently being met through submarine cables and the rest are through seven International Terrestrial Cable (ITC) operators. Considering the growing demand of international bandwidth, MoU has been already signed with SEA-ME-WE-6 Submarine Cable Consortium for connection with the third submarine cable to add additional 12 Tbps capacity which is expected to be operational by 2025.

vi) ***Expansion and up gradation of access networks:*** The "Modernization of Telecommunication Network for Digital Connectivity" project is being implemented by BTCL. Under the project, the Fixed Access Network and BTCL's IP Network will be upgraded through IMS (IP Multi-Media Subsystem) Platform, FTTx Technology's AGW (Access Gateway), GPON (Gigabit-capable Passive Optical Networks) and MDU (Multi Dwelling Unit) at three locations of the country. The project "Establish Optical Fibber Cable Network in All Government Colleges / Universities and Training Institutes" has provided high-speed internet broadband facility to 587 Government universities/colleges and training institutes using BTCL's existing optical fibre cable network.

Teletalk is providing 3G mobile services across the country through 4,936 2G BTS and 3,909 3G BTS (Node B) and 2,348 4G Node-B in all districts and 48 Upazilas. Teletalk is providing e-services to the citizens in the areas of public examination results, university admissions and publication of results, medical, education, disaster management, entertainment, utility bill payment etc.

vii) ***MNP, Tower Sharing and TVAS:*** Mobile Number Portability Services (MNPS) license has been issued in favour of an operator in 2018 to provide the facility to avail the services of any other mobile operator while keeping the mobile number unchanged. In the same year tower sharing license has been issued in favour of 4 (four) operators in order to ensure proper utilization of tower resources, reducing demand for electricity connection and cultivable lands and to ensure health and environmental protection. Regulatory Guidelines for Issuance of Registration Certificate for Providing Telecommunication Value Added Services (TVAS) have been issued in 2017 to provide safe, useful, efficient, universal and affordable Telecom Value Added Services to the general public.

viii) ***Mobile handset ecosystem:*** NOC Automation and IMEI Database have been set up in BTRC in 2019 for the protection of government revenue and facilitation of legal mobile handset imports and preparation and preservation of IMEI database. The IMEIs of each mobile handset, initially imported legally from abroad and locally produced in the country, are being stored in a database system called NAID (NOC Automation and IMEI Database).

ix) ***Voice Call and Internet Bandwidth rate:*** The approved call rate for mobile phones in Bangladesh has been fixed from a minimum of Tk 0.45 to a maximum of Tk 2.00. The average call rate of various packages has now come down to below Tk 0.50. In order to bring the price of internet bandwidth within the purchasing power of the people and reducing digital divide and create opportunities for development and employment of digital services, the monthly wholesale charge for internet bandwidth has been gradually reduced from Tk 27,000 in 2009 to Tk 285 in 2019. The mobile voice call rate was the 3rd lowest and broadband internet tariff was the 4th lowest according to the Global Information Technology Report, 2016 published by World Economic Forum.

x) ***Quality of Service:*** QoS guideline has been formulated and being enforced in order to improve the quality of telecommunication services. The issues related to Call drop, increase in network quality, closure of unwanted packages by customers, prevention of copyright infringement etc. are monitored regularly by BTRC.

(c) Safety and security in the use of digital media and technology

(i) ***Digital threat mitigation:*** 'Cyber Threat Detection and Response' project has been implemented by Department of Telecommunications (DoT) to prevent internet users from accessing websites/content that are inconsistent with the country's values, including porn and gambling sites.

(ii) ***Biometric registration of mobile subscriptions:*** The SIM / RUIM re-registration process verifying the customer's information with the national identity card in biometric system has been completed on 31st May 2016. In parallel biometric registration has been made mandatory for new connections. As a result, criminal activities such as mobile phone threats, extortion, militant financing, illegal call termination, etc. have been greatly reduced.

(iii) Coordination with global online service providers: Initiatives have been taken with the authorities of Facebook, Google, Microsoft and other online media to prevent, monitor and counter harmful content such as anti-social and anti-social propaganda, rumours and religious extremism on social networking sites.

(d) Indigenous manufacturing of digital equipment and accessories

i) Optical fibre Cable, HDPE duct: Apart from producing telephone copper cables and wires, Bangladesh Cable Shilpa Limited (BCSL) has started production of optical fibre since 2012, which is playing an important role in developing the infrastructure for Digital Bangladesh. Steps have been taken to install one new high speed sheathing line machine to increase the annual production capacity of the optical fibre cable plant to 9,000 km. The machine is expected to be operational by June 2020. Besides, commercial production of HDPE Silicon Duct has been started from September 2017. Up gradation of the duct plant is on-going to increase the annual production capacity to 3,500 km.

ii) Electrical Conductors, Cables and wires: BCSL has completed the installation of the plant to manufacture electrical overhead conductors, service drop cables and bare/ insulated wire with an annual production capacity of 2,400 metric tons (600 km per month).

iii) Telephone sets, PABX, Laptops and other telecom accessories: Telephone Silpa Shangstha (TSS) is manufacturing/assembling Digital telephone sets, Digital PABX, Laptop, Multi-functional digital energy meter and battery/charger for mobile telephone sets to support the needs of telecommunication/ICT sector.

(e) Modernization of postal services and expansion of services through IT

i) Postal Digital Centres: Under the project titled "Post E-Centre for Rural Community", 8,000 rural post offices and 500 Upazila post offices across the country have been converted into digital centres.

ii) Up gradation of postal systems and services: Under the "Information Technology Based Rural Post Office Construction" project 590 post office buildings have been rebuilt and 1,263 post offices have been repaired. Automation project of the Department of Posts had been undertaken in order to bring 71 main post offices, 13 mail and sorting offices and 200 Upazila post offices and town sub post offices under ICT based automation. Furthermore, 14 new modern mail processing centres will be set up to provide maximum service to the postal customers by replacing the 40/50- year old traditional mail processing centres with a combination of article, sorting and delivery system through the implementation of the "Mail Processing and Logistics Service Centre project". To reduce the dependency on the railway and leased vehicles in the postal transport and distribution system, 116 vehicles of different categories have been procured under the project titled "Strengthening the Postal Transport System".

iii) Digital Financial Inclusion: Postal Money (Dak Taka) has been introduced through post offices to ensure balance transactions for the people who are deprived of banking facilities. The electronic/ mobile money order service has been extended to 2,650 different categories of post offices across

the country. In addition, Postal cash card service is being provided in 638 post offices across the country including all District and Upazila post offices. To enhance the financial inclusion in the county, Digital Financial Service 'Nagad' has been introduced in 2019 which has been able to secure a significant market share within a very short time.

(f) Formulation/ amendment of laws/rules/policies/guidelines during 2015-2020

i) Bangladesh Telecommunication Regulatory Commission (Significant Market Capacity) Regulations, 2017.
ii) National Telecommunication Policy, 2018.
iii) National Broadband Policy, 2009 (Revised 2013, 2016, 2017).
iv) 4G / LTE Cellular Mobile Phone Operator Regulatory and Licensing Guidelines, 2018.
v) Mobile Number Portability Regulatory and Licensing Guidelines, 2018.
vi) Telecommunication Value Added Service Registration and Regulatory Guidelines, 2018.
vii) Tower Sharing Regulatory and Licensing Guidelines, 2018.

(g) Institutional reforms in the telecommunications sector

i) Bangladesh Communication Satellite Company Limited has been formed in 2016 to manage and control the communication satellites including providing and marketing the satellite services.

ii) The Department of Telecommunications was formed in 2015 in order to provide technical support, assist the government in policy formulation and implementation and create skilled manpower in the telecommunication sector.

(h) Contribution of Posts and Telecommunications Sectors to the National Economy

(i) Impact on GDP: During the last five years posts and telecommunications sectors have been able to maintain the growth rate alongside with the other sectors of the economy as shown in Table 6.13.

Table 6.13: The direct contribution of Posts and Telecommunications in GDP (Constant Prices; Base Year: 2005-06)

Fiscal Year	GDP (Crore Taka)	GDP Growth Rate (%)	GDP From Post and Telecom (Crore Taka)	Posts and Telecom Growth Rate (%)	Post & Telecom GDP Share (%)
2015-16	883,540	7.11	22,233	6.81	2.62
2016-17	947,900	7.28	23,785	6.98	2.61
2017-18	1,022,437	7.86	25,339	6.53	2.58
***2018-19**	1,105,793	8.15	27,397	8.12	2.58

Source: Bangladesh Economic Review, 2018; Ministry of Finance. *Bangladesh Bureau of Statistics.

According to the assessment of the Bureau of statistics, the segregated value addition by the Posts and Telecommunications sectors are shown in the Table 6.14.

Table 6.14: Summary of Value Addition by Posts and Telecommunications Sector (Constant Prices; Base Year: 2005-06; Taka million)

Sectors/ Sub-sectors	FY 2014-15	FY 2015-16	FY 2016-17	FY2017-18	FY 2018-19
Post and Courier Activity	**4709**	**5657**	**6009**	**6502**	**7040**
Bangladesh Post Office	2728	3605	3883	4300	4759
Courier Service	1981	2052	2126	2202	2281
Telecommunication	**204413**	**217762**	**233042**	**248216**	**268304**
Bangladesh T&T	9165	9585	10117	8201	8201
Mobile Phone	185223	197021	210464	226114	244597
Others	10025	11156	12460	13902	15506

Source: Statistical Yearbook Bangladesh, 2019; Bangladesh Bureau of Statistics

(ii) Impact on Foreign Direct Investment: Over the last two decades, telecommunication sector is a major source of foreign direct investment in the country. The FDI inflows for the last five years are shown in the Table 6.15. Despite of recent increase of FDI in other emerging sectors such as energy and RMG, telecommunication still is a vital destination of FDI.

Table 6.15: FDI in tele communications and Computer Software and IT sector.

Calendar Year	Total FDI (Million USD)	FDI in Telecom Sector (Million USD)	FDI in Computer Software & IT Sector (Million USD)	Share of Telecom+ Computer Software & IT in total FDI (%)
2015	2235.39	254.57	8.26	11.76
2016	2332.72	572.76	22.05	25.50
2017	2151.56	229.64	83.55	14.56
2018	3613.30	219.87	26.26	6.81
2019	2873.95	208.35	41.75	8.70

Source: Bangladesh Bank

A large number of people are employed in the telecommunication fields. About 7.60 lakh people were directly employed in the industry in 2018, of which 92.5 per cent are unskilled and 7 per cent are women. [6] The average annual growth rate of jobs in the sector is about nine per cent over the past few years. There are potential opportunities of increasing the employment generation in different subsectors especially in manufacturing and value-added services in the future.

(iii) Contribution to the Tax and Non-Tax Revenue: The sources of direct tax revenue from the telecommunication sector are the income tax, Value added tax, supplementary duty, customs duty, excise duty, SIM tax etc. from the service providers, infrastructure providers, value added services, Customer Premises Equipment (CPE)/network equipment and accessories vendors, importers, manufacturers and other members of the ecosystem. Non-tax revenue comprises of recurring and non-recurring license fees, spectrum allocation fees, annual spectrum charges, revenue shares and other administrative fees/charges/fines. Table 6.16 summaries the non-tax revenue contribution from the posts and telecommunications sectors in the recent years.

[6] USAID/Bangladesh, 2019; Comprehensive Private Sector Assessment.

Table 6.16: Non-tax Revenue Contribution from the Postal and Telecom sectors

Fiscal Year	Non-Tax Revenue collected under PTD (Taka crore)	
	Posts	Telecommunication
2013-14	219.13	10084.9
2014-15	253.17	3855.83
2015-16	301.18	4142.91
2016-17	370	3854.09
2017-18	405	6204.85
2018-19	445	3048.69

Source: Annual Reports of corresponding years, Posts and Telecommunications Division.

6.6.3 Goals, Targets and Strategies for Telecom Sector during the 8FYP

Strategic Context

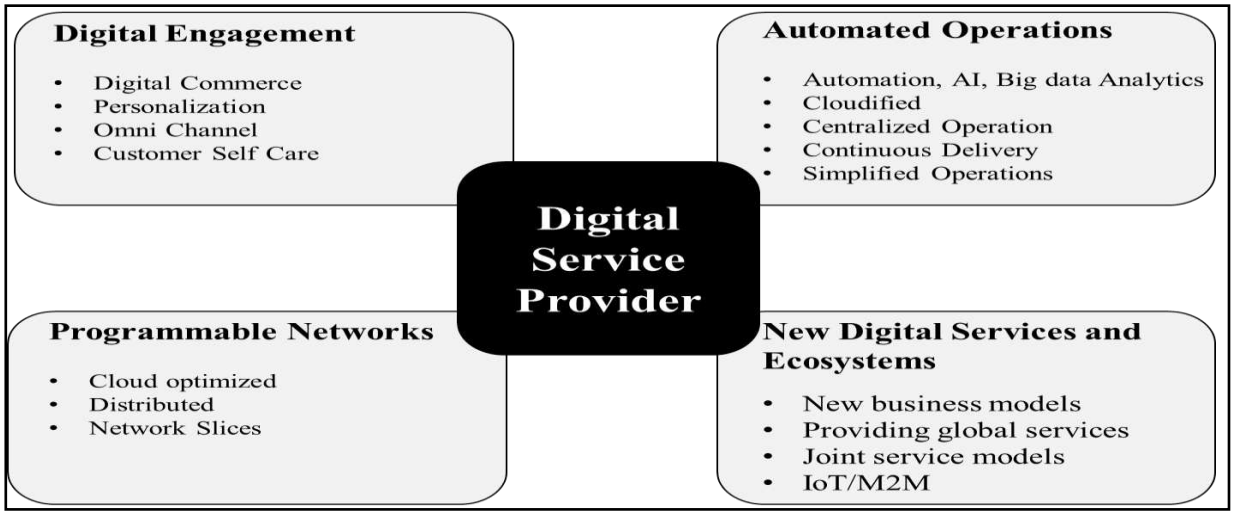
a) The Digital transformation

Across the globe, emerging technologies, faster growth of data and smarter analytics are changing the way people, businesses and governments interact. Digital transformation has become a universal phenomenon which focuses on smart integration of digital technologies, processes and competencies across all levels and functions of society, government, organizations, industry or ecosystem in a staged way**.** To be transformational, digital services need to be personalised, presence less, cashless, paperless, integrated and consent-based. Bangladesh needs to develop specific capabilities and core modernization to be able to deliver such transformational digital services that will lead to improvement in quality of life and wellbeing and the attainment of Sustainable Development Goals (SDG).

A comprehensive Digital Transformation Strategy (DTS) is very much essential for Bangladesh containing strategic vision for the country's digital transformation, clear priorities and objectives, measurable targets, sufficient budget and thorough monitoring and evaluation criteria. A phase by phase implementation roadmap also needs to be prepared in this regard.

Telecommunication industry has a crucial role in digital transformation. But at first transformation requires in the telecommunication industry itself. As a part of the transformation, the Communications Services Providers (CSPs) need to evolve as Digital Services Providers (DSPs). Digital transformation journeys are spanned over multiple fronts due to rapidly evolving technologies. Figure 6.2. summarises the essential characteristics of a Digital Service Provider.

Figure 6.2: Summary of the Essential Characteristics of a Digital Service Provider.



Source: LM Ericsson

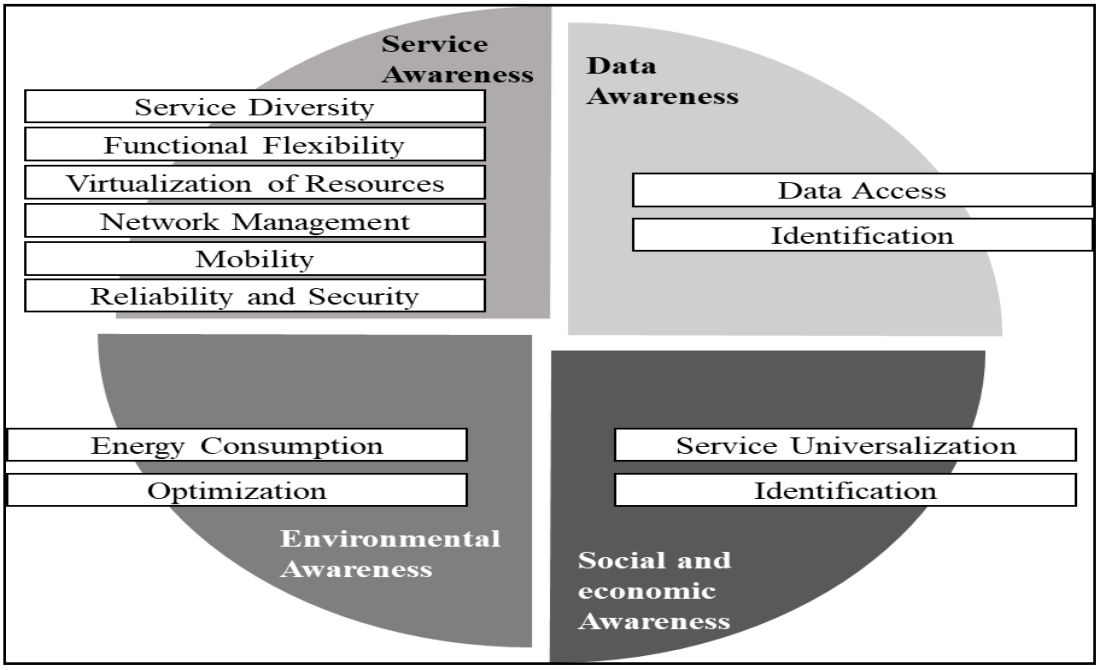
b) Fourth Industrial Revolution (4IR)

Telecommunication industry is at the epicentre of the 4IR by providing high-speed digital connectivity and many of the smart technologies and services at its core. Access, interconnectivity and applications are the enablers of the digital revolution which is being provided by the telecom ecosystem. However, it will be necessary to prepare the telecommunication industry to fuel other sectors in harnessing the potential of 4IR. New business models will be required in telecommunication industry in order to leverage emerging disruptive technologies and for that network transformation will be necessary. Operators of the digital age require corporate cultural change along with new organizational structures including strong collaboration with vertical industries and internet platforms. Above all, reforms in existing policy and regulatory models will be required for the digitization of the country's industrial sectors.

iv) Future networks and 5G

Numerous factors have introduced new requirements to the digital networks in recent years. The industrial economy nowadays is gradually being reliant on digital infrastructure to create and connect complex networks of devices, locations, systems, assets and people. Digital connectivity requirements are emerging pertaining to future society along with sustainability and environmental considerations. New application areas of digital technologies and networks such as Internet of Things, smart grids, smart cities and transport, smart agriculture, cloud computing are advancing in a very fast pace worldwide. Advancements in silicon, optical and computing technology has made possible to meet the future requirements of the networks with a substantially reduced cost of the equipment. Considering the future demands, Recommendation ITU-T Y.3001 (05/2011) has been introduced which are illustrated in the Figure 6.3.

Figure 6.3: Four Objectives and Twelve Design Goals of Future Networks

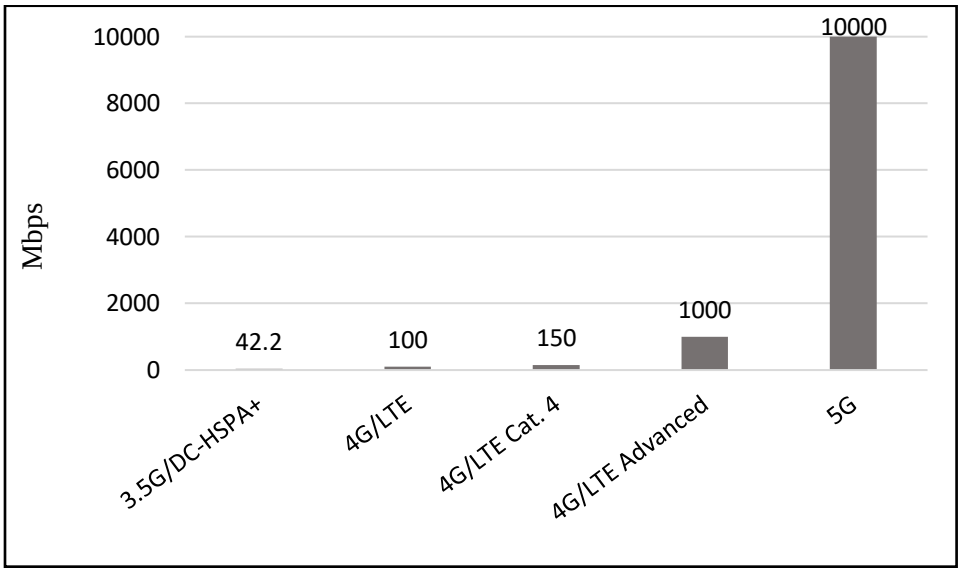


Source: ITU Recommendation ITU-T Y.3001

Based upon the visions of the future networks, ITU is promoting implementation of the fifth generation of mobile communication (5G) by 2020. Telecom service providers of the leading countries in digital economy have already started migration to the 5G networks. While 2G, 3G and 4G were primarily radio focused, 5G represents an entire system with radio, telecom core, and OSS all transformed to support new requirements. New radio technologies, virtualized cloud-based core, end-to-end management and orchestration to facilitate automation and new concepts like network slicing are involved with the system. The characteristics of 5G networks are as follows:

(i) Up-to 20 Gbps data rate;
(ii) 99.999% reliability;
(iii) 99.999% availability (highest 53 minutes downtime in a year);
(iv) 100% coverage;
(v) 1000x bandwidth per unit area;
(vi) High speed mobility (about 500 km/h);
(vii) 90% reduction in network energy usage;
(viii) Up-to 10-year battery life for low power IoT device;
(ix) Stronger subscriber authentication, user privacy and network security;

Figure 6.4: Speed of 5G Compared to Other Technologies



Bangladesh adopted 3G and 4G technology at a belated stage. The same is true for submarine cable connectivity. Deployment of 5G network infrastructure and services in right time is very crucial for Bangladesh to integrate the country with fourth industrial revolution and to carry forward the 'Digital Bangladesh'.

d) Need for increasing domestic and international backbone transmission capacity

The requirement of international connectivity is growing rapidly with the expansion of the digital economy in the country. At present, country's need for international digital connectivity is entirely being fulfilled by international submarine and terrestrial cables. As Bangladesh is making great strides economically, the need for international digital connectivity is also increasing. For instance, the growth in utilization of internet bandwidth in Bangladesh for the year 2017, 2018 and 2019 was around 78%, 72% and 53% respectively.

The per user international bandwidth usage in Bangladesh currently stands at around 15 kbps. Whereas the world average of international bandwidth usage per internet user was 76.6 kbps and Asia-Pacific average is 61.7 kbps.[7] It reveals that Bangladesh will require a substantial amount international connectivity by 2025. Bangladesh has already taken steps to strengthen its international digital communication infrastructure by deciding to connect to the country's third submarine cable SEA-ME-WE-6. But more initiatives require in order to meeting the growing demands of international connectivity.

Alongside, high speed and high capacity robust domestic backhaul throughout the country will be very critical in upcoming days. At the same time the capacity of transmission equipment will have to be upgraded in a regular basis to meet the growing needs and make them 5G compliant. The more area, people and devices will have high speed connectivity the amount of data will be increased proportionately due to extended participation in digital economy. Adequate investment, monitoring, technology measures and greater coordination are very important to achieve the goals in this area.

[7] ITU, 2018. Measuring the Information Society Report, 2018.

e) Utilizing the potential of Space Technology

Bangladesh has launched its first communication satellite 'Bangabandhu Satellite-1 (BS-1)' in the orbit to meet the present demands of the digital communication and broadcasting sector. The Satellite is fitted with 26 Ku-Band and 14 C-Band transponders. The network covers South Asia, portion of south-east Asia and Stan-countries. State own Satellite TV Channel BTV along with all the TV channels, DTH services and Bangladesh Betar are being broadcasted through BS-1. Stopping the currency outflow and reaching broadcast- based services in the remote areas have been made possible due to BS-1. Right now there is a requirement of a second satellite as the broadcasting sector is already become dependent on the country's own satellite. Dependency on the satellite services will increase with the planned introduction of 5G and IoT. Furthermore, new satellite- based services such as Digital Audio Broadcasting (DAB), Satellite Phones etc. have to be introduced depending on the market needs.

Satellite ecosystem revolves around the connectivity "beyond" the fibre and other common means of communication. It can support all the sectors of 'Blue Economy' i.e. Aquaculture, fisheries, coastal tourism, maritime transport, research etc. Satellite based 'Vessel Tracking & Monitoring System (VTMS)' will facilitate detect fleet patterns and aids monitoring, control, and surveillance efforts whenever needed, especially in case of natural disasters. VMS data of Bangladesh's satellite system also can support development of improved stock assessments. Satellites system has the potential to be utmost useful in land management, weather forecasting, water resources management and tracking of oil spills, potential polluters, temperature change and changes in the bio-system under the deep sea. Furthermore, with the help of e-education and telemedicine through Satellite Systems, the digital divide can be minimized.

f) Digital Security and Privacy

Digital security and privacy protection have become public policy priorities due to proliferation of digital and data-dependent economy and society. Digital threats continue to increase and diversify with alarming rapidity. Due to the convergence of the digital and physical environments, technology is now embedded in most of the critical infrastructures which are the vital foundation of daily lives.

Digital Crimes, also known as cybercrime, computer crime, electronic crime, hi-tech crime or e-crime involves a broad range of potentially illegal activities conducted by the misuse of digital devices and different types of communication networks. Traditional crimes may also be committed through the use of digital devices and networks. Digital crimes may not have direct contacts with the victims. As less visible and intangible kinds of property such as information, data and networks are involved in such crimes, victims may come to know about their losses long after the actual commission of crimes. Miscreants are able to steal greater amounts with greater comfort and a single act can victimize many people in many places at once.

The scopes of the digital offences are widespread and are increasing in a very fast pace. Offences against the confidentiality, integrity and availability of digital data and systems include illegal access (hacking, cracking), illegal data acquisition (data espionage), illegal interception, exploiting data and system interference etc. The computer related offences include fraud and computer-related fraud, computer-related forgery, identity theft, misuse of devices etc. Examples of content related offences are activities related to erotic or pornographic material, child pornography, religious offences, illegal gambling and online inappropriate games, libel and false information, spam and related threats, other forms of illegal content (e.g. how to build explosives, how to produce illegal drugs) etc. The terrorist use of the internet, cyber

warfare, Cyber laundering (i.e. money laundering, use of unauthorized currencies etc.) and phishing are combination of various digital offences. Terrorist use of internet includes propaganda, information gathering, preparation of real-world attacks, publication of training material, terrorist communication, terrorist financing, attacks against critical infrastructures etc. Nowadays online social media spaces have become sanctuary for the digital criminals. Digital offences in social media such as criminal activities broad-sweep scams, trying to lure someone to click on something or visit pages that will push malware on to visitors computer, searching for careless public exposure of personal data, using social media as a platform to connect/exchange radical ideas, trade of stolen information, using social media as a platform of defamation, bullying, spreading hate speech and radicalization etc. are liable for adverse impact on social, cultural, religious and political harmony and integrity. In addition, copyright infringement in the digital space is a major issue. Emergence of disruptive technologies such as IoT/M2M, Cyber Physical Systems, Artificial Intelligence etc. imposing new challenges for the judiciary, lawyers, prosecution, enforcement agencies and compliance professionals. Building trust and solid security protection into digital networks and services along with industrial, commercial and consumer products and services has become a challenge while comprehensive digital transformation is the goal.

Another important concern is the personal data privacy principles to an interconnected digital world. This is especially challenging when information can be gleaned from a whole range of digital sources such as social media, email servers, websites, blogs, online purchases, online inquiries etc. New laws, regulations and codes of practice must be there aiming to balance the interests of individuals who have a right to privacy. A key principle of habeas data is the right to own or know and control what information is being gathered and stored by whom and for what purpose. This right empowers the individual to demand corrections or possibly even to delete the information. Personal information usually refers to information that can be used directly or indirectly to identify a 'natural' living person, although in a digital age there is very little that cannot be used to trace back to a living person. There is a further issue of who has the right of ownership, if anyone, over information of a deceased person. This means that the drafting of new laws or regulations or codes of practice needs to be flexible to changes in technologies and proportionate to the level of harm that can accrue from inaccurate information or lack of privacy.

In an interconnected world anything online can be located anywhere on the planet, and with the rise of cloud computing anything online can, in principle, be transferred between countries. This is not a by-product of the rise of a digital economy, it is the digital economy. Special consideration must be given for using cloud computing to handle information that is vital to national security, to maintaining public trust and confidence in government, or to manage certain core government functions such as international relations, property rights protection, maintaining law and order, and national defence.

g) Bridging the Standardization Gap

The primary goal of the standardization of digital devices and communication/operating protocols is to ensure that the devices, systems and services can connect and interoperate with each other, doesn't create hindrance in innovation and above all keeps markets open and competitive. At the same time standardization confirms the quality of good and services with a solid degree of predictability, consistency and dependability. Telecommunication and digital device standards act as foundation of the digital single market. In the world of digital technology and services, maintaining standards are very crucial to ensure digital security as well. In the context of interconnected world, exclusion from accessing, adopting or developing standards can intensify economic inequalities.

h) Internet of Things (IoT) and Machine to Machine (M2M) Communication

Over the past few years, IoT and M2M has become an integral part of the contemporary digital infrastructure. IoT enables advanced services by interconnecting people, process and things through the internet using existing and evolving interoperable digital technologies. IoT makes full use of "things" through the utilisation of identification, data capture, processing and communication capabilities. M2M is forerunner of IoT on which IoT has been improved. M2M enables interconnection of machines through different communication technologies such as Electrical wiring, PSTN/ DSL, IEEE 802.3 Ethernets, Wi-Fi (IEEE 802.11 a/g/n/ac/p), Wi-Gig (IEEE 802.11.ad), Z-Wave (ITU-T G.9959), WPANs (Bluetooth (IEEE 802.15.1), ZigBeee/6LoWPAN (IEEE 802.15.4), Dash7 (ISO/IEC 18000-7) etc.), Power line Communication (PLC), 2G/3G/4G/5G, satellite etc. based on requirements and availability.

The features associated with the IoT include pervasive identification and addressing, processing, networking and sensing; object to object and object to person communication; massive amount of data collected and processed from various sources like object identifiers, sensors etc.; automatic communication without the consent of the user; heterogeneous objects providing different functionalities depending their context of applications. A number of challenges and issues with regard to spectrum allocation plan, service standards, privacy, data protection and information security are there for the regulators while the increasingly complex relationship of IoT/M2M with the networks, service providers and numerous numbers of devices with different needs and diverse applications is a concern.

Proper legal bindings, technical standards and guidelines are yet to be realized in the country regarding IoT. To enable a 4IR compliant digital connectivity ecosystem, proper guiding documents must be formulated within a very short time span.

i) Cloud infrastructure for future computing needs

Cloud can be classified as Public, Private, Hybrid and Community clouds based on service area. Whereas, services form cloud may be IaaS (Infrastructure-as-a-Service), PaaS (Platform-as-a-Service), SaaS (Software-as-a-Service) or Management, Storage, Database, Process, Security, Application, Testing-as-a-service. NIST defined five characteristics of cloud computing. Those are on demand self-service, broad network access, resource pooling, rapid elasticity and measured service.

Due to proliferation of cloud infrastructure, the requirement of allocating substantial fund for self-maintained data centres has been diminished. Now entities especially SMEs are able to access powerful resources that they could not afford earlier. Availing desired computing resources on demand through the network has become a potential driver for the digital transformation. Avoiding duplication of resources, reducing budget, better integration of services, flexibility, energy efficiency, innovation friendliness and relatively higher data security are few of the benefits of establishing clouds in public and private Digital infrastructures. With the advent of IoT and M2M and new generation of connectivity (e.g. 5G), the cloud infrastructure would be a complementary one to support the whole digital ecosystem and an essential part of 4IR.

k) The 'Digital Divide'

Digital divide is the gap between individuals and communities that have access to digital technologies and those that don't. Digital divide refers to the disparity on the availability, affordability, ability to access and use digital technologies including internet among demographics, regions, communities and individuals.

Digital inclusion, on the other hand, ensures individuals and communities irrespective of their gender, location, ethnic identity, religion and socio-economic status have affordability, access to and skills for use digital technologies so that they can fully participate in and benefit from the knowledge economy.

Digital divide results in social and economic deprivation of the section of people who couldn't get the benefits offered by digital technologies. In the era of fourth industrial revolution, digital technologies will determine how we live, learn and earn. For example, internet connected smart phones with numerous apps making peoples' (who have access to, can afford and use digital technologies) lives easy and more productive. On the other hand, it will be increasingly difficult for the people without proper access to connected digital devices and/or sufficient knowledge to use those devices to participate in the digital economy. Therefore, technology 'haves' and 'have nots' will create digital inequalities. Evolving digital technologies such as AI, Robotics, IoT, Block chain will increasingly substitute capital for labour. As a result, the beneficiaries of the fourth industrial revolution will be the innovators, disruptors with a certain range of technical skill sets and globally connected digital platforms as opposed to those who depend on their labour. Rising digital inequalities, if not addressed comprehensively, will be a major challenge for the economy and society.

l) Changing demand for Digital Skills

The fourth Industrial Revolution seems to be very different as the disrupting technological developments are heading to redesign and reengineer the world around us. However, increased digitization, use of robots and Artificial intelligence -based automation has significant impact on the labour market of the coming days. Undoubtedly, the new wind of change will create new job opportunities. Although, in parallel billions of jobs will be threatened around the globe. The challenge will be faced both in developed and developing nations. The World Economic Forum (WEF) referred the study of McKinsey Global Institute which claims that about 800 million people in only 42 countries under study could lose their jobs by 2030.[8] By this time millions of unskilled Bangladeshis are in threat of losing their job at home and abroad due to lack of technological skills. WEF identified generic skills required to align with the needs of job market beyond 2020 which includes complex problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgment and decision making, service orientation, negotiation, cognitive flexibility. However digital skills are the specific skillsets which will be required while considering the innovative knowledge economy.

Assessment of the manpower requirement of different skills and expertise will be required who will build the foundation of the ongoing digital revolution. A number of training centers and Institutes will have to be established throughout the country both under public and private sector initiatives. Alongside, it is needed to modernize the existing institutes with state of art facilities and appropriate pool of resource persons. Industry-academia collaboration will be required to prepare the working forces ready to take challenges for the new order of the technology horizons. A dedicated organization is required for research and human Resource Development in digital communications and services and to guide the overall activities of human resource development.

[8] McKinsey Global Institute, 2017. Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation.

***m)* Research and Development and indigenous manufacturing of digital devices**

At present Bangladesh Cable Shalpa Limited has the opportunity to export Optical Fibre and ducts abroad. It is encouraging that some of the private sector players already started exporting digital devices like mobile handsets and IoT devices in the foreign market. The Telephone Shilpa Sangstha Limited may also extend production of all sorts of digital devices and accessories to meet the domestic demands and export. But the main part will be the manufactures in the private sectors.

To enhance the competency in indigenous manufacturing, global software and equipment vendors will have to be encouraged to set up meaningful local presence in Bangladesh in order to support and service their products sold into the Bangladesh market and into regional and global markets. In parallel, a minimum amount of value addition to the imported digital products is required to develop local capacity and participation. At the same time, synergies amongst manufacturers, R&D centres, academia, service providers and other stakeholders are essential for the development of high-quality new products and equipment.

6.6.4 Telecommunication Sector Strategies for 8FYP

a) Digital Transformation

i) Formulation of a comprehensive Digital Transformation Strategy (DTS) for Bangladesh by 2021.
ii) Preparing a phase by phase implementation roadmap for the Digital Transformation Strategy (DTS) by 2021.
iii) Assessing the needs for remodelling the network including addition and/or removal of network segments to support the National Digital Transformation Strategy.
iv) Revising and/or formulating directives, guidelines, regulations, rules and other legal framework in order to support the digital transformation of the industry in minimum time.

b) Fourth Industrial Revolution (4IR)

i) Making available high- speed internet connectivity, IoT, Cloud services and AI based analytics platform in the industrial areas, economic zones, export processing zones and SME populated areas.
ii) Assessing the scopes for providing emerging technology based services and encouraging investors and entrepreneurs in those areas.
iii) Reforming the licensing and regulatory regime for faster network and organizational transformation of the service providers.
iv) Piloting smart factory and smart production in collaboration with manufacturing entities in different location of the country.
v) Piloting ‘smart cities’ and ‘smart agriculture’ in different location of the country.

c) Future networks and 5G

i) Performing complete assessment of the present network and services and determine the migration requirements in order to smooth deployment of 5G and enabled services by June, 2021.
ii) Preparing spectrum allocation roadmap up-to 2030 for 5G networks.
iii) Introducing 5G services in the country by June 2021.
iv) Piloting 5G use cases in significant sectors such as agriculture, transportation, health, energy and manufacturing industries.
v) Preparing action plans to bring all the districts and metropolitan cities, industrial areas, economic zones, export processing zones and universities under the coverage of 5G by 2025.
vi) Review prevailing directives/guidelines/regulations/rules/Acts and/or formulate new one for smooth deployment of 5G and associated services.
vii) Encouraging existing public telecommunication service providers to upgrade their infrastructure as per requirements of the future networks.

d) Domestic and international transmission capacity

i) Reformulating the International Long-Distance Telecommunication Service Policy, 2010 to make it compliant with the requirements of future networks.
ii) Expanding the international submarine and/or terrestrial cable connectivity considering the present growth rate and expected development.
iii) Establishing interconnectivity within the international cables in order to provide seamless international connectivity.
iv) Expanding the capacity of the existing international submarine/terrestrial cable connectivity by upgrading terminal equipment.
v) Expanding the optical fibre transmission network up-to all of the union levels of the country, wherever feasible.
vi) Establishing optical fibre/microwave-based transmission network in the remote/ riverine chars/ coastal areas/ islands/ hilly and hard to reach areas where satellite service is not technologically and economically viable.
vii) Ensuring adequate backhaul transmission capacity at the places of connecting upcoming international cables.
viii) Regular assessment of the capacity requirement of the backhaul transmission in different parts of the country and up gradation of transmission equipment accordingly.
ix) Coordinating with state organizations like Roads and Highways department, Local Government Engineering department, Bangladesh Railway, Bangladesh Bridge Authority and Power Grid Company of Bangladesh Limited etc. to facilitate convenient construction, operation and maintenance of the network cables.

e) Utilizing the potential of space technology

i) Formulation of a comprehensive national space strategy for the peaceful use of space technology to support the development needs of the country.

ii) Planning and implementing activities in order to support the blue economy with the space technology.
iii) Developing new services and usage of communication satellite-based services which can be applied to various sectors including road and water transport, agriculture, health, education, resource management etc.
iv) Encourage private sector entities and entrepreneurs for investments in innovative solutions and applications.
v) Implementing the next generation of satellite systems considering future requirements of satellite services and for providing redundancy of 'Bangabandhu Satellite-1'. Launching 'Bangabandhu Satellite-2' within 2023.
vi) Enhancing and expanding R&D, coordinating programmes and national efforts and the development of national expertise and partnerships in space technology along with undertaking specialized programmes for knowledge transfer.
vii) Establishing effective communication system in riverine char, coastal, hilly and hard to reach areas through proper implementation of satellite services.
viii) Ensuring the utilization of satellite services and technologies in national disaster and crises management.
ix) Encouraging local, regional, and international collaboration and partnership in the space sector.
x) Developing programmes and mechanisms to transfer the space technology solutions to other vital sectors.
xi) Enhancing the satellite control and operations capacities.
xii) Meeting additional needs of international market through cooperation with other satellite operators.
xiii) Identifying frequency bands and orbital positions in which Bangladesh can establish claims and are required for future development.
xiv) Developing a comprehensive regulatory and authorization framework for the space sector and monitor compliance.
xv) Developing standards and procedures to increase the efficiency of spectrum and orbit usage as well as situational awareness.

f) Ensuring Digital Security and Privacy

i) Publishing guidelines to reduce the risks, including prevention or mitigation of cyber-attacks consisting tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training requirements, best practices, assurance and technologies for the providers and users.
ii) Formulating Security guidelines for the Telecom providers according to the ITU-T recommendations and international best practices including ETSI, FIRST, IETF, IEEE, ISO/IEC JTC 1, OASIS, OMA, TCG, 3GPP/3GPP2 etc. standards.
iii) Formulating guidelines for implementing secure private networks and secure applications.
iv) Perform security Assessments for all building blocks of the telecommunication system including CPEs and applications.

v) Auditing the public telecom networks to ensure the conformity with the guidelines of the assurance framework.
vi) Perform security assessments and issue time-bound certificate for the important networks of the country.
vii) Performing on-demand security assessments and provide report/recommendations.
viii) Establishing a National Security Operations Centre (SOC).
ix) Enhance National and international coordination and cooperation pertaining digital security and privacy.
x) Formulation of appropriate legislations in order to safeguard privacy, private data and critical information in the digital space.
xi) Establishing institutional framework for conducting research activities.
xii) Establishing dedicated training facility on digital security in order to provide regular training to the Management/governance personnel; Architect/designer (digital infrastructure, software, Authentication and Authorization Infrastructure etc.); Admins/operators (Systems management, system administrators, telecom/network engineers); Security specialists; User coordinators (responsible for group of users, main contact point); Users and special communities; Software developers; and the People responsible for acquisition of hardware, software).

g) Bridging the Standardization Gap

i) Establishing a dedicated national telecommunication and digital standards body.
ii) Formulation of a national telecommunication and digital standards strategy and review relevant laws, regulations, and policies.
iii) Mandating national use of standards, either in product procurement or product development.
iv) Increasing local manufacturing of digital products and market share based on national standards.
v) Participation in regional and international digital standards development processes.
vi) Involving industry and academia in standards development process.

h) Creating Internet of Things (IoT) and Machine to Machine (M2M) Communication ecosystem

i) Formulating native standards for IoT/M2M harmonized with global standards.
ii) Allocating appropriate spectrum for IoT/M2M local area network Layer.
iii) Revisiting National Numbering Plan to accommodate the numbering needs of IoT/M2M.
iv) Addressing the issues related to Inter-Operator Roaming and Inter-Network Mobility through proper guidelines or directives.
v) Addressing the issues related to privacy and data protection along with KYC and customer traceability.
vi) Ensuring Security and Lawful Interception for IoT/M2M.
vii) Promoting indigenous manufacturing and development of IoT/M2M devices with product certification.
viii) Ensuring human resource development and capacity building:

ix) Coordinating with different ministries/departments/bodies in order to provide information on the applicability and benefits of using IoT/M2M in different sectors especially health, agriculture, safety and surveillance system, health etc.

i) Cloud infrastructure for future computing needs

i) Assigning a government body with appropriate authority and responsibility in order to certify/accredit qualified public cloud service providers within and outside the country along with formulation and enforcement of cloud framework, standards, risk assessment methodologies, security and data protection aspects, supervision guidelines and relevant regulations.
ii) Formulating policy for the transformation and migration of legacy system.
iii) Initiating a scalable pilot project and starting the transformation and consolidation to prove the concept.
iv) Promoting campaigns and workshops for both public and private sectors and providing training for government entities, post graduates, SMEs.
v) Addressing legislative issues of protection of personal data, confidentiality, public archive, bookkeeping etc. related to cloud infrastructure and services.

k) Bridging 'Digital Divide'

i) Expanding high speed and affordable digital connectivity throughout the country irrespective of urban and rural areas.
ii) Making available affordable and easy to use digital devices to all of the citizens.
iii) Generating and distributing abundant and useful contents in local language.
iv) Ensuring availability of all government as well as private sector services digitally in a user friendly manner.
v) Educating people about the use of digital technologies and how to derive benefits from those.
vi) Coordinating with the concerned authorities to upgrade the curriculum for the new generation.
vii) Provide training to the adult population for basic literacy on the usage of digital technologies.
viii) Strengthening the civic rights of the citizens such as right to information, freedom of expression in lawful ways, participation in the policymaking and user privacy will be strengthened through non-discriminatory, affordable, easy to use and safe access to digital technologies for all citizens of Bangladesh.

l) Address the changing demands for Digital Skills

i) Developing a framework including relevant indicators for the government to regularly assess progress and performance towards bridging the digital divide.
ii) Review of current government policies and strategies for bridging the digital divide.
iii) Placing stronger focus by the education and training providers on skills development opportunities that are relevant to the needs of learners, society and the economy.
iv) Ensuring active participation of employers in the development of skills and make effective use of skills in their organizations to improve productivity and competitiveness.
v) Skills in their organizations to improve productivity and competitiveness.
vi) Enhancing and evaluating the quality of teaching and learning at all stages of education.

m) Enhance Research and Development and manufacturing of Telecommunications and IT equipment and products

i) Promoting synergy amongst manufacturers, R&D centers, academia, service providers and other stakeholders for the development of high-quality new products and equipment.
ii) Funding R&D activities, product development and commercialization.
iii) Encouraging global equipment and software vendors to set up meaningful local presence in Bangladesh.
iv) Establishing a National Institute for research and human Resource Development for digital sector.
v) Encouraging a minimum amount of local value addition to the imported digital products to enhance local capacity and participation.

n) Restructuring Institutional Framework

i) Re-evaluating and re-defining the boundaries of incumbent institutions considering the emerging convergence and disruptive technologies and their possible role in future.
ii) Realizing the need for new institutional frameworks as per strategic direction for respective priority areas.
iii) Ensuring institutional presence in all the districts to accelerate the digital transformation, assessment of the network and technology requirements and digital divide, coordinating with the service providers and government entities along with government policy implementation monitoring regarding digital connectivity and services in the locality.

6.7 8FYP GOALS, TARGETS AND STRATEGIES FOR POSTAL SERVICES

i) Introducing digital postal services along with traditional postal services;
ii) Commercializing postal services;
iii) Introducing Domestic and International Financial Services;
iv) Bringing Mail transportation, collection and distribution under ICT based strict supervision;
v) Ensuring imparting of high-quality ICT based training;
vi) Following international standard in providing customer service and introducing zero tolerance policy;
vii) Giving importance to rural people in case of proving improved postal services;
viii) Adopting activities for making at least one IT based entrepreneur in each of rural post offices.
ix) Increasing the capacity of mailing operator and courier service licensing authority in order to ensure quality service.
x) Expansion Department of Posts digital financial service ‘Nagad’ provided remote areas across the country.
xi) Bringing all the villages of the country under the services of digital post office.
xii) Introduction of nationwide ad-mail service by 2021.
xiii) Establishment of in-house digital commerce hubs across the country.
xiv) Introduction of education insurance "Sukanya" for school going girls.

6.8 8FYP ADP ALLOCATIONS FOR TRANSPORT AND COMMUNICATIONS

In line with the strategy and proposed financing strategy in Section C.5, the proposed ADP allocations in constant and current prices are shown in Tables 6.12 and 6.13 respectively. In view of the growing demand for transport services and the need for modernization of transport infrastructure in preparation for move towards an UMIC, transport investment needs will be substantial. The 8FYP financing strategy for transport infrastructures call for greater mobilisation of PPP investments in toll roads, bridges, aviation and international shipping. Cost recovery policies will be strengthened learning from the good practice example of the Chittagong Port Authority that earns substantial profits. Cost recovery from airports, inland water transport, road user charges, and railway services can play a major role in O&M as well as self-financing of investments.

Table 6.17: 8FYP ADP Allocations for Transport (Taka billion current prices)

Ministry /Division	FY2021	FY2022	FY2023	FY2024	FY2025
Road Transport and Highways Division	177.9	190.0	215.0	233.8	279.1
Ministry of Railways	65.6	75.0	100.0	115.4	140.3
Ministry of Shipping	40.6	50.1	57.7	62.1	74.5
Ministry of Civil Aviation and Tourism	8.3	10.3	11.8	13.8	16.6
Posts and Telecommunications Division	12.1	14.9	17.2	20.0	24.0
Bridges Division	55.5	60.0	78.1	88.8	102.5
Total Transport	**360.1**	**400.3**	**479.8**	**533.9**	**637.0**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 6.18: 8FYP ADP Allocations for Transport (Taka billion, FY2021 Constant Prices)

Ministry / Division	FY2021	FY2022	FY2023	FY2024	FY2025
Road Transport and Highways Division	177.9	185.0	203.7	217.6	252.8
Ministry of Railways	65.6	73.4	94.1	99.5	115.0
Ministry of Shipping	40.6	47.5	53.1	56.4	61.2
Ministry of Civil Aviation and Tourism	8.3	9.7	11.7	12.9	13.6
Posts and Telecommunications Division	12.1	14.1	16.5	17.2	19.7
Bridges Division	55.5	58.1	72.4	80.0	91.3
Total Transport	**360.1**	**387.8**	**451.5**	**483.6**	**553.6**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 7:
LOCAL GOVERNMENT, RURAL DEVELOPMENT AND COOPERATIVES

CHAPTER 7

STRATEGY FOR LOCAL GOVERNMENT & RURAL DEVELOPMENT

7.1 INTRODUCTION

A well-functioning local government system is evident globally, in which the Local Government Institutions (LGIs) provide a range of services to citizens – education, healthcare, water, sanitation, local-level law and order, etc., in consultation with public participation at local levels. The development process of a nation can only be appropriately in progress when the comprehensive development of rural area is being properly addressed. This entails the importance of the Ministry of Local Government, Rural Development and Cooperative (MoLGRD&C), and provision for LGIs to utilize public resources for local development which correspond to local needs. The Government of Bangladesh has recognized the roles of LGIs in developments mandated by the Articles 11, 59 and 60 in Chapter 3 of the Constitution, which state

*"Local government in every administrative unit of the republic shall be entrusted to bodies, composed of persons elected in accordance with law" (*Article 59); and

"Parliament shall, by law, confer powers on the local government bodies to impose taxes for local purposes, to prepare their budgets and to maintain funds" (Article 60).

At the same time, Section 16 of the Constitution has given high priority for rural development, which states:

"The State shall adopt effective measures to bring about a radical transformation in the rural areas through the promotion of an agricultural revolution, the provision of rural electrification, the development of cottage and other industries, and the improvement of education, communications and public health, in those areas, so as progressively to remove the disparity in the standards of living between the urban and the rural areas."

Such mandates obviously lead to have suitable rural development efforts through the coordination with well-structured LGIs that developed over time with the democratically elected representatives. By law, all LGIs are required to have elected representatives, resulting all LGIs are currently administered by elected representatives, except the Chittagong Hill Tracts (CHT), which is under the administration of Chairman, who is nominated by the central government.

7.2 PROGRESS DURING THE 7FYP

Under the dynamic leadership of Prime Minister Sheikh Hasina, the government adopted a comprehensive policy to improve the local government system and to develop the urban and rural areas. In particular, the coordinated efforts during the 6FYP and 7FYP offered the higher income and employment opportunities, and the country has positioned itself at a level of middle-income nation. In line with the vision, the 7FYP set out two key priorities: (1) Strengthening the Local Government Institutions; and (2) Fostering the Rural Development, involving a reform of the legal/regulatory framework of LGIs, strengthening the local

governance; building capacity of LGIs and enhancing both vertical and horizontal coordination with central and local government agencies.

7.2.1 Local Government Division

The LGD undertook various development programmes and projects, aiming at enhancing the capacities of LGIs and improving basic services. The main areas of progress during the 7FYP are noted below

Capacity Building

Under the leadership of LGD, Bangladesh has made significant progress on strengthening the capacity of LGIs. UP is now more participatory and proactive; UZPs have been re-instated with the elected representatives; and Pourashavas and CCs have been made stronger. Several interventions that have contributed to strengthening LGIs include:

- Ensuring transparency and accountability;
- Digital transformation of Union Centres;
- Access to information (a2i);
- Communication with the people
- Facilitating training for elected representatives and staffs;
- Providing technical assistance.

Governance Improvement

The Local Government Division has undertaken several initiatives to improve the governance and financial accountability of the local government institutions (LGIs). Through PFM reform, the frequency and quality of audits have been improved. Moreover, web-based financial reporting has been initiated for the UPs. These PFM reform initiatives will contribute to the LGIs through:

- Strengthening annual financial audits and performance assessment systems for UPs.
- Strengthening the preparation of annual financial statements for UPS.
- Strengthening the quality of UP audits.
- Establishing a fully functional MIS system within UPs and LGD
- Improving service delivery by UPs.
- Institutionalizing fiscal transfer
- Expanding block grant to selected Pourashavas (on pilot basis)
- Developing capacity and supporting project implementation
- Ensuring accountability and transparency through people's participation

Projects have also been implemented to improve the governance of urban LGIs through infrastructure investment. This performance led infrastructure improvement mechanism attributed to the overall governance improvement and capacity development not only to selected municipalities and city corporations, but also created a general consciousness and awareness among all other urban LGIs. Several programmes have been undertaken during the 7FYP to increase public awareness, women participation in municipal development, urban planning, poverty reduction, financial management and transparency, and e-governance. Town Level Coordination Committee (TLCC) has been formed in many Pourashavas to ensure

good governance at local level Institutional and regulatory framework has been developed for imparting some essential services like faecal sludge management (FSM).

Infrastructure development. In urban area, LGD alone has made a significant progress in roads and other infrastructures during 7FYP, which includes 2 flyovers, 3348 km roads, 1116 footpaths, 1502 km drains, 5144 m bridges/culverts, 1042 public toilet, 25 bus/truck terminals, 440 tube-well, 844 km road-maintenance, 266 dustbins, 7 municipal markets, 30 kitchen markets, 15 park & recreation centres, 4 bathing/boat landing stations, 15 community centre/multipurpose buildings, 21 cyclone shelters, 19,600 street lights, 68 rivers/canals dredging and 20 lake/canal embankments. It has also contributed to develop an Integrated Solid Waste Management system and 2 Transfer Stations, and supplied 40 garbage dump trucks (1.5 –3 ton) and 66 vacuum cleaners to Pourashavas. In rural area, LGED has improved 33456 km of rural roads, constructed 152346 m of bridges/culverts, 896 no. of growth centres/rural markets, 243 ghats/landing stations, 455 cyclone shelters and 652 numbers of Union Parishad Complexes.

Rural Transport: As of 2019, LGED has developed 89.44% of UPZ roads, 67.41% of UP roads and 20% of village roads. In particular, 33456 km rural roads and 152346 meters bridges/culverts were built during the 7FYP. The current status of rural road network in Bangladesh has been shown in the following Table 7.1.

Rural Connectivity. As of 2018, the Rural Access Indicator (RAI) – the proportion of rural people living within 2 km of all-season roads of Bangladesh, was estimated at 83.5%. Except the Upazilas in Haor/wetland/hilly areas, this indicator is more than 90%. Out of 87,223 villages, more than 70,000 villages are well connected.

Table 7.1: Rural Roads Infrastructures by Types and Length

Road types	No. of Roads	Length (Km)			No. of Structures	Length (m)	Gaps	
		Total	Paved	Earthen			No.	Length (m)
UPZ Rd	4764	37,254	33,323 (89.44%)	3,931	61,435	425,140	2,340	81,100
Union Rd	8056	41,828	28,200 (67.41%)	13,628	62,346	327,298	4,360	95,400
Village Rd- A	48514	1 128,476	36,627 (28.5%)	91,849	87,010	388,196	27,410	245,243
Village Rd- B	89786	1145,774	18,269 (12.53%)	127,505	53,109	197,156	36,668	220,138
Total	**151120**	**3353,332**	**116,419**	**236,913**	**263,999**	**1,337,790**	**70,778**	**641,880**

Source: Local Government Division

Basic Service Delivery

The LGD has implemented a large number of projects related to the development and delivery of water and sanitation in both rural and urban areas. In the urban areas, services are provided by city corporations and municipalities. WASA in four city corporation areas made consistent progress with planning, development and maintenance of water supply, sewerage and drainage facilities. In the rural areas, the arsenic presence in a large number of tube wells in the country is still a challenge in access to safe water. The government has taken a number of interventions, including awareness, arsenic test, providing

alternative option for safe drinking water. The number of people exposed to arsenic contaminated drinking water at 50 ppb reduced from 19.6 to 17.5 million (MICS 2019). However, the access to water on-premises increased from 74.2 per cent to 82.4 per cent from 2012-13 to 2019 (MICS) . Open defecation in rural areas has been nearly eliminated. This is a great step towards covering all population under improved sanitation. However, the proportion of people using the improved sanitation is less, only 64.4%. More efforts are needed to bring all people under improved sanitation.

Physical/Master Plan

LGED under the policy of LGD has so far developed 254 Pourashava and 2 City Corporation Master Plans. In addition, 6 more were prepared by the UDD and other development authorities. The remaining municipalities are awaiting the preparation of the Plan, and the gazette notifications from the LGD yet to be published. However, the enforcement of Master Plans requires creation of position of the Town Planners with career development opportunity.

Challenges in LGD

Despite progress, LGIs are facing several challenges to ensure good governance and delivering desired services to the people. Some of the major challenges include:

Unclear functions and responsibilities of LGIs: The responsibilities and functions of different LGIs are not always well defined and sometimes there are overlapping mandates.

Revenue discretion of LGIs and dependency on the central government. Inadequate revenue remains a major constraint to LGI performance. Most of the LGIs suffer from the limited own revenues and largely depend on funds from the national government that are inadequate and unpredictable. Budgetary constraint is the most important concern that will need to be addressed to improve LGI service delivery in the 8FYP

Shortage of staffing. The shortage of manpower at UP and UZP seriously constrains rural service delivery. The UPs lack technical staff to prepare budgets, manage accounts and keep proper records. ICT staff does not exist that prevents the digitization of records. Increased staffing in UZPs is essential for medium-term planning and budget, for performing assigned responsibilities, and for record keeping and accountability. On the other hand, the staffing pattern of municipalities needs to be reviewed and rationalized because some municipalities are overstaffed in comparison to actual needs. Such overstaffing increases spending on municipal administration, while reducing the allocation for municipal services.

Non-participation and weak accountability. An effective local government system is associated with ensuring 'citizen's participation and accountability' at local levels. This is critical for achieving the pro-poor development agendas through participatory decision making and efficient allocation of resources.

Inadequate devolution of power for service delivery. Inadequate devolution of responsibilities to LGIs, inadequate communications and weak coordination with district/national level administration are obstacles in delivering services to local people. There is a need for a devolved decision-making power at UP and UZP levels that will improve services delivery by LGIs.

Weak resource mobilisation effort. The absence of fiscal decentralization is a major impediment to the growth of LGIs as a major service delivery agency at the local level. The only tax source assigned to urban LGIs is the property/holding tax. Yet, yields are insignificant mostly owing to the absence of a well-defined property tax system. There are problems with land records (for which LGIs suffer), property valuation (mostly done at historical prices and costs), tax assessments, low tax rates, and weak tax administration. LGIs do not have the authority to change rates or property valuation. Additionally, cost recovery for urban and rural services relating to water, sanitation and waste disposal is inadequate. The issue of fiscal decentralization is discussed in detail in Section 7.3.

7.2.2 Rural Development & Cooperatives Division

RDCD had diverse interventions to secure the socio-economic development and accelerating rural economy through promotion of rural organizations, micro and supervised credit operation, rural capital management, facilitating production and market linkage for the rural products, developing rural micro infrastructure, conducting research and action research, etc. The RDCD has made a considerable progress during the 7FYP, particularly with increased agricultural and off-farm production, skilled manpower, energy supply, water and sanitation and access to finance for the rural poor (particularly women) and employment generation.

Progress in the Past

- *Water resources and irrigation:* During 7FYP, BRDB managed about 18,000 no of irrigation pump which significantly contributed to boost up the rural agriculture production specially the rice production. The adoption of the Bangladesh Delta Plan 2100 (BDP2100) in November 2018 is a major milestone in the Bangladesh history of integrated management of water resources that is expected to radically change the rural economic environment with improved flood control, reduced salinity, reduced water logging, improved drought management and proper irrigation facilities. This will also improve coordination of water resource management across the large number of public agencies involved in implementation.
- *Rural employment and livelihood*: A total of 23,400 beneficiaries were supported with programmes of rural employment and livelihood involving Tk.166.66 crore through different projects of the Department of Cooperatives (DoC). In addition, around 22,000 households were supported with cross-breed cattle, which have increased the milk production by 90,000 litres per day. The Department of Cooperatives, BRDB and other concern agencies under RDCD have made a progress on the rural employment, livelihood improvement of disadvantaged women and ethnic people, and breed development. These programmes have contributed to rural employment and income generation ultimately reduced the rural poverty. BRDB also has tremendous achievement on micro infrastructure development in rural area in coordination with UP under the 'Link Model' Concept. BARD and RDA contribute to rural development through research, action research and training of local government functionaries, civil servants, co-operators and rural development functionaries of GOs and NGOs. Bangabandhu Academy for Poverty Alleviation & Rural Development (BAPARD) arranges training on various income generating activities on farming and off-farming for self-employment of small and marginal farmers and asset-less unemployed people. During the last five years (From July/2015 to June/2020) it conducted training for 15,135 trainees, where 8282 were male and 6853 were female. During the 7FYP, Palli Daridro Bimochon Foundation has implemented several projects aiming at rural employment generation,

livelihood development of disadvantaged women and gender equality. A total of 3,00,000 beneficiaries were supported with an amount of Tk.350 crore, which created employment opportunities for 1,50,000 people during the 7FYP.

- *Amar Bari Amar Khamar*: This special program initiated by the Honourable Prime Minister to alleviate rural poverty. The objective of this program is to provide financial assistance to selected farming households to build their homestead farm. Currently, some 55 lakh poor households are organized under 1 lakh 20 thousand Village Development Organisations (VDO) to support this project.

Challenges of RDCD

Rural development policies and projects have contributed significantly to poverty reduction, employment generation and income growth. With improved communications the divide between urban and rural economies is shrinking. Yet, there is an unfinished agenda that remains to be addressed to ensure sustained rural development in Bangladesh.

Uplifting Rural Economic Growth

The average productivity gap between urban and rural areas remains at large. This requires further agriculture sector diversification and strengthening of non-farm rural economy. Furthermore, the poverty data shows huge variations in rural environment by districts. Districts with high rural poverty are at a great disadvantage in terms of infrastructure, vulnerability to natural disasters, adverse effects of climate change and lack of diversified income and employment opportunities. A more balanced approach to rural income growth that addresses both the urban -rural divide and the divide among the poorest and richer rural districts is needed.

Coordination of Rural Services and Development Activities

To attain the perspective plan 2020-2041, the development efforts in rural area need to be in participatory and coordinated manner. Different government, nongovernment agencies, local government bodies along with private initiatives has the diverse efforts for the development of rural area. Alongside this, different agencies provide necessary services also. Yet this services and development efforts and activities are not adequately coordinated. It results in scattered, overlapping, unplanned developments. It is still a huge challenge to ensure equitably distributed and coordinated rural development intervention both at policy and implementation level. The PRDP project of BRDB practiced the coordinated service delivery by NBDs and UPs along with the implementation of priority-based development planning formulated by the village people with the active participation of UPs and NBDs. This practice of participatory development should be promoted nationwide.

Reducing Rural Poverty and Inequality:

According to HIES 2016, 26.4% of the rural population were still living below the poverty line. Moreover, Gini coefficient of income distribution in rural areas stands at 0.454. So, the reduction of rural poverty and inequality remains a big challenge.

Reduction of Rural Unemployment:

Labour force survey 2016-17, BBS shows that among the 63.5 million economically active populations, 4.2 per cent were unemployed. As approximately 70% of the total population lives in rural areas, majority of these unemployed people resides in rural areas. So, reduction of rural unemployment is another challenge.

Lack of Digital and GIS based Database and Monitoring System:

As per mandate outlined in the Allocation of Business of the Government, RDCD is involved in policy making, implementing projects and programmes addressing various issues of rural development. A robust and reliable database on various aspects of rural economy is essential for making appropriate policy decisions and their implementation. At present there is no digital and GIS based database in the RDCD. This is an impediment in formulating, implementation and also evaluating the rural development policies and projects. A reliable GIS based Digital database has to be established to ensure efficient and effective implementation of the programmes for an inclusive and vibrant rural economy, and also to ensure the implementation of the *"no one is left behind"* government initiative in sustainable rural development.

7.2.3 Ministry of Chittagong Hill Tracts Affairs (MoCHTA)

The 7FYP recognizes the Chittagong Hill tracts (CHT) as the most disadvantaged and vulnerable region, lacking necessary employment opportunities, healthcare facilities, safe water, sanitation, education and infrastructure. The government has made considerable effort to improve the situation as a part of the implementation of the CHT accord, notably, the implementation of the Tribal Health, Nutrition and Population Plan (THNPP), National Education Policy of 2010, the Third Primary Education Development Program (PEDP 3) and various water, flood control and irrigation projects.

The MoCHTA has been working to ensure 'food and nutrition' security of the people in the hilly region, and implemented several projects to increase households' income opportunities. These projects supported with the cultivation of varieties of fruits, bamboo and spices, as well as storing, processing and marketing of products.

Education programmes continue to facilitate the pre-school education in local languages. To provide educational support in remote areas, a number of schools, colleges, hostels have been built and educational materials were distributed. Moreover, 8500 poor but meritorious students were awarded with scholarships for higher studies in the last five-year. All contribute to achieving the goal of educating the ethnic people in the region.

The physical and mental health development enhanced through building sports facilities and in the region. MoCHTA has built stadiums and gymnasiums in each of Rangamati, Bandarban and Khagrachari, as well as 7 auditoriums and 8 community-centres.

The ministry continues to facilitate training on ICT to improve the technical capacity of educational institutions, journalists, and law-enforcing agencies. It has provided the unemployed youths with advanced training on computer programming, internet, outsourcing and freelancing.

Lessons Learnt from the Past

High Prevalence of Poverty

CHT is one of the most disadvantaged regions in the country in terms of income, employment, poverty, health, nutrition, water, sanitation, education, women employment, and access to infrastructure. The rates of both primary and secondary education remain far below the national average. As well as food poverty is widespread, making both 'absolute' and 'extreme' poverty is much higher than the national level; the poverty (head count) rates are 28.5%, 63.2% and 52.7% in Rangamati, Bandarban and Khagrachari, respectively.

Staffing Shortage

Due to lack of staffing in the Ministry, CHT Regional Council and HDCs, remote areas of CHT is still remaining underdeveloped. Considering the remoteness of CHT, adequate manpower should be provided in HDCs.

Other Challenges

- Living in the remote areas makes it hard to reach and mobilize resources to the ethnic people; (ii) Lack of specific objectives in the mainstream policies regarding needs and concerns of the ethnic minorities;
- Absence of an alphabet and dearth of students, hindering indigenous curriculum development and constraining learning;
- Low food production and lack of economic opportunities resulting in food insecurity;
- Inadequate institutional mechanism to coordinate with NGOs and the private sector; and
- The cost of construction is higher due to inadequate road infrastructure and remoteness.

Challenges of MoCHTA

- Inadequate roads/transportation resulting difficulties in access to market, building materials and services.
- High construction cost in the remote areas of CHT;
- Making inclusionary National Development Policy for the region;
- Developing school curriculum in ethnic language;
- Increasing the food production in the region;
- Lack of census/statistical data on demography and socio-economic indicators;
- Lack of access to finance
- Lack of access to safe water
- Political instability linked to low level of law and order
- Lack of opportunity in the non-agricultural sector;
- Low rate of education and high unemployment rate;
- Inefficient use and management of land and resources; and
- Low navigability of rivers.

7.2.4 Investment Program in the 7FYP

Regarding ADP allocation, the government accorded the highest priority to development of the LGIs. Although the allocations fell short of the 7FYP targets, total investments increased considerably over the plan period (Table 7.2). On average ADP allocations amounted to 16% of total ADP, which is the highest for any line ministry. Yet, they fell short of meeting the development needs, which suggests the importance of strengthening resource mobilization at the LGI level through fiscal decentralization.

Table 7.2: FY2017-FY2021 Development Expenditures (In Crore Taka)

Year	Local Government			Rural Development & Cooperatives			Chittagong Hill Tracts		
	7FYP allocations	Annual Dev. Expenditures	Annual Growth	7FYP allocations	Annual Dev. Expenditures	Annual Growth	7FYP allocations	Annual Dev. Expenditures	Annual Growth
2016/17	16,650	12,374	-	1,020	1,145	-	510	606	-
2017/18	20,340	21,526	74.0%	1,450	1,414	23.5%	740	849	40.1%
2018/19	24,210	22,850	6.0%	1,730	1,715	21.3%	880	914	7.7%
2019/20	28,380	25,468	11.5%	2,030	1,695	1.2%	1,030	989	8.2%
2020/21	33,300	29,921*	17.5%	2,380	1,865*	10.0%	1.210	841	15.0%

Source: Ministry of Finance (*Estimated figures)

7.3 FISCAL DECENTRALISATION

Two good indicators of fiscal decentralization are the expenditure share of LGIs in total expenditure and the revenue share of LGIs in total revenues. The higher the contribution of LGI to expenditures and revenues, the higher is the level of decentralization. The percentage share of LGIs in total government spending shows how much spending authority is devolved to LGIs. The spending authorities and functions they represent show the areas where decentralized service delivery prevails. In a typical decentralized administration, LGIs tend to have considerable spending authority because they are responsible for delivery of a large number of basic social and economic services to the community over which they have administrative jurisdiction including health, nutrition, education, water, sanitation, drainage, waste management, park and recreation services, local transport, local law and order and local justice. They are held accountable to the community through the periodic well-defined electoral process based on the effectiveness with which they deliver these services. Within the community, these are typically one-stop services with no overlap with another level of government for these specific services.

In a limited way, share of revenues mobilized is also an important indicator because along with service charges this allows greater financial autonomy to the LGIs. However, often for efficiency reasons most revenues are collected by a central revenue authority and then shared between the national government and LGIs on a constitutionally determined basis. By so doing, revenue sharing arrangements are protected from political manipulation, especially in the event of representation of LGIs by a different political party than the national government. In an environment where a well-defined and constitutionally mandated revenue sharing arrangement does not prevail, the share of revenues collected by LGIs becomes much more meaningful and stronger indicator of fiscal decentralization.

7.3.1 Trend in LGI Finances

Consolidated data on LGI finances are not provided in the Budget document or posted on the website. The Ministry of Finance's major publication, the Bangladesh Economic Review, also does not provide this information. However, the Bangladesh Bureau of Statistics compiles this information and provides this in the statistical yearbook. Unfortunately, this data has not been updated since FY2013. However, data for FY1974 to FY2013 provides an illuminating picture of what has been happening to LGI finances in Bangladesh. The broad picture on LGI finances remains valid since nothing has changed in terms of fiscal decentralization. Table 7.3 summarizes the evolution of LGI finances in Bangladesh. The highlights are:

- Government transfers have progressively displaced own sources as the most important source of LGI financing. The share of government transfers increased from a low of 26% in FY1974 to a peak of 62% in FY2011. The share of government transfers in total receipts of LGIs however declined to 43% in FY2013, primarily because of marked increases in LGI's own revenues. In the two-year period since FY11, LGIs own resource mobilization increased by 122% to Tk. 76.2 billion in FY13.
- Charges and fees are the next important financing source, accounting for 25%.
- Taxes account for only 14%.
- There is no market borrowing. The Government budget is responsible for all transfer funding including grants and loans. Most transfers are in the form of grants. Large City Corporations get some limited funding as loans. Since they do not have any capacity for loan servicing, these government loans stay in the books as outstanding dues.

Table 7.3: Bangladesh LGI Finances (Taka millions)

Items	FY1974	FY1978	FY1992	FY2001	FY2011	FY2012	FY2013
Taxes	148	301	2626	4645	12799	13953	18202
Charges & fees	38	165	1750	3774	21541	42599	57986
Total own resources	186	466	4376	8419	34340	56552	76188
Government transfers	66	172	2918	11210	55934	52774	57100
Total resources	252	638	7294	19629	90274	109326	133288
Total spending	252	638	7294	19629	90274	109326	133288

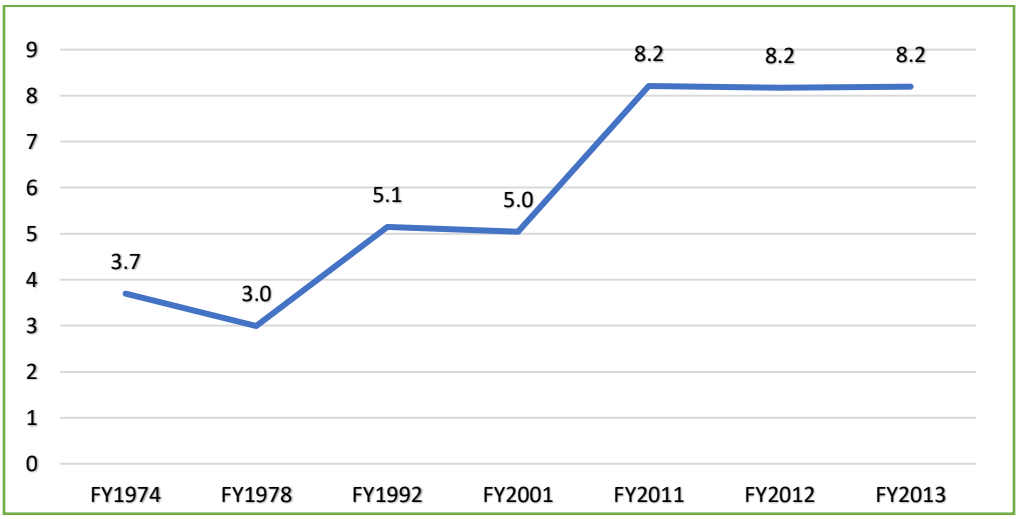
Source: BBS Statistical Yearbook, Various Years

7.3.2 LGIs' Spending Trends

As noted, LGI spending relative to total government spending is a powerful indicator of fiscal decentralization in Bangladesh. The main findings are as follows.

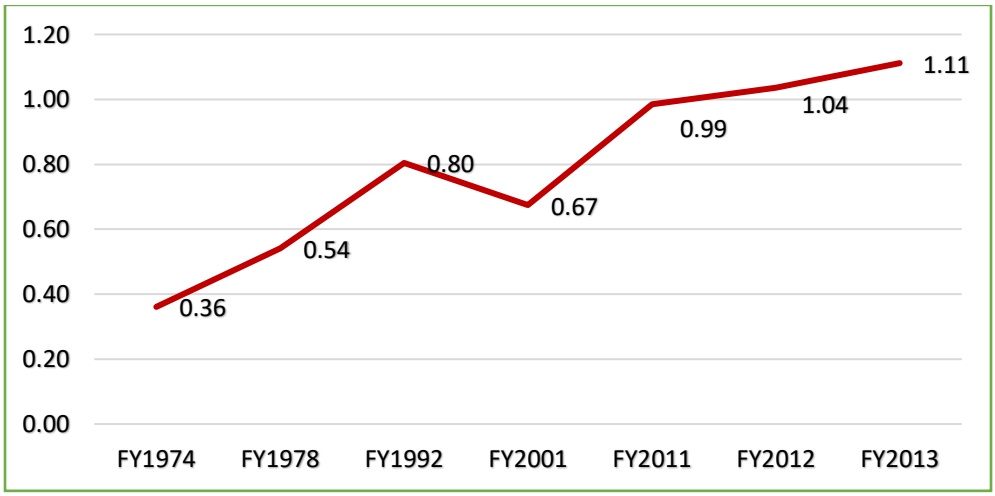
- Figure 7.1 shows the share of LGI in total government spending in Bangladesh. Despite some progress starting from a very low base, LGIs account for only 8.2% of total government spending.
- In terms of GDP, total LGI spending accounts for a mere 1.11 per cent (Figure 7.2).
- In real terms, annual LGI spending increased by approx. 7% over FY1974 and FY2013.
- The LGRD&C controls and manages most urban and rural LGI spending by virtue of its control over government transfers that are the most important source of LGI financing.

Figure 7.1: LGI Spending as a Share of Total Government Spending



Source: BBS Statistical Yearbook, Various Years

Figure 7.2: LGI Spending as a Share of GDP



Source: BBS Statistical Yearbook, Various Years

Poor predictability of Government Transfers

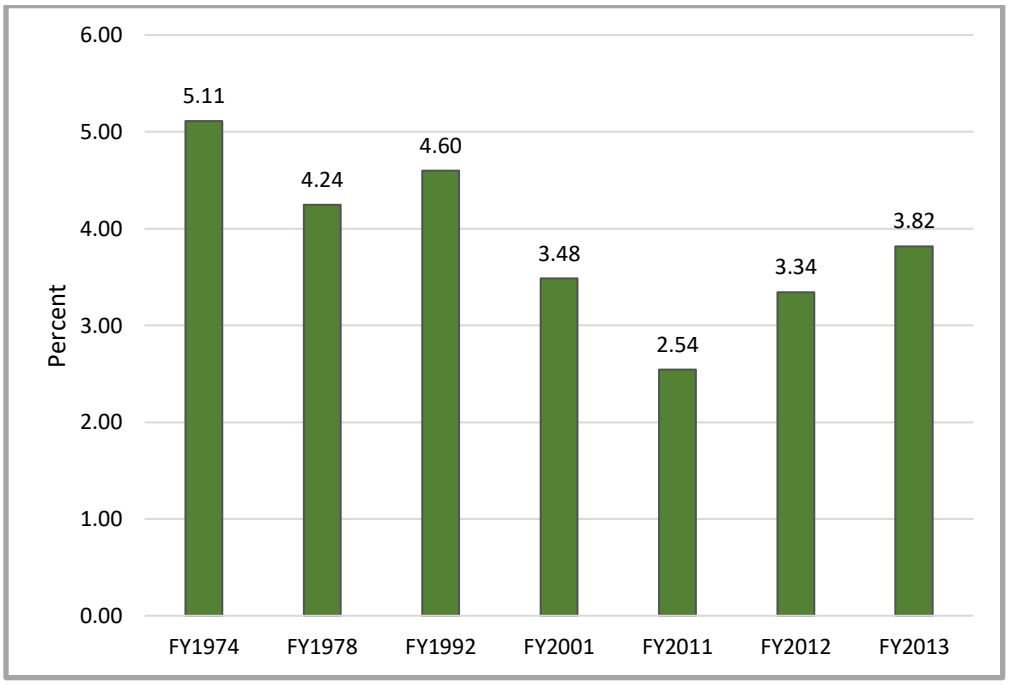
As noted, LGIs are heavily dependent upon transfers from the national government. However, what is different in Bangladesh is that there is no formal legally-mandated resource transfer mechanism. As a result, transfers are unpredictable and discretionary and there is often little or no correlation between assigned responsibilities and resource transfers. The resource transfers are determined centrally based on political considerations and competing national priorities.

More recently, a major improvement has happened in the allocation of government transfers for the lowest level of LGIs – the UPs – based on the agreement with the World Bank in the context of the implementation of the Local Government Support Project II. Transfers to UPs are now made on a formula basis that includes population and performance.

7.3.3 Weak Own Revenue Sources

The level of fiscal decentralization as measured by resource mobilization is even weaker. LGIs account for less than 4% of total government revenues (Figure 7.3). Own revenue effort of LGIs including taxes and cost recovery from services fell from 5.1% of total revenues in FY1974 to 2.54% in FY2011 before recovering slightly to 3.82% in FY2013. This is mainly by design as almost all potent sources of revenues are controlled at the national level. The only tax source assigned to urban LGIs is the property/holding tax. Yet, yields are insignificant mostly owing to lack of political will to design and enforce a well-defined property tax. There are problems with land records, property valuation (mostly done at historical prices and costs), tax assessments, very low tax rates, and very weak tax administration. LGIs do not have the authority to change rates or property valuation.

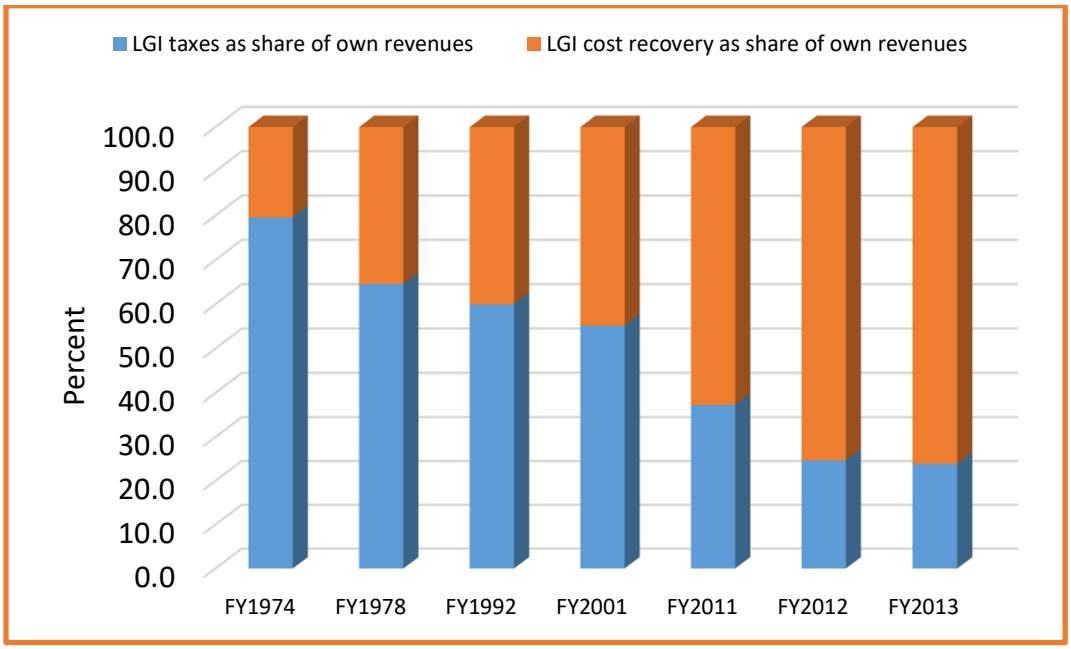
Figure 7.3: LGI Own Revenues as a Share of Total Government Revenues



Source: BBS Statistical Yearbook, Various Years

A breakdown of own resources between taxes and cost recovery shows that cost recovery component has performed better than tax revenues (Figure 7.4). Thus, the share of taxes in total LGI revenues has fallen from a high of 75% in FY1974 to 45% in FY2013. Nationwide, tax collection is a major fiscal challenge, but is has been an even bigger problem for LGIs. As a share of GDP, LGI tax collection declined from 0.3% of GDP in FY1974 to only 0.16% in FY2013. The improved performance of cost recovery is an encouraging sign. Indeed, it gathered some steam after FY2011 as a response by LGIs to the falling share of transfers. This effort helped LGIs to protect some of their spending programmes. Otherwise, LGI spending could have collapsed to less than 1% of GDP. Cost recoveries have greater potential for urban LGIs (Pourashavas and CCs) since these institutions provide a range of services to citizens and can pass on the costs through adjustments in user charges. Rural LGI, particularly for the UPs the opportunities are limited—nontax incomes being limited to issuance of birth certificates, residency and character certificates, and license fees for shops and establishments.

Figure 7.4: Revenue Shares of Taxes and Cost Recovery in LGI Own Revenues



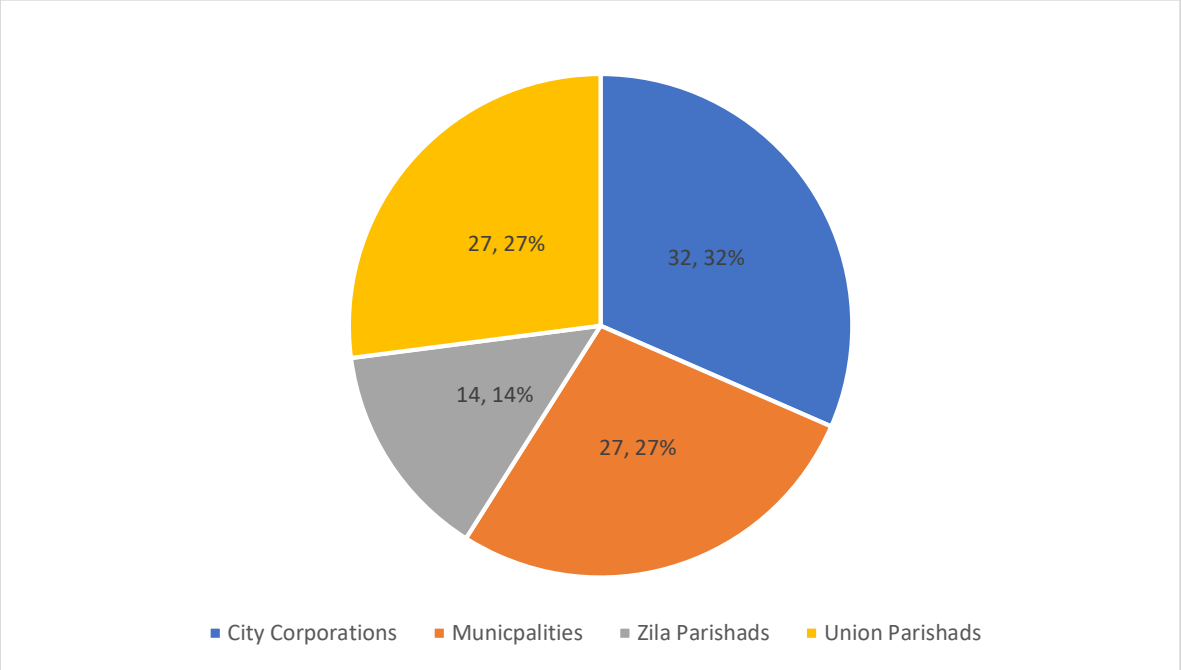
Source: BBS Statistical Yearbook, Various Years

7.3.4 Spending Disparity by LGI Entities

While all LGI entities face tremendous financing challenges, some are relatively better off than others. City Corporations in general have better financing options that allow them to have better command over resources than other LGI entities (Figure 7.5). Since the number of City Corporations is only 12, per unit they command substantially higher resources than other LGIs. UPs collectively account for 27% of total LGI spending, but when this is adjusted for the number of UPs (4554), per unit spending by UPs is very low. Thus, in FY2013 the average UP level spending amounted to a mere Taka 7.9 million in FY2013, which is equivalent to $100,000 a year. The UPs are the primary government contacts with the rural population. With such meagre resources to provide services to an average population size of 23000 people per UP, it is hardly surprising that the development impact of UPs is negligible.

The financial circumstances of the municipalities that provide essential services such as water supply, sanitation, waste management and drainage to the urban population outside the jurisdiction of the 12 City Corporations are similarly dire. On average in FY2013 each municipality spent about Taka 113 million, which is equivalent to $1.4 million, to provide these critical services to an average population of 124 thousand people per municipality. It is mind boggling to imagine what kind of basic urban services can be provided from a spending level of $11 per person per year. The situation is better for CCs, especially in Dhaka, but urban LGIs are heavily financially constrained to provide meaningful services to their constituencies.

Figure 7.5: Spending Shares of LGI Entities



Source: BBS Statistical Yearbook, Various Years

7.3.5 Fiscal Decentralisation: International Comparison

A review of international evidence suggests that Bangladesh is fiscally amongst the most centralized countries in the world measured in terms of both expenditures and taxes (Table 7.4)**.** Data from a sample of 16 developing countries and 26 developed countries shows that spending by LGIs account for 19% of total government spending in developing countries and 28% for industrial countries as compared with only 7% in Bangladesh. Taxes similarly are heavily centralized in Bangladesh. Thus, sub-national government taxes account for 11.4% of total taxes in a sample of 16 developing countries and 22.7% in a sample of 24 industrial countries. In Bangladesh, it is only 1.6% of total government taxes.

Table 7.4: Fiscal Decentralization in Comparison with Other Nations for the 2000s

Context	Sub-national government expenditures		Sub-national government taxes	
	% of total government expenditure	% of GDP	% of total taxes	% of GDP
Developing countries	18.8 (n=16)	5.1 (n=20)	11.4 (n=16)	2.3 (n=20)
Industrial countries	27.8 (n=26)	13.9 (n=26)	22.7 (n=24)	6.4 (n=25)
Bangladesh	7.0	1.11	1.6	0.15

Source: Bhal, Linn and Wetzel 2013. Financing Metropolitan Governments in Developing Countries. Lincoln Institute of Land Policy, Cambridge, Massachusetts.

It is no accident that cities of industrial countries tend to have better services and significantly higher fiscal decentralization. A system of well-defined revenue sharing and resource arrangements not only provides larger funding, the predictability of resources makes it that much easier to plan and provide better services. Good city governance and greater fiscal autonomy tend to be positively correlated and together they enable better services.

7.3.6 Consequences of Centralised Fiscal Framework

Inadequate LGI governance and weak fiscal decentralisation are the most fundamental constraints to better rural and urban basic service delivery in Bangladesh. Lack of fiscal autonomy and associated resource constraint reduces the ability of LGIs to provide adequate services in several ways:

- Weak fiscal decentralisation contributes to grossly inadequate resources that in turn lead to poor capacities of LGIs to deliver services;
- Inadequacy of staffing in both quantity and quality is a major bottleneck to service delivery;
- Centralised decision-making on spending results in poor accountability of LGIs, especially City Corporations and municipalities;
- Since transfers have no legal basis and are discretionary, there is no predictability of resources. Government control over revenues and spending essentially means that elected managers belonging to the opposition political parties have little control over service delivery that depends on discretionary fiscal transfers from the national government;
- The scope for innovative financial solutions at the local level is limited by the weakness of the property tax design, the absence of public borrowing by LGIs and by inadequacy of effective public private partnership.

7.4 OBJECTIVES, TARGETS AND STRATEGIES FOR LGRD&C IN THE 8FYP

Consistent with PP2041, the main goal of the LGRD&C sector is to achieve "*effective, accountable and equitable local government system, and rural development in Bangladesh"*. All programmes and projects will be in line with this fundamental goal. This is essential to take Bangladesh to the path of an UMIC by FY2031. A performance-based evaluation system has been introduced by the LGD to enhance the capacity, accountability, transparency & healthy competitions among LGIs, in particular, for UPs, City Corporations and Municipalities that are included in foreign aided projects. For all other urban LGIs that do not get foreign financing, similar harmonic standardize system will be adopted. The system will continue until the performance reaches at a level of standard, which will be used as a measure of additional allocation of ADP and other dividends within the sector. An effective, accountable and equitable *Local Government* System (LGS) can ensure an efficient allocation and use of limited resources, participation at local level and good governance. Such a system can contribute to achieving the broad objectives of:

(1) Improved governance at local levels;

(2) Resource mobilization and coordination between the national and local government; and

(3) Delivery of necessary services to the urban and rural people.

Rural development is particularly associated with the aim of transforming the country into Middle-Income one. The roles of the RDCD are very relevant and critical to this context. The contribution of RDCD to this transformation is largely contingent upon the available resources and capacity of the sector to facilitate necessary training for skill development of the rural population, employment/self-employment opportunities and development of rural infrastructure. The broad goal of RDCD is to ensure *adequate employment and income generation* for the rural population. In light with the government's priority program "*My Village-My Town*", a philosophical change in planning, promoting and implementing rural development program and projects to be visioned during 8FYP.

7.4.1 Local Government Division (LGD)

Three broad objectives of the LGD are to achieve good governance at local levels; improve LGI resource mobilization; improve service delivery; and strengthen coordination between national government and LGIs. These are elaborated in detail below:

Main objectives for LGD for the 8FYP

(1) Ensure good governance at local levels.

- Define functions of LGIs and RDIs at all levels and clarify roles and responsibilities between sectoral ministries / agencies and LGIs for service delivery to the people
- Update guidelines for linking local development plan with the national development plan
- Strengthen capacity of LGIs, RDIs and associated agencies
- Ensure local level participation in planning and monitoring the functions of LGIs
- Promote the performance- based incentive system for the LGIs
- Conduct action research on local development and disseminate results
- Promote women's empowerment in the LGIs and RDIs

(2) Improved service delivery

- Provide sustainable physical and social infrastructures and improve rural infrastructure
- Ensure appropriate services at grass root level in line with the principle of "leaving no one behind"
- Ensure safe water supply and sanitation facilities in a sustainable manner
- Improve e-governance system and services
- Extend social safety nets coverage
- Promote primary health care and nutrition services

(3) Enhanced resource mobilization and coordination between national and LGIs

- Reform national transfers to LGIs by making them criteria base, transparent and predictable
- Sharply strengthen LGI resource mobilization focused on property taxes and cost recovery of services

Key Strategies for Improved LGI Governance during the 8FYP

Improving governance within the Local Government Institutions (LGI) is central for both delivering public services efficiently to the local communities and also ensuring that local concerns are internalized when decisions related to policy and the allocation of resources for LGI are taken by the Government. Moreover, to strengthen governance, reforms are needed to improve the: {i} administrative functions of LGIs; {ii} service delivery functions of LGIs; and {iii} Public Finance Management (PFM) functions of LGIs. Against this context, the Government will prioritize the implementation of three strategic documents under the FYP, which are:

***Strategy for Governance Improvement of City Corporations (SGICC) (2020 – 2030)*:** This strategic document aims to improve governance in the administration of City Corporations between 2020 and 2030, and it has four key goals – {i} formulating and implementing the legal instruments that are requited for the implementation of the City Corporation Act 2009; {ii}Introducing systems of continuous organizational improvement and development in the City Corporations; {iii} Strengthening the fiscal foundations of the City Corporations and preparing their budgets based on multi-year fiscal frameworks; and {iv} Systems for continuous development of the human resources in the City Corporations will be established by the Government. Furthermore, each of these goals will be addressed through multiple strategic directions, which will be executed to ensure that the specified targets are attained and administrative governance within the City Corporations is improved under the 8FYP.

***National Strategy for Paurashava Governance Improvement (2016-2025)*:** The objective of this strategic document is to ensure that the Paurashavas (Municipalities) become eligible to provide priority public services to their citizens at satisfactory levels in a sustainable manner by the year 2025. In particular, four key specific goals are prioritized, which are: (i) increasing the revenues of the Paurashavas; (ii) proper establishment of the Paurashavas' financial management with the implementation of an appropriate Paurashava Development Plan; (iii) Carrying out the administrative activities of the Paurashavas efficiently and effectively in accordance with the laws, rules, regulations and other legal instruments; and (iv) strengthening the human resources of Paurashavas. Hence, under the 8FYP, the Government will prioritize the implementation of all the identified activities for each of the respective goals that are underscored in the strategic document.

Mid and Long-Term Strategy for Upazila Parishad Governance Improvement: This strategy document aims to clarify the basic policy directions to achieve efficient and accountable Upazila Parishads (UP). It first defines the mission statement of Upazila Parishads, which indicates that the public services to be delivered at the Upazila levels are improved through a planned and integrated process of all development activities at the Upazila levels by 2041. It highlights "coordination" as the core function of Upazila Parishads. When the coordination by the Upazila Parishad functions effectively, the delivery of public services at the Upazila level is expected to be improved. In particular, seven key targets were pointed out that will be prioritized under the 8FYP, which are: (i) ensuring of both horizontal and vertical coordination by the Upazila Parishads; (ii) proper function of Upazila Committees and contribution to better coordination with the transferred line departments; (iii) preparation of both Five-Year Plans (FYP) and Annual Development Plans (ADP) by the Upazila Parishads; (iv) proper reflection of the citizens' views in the Upazila Parishads' budgets as well as their development plans (both Five-Year Plans and Annual Development Plans); (v) proper preparation of the budgets and other annual financial statements in accordance with the relevant laws and guidelines; (vi) proper monitoring of the Upazila Parishads' activities

by the concerned Wing of the Local Government Division (LGD); and (vii) Establishment and implementation of a training mechanism that covers all the Upazila Parishads.

Lesson of Previous Successful Experiences: The Government could draw lessons from global experiences and /or from successful past and existing projects. One such positive experience is the local governance programme "Sharique", which equipped Union Parishads with capacities and competencies that aimed at helping them to serve the citizens with better local services in a more accountable, socially inclusive and effective manner besides contributing to the empowerment of local citizens to make inclusive, gender sensitive and pro-poor collective choices (Box 7.1)

Box 7.1: Step-by-Step Guide to Inclusive, Effective and Accountable Local Governance in Bangladesh

The Sharique project started in 2006 which was supported by the Swiss Agency for Development and Cooperation (SDC) and implemented by HELVETAS Swiss Intercooperation. Sharique started with the aim to equip Union Parishads with capacities and competencies that aimed to help them to serve the citizens with better local services in a more accountable, socially inclusive and effective manner besides contributing to the empowerment of local citizens to make inclusive, gender sensitive and pro-poor collective choices. In order to establish an effective local governance regime, joint and participatory decision making from the citizens, awareness of their rights and being able to demand it to the concerned officials need to be practiced. The programme aims to target all these areas by providing training on matters like budgeting and planning, roles and responsibilities of UP representatives and Standing Committees, gender equality issues, women leadership training, etc. The programme enabled formation of citizen groups (ward shavas) who are allowed to oversee the UP activities and also provide advocacy services to the UP. Sharique's main focus is on inclusive rural development with participation of poor and disadvantaged, and with emphasis on women rights in particular.

In order to promote 'good governance' practices, the programme's agenda include:

- *Inclusion, equality and non-discrimination*: No group will be excluded from facilities and proactive public integration policies will be implemented for the impoverished, religious minorities, disadvantaged groups, women, etc.
- *Effectiveness and efficiency*: Proper distribution of entitlements and rigorous public procurement practices are part of the agenda.
- *Accountability:* People should have right to information, be able to give recommendation/feedback on services they receive and bring forth changes, if necessary. The controlling agencies will reward those who perform well and punish those who abuse power.
- *Participation:* All groups including minorities will contribute to decision-making process and express view-points whenever necessary.
- *Transparency*: Public should obtain information from the LGIs about decisions they take and changes they plan on implementing. Information should be readily available to all.
- *The rule of law*: Some of the key elements include non-discrimination and equality, independence and impartiality of the judiciary and respect for human rights.

Steps towards inclusive and accountable local governance have been planned in five major steps and two transversal elements: (i) Awareness raising and assessing governance; (ii) Strengthening coordination structures; (iii) Opening up participatory spaces; (iv) Integrated planning; (v) Budgeting and finance management; and (vi) Gender equality and pro-poor governance. Most of these objectives focus on analysing a particular situation faced by the locals, empowering disadvantaged groups, mandating planning and budgeting tasks among other things. Revealing information to the citizens and owning up for any misuse of power by the concerned officials are the main elements of enforcing effective local governance practices.

One of the main successes of Sharique project is building 'trust' by convincing both LGIs and the citizens that the spirit of the project is in their favour. Sharique's learning is that often citizens do not get information because they do not know how to ask for it because of limited communication skills and because UPs are often unreachable. Sharique has facilitated the creation of ward platforms (i.e. active citizens groups) which enabled information to pass from one concerned party to the other with much ease.

Government department workers are now more available and services of NGOs more harmonised with UPs and line departments' activities. UPs now have better access to the services provided by private traders (especially agri-traders) and are therefore more competent in eliminating manipulation of prices and adulteration of goods. Short checklists, which were developed by Sharique for conducting Union Development Coordination Committee (UDCC) meetings help UDCC members be more structured, committed and result oriented. Bi-monthly meetings have improved communication, however, follow up actions from these meetings need to be taken on by the UPs. UDCC has proved so far to be the best platform where any issues can be discussed whether those are of direct UP responsibility or beyond.

Sharique trained UPs to provide information about any upcoming events in advance. Informing the citizens beforehand about meetings enabled better and diversified participation and helped them to bring about discussions on concerning issues and suggestions. Another element that helped achieve a more meaningful participation was training women in 'speak up' skills for which the number of women in ward shava and budget meetings often outnumber men in recent times. UP bodies now feel more confident on how to fulfil the government requirements regarding the elaboration of a Five-Year Plan. Previously they had no material available on how to develop it until Sharique trained them on what should be done, step by step and according to the law. Sharique promoted better accountability measures by making budget calendars and budget forecasts for which the PFM training proved to be a major breakthrough. Projects conforming to gender-stereotypical roles have been successful to encourage greater participation of women, it may be anticipated that their demands for projects and roles will evolve accordingly. A number of lessons can be taken from the Sharique project, such as- accountability can be better promoted through collective feedback synthesized by facilitators in a constructive manner, both citizens and UP members must be aware of all activities and tools used and last but not least, it is important to overcome the stereotype that UPs are reluctant to cooperate and provide information.

Introducing the National Integrity Strategy (NIS) at the Upazila Level for Improving Governance at Local Government Institutions (LGIs)

The Government of Bangladesh has formulated a National Integrity Strategy (NIS) in 2012 for the promotion of good governance in the State as well as in the society. The Government has been actively promoting the NIS as a part of strengthening transparency and accountability of both State and non-state organizations. Therefore, the Cabinet Division has taken activities for strengthening the mechanisms of accountability, including the Citizen's Charter, Grievance Redressal System (GRS), Annual Performance Agreement (APA), Public Hearing, One Stop Service Centres, Small Improvement Program, Right to Information (RTI), e-Governance and e-service delivery. During the 7FYP, the Cabinet Division has been promoting the NIS mainly to the Ministries/Division and State Institutions mentioned in the Strategy, by forming Ethic Committees, assigning Integrity Focal Points, formulating and implementing NIS work-plans led by quarterly monitoring and annual evaluations. However, this division has also started expanding the NIS to the local levels by issuing the guidelines for departments/attached bodies and regional/field level offices to formulate and implement the NIS work-plans.

In light of enhancing more effective and citizen-first delivery of services, the Cabinet Division during 8FYP will promote localization of the NIS, with central roles of the Local Government Institutions (LGIs). With implementation of the NIS Support Project Phase II, the Cabinet Division prioritizes NIS localization of NIS to the Upazila Parishads and City Corporations. Upazila Ethic Committees, headed by the Upazila Nirbahi Officers (UNO) and with Chairperson, Upazila Parishad as advisor, will develop, implement and monitor the progress of NIS work-plan. The implementation of the above-mentioned NIS-related policies is promoted with active involvement of NIS promoters, such as educational institutions, local media and the Upazila Corruption Prevention Committees. Besides, there are plans to strengthen the promotion and practice of the NIS in other state and non-state institutions.

Improving Public Financial Management (PFM) for Local Government Institutions (LGIs)

Sound financial management is a key for all tiers of LGIs, regardless of urban or rural, to deliver public services effectively. Building on the notable progress made during the 7 FYP, challenges still remain in the following aspects, which will be given *special* attention and efforts by both the central government, mainly Local Government Division, and LGIs made during the 8FYP. In particular, the focus will be on:

***Legal Instruments*:** The Local Government Acts, developed for each tier of the LGIs, provide overall framework for their financial management, some of which are insufficient and/or outdated for addressing the increasing needs of their citizens. Thus, these laws will be routinely evaluated and updated.

Planning and Budgeting: As per the provisions of the Local Government Acts, each tier of the LGIs is mandated to prepare annual and/or multi-year development plans, to which the allocation of budgets should be well linked. Predictability of the amount and timing of the transfer of Annual Development Programme (ADP) grants will be improved, considering the due process of preparing annual budgets. In light of ensuring the right to information as well as its disclosure, the preparation, execution and reporting of Annual Development Plans/Budgets will be undertaken through a more transparent and accountable process for the respective citizens. For the Upazila Parishads, adequate coordination with Transferred Line Departments will be prioritized as it is essential for preparing comprehensive development plans.

***Increasing the Resource Mobilization Capacity of LGIs*:** Administrative capacity for the collection of taxes will be improved, especially for holding tax, which is the major source of own revenue for the LGIs. Periodic reassessment of the holding tax, improving the coverage of collection, development of standard training materials, creating awareness amongst citizens including the introduction of incentives as well as penalties are particularly important for the urban LGIs (City Corporations and Paurashavas). A decentralized administrative system is not effective without fiscal responsibilities as well. There is a large potential to increase domestic resource mobilization through fiscal decentralization which would involve more revenue-raising and expenditure authority divested to the LGIs. The existing resource transfer mechanism from the budget through the ministries to the local government will be reviewed along with the block resource transfer formula to local government, including the municipalities and city corporations taking into account, equity and efficiency considerations. The reverse flow—of revenue proceeds from the municipal/city corporation, upazila and union levels to higher levels of the LGI and government system also needs serious review.

Developing an Effective Revenue Sharing Mechanisms: A new formula for revenue sharing mechanism will be devised, which incentivizes the LGIs to increase revenue mobilization and make them more vibrant at the local level in serving local residents. The recommended measures also require strengthening the capacity of LGIs in PFM in particular. They also require rationalizing and selective filling of the large number of existing vacancies and selective increases in staff strength to address the mismatch between the needed skills and existing skills among staff. Of critical importance also, is the training and up gradation of fiscal and financial management capacity, starting with basic book-keeping, financial reporting, and audit management practices of existing LGI staff. Finally, upgrading the LGI systems to operate in a stronger decentralized system will be accompanied by measure to ensure responsiveness, public participation, partnership with NGOs and community-based organizations, while maintaining high standards of transparency and accountability.

Increasing Inter-Governmental Fiscal Transfers: Although the total amount of ADP allocation for the LGIs has been showing a steady increase, the percentage of ADP for LGIs against total ADP has been actually decreasing, around 5% in FY 2016/17 to 2% in FY 2019/20. To sustain the economic growth gained during the 7FYP, more allocation of ADP for the LGIs will be directed to implement public investment projects - so that they can directly manage their own planning and budgeting systems. At the same time, the Government will put in place a fiscal formula, which will partially determine the amount of ADP an Upazila receives as basic ADP on the basis of its socio-economic needs by taking into consideration key socio-economic factors such as population, area, remoteness and poverty rate, etc. On the other hand, a share of the ADP will be shaped by the fiscal and developmental performance of an Upazila Administration and will be institutionalized as Performance Based ADP. This will also ensure predictability and timely release of budgetary transfers.

Improving PFM Staffing Resources: In order to get any feasible improvements in PFM practices, some minimum increases in resource inflows and PFM-related capacity building is essential. As a minimum, each UP (rural LGI) must have at least one budget officer who is trained in IT and have a basic computer facility. Hence, GoB will ensure that each UZP and municipality will have one budget officer, one trained financial management specialist, one trained IT staff, and computer facilities.

Strengthening Supervision and Monitoring Capacity of LGD: In the absence of a formal mechanism of supervision, monitoring, evaluation and enforcement of PFM rules and regulations, expected progress will not be possible. As such, monitoring and supervision capacities of LGD will be substantially strengthened.

Improving the understanding about Budget: LGI officials will be trained and mandated to use the budget document to achieve development objectives. This will entail monitoring of budget execution process/operation on a quarterly basis at the beginning and eventually on a monthly basis for the LGI officials to undertake corrective measures during the fiscal year.

Mandate Multi-Year Budgets: A multi-year budget approach, as opposed to an annual budget, will be formulated under the 8th Plan period in order to more efficiently assess future revenues and expenditures and the stability or instability related to these budget items. This type of budgeting mechanism will help deter unsustainable expenditure increases.

Expanding LGI's Taxation Authority: The Government will facilitate an expansion of taxing power that allows local governments to decide how and how much to tax in order to best match their community's demographics, budget and political realities. The top priority is to strengthen the system of property taxation through proper and computerized land record, proper land and property valuation and sensible tax rates that allow some minimum revenue mobilization.

Strengthen and Simplify Revenue Collection Efforts: The Government will ensure improvements in tax administration including proper assessments, avoiding harassment of citizens, effective consultation with taxpayers and community leaders to develop business partnership, and property accounting and record keeping of revenues.

Introduce IBAS ++ Accounting at LGI level: With the adoption of IBAS++ at the national level budgeting and accounting system, a horizon has opened up for proper accounting at LGI levels. The Government will consider the extension and adoption of IBAS++ in the LGIs during the 8FYP.

Strengthening of LGI Audits: Audit of LGI operations will be strengthened in meaningful and practical ways. Specific suggestions include physical verification and updating the Asset Stock Register on an annual cycle; making the standing committee on audit and accounts functional and accountable; ensuring the LGIs take necessary steps to implement prior audit observations; recruit better-quality private audit firm to do sound audits, which will contribute the following:

- Enhance mobilization of local revenue and resources
- Ensure adequate and equitable allocation of funds
- Ensure better coordination in planning, implementation and monitoring of development programmes
- Improve both horizontal and vertical coordination and linkages among LGIs
- Ensure appropriate policy for adequate resource mobilization and allocation.

Rural Transport Development & Management

(1) Rural road development strategy.

- Development of climate, disaster and other impact resilient rural transportation network that will be able to accommodate a vibrant middle- income economy and gradually lead to a developed nation economy;
- Development of roads with more economic and social priority that will be able to generate more employment, other economic-social benefits simultaneously will add more growth to rural economy. Development of prioritized roads at the first phase will accelerate more growth and eventually will generate money for less priority roads;
- Multimodal transport development for Haor, Wetland and Hilly regions so that the people of these areas can merge with the present pace of development of the country restoring the ecosystem; and
- Rural road master plan will be followed and preservation of agricultural land will be considered during new road development and up-gradation.

(2) Rural Road Operation and Maintenance Strategy

- Active involvement of UPZs, UPs and local communities will be considered for operation and maintenance of the rural roads. A framework will be developed for their scope of involvement;
- Technology driven road asset information system will be developed to assess the maintenance need with more accuracy and respond quickly;
- An efficient system for patch repairing and potholes management will be developed so that the roads can be restored immediately without further deterioration;
- For rehabilitation of rural roads after major disasters, 'Build Back Better method' of 'Sandai Framework of Disaster Risk Prevention' will be followed;
- Maintenance of existing rural roads will be given priority over new road development and justified fund will be allocated according to demand for maintenance; and
- A comprehensive asset management policy, strategy will be developed and required capability according to policy, strategy will be developed for a holistic management of rural road asset.

(3) Strategic priorities for rural road network

- LGED will upgrade and maintain the rural road network in the master plan. The road network will be developed in a way to withstand floods and disasters, which will connect the growth centre/markets, villages and Upazila roads. The Upazila road network will connect with the economic zones, special economic zones, export processing zones, industries, land ports, river ports, sea ports and railway stations. It will also include construction/reconstruction of bridges/culverts on these roads. Connectivity with railway and waterways will be given priority to integrate multimodal transport system with rural road network. Existing paved road network will also be included. Based on the economic and social importance, the core roads will be selected;
- The second priority will be to improve Upazila Roads, Union Roads and Village Roads including culverts/bridges which have strategic importance to connect road network, disconnected villages and major population of a village, railway, waterway and major farmlands. The selection of these roads will be based on economic and social priority; and
- The third priority will be the inter villages and intra-villages roads connectivity.

Rural Growth Centre/Markets

Rural growth centres/markets work as a catalyst for supply-chain system, and add value to local products. *My Village-My Town* envisions a vibrant rural economy with available jobs, high growth and standard rural livelihood. The following strategies will be undertaken during 8FYP for rural transformation:

- More Growth centre/markets (GCs) will be developed near the economic zones to create synergy in development and thus more employment opportunities;
- Special GCs will be developed at some areas to promote special localized products such as mangoes, watermelon, vegetables, guavas etic;
- The GCs will be facilitated to provide e-commerce, bank-agent banking, cold storage facilities and food processing and agricultural value-chain creation; and
- The GCs will be a hub of dynamic rural economy, restoring environment and adding beauty to landscape. It will support supply-chain and add value to farm and non-farm products.

Rural Water Supply & Sanitation

Water supply and sanitation is an important an integral part of *My Village-My Town*. The following strategies and targets will be undertaken during the 8FYP:

- A piped water supply has been targeted in the densely populated villages; the strategy will be different in villages where households are located sparsely. Such initiative must follow an in-depth study on the beneficiaries' regarding the 'willingness to pay' for the service;
- The priority will be given to 117 arsenic-prone Upazilas and salinity-prone coastal Upazilas;
- Pond digging will be extended in coastal areas for safe water supply;
- Improved latrine will gradually replace the 'pit latrine'. In the 8FYP, the target is to increase coverage from 61% to 70%; and
- Suitable strategies will be undertaken for faecal sludge management in rural areas.

Rural Waste Management

The waste management strategies in the rural areas include:

- The rural community will be involved in waste management. Awareness campaign will be done at all community levels;
- Two business models of waste management – degradable and recyclable – will be developed, involving the UPs in 100 UPZs at the beginning;
- A business model will be developed for waste management at 500 GCs, initially.

Upazila Development/Master Plan

Transformation of the villages will require careful justification and planned land-use. Looking at challenges in urban areas, the following strategies and targets will be undertaken for UPZs Master Plan under 8FYP period:

- Relevant ministries/agencies will develop National Physical Plan by 2022;
- The UPZ Master Plan will target the long-term strategic plan, mid-term sectoral plan and short-term detailed area plan by 2025 for 250 UPZs (by 2030 for all). Prioritize the list based on existing growth, environmental sensitivity, and development potentials; and
- UPZs will be adequately staffed with the posts of 'Senior Planner' and associates to enforce the master plan;

Community Space and Recreational Facilities in Villages

For an inclusive development, adequate communal facilities for children, adolescents, youths and elderly will be promoted. The following strategy and targets have been set out under the 8FYP:

- UPZ plan will incorporate spaces for Mini Stadium, Multimedia centre, Mini-theatre, Youth sports centre as per 2018 election manifesto;
- A policy will be taken to open up the fields and playgrounds of educational institutions community people;
- The vicinity of bridges will be developed as recreational space under bridge development, and walkway and park on the banks of rivers/canals;
- LGD will develop provision for community spaces in public housing, implemented by LGED and UPZs; and
- The UPs premises will be used for Union Digital Centres, as well as for community learning centres.

Capacity Development of UPZ & UP

Some of the featured initiatives for the UP and UPZ that would facilitate rural transformation include:

- Capacity building of UPZs for enforcement of Master Plan;
- Appropriate coordination between UPZs/UPs and concerned ministry to evaluate activities under My Village-My Town;
- Adequate staffing and strategies to increase the revenue of UPs; and
- Appropriate guidelines for UPs in regards to service delivery, including waste management

Specific Objectives & Targets

Local Government Engineering Department (LGED)

- Up-gradation/ Double lane of rural core road network with climate, disaster and other impact resilient design (16000 Km)
- Improvement of prioritized Upazila road, Union road and village road to establish better connectivity with villages and thus increasing Rural Access Index (RAI) to 90 per cent from 84 per cent (Survey 2018) (33,000 Km)
- Construction/ reconstruction/ rehabilitation/ widening of 165,000-meter bridges on core road network and other Upazila roads, Union roads and village roads
- Improvement of road safety engineering at junctions of LGED roads with National Highways Improvement of the selected Union Road. (8000 Km)
- Development of 500 Growth Centre centric urban centre with physical planning, water supply, waste management,
- Development of growth centres and Rural Markets -1200 Nos.
- Construction of all remaining Union Parishad Complexes (1166 Nos.)

  Extension of Upazila Complexes (400 Nos)

7.4.2 Rural Development and Cooperatives Division (RDCD)

As mentioned, the strategic goal of RDCD is to facilitate robust and sustainable growth in rural economy for the comprehensive rural development. To align this overall goal with the SDGs, RDCD will also seek to reduce proportion of the rural population living in poverty, reduce inequality, and enhance agricultural productivity and incomes of rural population. Human resource development, promoting rural organization, rural capital services, community capacity building, etc. can stimulate rural economy and facilitate the opportunities that will improve social and economic condition of the rural people. In view of this goal, the following objectives will be achieved by RDCD in the 8FYP

Overall Objectives of RDCD for the 8FYP

The major objectives and targets of the RDCD for the 8FYP are:

(1) Facilitate rural growth and diversify economy for the promotion of employment and income generation;

(2) Reduce rural poverty focusing on the vulnerable rural population;

(3) Ensure balanced development across districts, with a particular focus on the poor region;

(4) Promote cooperative activities in production and financial resource pooling; and

(5) Ensure linkage among farmers, non-farm employees and markets for marketing products.

Strategic Priorities for RDCD

RDCD has been assigned for coordination of the rural development and relevant activities both at policy and implementation level. The most prioritized strategies for the comprehensive rural development are – rural infrastructure and connectivity, Capacity development for rural community, extension of capital

services, rural livelihood mapping, creation of livelihood village, market linkage for rural products with rural e-commerce, beneficiary database, mainstreaming women for development, Rural Development Central Database, etc. The RDCD works in full coordination with the LGD that has responsibility for delivery of both urban and rural infrastructures. The urban infrastructure strategy and policies are discussed in great detail in Chapter 9 that deals with urbanization. The rural infrastructure strategies and policies are discussed here.

Some strategies are given below:

Capacity development for rural community: To enhance community capacity, focus will be given to develop Human Resources, Networking among all relevant Stakeholders in rural area, leadership development and institutional capacity development. Rural people should be able to set their community goal, initiate actions to achieve it and evaluate it.

Extension of Capital Services: Mobilizing local resources and its effective utilization has its importance in rural production. Besides providing capital support as credit or grant to the rural people can generate income and employment opportunities. RDCD through its agencies will continue to provide micro credit, SME credit and supportive linkage facilities for the income generating activities and small entrepreneurship development.

Rural Livelihood Mapping: Under the 8FYP endeavour will be made by BRDB to accomplish Rural Livelihood Mapping and publish the 'Livelihoodpedia of Bangladesh. It will be a comprehensive publication as well as an open source database comprising the detail information about traditional and prominent livelihoods of rural Bangladesh. The, rural development and poverty alleviation stakeholders may utilize the mapping and the database to facilitate the development efforts.

Creation of Livelihood Village: In the process of training-credit-production-marketing several livelihood-based villages (Duck Village, Carpentry Village, Embroidery Village, Tailoring Village, etc.) have been developed in different rural area of Bangladesh. This concept of 'Livelihood Village' piloted and promoted by "Gaibandha Integrated Rural Poverty Alleviation (GIRPA) Project" of BRDB will further be promoted and patronized based on the opportunity, Capability, geographical location, market option, etc. BRDB will develop 128 Livelihood Village within the 8FYP period.

Market Linkage for Rural Products with Rural E-Commerce: Along with infrastructure the organized and efficient market linkage facilities will be developed with the provision of corporate marketing. Frequent 'Rural Product Fair' will be organized by BRDB under the supervision and guidance of RDCD. Branding and promotion strategies will be integrated to market linkage program. The provision of 'E-Commerce for Rural Product' will be explored and established with the support of concern stakeholders.

Rural Development Central Database: A central beneficiary database system should be developed for rural development activities which will be administered by RDCD. BRDB will be responsible to give the input of field level data and manage it at field level. All the rural development stakeholders will use this database for service delivery and other respective functions.

IT Access Development for rural Area: The rural area will be enabled to use the IT facilities so that the people can utilize it for communication, information, online services, ecommerce and other relevant services. BRDB will establish some of its rural development societies as IT centre in the village in a participatory manner. BRDB will train the eligible member of the selected societies on ICT and will coordinate them with UP and NBDs.

Women Empowerment: As the Rural development strategy of Bangladesh emphasizes focus on poor along with women, BRDB and other agencies under RDCD will introduce different types of development activities under the 8FYP for women empowerment and bring them in the mainstream of the rural society. The focus area for women empowerment activities will be training, post training support, market linkage, leadership development, income generating activities etc. There will be coordinated effort with concern stakeholders for reducing dowry, child marriage, evils of eve-teasing for women empowerment and gender parity in the rural area.

Rural storage facilities: There are not enough storage facilities in the rural area. As a result, most of the farmers sell their crop and get low price for their products crop in the harvesting period. On the other hand, price of the same product become higher in the dull season. Sometimes, it is needed to import from outside of the country which spend foreign currency and consumers become loser due to high price. BRDB envisioned to provide rural storage facilities for group/society based farmers in the rural area under 8FYP to ensure short time preservation and fair price for producer and consumers.

Social Safety net: Social Safety net programmes in Bangladesh have been contributing to poverty lessening and reducing vulnerability of rural people groups through various dimension including income generating activities, employment creation, training, capital supply, capital formation, food security etc. RDCD projected to extend its social safety net programmes under 8FYP with abovementioned dimension.

Socio Cultural Development: Socio culture is a part of development, peace and harmony in rural area. Culture and heritage and sports have been included in the 'National Rural Development Policy-2001'. To this end indigenous local culture and sports will be promoted and a congenial atmosphere will be created for those events. RDCD, through its agencies, will take initiative and patronize the socio cultural activities. Initiative will be taken to arrange sports competition among the rural development societies, hosting the joint cultural event by the societies and UPs and promote the social capital in rural area.

Land Use Planning & Land Zoning: Bangladesh is a least developed country and its economy is based on agriculture. Among the natural resources, land and soil are the key resource for agriculture. Bangladesh is considered as one of the most densely populated country in the context of land-man ratio. Improper and unplanned utilization of land demands proper land zone classes in Bangladesh by maintaining the soil health and rational use of land and soil. As such, initiative will be taken jointly with local people, BRDB, DAE and other agencies to develop land use plan under the UP. Residential, commercial and agricultural use of land will be demarcated. Such proper and efficient use of land will be prioritized for sustainable development.

Rural Housing: Housing, which is one of the basic needs for human being, is scarce in rural Bangladesh. Government of Bangladesh has already taken a number of initiatives to provide low cost rural housing facilities to the rural poor. Rural housing is a new concept by which multi-storied buildings will be constructed on a comparatively small piece of land at a convenient rural area so that many more rural people

can live there together. Nowadays, rural housing programmes are being implemented through many NGOs in the country. As an important organization of RDCD, Bangladesh Rural Development Board (BRDB) is also capable enough to implement rural housing purpose of the government. Regarding rural housing program, BRDB has already participated a series of discussion with relevant authorities. BRDB has also a plan to implement the program during this 8th 5-year period.

Rural micro-infrastructure development: RDCD has the mandate to promote overall socio-economic development and poverty reduction of the rural areas covering 'para' (small part of village), villages, wards and unions by implementing various micro-infrastructure development schemes. LGD implements only feeder roads type - B which connect upazila headquarters to feeder roads type – A and upazila headquarters to growth centres. Other than aforementioned infrastructures, small level infrastructures like installation of deep tube-wells, construction of small roads, culverts etc. are neither been included into the program of LGD nor the any other agency. As a significant organization of RDCD, BRDB has been implementing micro-infrastructure development schemes at rural areas by Participatory Rural Development system since 2000. A huge number of micro-infrastructure development schemes have already been successfully implemented across the country. In presence of LGRD&C Minister, who is also the Chairperson of BRDB, it has been decided to mainstreaming the construction of rural micro infrastructure through Participatory Rural Development system in the 45th board meeting in 2012. The mainstreaming initiatives are on the process by which rural micro-infrastructure development activities will be done with revenue budget aiming to ensure a balanced rural development by 2041. BRDB has already approached the Finance Division through RDCD, to create a micro infrastructure code in favour of BRDB under revenue budget head, so that BRDB could implement the rural micro-infrastructure program on a regular basis.

Rural Small and Medium Enterprises (SMEs): Small and medium enterprises are playing a major role in the economy of Bangladesh, particularly in rural economy. But most of the SMEs could not make significant success due to many difficulties such as lack of necessary funds, local level technology, patronization etc. There are some private and non-government initiatives to meet the difficulties of SMEs but those are very insufficient. With directions of RDCD, BRDB has been providing many supports like funds, training, technology, raw materials etc. to make the rural SMEs sustainable though several projects uplifting the rural socio-economic conditions. Through upazila level offices, BRDB is now formulating formal and informal groups, providing capital supports, skill development training, and necessary technologies to the group members to smoothly run the SMEs. During the period of this 8th five-year, BRDB will undertake some more initiatives to develop and patronize the country's rural SMEs.

Development of Rural Energy: Rural energy sector can play a vital role in the development of rural life standard. There is fewer electrification facility in some remote rural areas especially char and hilly areas of Bangladesh. Now some NGOs are working in these remote rural char and hilly areas to provide energy like solar energy. These energy facilities provided by the NGOs are not cost effective and feasible. As the mother organization of RDCD, BRDB is now working at every corner of these remote rural char and hilly areas with its existing manpower and organizational network. So, BRDB will be able to easily extend the energy providing assistance to the mentioned remote areas of Bangladesh. During the upcoming 8th five-year period, BRDB will undertake necessary development initiatives to provide low cost energy facilities in a feasible way to the less-facilitated communities of those remote areas.

Agricultural Mechanization: Mechanization is an important tool for profitable and competitive agriculture. The need for mechanization is increasing fast with the decrease of draft power. Without mechanization it will not be possible to maintain multiple cropping patterns, which need quick land preparation, planting,

weeding, harvesting, processing etc. In all cases, the traditional method involves a lot of money and time. Nevertheless, in the modern mechanical system, the cost comes down to somewhere half to somewhere a quarter. Mechanization services will provide to the farmers through Krishok Samobay Samitee (KSS). Those services include distribution of different agricultural machinery including harvesting, planting, processing of crops and packaging in a participatory manner with the KSS. Alongside this endeavour will be made to sensitize the rural farmers to use this technology and also training will be imparted for the utilization and repair of the machineries.

Climate Change and Environment Management: Bangladesh has been suffering tremendously due to consequences of climate change. A setting in the tropics, in the floodplain delta of the three major river basins - the Ganges, the Brahmaputra, and the Meghna, and extensive low floodplain topography with a low lying coast line, has rendered the country prone to a multitude of natural hazards (e.g. floods, droughts, storm surge, salt water intrusion, river erosion, etc.) and vulnerable to the adverse impacts of future change in climatic conditions. For the mitigation and adaptation of the climate change consequences necessary measures will be taken in the rural area.

Environment friendly utilization of land and natural resources of development of rural environment will be ensured. With a view to preserve ecological balance and prevent indiscriminate damage of soil, forests, water ways and animals, regulatory measures will be taken and proper application of the National Environment law will be assisted. Necessary measures will be taken to scale down the use of chemical fertilizers and insecticides and increase the use of organic manure in agriculture. Social movement for motivating rural people to actively contribute to environmental sustainability, live healthy lives and prevent pollution of soil, water and air will be strengthened. Initiative will also be taken to waste management in rural area in a participatory manner.

Specific Objectives & Targets of RDCD in 8th Plan Period

Department of Cooperative (DoC)

The proposed DoC activities include livelihood development, sustainable agriculture, food security, governance improvement and institutional development.

Livelihood Development: Expansion of Milk Cooperatives in Milk fade Upazila; Implementation of *My Village-My Town* - Establishment of Bangabandhu Model Village; Creation of Alternative livelihood for the people of Haor region; Livelihood development of Ethnic people of plain land through cooperatives; Cooperative based Rural Employment Creation through Skill Development of Youth & Women;

Sustainable Agriculture, Food Security: Cooperative product marketing & value chain development; Introducing modern technology in agricultural cooperatives to increase food production and ensure fair price for small farmers; Expansion of dairy cooperatives in 61 districts; Establishment of cooperative based agricultural growth centres; Engaging women in dairy production and to fulfil nutrition demand of women, children and adolescents girls through expansion of dairy cooperatives.

Governance Improvement: Capacity building of cooperatives financial institutions including Bangladesh Cooperatives Bank for ensuring financial discipline

Institutional Development: Modernization & physical infrastructure development of Bangladesh Cooperative Academy and training institutes

Bangladesh Rural Development Board (BRDB)

With the vision "Human Organization based Developed Rural Community" BRDB is strongly committed to reduce rural poverty and ensure comprehensive rural development. The mission of the organization is 'Self-reliant rural area through the comprehensive management of organized people, training, capital, technology, opportunities and assets'. BRDB will undertake the following activities:

- My Village-My Town;
- Transformation of the youth into skilled manpower and ensuring employment;
- Women empowerment and gender parity;
- Ensuring nutritious and safe food;
- Reduction of rural poverty;
- Modern agricultural system;

With accelerating the above-mentioned activities, BRDB will enforce the activities of coordinating among the rural stakeholders, developing local leadership as a community catalyst, promoting market linkage infrastructure through the cooperative movement and micro-infrastructure development with stakeholders' participation in its regular work strategies.

Institutional development will be ensured both in terms of infrastructure and governance to accomplish the aforesaid activities.

Bangladesh Academy for Rural Development (BARD), Cumilla

Bangladesh Academy for Rural Development (BARD) is the pathfinder institution in Bangladesh for conducting applied and action research, innovation of models, conducting training for rural development. In the 8th plan period, BARD will conduct action research on:

- Agricultural Mechanization and Safe Food Production through Rural Community Enterprise
- Ecological Farming for Sustainable Agriculture
- Promoting Livelihood of Marginalized Communities in Cumilla, Chandpur and B-Baria District
- Livelihood Improvement through Rural Micro Enterprise
- Capacity Building of Rural People Through Union Parishad and Village Based Organization after Corona Pandemic
- BARD will establish regional academy in Barisal, Chittagong (excluding CHT) and Shylhet division to promote the livelihood for the people of coastal, haor and char land area.

Rural Development Academy (RDA), Bogura, Rangpur, Jamalpur, Jashore; and Bangabandhu Academy for Poverty Alleviation & Rural Development (BAPARD), Kotalipara, Gopalganj

The mission of RDAs and BAPARD are to provide training, conduct applied and action research, conducting post-graduate courses, supervise research work for national and international students and offer advisory services in the field of rural development, and poverty alleviation. A new Academy will be established in Jashore to disseminate the RDA developed model for poverty reduction in Southern Part of Bangladesh and attaining the Sustainable Development Goals (SDGs).

During 8th plan period, the RDAs and BAPARD will undertake action research on Sustainable Livelihood Development; Socio-economic Development of Rural Farmers through development and dissemination of cost saving and sustainable agricultural technologies; Safe Food Production; Development of marketing channels for ensuring better prices of rural produces, Adaptation of rural livelihoods with Climate Changes, Impact Covid-19 pandemic on rural economies and the way out, reducing poverty and inequality in rural economy, inclusive rural development, combating adverse impact of disaster in rural areas, development of sustainable rural development models and on other crucial areas of rural development.

Small Farmers Development Foundation (SFDF)

The broad objective of the Foundation is to provide collateral free microcredit with a view to uplift socio-economic condition as well as poverty reduction of the small and marginal farmers of the country. The foundation will seek to create employment opportunities and income generating activities of small and marginal farmers through access to microcredit, capital formation through small savings, and market linkages.

Palli Daridro Bimochon Foundation (PDBF)

The objectives PDBF include socio-economic development of the poor and the underprivileged people through training, capital formulation, women empowerment.

During 8th plan period, PDBF will undertake activities on creation of small entrepreneurs, and self-employment programmes, awareness and skills development of rural youths with special focus on the poor and vulnerable groups in rural areas.

Milk Producers' Cooperative Union Limited (MilkVita)

- The objectives of the Milk Vita are socio-economic development of small, marginal and landless farmers through production, processing, and marketing of milk and dairy product.
- During 8th plan period, Milk Vita will undertake programmes to form new milk cooperatives; to alleviate poverty through cow rearing, milk collection, processing and distribution and to women empowerment by off-farm activities.

8FYP Strategy for RDCD

Promote diversified rural economy: Along with efforts to improve productivity and diversity within agriculture, the on-going rural transformation whereby the income share of rural population from non-farm activities is growing will be further strengthened to provide a diversified income and employment base for the rural population. The details of this strategy were provided in chapters 2 and 4 of Part 1 of the Plan document. The details of the agricultural strategy were discussed in Chapter 3 of Part 2 of the Plan document. Supportive policies include the implementation of BDP2100, public investment in farm technology and productivity, support policies for strengthening fishing activities including the harnessing of the potentials of the Blue Economy, public investment in rural infrastructure, and credit policies to promote non-farm economic activities.

Ensure balanced rural development: The government is acutely aware of the many lagging rural areas of Bangladesh. Special efforts will be made to reduce some of the gaps during the 8FYP by improving infrastructure, giving priority to the needs of these lagging areas in allocating public spending on agriculture and water management, and improving the flow of credit to these areas to boost non-farm enterprises. The activities of the various rural support institutions will prioritize these lagging regions in designing their programmes for the 8FYP.

Strengthen rural education, training and skill formation: The implementation of the Non-Formal Education strategy will be strengthened to eliminate rural adult illiteracy for both males and females, increase rural education coverage and quality, and provide skills training through the various rural support institutions. The training will provide skills development training to the rural poor, particularly disadvantaged women and socially excluded groups, to generate self-employment in non-farm sectors. The on-farm research and extension services will impart training to farmers to enable farm productivity increases.

Strengthen and capacity building of RDCD and the various rural support institutions: The BRDB, the BARD, the RDA, the BAPARD will be strengthened to conduct action and adaptive research, disseminate appropriate knowledge, training and technology in the rural areas. Foreign and local higher education and training will be undertaken for the officers of RDCD, Rural Development Academies, BRDB and other rural agencies of RDCD in the fields of sustainable rural development, monitoring and evaluation of development programmes. A GIS based database system will be established at RDCD to providing reliable information on rural economy and its develoment status.

Strengthen the functioning of the Cooperative Unions: In coordination with LGIs, RDCD and DoC will strengthen the Cooperative Unions, and regularly monitor its Credit activities to ensure desired outcomes. It will also facilitate consultative services to the cooperatives to promote the cooperative-entrepreneurship. In addition, RDCD and DoC will provide access to public with regard to the database on cooperatives, cooperative entrepreneurship provisions and available training facilities. RDCD will promote the agricultural value chain and access to market through cooperatives, through marketing of agricultural products and raising awareness of value-chain, supporting activities related to production, and developing marketing infrastructures.

Strengthen the implementation of social protection programmes: The government is acutely aware of the need to strengthen the implementation of the various rural social protection programmes to maximise the poverty reduction impact. This has become even more challenging in view of the COVID-19 pandemic. In coordination with LGIs and other rural support institutions utmost effort will be made to ensure proper targeting of beneficiaries so that exclusion and inclusion errors are both minimized.

7.4.3 Objectives & Targets of the MoCHTA

The government is committed to ensure social, economic and political rights in the region, as well as enabling the tribal people to retain their social, cultural and traditional identities through fullest implementation of the CHT Accord. In such context, the MoCHTA will coordinate inter-ministerial activities of the region, will provide assistance to the CHT Accord Implementation and Monitoring Committee to have fullest implementation and proper monitoring of the issues of the CHT Accord and

ensure development in education, healthcare, food and nutrition, employment and protection of land-right, resources, and farm and nonfarm activities. The following functions are likely to be done:

- Monitoring and supervision will be strengthened so that education, health and maternal child health services, social safety nets, and nutrition and housing facilities reach the ethnic people.
- The election and management of the Hill District Councils will follow the Hill District Council Act, 1989.
- As per the CHT treaty of 1997, the MoCHTA, CHT Regional Council and Hill District Councils will be strengthened to facilitate development in the region.
- Following Dispute Resolution Act 2001, the Land Commission will resolve the disputes and ensure land rights of the tribal people. In such a situation, community land ownership will be honoured. The Rules of the CHT Land Disputes Resolution will be enacted soon so that CHT Land Disputes Resolution Commission can function for settling land disputes in the region.
- A land survey will be carried out in consultation with stakeholders as per provisions of the CHT Accord. An appropriate land policy will be adopted to deal with the land disputes in the region.
- The ministry will expand small and cottage industries, trading, poultry and livestock rearing, beekeeping and mushroom cultivation, cultivation of fruits and medicinal plants and non-farm activities, which will increase employment and income opportunities in the hilly region.
- Infrastructures will be developed to eliminate barriers in marketing the local products into national and international markets.
- A special program will be developed to strengthen post-harvest storage, value-chain development, processing, packaging, and marketing. Private investment in processing, packaging, and marketing the local products and services will be encouraged.
- Existing skills development training will be extended in the CHT region, targeting the overseas labour markets.
- Ecotourism and community-based tourism abiding by the legislations narrated in the HDCs Acts, CHTRC Act and Allocation of Business of MoCHTA will be encouraged as a means of income generation. Local investment will be encouraged to develop sustainable tourist spots and facilities in Rangamati, Bandarban and Khagrachari. Care and caution will be taken so that tourism does not adversely affect the local culture and environment.
- Community forest will be encouraged and expanded to conserve biodiversity and the watersheds, and measures will be taken to protect wildlife and biodiversity.
- Special initiatives will be undertaken to ensure the flow of water in creeks, water bodies and waterfalls by preserving the natural sources and integrated watershed management. It will promote sustainable water resources management.

8FYP Strategy for MoCHTA

- Enhance institutional capacity of three Hill District Councils (HDCs), CHTRC and CHT Development Board (CHTDB) urgently. These organizations can effectively implement development projects to achieve sustainable goals in the CHT region.
- Institutional capacity will be increased through Annual Performance Agreements, National Integration Strategy, innovation, domestic and foreign training, monthly coordination meetings, monthly development review meetings and project inspections.

- As per the peace agreement and the subsequent legislations, the MoCHTA is entrusted with overall socio-economic development in the CHT region. Following the agreement and the subsequent legislations, the concerned ministries will consult with the MoCHTA, and implement activities in coordination with the ministry.
- Special attention will be given to lower the large incidence of poverty in CHT by giving priority to the allocation of resource transfers from LGD, selection of rural infrastructure projects relating to irrigation, drainage, roads, bridges and culverts, imparting training and research to CHT, and improving access to credit from the micro-credit institutions
- Social protection of the poor and vulnerable will be expanded

7.5 COORDINATION AMONG STAKEHOLDERS

The MoLGRD&C is involved in rural and urban development, requiring coordination among stakeholders, including MoLGRD&C, LGIs, other Line Ministries, Division and Agencies (MDA) and development partners (DPs). The Ministry of LGRD&C will lead the donor coordination on behalf of the major government stakeholders: LGD and RDCD, Planning Commission, Finance Division, Ministry of Agriculture, Road Transport and Highways Division and the Ministry of Commerce. The coordination with DPs is very important as there is a number of Sector Working Groups (SWG) under the Local Consultative Group (LCG). Without proper coordination, there is a risk of duplication and supply-driven donor activities. The functioning of the various SWGs of the DPs and the lead government counterparts is shown in following Table 7.5. The Local Government Division (LGD) assumes the leading roles in local governance, water supply and sanitation, and urban sector. The Ministry of Agriculture takes the lead on agriculture and rural development; the Road Transport and Highways Division on roads issues; the Ministry of Commerce assumes the responsibility of commerce and businesses, private sector and trade; and the Ministry of Chittagong Hill Tracts Affairs on CHT matters. Given the involvement of MoLGRD&C in rural development, rural roads, rural CMSEs and CHT rural infrastructure, the MoLGRD&C departments will ensure proper coordination with the concerned line ministries to ensure donor coordination and maximize the support benefits.

Table 7.5: Development Partners and Sectors Working Groups

Sl	Development Partner	Working Group (Lead Ministry/Division)
1.	ADB, Denmark, EU, Germany, Japan, UN agencies, Switzerland, the WB	Local government (LGD)
2.	ADB, Australia, Denmark, EU, Japan, UK, UN, WB	Water supply and sanitation (LGD)
3.	ADB, Australia, Germany, Japan, UK, UN agencies, WB	Urban sector (LGD)
4.	ADB, Australia, Denmark, EU, Japan, Korea, Switzerland, UN agencies, USA, WB	Agriculture & Rural Development (Ministry of Agriculture)
5.	ADB, Canada, Denmark, EU, Germany, Japan, Netherlands, Norway, Switzerland, UK, UN agencies, USA, WB	Private sector development & trade (Ministry of Commerce)
6.	Japan, ADB, IsDB, Korea, World Bank	Roads and Highways (Road Transport and Highways Division)
7.	UN agencies, ADB, Australia, Canada, Denmark, EU, USA	CHT (Ministry of CHTA)

Source: LGRD Sector Strategy Paper 2018

7.6 DEVELOPMENT RESOURCE ALLOCATION IN THE 8FYP

The ADP allocations for LGI and CHT are shown in Tables 7.6 and 7.7 in current and constant prices. It is important to note that allocations for the Local Government Division (LGD) include block transfer grants for all LGIs and funding for major urban projects in water, sanitation, waste management and urban roads. So, the total funding available for LGIs and for urban development are much higher than indicated by allocations to LGD. In particular, a key objective of the 8FYP is to strengthen own resource mobilization from property taxes and cost recovery for all LGIs, especially the urban-based LGIs

Table 7.6: 8FYP ADP Allocations for Local Government and Rural Development (Taka billion current prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Local Government Division (LGD)	224.7	276.8	281.9	310.4	353.8
Rural Development and Co-operatives Division	23.4	28.9	33.3	38.8	46.6
Ministry of Chittagong Hill Tracts Affairs	11.8	14.5	16.8	19.6	23.5
Total Sector	**260.0**	**320.2**	**332.0**	**368.8**	**423.9**

Source: Chapter 5, Part 1 Annex Table A5.1

Table 7.7: 8FYP ADP Allocations for Local Government and Rural Development (Taka billion FY 2021 constant prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Local Government Division	224.7	262.9	254.7	267.2	290.8
Rural Development and Co-operatives Division	23.4	27.4	30.1	33.4	38.3
Ministry of Chittagong Hill Tracts Affairs	11.8	13.8	15.1	16.8	19.3
Total Sector	**260.0**	**304.1**	**299.9**	**317.4**	**348.4**

Source: Chapter 5, Part 1, annex Table A5.2

SECTOR 8:
ENVIRONMENT AND CLIMATE CHANGE

CHAPTER 8

SUSTAINABLE DEVELOPMENT: ENVIRONMENT AND CLIMATE CHANGE

8.1 OVERVIEW

One of the most noteworthy achievements of Bangladesh over the last decade was that it was able to raise its per capita income from less than US$754 in FY2009 to more than US$ 1,909 in FY2019. This economic transformation was only possible as the country entered a high growth regime of above 7.6% over the last 4 years. This also meant that Bangladesh experienced a steep decline in both moderate and extreme poverty. Furthermore, this pro-poor economic transformation coincided with sustained reductions in child mortality and fertility, improvements in life expectancy and nutritional status of the population, enhanced access to electricity, sanitation and clean water, and broad-based expansions in education.

Looking into the future, policymakers aim to increase growth from 8.15% in FY19 to 8.51% in FY25 and sustain an average economic growth rate of 9% between FY21 to FY41 in order to attain a High-Income Country status by FY41. This long-term aspiration of development, however, necessitates that Bangladesh reconciles its strategies for growth and social development with renewed attention to nature, climate, and the underlying economic system that made our economy unsustainable and exposed to pollution, degradation of environment and ecosystem risk to climate and disaster risk. Therefore, the 8FYP recognizes Bangladesh's commitment to Rio Convention, Paris Agreement and Sendai Framework on Disaster Risk Reduction and Sustainable Development Goals. While some developing countries have championed the notion of "grow dirty, clean up later", the Government of Bangladesh understands and acknowledges that growth can only be sustainable when it is green in nature – vis-à-vis – "Green Growth". This is because, while the measures associated with environmental conservation might appear economically burdensome in the very short-run, the likelihood of maintaining fast-paced long-run growth in the absence of environmental conservation is low due to the loss of capital stock as a result of ecosystem degradation such as land degradation, soil erosion, flooding, loss of land fertility and health hazards due to air and water and soil pollution. The return of investment on resilient and environmentally sustainable development is high when development processes are transformed into sustainable pathways.

In fact, at the macro-level, indicative projections presented in the Bangladesh Delta Plan 2100 (BDP2100) highlighted that the combined effects of moderate climate change could cause an average loss of about 1.3% in the growth of GDP per year until FY2041. The time paths for the GDP growth in the case of unchecked environmental degradation (termed Business-As-Usual or BAU) and for the case where all necessary actions to protect the environment including the adoption of the (BDP 2100 are taken (termed the Policy Scenario), also highlight a substantial cost associated with environmental neglect.

The cumulative gap in per capita income between the two scenarios grows progressively, and by FY2041 – the gap can be as high as 27%. This will also have substantial implications for poverty. In fact, in 2015, the Government of Bangladesh estimated that damages from five major natural disasters since 1998 amounts to roughly 15% of GDP – while a joint work by the Government of Bangladesh and the World

Bank in 2010 indicated that climate related disasters accounted for 0.5 to 1% loss of GDP annually due to damages in livelihood, infrastructure and forgone production and likely to grow further unless policies and investments are made to manage the negative impact of climate change and environmental degradation. Environmental hazards due to both climate change and economic activities have severe implications for public health as well, as increasing heat propagates new pests and disease vectors, air pollution and health hazards like malaria, dengue plus water borne diseases hinder health conditions. In a broad perspective, proactive investments to manage those stress and potential disruption make credible economic performance. Climate change through floods and the erosion of land can also lead to a situation involving climate refugees, caused by mass migration to urban centres, resulting in hasty and carbon intensive urbanization and poor living conditions.

The Government recognizes this key role of environmental sustainability for making economic transformation meaningful. Moreover, since its inception, Bangladesh has already attained a good degree of climate resilience, especially in mitigating and adapting to natural disasters by mobilizing critical investments in climate resilient technologies and infrastructure and it and acknowledges the need for turning Bangladesh into a climate-resilient and environmentally sound country. In particular, to facilitate the journey to an Upper-Middle-Income Country status by FY2031 and a High-Income Country by FY2041, it is essential that substantial further steps are taken to ensure that the natural environment in Bangladesh resembles those of the high-income economies by 2041. To this end, the Sustainable Development Goals and the Perspective Plan 2021-2041 have pointed out specific objectives and targets – illustrated in Tables, 8.1 and 8.2 – which aim to reconcile environmental concerns with our socio-economic aspirations. The targets, nonetheless, underscore the strong leap we need in terms of addressing environmental management challenges while moving forward. This is mainly due to substandard performances in the past. In fact, even very recently, Bangladesh has ranked poorly in the 2020 Environmental Performance Index (EPI) (162 out of 180) by Yale and Columbia University. Bangladesh has also been ranked as the 7th most vulnerable on the Climate Risk Index in 2020. As a result, the ability to address the environmental challenges will determine our scope to achieve High-Income Country status and eliminate the incidence of absolute poverty by FY2041.

The Eighth Five Year Plan will focus on integrating economic progress, environment, climate change and disaster management concerns into planning and budgeting with the goal of attaining sustainable development. In this context, appropriate policy and institutional capacity building for sustainable water and land management, biodiversity conservation, climate resilient development and disaster management are crucial at all levels of government, especially with a greater emphasis at the local government level where most of the programmes are to be implemented. The Eighth Plan will also incorporate a strategy of green growth to harmonize economic growth for better environmental sustainability.

Therefore, the Eighth Plan envisions a sustainable development agenda, and is focused accordingly on synchronizing economic and environment planning to produce coherent decision making on both economic and environmental fronts. It highlights the need to address the environment, climate change adaptation and mitigation, and disaster risk reduction in a broader development context, recognizing the environmental concerns as an added challenge to reducing poverty, hunger, diseases and facilitating growth. Of course, some of the objectives and activities that were considered under the Sixth and Seventh Plans but were not addressed or implemented adequately have also found consideration under the Eighth Plan, as long as they have an instrumental role in aiding the key objectives of the Plan and the long-term agendas articulated in the Perspective Plan 2041.

Table 8.1: Perspective Plan 2021-2041 Objectives for Environmental Sector

I. Some 80 per cent of the population lives in urban areas and enjoys a quality of life that is comparable to those found in the present-day high-income economies.

II. There is a proper balance between ecology, the natural environment and needs of the population. In particular, the productivity of land is preserved, forest resources are conserved and enriched, biodiversity and air quality are improved, pollution level is decreased and water resources are properly managed to prevent flooding and water shortages.

III. Cities are normally flood free with proper drainage, modern sewerage, proper waste management and clean air.

IV. There is minimal incidence of absolute poverty; there are no slums and every household have a basic minimum housing quality.

V. The country is equipped to respond fully and quickly to any incidence of natural disasters.

VI. Environmental governance is such whereby there is a sound mix of incentives and regulatory policies including the application of the polluter pays principle and a decentralized implementation of environmental policies and programmes.

Source: PP2041, GED

Table 8.2: Core Targets for Environmental Management

Objectives / Targets	Base Year (2018)	Target (2041)
Share of urban population in total population (%)	30	80
Urban households with tap water connectivity (%)	40	100
Urban households with water-sealed sanitary toilets (%)	42	100
Urban households with modern sewerage connection (%)	N/A	100
Rural households with tap water connectivity (%)	0	50
Rural households with water-sealed sanitary toilets (%)	0	50
Rural households with safe sewerage connection	0	100
Incidence of absolute poverty (%)	24	< 3%
Per cent of population living in slums (%)	55	0
Per cent of urban centres with waste water treatment facilities	N/A	100
Core environmental spending (% of GDP)	1	3.5
Spending by environment coordinating entity (% of GDP)	0.005	0.5
Application of polluter pays principle (% of cases)	0	100
Carbon tax (% of fuel prices)	0	15
Green area for Dhaka-major cities (square metres/million people)	N/A	5-12
Disaster readiness (%)	N/A	100
Urban water bodies compliance with water quality standards (%)	0	100
Air quality (annual average, µg/m3 PM 2.5)	86	40
Per cent of cities flood free with proper drainage	0	100
Per cent of land degraded	18	5
Area under forest cover (% of land) [base year 2015]	14.1	20
Protection of Habitat and Biodiversity International Ranking	Bottom 5%	Top 30%
Environmental Performance Index International Ranking	Bottom 5%	Top 30%

Source: PP2041 Projections. Base year values show most recent available data

8.2 PROGRESS DURING THE 7th PLAN

Bangladesh faces steep environmental challenges emerging from both the crude process that guides economic progress in the early stages of development – and also from the larger changes in the climate resulting from growing emissions of greenhouse gases into the atmosphere. Moreover, to address these challenges, the government prepared some key strategic plans and laws to introduce more harmony into economic planning. In 2009, it adopted the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Moreover, a National Strategy for Sustainable Development (NSDS) 2010-2021 was formally adopted in 2013, which aimed to integrate environmental management while pursuing the broader objectives of the Perspective Plan 2010-2021. At present, an impressive list of environmental laws, regulations and plans cover a wide range of environmental issues including forest degradation, air pollution, water pollution, bio-diversity loss and wetland management. Additional laws, regulations and programmes related to agriculture, land, water management, fisheries and disaster management also seek to address environmental concerns in areas, such as land degradation, sustainable management of fisheries, management of water resources, waste management and disaster risk reduction. The Government has also undertaken specific measures during the 7FYP to improve the state of environmental management, which are as follows:

8.2.1 Plan, Policy, Strategy

The government has adopted a medium- term strategy and has developed plans and policies to implement the strategy. The main elements are as follows.

National Environment Policy 2018: The Government has promulgated the National Environment Policy 2018 as refinement of the Environment Policy 1992 in order to ensure sustainable development and bring the environment into the mainstream of national development by reflecting the issues of protection and improvement of environment and biodiversity. This policy will be considered as an integrated policy for the protection and improvement of environment and will serve as guidelines for all environmental activities stated in all other policies.

Ecologically Critical Areas (ECAs) Management Rules 2016: The Government has declared thirteen biodiversity significant areas which are ecologically vulnerable and degraded as ECAs to halt its continuous degradation. Considering the value of these Ecosystems, Bangladesh government has promulgated Ecologically Critical Areas Management Rules 2016, for its proper management and improvement of the ecosystem. The rules set out several committees namely: National ECA Committee, District ECA Committee, Upzila and Union ECA Committee in different tiers for management of the ECAs.

National Biodiversity Strategy and Action Plan (NBSAP), 2016-2021

Bangladesh enjoys a very rich diversity of flora and fauna in a wider range of ecosystems. The economy of the country and the people are heavily dependent on the biological resources for their lives and livelihoods. Our cultural heritage, rural lifestyles and traditional healthcare have long been attached to the services provided by the biodiversity. To ensure our rich biodiversity be conserved and used sustainably, we need to follow the updated NBSAP formulated in 2016. NBSAP reflects well thought of actions and strategies of implementation in line with global targets and Biological Diversity Act of the country. As the NBSAP

serves as a guiding document for management of country's biodiversity and there is obligation under the Biological Diversity Act to develop and update the document on a regular interval, the development projects and programmes taken and implemented during 8FYP should address the NBSAP, 2016-2021 targets those are also linked with SDG targets. Department of Environment will update or revise the NBSAP with the upcoming Global Biodiversity Framework to be adopted for the duration of 2021-2030.

Bangladesh Biological Diversity Act, 2017

Government enacted the Bangladesh Biological Diversity Act in 2017 to materialize the constitutional obligation of biodiversity conservation as well as, our global commitment that enshrined in the three objectives of the United Nations Convention on Biological Diversity. Towards full implementation of the Act on Biodiversity, strengthened institutional structure under the Department of Environment will be required. The Act will facilitate conservation activities in every tier of the local government and up to the grass root level with the formation of biodiversity committees, establishment of biodiversity register and biodiversity fund to be established by the government.

Biosafety Policy of Bangladesh

To enhance the implementation of biosafety regulatory regime, a development project on implementation of the National Biosafety Framework (NBF) has been taken to enhance the capacity on biosafety at various levels. A GMO detection laboratory has already been established in the Department of Environment to support the regulatory system. As a party to the Cartagena Protocol on Biosafety, Government of Bangladesh intends to fulfil the commitments under that international agreement, including the use of risk assessment to inform decision making on the use of GMOs, and supporting efforts to ensure public awareness on biosafety. Biosafety Policy has been formulated both in English and Bangla with a view to institutionalizing a stand-alone policy that has the vision for biosafety applicable for handling GMOs, including research under containment in the laboratory, field trial, trans-boundary movement, transit, and any uses of GMOs that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human and animal health.

Formulation of National Oil and Chemical Spill Contingency Plan (NOSCOP): Being a river-floodplain-prolific country, there is a high traffic movement in the waterways, both inland and the coast and marine. The pollution from blow-out, collision, stranding, and other inland and marine accidents can threaten marine life including marine fisheries in the coast, inter-tidal zones and in the deep sea; coastal mangroves and vegetations; fisheries including aquatic life in the rivers, floodplains and wetlands; agricultural products; inland and sea birds; recreational beaches; and tourism with subsequent loss of revenue. Furthermore, the Bangladeshi coast, its EEZ in the Bay of Bengal, area of High Sea within the national maritime border is close to multiple international shipping routes that expose the country to possible spillage incidents. Considering the additional ship-breaking activities and proximity of oil, petroleum, and chemical processing industries on the coastal belt present substantial commercial activity and hazards that may cause spillage. National Oil and Chemical Spill Contingency Plan (NOSCOP) is being formulated both in Bangla and in English to combat water pollution both in the inland water and in the coastal and marine water.

Improved Management in Wildlife Conservation and Protection: The Government has formulated a wide array of measures to implement the Wildlife (conservation and security) Act, 2012. The Government has also formulated a Wildlife Conservation Master Plan 2015-2035, which charts out a long-term plan to improve the conservation of wildlife in Bangladesh. Bangladesh Tiger Action Plan (2018-2027), Bangladesh Elephant Conservation Action Plan (2018-2027), Bangladesh Vulture Conservation Action Plan (2016-2025) have been formulated. Several projects to address the plans to protect and conserve the wildlife are under implementation.

Adoption of the Bangladesh Delta Plan 2100: Bangladesh Delta Plan 2100 documents the broad development strategies which the country can adopt as it gravitates toward the end of the 21st century. It offers long-term strategies and interventions that should be embraced in order to ensure food and water security, economic progress and environmental sustainability while reducing the threats of natural disasters and developing resilience to climate change by putting forward a set of forward-looking integrated strategies, which is both holistic and multi-dimensional in nature. In some sense, the Delta Plan 2100 is a techno-economic plan which covers both technical and economic issues, and it evaluates the needs of mobilizing resources for an effective investment programme till 2030. It also harnesses an approach of Adaptive Delta Management (ADM) by having a strong focus on the issues associated with climate change, such as rise in global temperature, erratic patterns of rainfall patterns, rise in sea levels, etc.

More precisely, BDP 2100 charts out the pathways of development under two distinct policy options: The Business-as Usual (BAU) policy option and the Delta Plan (DP) policy option. Under the BAU policy option, the impact of climate change is projected to be unmitigated, resulting in increased natural hazard and lower long-run growth – as the efficiency of capital falls due to lower agricultural production, higher health hazards and increased pressure for urbanization. On the other hand, under the Delta Plan (DP) policy option, the effects of climate change are expected to be minimized, and associated adaptation measures are planned which will help us achieve higher economic growth. Furthermore, under the DP policy, Bangladesh is projected to achieve Upper Middle-Income Country status by 2031 and High-Income country by 2041.

BDP 2100 also links Integrated Water Resources Management (IWRM) to economic growth as water has been considered for the sustainability of the delta. Key components of IWRM cover the impacts of climate change, food and water security, economic and social progress, knowledge development, expansion of forest and tree area, biodiversity conservation, crop production, etc. Additionally, this alignment with IWRM allows BDP 2100 to pursue the goals that are critical for long-run sustainable development, which are: ensuring safety from climate change related disasters; address efficiency gaps in water usage and security; ensure the conservation of wetlands and develop an integrated system; attain optimal use of land and water resources; and create institutions that can generate the cooperation which is necessary for in-country and trans-boundary water resource management – and they are collectively aligned with the aims of the SDGs.

It is also essential to underscore that the formulation of the BDP 2100 went through an extensive consultative process and was based on twenty-six baseline studies on key areas such as climate change, natural resources, environment and ecology, review of past experiences, environmental governance, knowledge and data management. Consequently, the challenges lie with effective implementation – and the key areas of concern are: mobilizing resources for supporting the investment plan, developing capacities at different stages of the Government; achieving the necessary coordination between, among and within

agencies and Ministries and Divisions; aligning delta implementation activities with the Annual Development Programme (ADP); and designing appropriate mode of financing for Public-Private Partnership (PPP) related projects and also new projects address climate change adaptation.

NAP, BCCSAP, CIP, NDC, FIP and FMP: The Government has initiated the process to formulate National Adaptation Plan (NAP) in 2019 with the support from GCF-UNDP and steered by MoEFCC. Similarly, MoEFCC has initiated the process to update Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009, which was supposed to be completed by this time, but could not be completed due to COVID-19 pandemic. Nationally Determined Contribution (NDC), which was prepared and submitted before the Paris Agreement in 2015 is a flagship document of the government, where Bangladesh government decided to reduce GHG emission by 5% from business-as-usual (BAU) levels by 2030 or 12 million ton of CO2eq in power, transport and industry sectors. Under conditional contribution with financial and technological support from developed countries, Bangladesh decided to reduce GHG emission by additional 10% from BAU levels by 2030 or 24 million metric ton CO2eq in those three sectors. Besides, MoEFCC has also prepared Climate Investment Plan in 2017 with support from FAO. At present, Bangladesh is also formulating the NAP process that is expected to be completed by 2022 with financial support from the Green Climate Fund. However, all these initiatives need to be aligned and come under one umbrella of Bangladesh Delta Plan (BDP) 2100 to ensure better coordination and sustainability with clear budget links.

The Government has also operationalized the Climate Fiscal Framework (CFF), developed by the Ministry of Finance, which provides the principles and tools for climate fiscal policy-making (CFP), helping to identify the demand and supply sides of climate fiscal funds (expenditures vis-à-vis revenue or finance, respectively), and to ensure that CFP is transparent and sustainable in the longer term. It is also essential to note that under the 7th Plan period, the Office of the Comptroller and Auditor General (OCAG), for the first time, conducted two pilot performance audits using climate lens with technical support from the Inclusive Budgeting and Financing for Climate Resilience (IBFCR) project of Finance Division.

Forest Investment Plan (FIP) (2017-2022) has been developed to identify the future investment opportunities to increase the forest cover, reducing the deforestation and forest degradation, improving the livelihoods of the forest dependent people through the implementation of participatory/social forestry. An updated Forestry Master Plan (FMP) has been developed for the period of 2017-2036 after the completion of previous FMP in 2015 to address the upcoming and on-going challenges related to anthropogenic issues and climate change.

8.2.2 Activities/Initiatives/Measures

Improved Institutional Capacity: The Department of Environment has enhanced its institutional capacity. The Department discharges its responsibilities through a head office at Dhaka, eight divisional offices located in Dhaka, Chittagong, Khulna, Rajshahi, Barishal, Sylhet, Mymenshing and Rangpur.

Activities to Mitigate River Bank Erosion: Steps have been taken for managing water resources, land use, and mitigating effects of climate change on the environment by re-excavating small rivers, canals and wetlands across the country and assimilation of the Climate Smart Integrated Coastal Resource Database (CSICRD). The Government has already undertaken plans to increase navigability of rivers, dredging of 510 km of rivers by 2022 to prevent river erosion and ensure supply of water during the lean season, digging

and re-excavation of 4,883 km of irrigation canals, construction and repair of 200 irrigation structures to extend irrigation facilities, construction of 3 barrages and rubber dams, construction of 250 km flood protection and coastal embankment to reduce flood, salinity and water logging, renovation of 1,040 km flood protection embankments and coastal embankments, construction and renovation of 590 flood protection and drainage infrastructure, excavation and re-excavation of 1,325 km drainage canals, and conservation work of 195 km border river banks and 6 cross-dams.

Improved Management to Control Water Pollution: In order to control water pollution, the Government has banned the use, production and marketing of polyethylene shopping bags and made it mandatory for the industries to set up Effluent Treatment Plants (ETPs) to treat their waste before discharging them to water bodies. Unfortunately, the effective enforcement of regulation concerning the ban of plastic is still undermining environmental health, which needs more focus under the 8th Plan. Therefore, the Department of Environment (DoE) takes legal action against violators including the imposition of penalties as provided under the law. The tannery industries operating in Hazaribagh have been relocated to the tannery industrial estate in Savar, which will dispose the liquid wastes through a common ETP.

Activities to Reduce Land Degradation: Bangladesh National Action Program (NAP) for combating Desertification, Land Degradation and Drought (DLDD), 2015-2024 has been formulated to support and enhances the implementation of UNCCD strategy 2008-2018. Its vision is 'to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effect of droughts in the affected areas in order to support poverty and environmental sustainability.

To achieve SDG15.3.1, Land Degradation Neutrality (LDN) by 2030, Bangladesh set its voluntary national LDN targets. Based on the national commitment to achieve LDN by 2030, 5,100 km2 preliminary LDN targets have been defined for Bangladesh.

DoE is implementing a number of projects to reduce land degradation and to mainstream sustainable Land Management (SLM) best practices.

Improved Coastal Afforestation: During the Seventh Five Year Plan coastal afforestation in newly accreted chars in the coastal areas have been given due emphasis and about 23,818 hectares plantations have been raised. Forest Department has conducted a study in 2016 to identify the potential newly accreted char land and suitable barren lands and mapped for bringing under afforestation activity to establish green belt along the coastal region.

Established Forest and Carbon Inventories: Forest Department conducted National Forest Inventory (NFI) during 2016-19 to identify the status of forest and tree resources, carbon and biomass stock, dependency of local people on trees and forests etc. The result shows that forest cover of Bangladesh is 12.8 % of the country. Government estimated the carbon emission for Agriculture, Forestry and Other Land Use (AFOLU) sector to develop the Forest Reference Level (FRL) and submitted to the UNFCCC. To reduce the carbon emission from forestry sector, Bangladesh formulated Bangladesh National REDD+ Strategy (BNRS) and established National Forest Monitoring System (NFMS) for periodical monitoring of tree and forest cover using satellite imagery. Bangladesh Forest Information System (BFIS) is established for supporting the dissemination of information and data to the stakeholders.

Improved Co-management in Protected Areas: Protected Area Management Rules has been formulated in 2017. Forest Department has implemented co-management in 22 protected areas to conserve the wildlife and biodiversity involving the forest dependent communities.

Improved Management of Wetlands: A 20-year Haor Development Master Plan and Database has been prepared for development of the Haor areas. Under this, steps have been taken in the Haor areas to develop infrastructure, re-excavate rivers, canals, and Haors, and foster socio-economic development of the people of the concerned areas. This Master Plan is essential as haor region has long been lagging behind mainstream national development although the economic development of Bangladesh is moving steadily at a moderate pace. In particular, the Master Plan allows the Government to harness the development potentials by addressing the issues as well as to gain comprehensive understanding on the present hydrological and hydro-morphological characteristics and conditions, land-use patterns, ecological sensitivity and water quality situation. Implementation progress is; however, lagging and stronger efforts will be needed in the 8FYP.

Improving Transnational Cooperation on Water Management: The Government has remained committed to improve transnational cooperation for the management of rivers shared by Bangladesh and its neighbours. It has also signed a Framework Agreement on Cooperation for Development between Bangladesh and India in 2011 for water resource management and development of cross-border rivers through sub-regional cooperation, and under the 7FYP – the Government has taken measures to form an organization based on the Ganges-Brahmaputra-Meghna river basins, such as the River Basin Organisation/River Basin Commission.

Improved Data Archiving: Service Level Agreement (SLA) was done in 2017 with Bangladesh Computer Council (BCC) for hosting the Bangladesh Forest Information System (BFIS) for data archiving and sharing the updated information with stakeholders. Several information modules were developed and hosted in the BFIS to support the assessment and monitoring the forest resources.

Supporting Alternative Livelihood: The Government has supported more than 10,000 families during the 7FYP to reduce their dependence on forests, which will result in lower illegal logging of timber and depletion of natural resources. This process has been carried out under different development projects of Forest Department

Improved Watershed Management: Watershed management was one of the prioritized activities of the government. Hill forest area was considered for the improvement of tree cover to regulate the water cycle and reduce the soil erosion.

Increased Commitment to Social Forestry: The Government has remained committed to the objectives of social forestry under the 7FYP as it continued to offer resources to thousands of people under different social forestry schemes. At present, more than half a million people are involved with the overall social forestry programme. Additionally, encroached forest lands, depleted forest areas, vacant marginal land and road side areas were reforested during the plan period. The major components of these projects were to establish woodlot, agro-forestry and strip plantations throughout the country. The Plantations established under social forestry programme are being harvested at the end of the rotation (10 years) and of which the benefit will go to the participant.

Increased Commitment to Green Growth: During the 7FYP, fiscal initiatives have been designed by providing tax incentives to encourage investment in renewable energy ventures. The incentives include exemption from being charged 15% VAT on renewable energy equipment and materials used in the production of renewable energy. The Government has also developed a network of microcredit providers in remote rural areas to provide funding for the purchase of renewable energy equipment; and corporate income tax exemptions for renewable energy projects.

Climate Fiscal Reforms

In 2014, the government adopted a Climate Fiscal Framework to mainstream climate finance in the countries Public Financial Management (PFM) systems and processes encompassing strategic planning, budget formulation, budget execution, and parliamentary oversight. Already, Finance Division has introduced climate dimension in its Medium-Term Budget Framework (MTBF) and issued strategic guidance through Budget Call Circular (BCC) to the line ministries to make their budget climate inclusive. As part of MTBF process, it has also developed a climate inclusive macro-economic framework. In addition, over the last four years, the Finance Division has been publishing annual climate budget report using its robust IT platform called iBAS++. As part of the process of ensuring enhanced accountability and transparency, the Office of the Auditor General has introduced climate performance audit in its audit protocol. These initiatives are linked with ADP implementation and help monitor climate expenditure of Bangladesh.

Controlling Noise Pollution: Noise pollution is one of the major environmental issues in all the big cities in Bangladesh. High noise has serious health impact including hearing impairment, increase in blood pressure and heartbeat, obstacle in digestive system and above all, decrease in growth of the children indiscriminate and impatient honking of the drivers is one of the major reasons for noise pollution. The Government has promulgated noise (Control) Rules, 2006. To expedite implementation of the Noise (Control) Rules, 2006, the Government has implemented a program titled Integrated and Participatory Program to Control Noise pollution during 2015-2017. The program included airing a discussion program on television and publicity campaign through Public Media and Social Media. DoE has taken a project named 'Noise Pollution Control through collaborative and participatory approach' to address noise pollution problem in the country.

Monitoring and Reducing Air Pollution: The Department of Environment under the Ministry of Environment, Forest and Climate Change has been consistently monitoring the ambient air quality of the country through its 16 (sixteen) Continuous Air Monitoring Stations (CAMS) and 15 (fifteen) Compact CAMS installed across the country. 05 (five) criteria air pollutants are continuously monitored by these stations. Daily Air Quality Index (AQI) values are also calculated based on the available air quality data that refers to the situation of air pollution in terms of health impacts, and this daily AQI is presented at DoE website. To address the air pollution effectively, the Government of Bangladesh has taken necessary measures in terms of policy, legal and administrative instruments. The Government of Bangladesh has enacted Brick Manufacturing and Kiln Installation Act, 2013 (Amended 2019). To make mandatory use of block bricks, government has issued a gazette notification in November 2019. The gazette notification has phased the targets of reduction of use of clay-fired bricks over the period of 2019 to 2025, except for the construction of base/sub-base of the high-ways. The Department of Environment in collaboration with local administrations started rigorous enforcement drives to dismantle or shut down polluting brick kilns across

the country particularly in the districts adjacent to Dhaka city. The Ministry of Environment, Forest and Climate Change issued a comprehensive guidelines or directives to relevant government and non-government entities with a view to controlling and reducing air pollution from their respective activities particularly pollution from brick kilns, construction activities, vehicles, open biomass burning, industry and others. In order to address air pollution issues comprehensively, a separate Act 'Clean Air Act, 2020' has been formulated.

Implementation of Montreal Protocol on Ozone Depleting Substances (ODSs)

Bangladesh acceded to the Montreal Protocol on Substances that Deplete the Ozone Layer on 2nd August 1990 and approved its London, Copenhagen, Montreal and Beijing amendments in 1994, 2000, 2001 and 2010 respectively. Bangladesh also ratified the Kigali Amendment to the Montreal Protocol on 08 June 2020 through which high global warming potential (GWP) refrigerant HFCs have to be phased down. As per global commitments, Bangladesh achieved 100% phase-out of import and consumption of CFCs, Halons, Methyl Chloroform and Carbon Tetrachloride by 1 January 2010. As per another schedule, Bangladesh met 10% HCFC reduction target by 2015, 33% reduction target by 2018 and committed to meet the target of 67.5% reduction by 2025. In line with the Kigali Amendment to the Protocol, Bangladesh has started phasing down activities for the refrigerant HFCs having high GWP. It has been assessed that because of global phase down HFCs by 2050, global temperature rise could be reduced by 0.5°C. UN Environment (UNEP), International Ozone Secretariat and World Customs Organization jointly awarded Bangladesh with the certificate of appreciation in 2012, 2017 and 2019 for the outstanding success on implementation of the Montreal Protocol.

Measures to Protect Natural Recourses: Rice has been being distributed through VGF to more than 400,000 families who were dependent on fishing every year during the ban on catching mother Hilsas. Moreover, such support was also extended to more than 250,000 families dependent on fishing for four months every year during the ban on catching Jhatka-Hilsas. Measures were also taken to preserve aquatic forests and swamps, ecologically critical areas, etc. The Government has prepared a National Conservation Policy 2016-2031 which aims to ensure the sustainable use of natural resources. Government continues ban on timber felling from natural forests till December 2022. At the same time SMART patrolling has started in the Sundarbans and other protected areas to conserve the wildlife and biodiversity.

Climate Change Trust Fund: The Government of Bangladesh adopted the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) to address the perils of climate change in 2009. Moreover, to implement the BCCSAP, the Government established the Climate Change Trust Fund (CCTF) from its own resources – making Bangladesh the first LDC to institutionalize a home-grown approach to address climate change. To finance BCCTF, the government allocated 3,652 crore Taka so far. During the period of the Seventh Five Year Plan, the BCCTF has funded 78 projects for addressing climate change impacts.

Development of a Pro-Poor Climate Change Management Strategy: A pro-poor Climate Change Management strategy has been implemented emphasizing on adaptation, resilience building, disaster risk reduction, low carbon development, green technology and R&D.

Mainstreaming Climate Change and Disaster Risk Management Agenda into National Planning: The Government has been active in establishing various policies and institutional initiatives to integrate disaster and climate change into its national planning. In particular, the GoB is committed to promoting a whole of

government approach to address climate change related risks. Climate change has been highlighted in its own chapter since the Sixth Five Year Plan. Local Government Division also mainstreamed climate change into 72 most climate vulnerable Union Parishad's planning process and supported 300,000 people to build their adaptive capacity against salinity, cyclone, flash flood and floods in coastal, haor and Charlands. In addition, the Standing Order on Disaster is revised to address new risks including earthquake, urban disasters following the same principle of whole of society approach. In addition, development of 'ex-ante' Disaster Impact Assessment (DIA), which is a tool for integrating knowledge and information on potential disasters in the process of 'Risk-informed planning', is underway, pursued by Ministry of Planning. In this support, the Planning Commission is establishing Digital Risk Information Platform (DRIP) connecting existing initiatives for digital Bangladesh, with an aim to provide necessary disaster and climate risk data and information to carry out Disaster Impact Assessment (DIA) of development projects.

Expanding Special Economic Zones Improve Land Usage: Bangladesh routinely loses agricultural land for non-agricultural use that hinders environmental management due to ad hoc industrialization in different regions. This weakens sound environmental management as pollution and industrial wastes hinder environmental setting of local communities. The introduction of Special Economic Zones (SEZ) has helped offer more structure to environmental management as it concentrates industrialization in few specific regions, allowing environmental regulators to monitor industrial pollution more accurately. So far, the Government has inaugurated eleven economic zones that are ready for setting up factories, which are the: Mongla Economic Zone at Mongla in Bagerhat district, Meghna Economic Zone and Meghna Economic Industrial Economic Zone at Sonargaon in Narayanganj, Abdul Monem Economic Zone at Gazaria in Munshiganj, Bay Economic Zone at Gazipur Sadar in Gazipur, Aman Economic Zone at Sonargaon in Narayanganj, City Economic Zone at Rupganj in Narayanganj, Kishoreganj Economic Zone at Pakundia in Kishoreganj, East West Special Economic Zone at Keraniganj in Dhaka, Karnaphuli Dry Dock Special Economic Zone at Anwara in Chittagong, and Sreehatta Economic Zone at Moulvibazar Sadar in Moulvibazar. In total, the Government plans to administer 51 state-owned special economic zones and eleven privately owned economic zones.

Bangladesh Bank's Expanding Support for Green Technology: In 2009, Bangladesh Bank established the refinance scheme for supporting environment friendly technology such as solar energy, bio-gas plants, and Effluent Treatment Plants (ETP). The initial schemes focused on only 10 products, which have increased to 50 products fewer than 11 categories: renewable energy, energy efficiency, solid waste management, liquid waste management, alternative energy, fire burnt brick, non-fire block brick, recycling and recyclable product, ensuring safety in work environment of factories, etc. Moreover, as of now, 39 banks and 19 financial institutions have signed a participation agreement with Bangladesh Bank to avail finance from this scheme.

Relocation of Tannery: Production of leather and leather goods is a booming sector in Bangladesh. However, it comes at a heavy cost due to its impacts on the environment. Thus, to mitigate its impacts, the leather industry was relocated to Savar from Hazaribagh during the 7th Plan period, building a Tannery Estate in the progress.

Country Programme Framework for Green Climate Fund (Accessing international finance for climate action): ERD as Bangladesh National Designated Authority to Green Climate Fund (GCF) developed a 4b USD pipeline for GCF and mobilised almost 94.7 million with 4 projects from GCF.

8.3 KEY CHALLENGES TO SUSTAINABLE DEVELOPMENT

8.3.1 Lack of Coherent Institutions, Policies and Resource Constraints

The Government of Bangladesh has introduced a wide array of institutions and policies to address the environmental challenges facing Bangladesh. Yet, it does recognize that often the laws, regulations and programmes did not emerge as a part of a coordinated and integrated sustainable development strategy; as it is not so clear how these laws and regulations interact with each other and how they connect to the overarching goal of reconciling economic progress and environmental sustainability. Moreover, the government recognizes the limitations within the overall governance and institutional arrangement that guides environmental management. In particular, the focal ministry for environmental management, the Ministry of Environment, Forest, and Climate Change (MoEFCC), and its main agency for environmental management, the Department of Environment (DoE), have inadequate capacities, technical knowledge and staffing due to very limited resources. The technical data on environment performance is also scarce and not regularly monitored or updated to check the progress. Likewise, there are inadequate staffing and logistics for forest management and limited technical skill to address the national and international reporting requirements at Forest Department. Inadequate coordination between the MoEFCC and the other key ministries have also undermined the state of environment management; perhaps best reflected in the absence of Local Government Institutions (LGIs) in environmental management.

The government recognizes these limitations and aims to improve such limitations by implementing the broader strategic objectives and targets of the Bangladesh Delta Plan 2100, which undertakes a holistic approach to reconcile long-term economic progress with the environmental concerns associated with both climate change and industrialization. The government is also committed to initiate Environmental Fiscal Reforms (EFR), which can reduce the pricing distortions presently undermining sound environmental management. Currently, fiscal policy does an adequate job to achieve environmental sustainability. However, an assessment needs to be done on fiscal incentives and necessary adjustments can be brought to incentivise green growth. In contrast, the pricing policies of energy heavily subsidize carbon-emitting fossil fuels that have not only created tremendous budgetary burdens, but also contributed to air and water pollution resulting significant amount of health expenditure with implications GOB's vision. These issues will be addressed under the 8FYP through implementation of effective environmental fiscal reforms that are based on a mix of both "polluter pays" and "beneficiary pays" principles reinforced by sustainable consumption and production. However, all these reforms must end up in financing environmental management sufficiently. There is little debate that at the heart of the weak performance of environmental protection is the shortage of financial resources. Direct spending by the coordinating ministry responsible for managing the national environmental programmes (MoEFCC) has been almost negligible and even as late as FY2020; the targeted budget was only about 0.05% of GDP. Total public spending of the core ministries dealing with water, land and environment-related services constitute about 0.39% of GDP. This resource scarcity severely limits the scope of institutions within the government to support a comprehensive set of activities for sound environmental management and execute climate change adaptation programmes.

Table 8.3: Public Spending by Ministry of Environment, Forest and Climate Change (Taka Crore)

Ministry	FY2000			FY2010			FY2020		
	Operating	ADP	Total	Operating	ADP	Total	Operating	ADP	Total
MoEFCC	52	80	132	769	62	831	820	676	1496
Nom. GDP god	237090	2370	23709	797540	79754	79754	2885870	2885	2885870
% of GDP	0.14	0.4	0.54	0.23	0.16	0.39	0.12	0.26	0.39

Source: Ministry of Finance and the Bangladesh Bureau of Statistics

8.3.2 Environmental Concerns from Economic Activities

Bangladesh has one of highest population densities in the world and has experienced approximately more than 2.5 times growth in the size of its population since 1972. Moreover, the population is expected to grow to 200 million people by 2050, which will have substantial implications for environmental change. Urbanization and industrialization that accompanied this growth in population caused serious strain on environmental quality and natural resources, including air, water, and soil pollution. This has threatened ecosystems and public health as well as economic growth. The leading environmental challenges that Bangladesh face due to such changes in its population and economic activities are as follows:

Water Quality: DoE is conducting monitoring and enforcement drive with its limited capacity and that is not sufficient to cover all the polluting industries and organizations responsible for water pollution. Water pollution in Bangladesh mostly results from industrial discharges, municipal wastes, agrochemicals, salinity intrusion and arsenic contamination. Consequently, this has severely undermined the quality of the rivers over the years and it remains an enduring problem. In particular, the major causes of surface water pollution are related to land-based activities, including industrial effluents, agrochemicals, and faecal pollution, and oil and lube spillages. Given rivers are frequently used as dumps, overall inland surface water quality drops below the permissible limit of Department of Environment (DoE) standards in the dry season although it improves in the wet/monsoon season. It is also essential to recognize that process of industrialization has been mostly concentrated in few districts, which are: Dhaka, Narayanganj, Gazipur, Narsingdi, Chattogram, Cumilla and Khulna. And that is why, Buriganga and Turag River, which are the two major rivers of Dhaka, have been most susceptible to water pollution from industries relating tannery, fabric dying and chemical processing, fabric washing, garments, plastic products etc. located on the banks of these two rivers. In many places, the sewerage lines carrying sewage and municipal solid waste also end up in these rivers. According to different surveys, 60 out of 64 districts – comprising 126,134 km^2 of Bangladesh are exposed to arsenic contamination in their drinking water. On the whole, this calls for a paradigm shift in how water is managed in Bangladesh and thus, attaining significant improvements during the 8FYP period will be essential for meeting the broader environmental objectives. Limited capacity of the Department of Environment (DoE) as a monitoring and enforcing body along with lack of resources allowed the industries, sewerage and solid waste management authorities to dump their wastes to the receiving water.

Unsustainable use of ground water for industrial and other commercial purposes is also threatening the water security of the country. Currently groundwater is free for any use. 8th five-year plan will focus on the valuation (water pricing and water auditing) of the water to limit its unsustainable use.
Because of increasing industrialization along the coast and limited capacity in the management of plastic wastes marine water pollution is increasing.

Urban Air Pollution: Existing evidence indicates that the urban air environment in major cities of Bangladesh is amongst the most polluted in the world. The air quality monitored by the World Health Organization (WHO) ranks Bangladesh as having one of the most polluted air out of 202 countries. This is a less than desired scenario as the availability of clean air is an essential part of the quality of life, as air pollution can have severe negative effects on public health over the longer term, including chronic respiratory disease, lung cancer, heart disease, and even damage to the brain, nerves, liver, or kidneys. According to the WHO, outdoor air pollution results in 4.2 million premature deaths around the world. More specifically, the distribution of all deaths are as follows: (i) 29% of all deaths and disease from lung cancer; (ii) 17% of all deaths and disease from acute lower respiratory infection; (iii) 24% of all deaths from stroke; (iv) 25% of all deaths and disease from ischaemic heart disease; and (v) 43% of all deaths and disease from chronic obstructive pulmonary disease. Several factors contribute to outdoor air pollution in Bangladesh. These mainly include: the use of fossil fuel for energy; emissions from industrial plants, especially brick kilns; emissions from transport vehicles without adequate emission control mechanisms, and gaseous releases from the improper treatment and disposal of solid and liquid wastes. And that is why the 8FYP remains committed to reducing urban air pollution, so that Bangladesh can avoid the broader public health risks that are associated with urban air pollution.

Impact of Industry in Metropolitan City and in Residential Building/Area: Industrial sector is usually accepted as the engine that triggers economic growth due to its strong backward and forward linkages with other sectors. On the other hand, Industry in Metropolitan City and as well as in Residential Building's activity could end up with negative economic, social and environmental impacts. Metropolitan cities of Bangladesh have been facing this problem severely. The Government of Bangladesh is establishing Economic Zone, now time to shift all industries from residential area/building as well as from metropolitan.

Land Degradation: Bangladesh remains the most densely populated countries in the world if we consider all the countries or territories with populations of more than 5 million. Land degradation is a special challenge for Bangladesh owing to the low per capita availability of land that has been gradually shrinking owing to the population growth. It is also essential to recognize that degradation of the available land adds to the challenge of achieving and sustaining food security for a country. Soil degradation can happen either from natural processes or due to the pattern of land use. The natural factors that lower the productivity of soil include water logging; salinity encroachment; soil erosion and landslides. Processes of land use that degrade the soil include cropping pattern; infrastructure construction; industrialization; and solid waste disposal. The major types of land degradation that Bangladesh faces are (i) soil erosion, (ii) water pollution, (iii) river bank erosion, (iv) coastal salinization, (v) sedimentation, (vi) acid sulphate soil, (vii) acidification, (viii) water logging (ix) depletion of soil fertility, x) soil pollution, xi) plough plan and xii) deforestation. As a result, the 8FYP will undertake a range of activities that will help mitigate the problem of land degradation in Bangladesh and will help support the broader agenda of attaining sustainable development.

Loss of Bio-Diversity: Biodiversity constitutes the living natural resources that are found inhabiting our aquatic (including marine and fresh water) and terrestrial (including all the major biomes like forests) ecological systems. Moreover, sustaining biodiversity is essential as it provides people with basic ecosystem goods and services that include food, fibre, medicine, water and air purification, climate control, cycling of nutrient and control of erosion. Thus, loss in biodiversity has implications for the wider population, especially those who depend on agriculture, fisheries and forestry for their livelihoods. Protecting biodiversity is particularly essential for Bangladesh because agriculture accounts for 40% of the

employment of its labour force. Biodiversity also has implications for public health as loss of biodiversity has serious implication for the availability of medicines; given approximately half of all synthetic drugs have a natural origin. Bangladesh, in this context, has had a rich heritage of a diverse ecosystem, which has come under severe threat from environmentally damaging economic transformation. Deforestation and forest degradation, the degradation of land, sea and river water pollution, indiscriminate filling of water bodies for land acquisition, unsustainable use of ground water and fishery resources in ponds, lakes and rivers, and unsustainable ways of shrimp farming have collectively taken a huge toll on the degradation of the eco-system and consequent loss of biodiversity.

Noise Pollution: Noise pollution remains a severe health risk, especially in the urban areas and of course, a city like Dhaka which has one of the highest population densities in the world. Lack of public awareness, motivation as well as weak enforcement of the noise-related rules and regulations has led to noise levels exceeding the acceptable limit major cities. Sources of this pollution include road, rail, and air traffic, as well as industry, construction, and hydraulic horns; and frequent exposure to high levels of noise increases public health concerns as it damages hearing, and increases stress and blood pressure among other health impacts.

Municipal Waste Pollution: Effective solid waste management remains a severe challenge in Bangladesh, which undermines the health and well-being of its urban residents. Municipal solid waste management efforts in Bangladesh often focus on the collection and disposal of solid waste while cost-effective opportunities involving waste reduction programmes and recycling strategies remain mostly unexplored. Moreover, only between 44 and 76 per cent of the total municipal solid waste is collected, leaving huge amounts uncollected and untreated. This creates a public nuisance as well as a health hazard. More specially, ineffective waste management leads to various communicable diseases. For instance, it has been estimated that 20 per cent of biomedical waste is highly infectious and often ends up in sewage systems. Reports have also indicated that most cases of child mortality can be linked to this poor sanitation problem.

E-Waste: Technology is becoming increasingly integrated into every aspect of our lives. Semiconductors and sensors are being added to products that never before had them, creating wearable monitors, smart homes, TVs that can stream programming from the internet, and much more. Meanwhile, the life span of devices is getting shorter as many products will be redundant once their batteries die or are replaced as upgraded versions enter the market. In fact, to some degree, companies intentionally plan the obsolescence of their goods by updating the design or software and discontinuing support for older models, so that it is cheaper to buy a new product than to repair an old one. Electronic devices are made of a complex mix of materials that include gold, silver, copper, platinum, palladium, lithium, cobalt and other valuable elements. These precious materials can be reclaimed through recycling. But electronic devices also comprise toxic heavy metals like lead, mercury, cadmium and beryllium, polluting PVC plastic and hazardous chemicals, such as brominated flame retardants, which can harm human health and the environment.

Medical Waste: The rising density of infectious and hazardous medical waste is posing serious threats to environmental health and requires special attention with specific treatment and management prior to its final disposal. The problem is growing with an ever-increasing number of hospitals, clinics, and diagnostic laboratories in Dhaka City, Bangladesh. Due to a dearth of contemporary research, very little is known on the magnitude of the problem. A report reveals that health care establishments (HCE) in Dhaka generate

around 56 tons/day of wastes having both hazardous and non-hazardous. Out of which, around 12 tons/day of hazardous waste are generated. Apart from Dhaka and few cities, there is no proper and systematic in-house and out-house medical waste management in the country. Even the existing systems in Dhaka and few cities are not comparable with the systems operated in advanced countries.

Within Bangladesh, climate change remains one of the most critical threats to its social and economic progress. It challenges the country's aim to sustain food security and makes its population vulnerable to both environmental and health shocks. The rise of sea levels (SLR) and the displacement of a large segment of the population associated with it can create both climate induced exodus, resulting in higher poverty plus lower quality of urban life, and a depletion of valuable assets. Moreover, these climates related economic vulnerabilities and risks are created through multiple channels, which are:

Impacts on Agriculture: Agriculture remains of the most vulnerable sectors to the effects of climate change. The key channels through which climate change damages the productivity of the agriculture sector are: (i) rising temperatures and solar radiation increase the incidence of insects, diseases and microorganisms hurting soil fertility; {ii} rising temperatures can reduce the yields of different types of rice; (iii) rise in salinity due to sea level rises undermine soil fertility, hurting farm productivity. In fact, a study conducted in Khulna, Bagerhat, and Shatkhira projects that a sea level rise of 32 cm could reduce the suitable area for Aman rice cultivation by 60 percent, compared to only 12 percent with a sea level rise of 88 cm. 6 million people are already exposed to high salinity, and climate change is expected to increase it to 13.6 million people by 2050; (iv) increased flooding, land erosion and cyclones resulting from climate change will hinder agricultural output.

Impacts on Forest Resources & Ecosystems: Climate Change induced - rise in sea levels, temperature and increased incidence of storms and flooding induced by climate change will bring damage to forest resources and harm climate species sensitive to the climate. The world's largest mangrove forest, the Sundarbans, is extremely vulnerable to climate change as rise in sea level will increase saltwater intrusion, which will deteriorate the health of the overall eco-system of the forest. Forest cover is already threatened by cyclones and human interferenceas a segment of the poor people depends on forest resources for their livelihood. Degradation of wetlands owing to human interference has caused several problems, including extinction and reduction of wildlife, extinction of many indigenous wild and domesticated rice varieties, loss of many indigenous aquatic plants, herbs, shrubs and weeds, loss of natural soil nutrients, loss of natural water reservoirs and of their resultant benefits, increase in the occurrence of flooding and degeneration of wetland based ecosystems, occupations, socio-economic institutions, and cultures. Land degradation from salinity and water-logging creates problems for agricultural sustainability. In general, sustainable uses of land, water and forest will become increasingly difficult as the effects of climate change unfolds over the next few decades.

Impact on Land and Physical Assets: Empirical data from 15 monitoring stations during 1980 to 2012 indicate that rises in the sea level have increased in the coastal zones by 6 to 21 mm per year. Moreover, the Government recognizes that country can expect to experience sea level rises of 14 cm, 32 cm, and 88 cm by the years 2030, 2050, and 2100, respectively. This will result in both losses of public and private land and physical assets, as well as increased health risks due to increased salinity. In fact, a 1-meter rise in sea levels will submerge a large part of the dry land permanently. This will result in a fall in *production* in all sectors and a land quantity shock which will adversely affect the overall real GDP. Climate change and the resultant floods and cyclones will also impact the capital stock negatively as it will accelerate

depreciation of physical infrastructures. In fact, the IPCC's Fifth Assessment Report underscored that the rise in sea levels can put at least 27 million people in Bangladesh at risk – leading to climate induced migration.

Impact on Environment and Health: Climate change is also expected to increase health hazards as it might facilitate water-borne diseases, such as diarrhoea and dysentery, and vector-borne diseases, such as malaria and dengue (which are climate sensitive). Research suggests that growing morbidity could occur from dengue and malaria. Additional health risks emerge from exposure to contaminated water, especially arsenic poisoning. In urban areas poor waste management and polluted water bodies create serious environment-related health concerns. Furthermore, increased concentration of humidity in the environment can also trigger respiratory problems.

Water and Sanitation Services to the Hard-to-reach Climate Hotspots: Hard-to-reach climate hotspots such as chars, haors, hilly areas, and coastal regions suffer from considerably low water, sanitation and hygiene (WASH) service levels. The problems are particularly pronounced for coastal regions. According to the National Strategy for Water and Sanitation in Hard to Reach Areas 2011, coastal regions account for the second highest number of hard-to-reach unions in the extreme category, only behind hilly areas. Coastal areas are vulnerable to adverse climate impacts of sea level rise and salinity intrusion. A rise in groundwater salinity has a disproportionate impact on the poor. The World Bank's Bangladesh WASH Poverty Diagnostic (BWPD) study suggests that about 2.5 million in the southwest coastal region are already suffering from shortages in drinking water, and by 2050, water scarcity can impact as many as 5.2 million poor and 3.2 million extreme poor in the region. To avoid saline groundwater, the poor are more likely to turn to using water from unprotected freshwater sources such as ponds, risking serious health consequences. Studies have also shown that a rise in salinity in the Sundarbans region is associated with lower school attendance of schoolgirls as they are often burdened with fetching water from distant locations[9].

In addition to Delta Plan 2100, the National Strategy for Water and Sanitation in Hard to Reach Areas 2011 also acknowledges the WASH crisis in hill tracts, coastal zones, haors and other hard-to-reach areas. It should be noted that this strategy also articulates a plan for urban slums as most slums are located on lowlands and are vulnerable to waterlogging and natural disasters. The challenges faced by these areas are diverse. Coastal zones are susceptible to salinity intrusion, freshwater scarcity, and groundwater level decline. Freshwater scarcity and drinking water supply are also major issues in hill tracts, along with inadequate sanitation services. The areas susceptible to climate change require context specific interventions to ensure sustainable WASH services. Adequate attention should also be given to climate-induced WASH realities of women and other vulnerable groups who are disproportionately affected.

8.4 ENVIRONMENTAL STRATEGIES AND ACTIVITIES UNDER THE 8th PLAN

Sustainable development targets and strategies relating to environment, climate change and forest management in the 8FYP will essentially draw on the long-term goals and strategies articulated in the PP2041. Based on that, the core targets for environmental management under the 8FYP are summarized in Table 8.4.

[9] Komatsu, H., and G. Joseph. 2016. "Drinking Water Salinity, Burden of Water Collection and School Attendance of Girls: Evidence from Bangladesh and West Bengal." Policy Research Working Paper, World Bank, Washington, DC

Table 8.4: Core Targets for Environmental Management

Objectives / Targets	Base Year (2018)	Target (2025)
Per cent of urban centres with waste water treatment facilities	N/A	50
Core environmental spending (% of GDP)	1	1.5
Spending by environment coordinating entity (% of GDP)	0.005	0.1
Application of polluter pays principle (% of cases)	0	40
Carbon tax (% of fuel prices)	0	5
Green area for Dhaka-major cities (square meter/million people)	N/A	1-4
Disaster risk reduction and management readiness (% of population)	N/A	50
Urban water bodies compliance with water quality standards (%)	0	50
Air quality (annual average, µg/m3 PM 2.5)	86	60
Per cent of cities flood-free, with proper drainage	0	45
Per cent of land degraded	18	12
Area under forest cover (% of land) [base year 2015]	14.1	15.2
Protection of Habitat and Biodiversity International Ranking	Bottom 5%	Top 50%
Environmental Performance Index International Ranking	Bottom 5%	Top 50%

Source: GED Projections. Base year values show most recent available data

8.4.1 Adoption of Environmental Fiscal Reforms (EFR) for Sustainable Development

The Government will undertake a wide array of environmental fiscal reforms for improving environmental performance to attain sustainable development and green growth. These will include:

- **Integrating Environment and Ecosystem Conservation and Climate Change Issues in Planning and Budgeting:** The Government will prioritize the integration of environmental conservation in budgetary management by increasingly undertaking green Public Financial Management (PFM), which will depend on green accounting, procurement and auditing. Project selection will require full accounting of environmental costs for all investment projects. The incorporation of the "Green PFM" agenda will happen under the 8FYP and institutional capacities in the Ministries of Finance, Planning and concerned line ministries will be improved and strengthened to achieve this objective.
- **Increasing Resources for the Ministry of Environment, Forest and Climate Change:** The Government acknowledges that for the MoEFCC to play its due role in environmental management, it must invest in its capacities and allow it to use more resources. The government will progressively increase in its budget to reach the target of 0.1% of GDP by 2025 and 0.5% of GDP by 2041, so that it can improve capacity through better staffing, including technical professional staff, establishing a strong digital Management Information System (MIS) based on a data bank that gets regularly updated, and regular monitoring and evaluation of environmental compliance.
- **Increased resources in the management of ecosystem and biodiversity conservation:** As per the ECA rules 2016, The Government of Bangladesh is going to develop a special fund for management and improvement of Ecologically Critical Areas and create financial code of revenue budget to improve the ECAs following ecosystem based approach. The Government of Bangladesh has declared 13 areas as ECAs and imposed different restrictions to restrict the deterioration of the

ecosystem and biodiversity. The Government of Bangladesh is the party to the Convention of Biological Diversity (CBD). To implement the Convention and its objectives, the Government of Bangladesh has developed the NBSAP 2016-2021, as CBD will enter into a new decade (2021-2030). During the beginning of the 8FYP, Bangladesh has to revise the NBSAP in line with the global targets under Global Biodiversity Framework. As per Bangladesh Biological Diversity Act, 2017 The Government of Bangladesh is going to establish Biodiversity Fund to support activities of conservation and sustainable use at the grass root and community level.

- **Taxation of Emission from Industrial Units:** The Government has already introduced policies for the control of air pollution from brick manufacturing kilns. Moreover, under the 8FYP, it will develop more policies to control emission from the other polluting industries by developing a "polluter pays principle with appropriate compensation". In order to do so, the Government will undertake measures to better monitor air quality standards of industrial units better – as the absence of proper testing equipment and database has so far undermined such effort. Thus, the creation of an appropriate mechanism to store data and monitoring will allow the Government to introduce a system of taxes on air pollution, which will create incentives for the industrialists to adopt clean technology.
- **Taxation of Industrial Water Pollution:** The Government will increasingly monitor and impose taxes and fines for the pollution of water by the industrial units. This will improve the incentive structure as private entrepreneurs will be incentivized to invest in ETPs, so that a better management of pollution is attained under the 8FYP. At present, disposal of untreated effluent by the industrial units is causing major deterioration in the quality of surface and ground water.
- **Biosafety:** The Government of Bangladesh has developed Biosafety Policy and Biosafety guidelines. Under Bangladesh Biosafety Rules 2012, the risk of genetically modified organism (GMO) has to be controlled to ensure safe transfer and handling of GMOs, taking into risk to human health. Institutions/Organizations dealing with GMOs should implement the Biosafety measures following the Biosafety rules and guidelines. DoE has completed a development project on Implementation of NBF and further enhancement of capacity building is envisaged during 8FYP.
- **Reducing Subsidies for Fuel and Adopt Green Tax on Fossil Fuel Consumption:** The Government will increasingly reduce its subsidies on fossil fuels to support its policies and goals on climate change. The Government will also introduce a green tax on the consumption of fossil fuels as it discourages the emission of CO_2 from fossil fuels but also provides a useful avenue for generation of revenue that will be used for supporting clean energy and other environmental programmes.
- **Pricing Policies for Water, Sanitation and Solid Waste Management:** The Government recognizes that the state alone cannot be the sole provider of water, sanitation and waste management services. Consequently, under the 8FYP, the Government will develop appropriate pricing policies to encourage private piped water supply, hygienic and environmentally safe household sanitation and sound management of solid waste. The public sector alone cannot handle the large service gaps and private provision might be needed. The Beneficiary Pays Principle will be used to develop the criteria for setting prices – especially for the urban middle class who now has the income to bear such costs.

- **Introduction of Household Illegal Waste Dumping Charges:** The Government acknowledges that a major source of air and water pollution is the dumping of household wastes in water bodies and in neighbourhoods. With improved solid waste management services from the municipalities and private sector as discussed above, this endemic problem can be reduced. As a result, under the 8FYP, a system of pollution charges for the illegal disposal of household waste will be introduced which will improve household cooperation and compliance. The Government will initially undertake a pilot scheme in the high-income urban neighbourhoods where the installation of security cameras could assist compliance with such regulations.

- **Exploring Private Financing Options:** There are three main instruments for boosting private financing for the environment. First, in several areas, such as afforestation outside dedicated forests for timber and non-timber forest products, fisheries, eco-tourism, water supply and waste management, private supply will be encouraged with proper regulatory and pricing policies. Second, legal and regulatory policies will be used to encourage proper adoption of measures that include private investment in the protection of the environment. Important examples of this include adoption of clean air technology in the industries, installation of ETPs in industries and private hospitals, and prevention of land degradation through proper farming practices – including the banning of Jhum cultivation while providing alternative livelihoods to the affected population. Third, the public sector will enter into co-financing arrangements for a range of environmental services through Public-Private Partnerships – including partnerships with communities.

- **Taxation on Timber Extraction:** The Government of Bangladesh recognizes the challenges which it faces in forest management, including serious administrative and governance issues. As a first step, it will prioritize improvements in forest governance through a proper Management Information System (MIS). This will assist the formulation of a tax framework for on the extraction of timber by taxing excessive usages of timber by the wood furniture industry. This can become an important source of revenue for the Government over time and also support more sustainable timber extraction. The tax will be levied at the factory gate where logs enter for further processing so that all logging are captured in the tax net.

8.4.2 Administrative Reforms for Implementing Environmental Fiscal Reforms

- **Coordinating NAP, BCCSAP, CIP and NDC with BDP 2100:** Mainstreaming environment and climate change into planning process involves improved governance and coordination and linkage among various plan documents. BDP 2100 would offer host umbrella plan for such relevant plans. GED in close partnership with MoEFCC, sectoral ministries and ERD as NDA will guide this plan harmonization. Governance structure that has been taking place for BDP 2100 might be used to guide and monitor these plans and programmes to ensure better coordination and mobilize necessary budget. MoEFCC and DoE in particular will take appropriate actions in this regard and consult GED as and when necessary.

- **Mainstreaming EFR within Ministry of Finance (MoF):** The Government of Bangladesh recognizes that the adoption of Environmental Fiscal Reforms (EFR) will require policy focus from the Ministry of Finance (MoF). This will necessitate that the MoF develops effective partnerships with several local research institutions that can support with EFR policy formulation – and under the 8FYP – the Government will pursue such partnerships to mainstream EFR within the MoF.

- **Improving the Capacity of MoEFCC:** During the 8FYP, the Government will address the weak technical capacity of the MoEFCC to expedite the implementation of EFR. Accordingly, the Government will ensure that the Forest Department and the Department of Environment (DoE) are adequately staffed, so that they have the necessary technical skills to execute their respective regulatory roles and also implement EFR. At present, the MoEFCC and the DoE lack technical expertise, trained staff, baseline information, and strong Management Information Systems (MIS). Furthermore, changes in Ministry's personnel leads to a lack of institutional memory, and incurs additional costs for designing and implementing the climate change policies. These issues will receive attention during the 8FYP period. Government will develop and maintain a proper MIS for Forest Department and DoE. This will start as a pilot program in Dhaka and then gradually extended to the other large industrial cities. Third, steps will be taken to tackle all problems related to governance in forest management and the implementation of environmental standards and compliance. It is also necessary to enhance the capacity and expertise of BCCT as it operationalizes CCTF and with access to international fund in future.

- **Increasing the Role of LGIs:** During the 8FYP, the Government will prioritize the implementation of the beneficiary pays principle by increasing the role of Local Government Institutions (LGI) in environmental management. First, the Government will establish WASAs in all 7 Divisional cities by 2025. Second, it will introduce adequate financial accounting and reporting standards that allow a good estimate of the unit cost of the services provided – including capital costs. Third, a computerized MIS system will be developed for each urban LGI that provides basic information on the number of customers, amount of water produced and supplied number of hours of water available, the age and quality of water and sanitation infrastructure, amount of revenues collected, missing water in terms of revenues, etc. This MIS will be updated on an annual basis. Fourth, the capabilities of the Ministry of Local Government, Rural Development and Cooperatives that provides oversight to LGIs will be strengthened to provide better guidance, supervision and monitoring of LGIs. The primary agenda here is to address the absence of an efficient mechanism and administrative infrastructure to support interactions between central government and local stakeholders by developing specific strategies and coordination mechanisms across different local level government departments.

- **Develop an "Water and Sanitation Regulatory Agency" (WASRA):** During the 8FYP, the Government will support the establishment of the Water and Sanitation Regulatory Agency (WASRA) that will be charged with regulating the public and private utilities engaged with supply water and sanitation services and setting prices. This will follow the participation of private actors in such markets, so that equitable pricing policy ensures both private investment and fair pricing for such basic services.

8.4.3 Other Environmental Institutional Reforms

- **Increased Partnerships for MoEFCC:** During the 8FYP, the Government will ensure that the MoEFCC develops partnerships with the private sector, the NGOs and the research community in the areas of monitoring compliance and knowledge management, including the gathering of data and policy research. Regular dialogue with the stakeholders including public hearings and participatory policy development will be undertaken to improve compliance and the

implementation of policies. The MoEFCC will also come up with the Environmental Outlook Report on Bangladesh regularly with updated information on the state of the environment and action plan for achieving the milestones, to be widely disseminated with different stakeholders.

- **Decentralization of Environmental Management:** The Government will learn from the international examples of good practice with regard to what might be the appropriate division of responsibilities between the national and local level environmental agencies. To facilitate implementation, a formal coordinating mechanism between the national and local government environmental agencies will be established. The LGIs will have to be participatory in their approach and adopt proper mechanisms for allowing citizens' participation in all local issues including environmental management. A policy initiative will be formally taken to engage local government authorities down to the Upazila level to involve them in the oversight of environmental management, linking them to development activities.

8.4.4 Context-Specific Environmental and WASH Technologies/interventions

- ***Coastal Areas:*** Salinity intrusion due to natural causes as well human-induced reasons such as saline water abstraction for shrimp cultivation affect both surface and groundwater sources. WASH infrastructures are also damaged by cyclones, storm surges and inundation. Drinking water and sanitation infrastructure need to be constructed on raised platforms. For community water supply, constructing desalination plants and rainwater harvesting systems will be considered as feasible solutions. For smaller scale use, tube wells with appropriate treatment units for arsenic and iron, and pond sand filters to treat water from pond surface will be used as recommended technologies.
- ***Char Areas:*** In char areas, WASH facilities are regularly damaged by inundation due to rainfall flood. The areas are largely inhabited by the poor and marginalized who are deprived from basic services including WASH. As in other areas vulnerable to flooding, housing and WASH structures will be constructed on raised platforms. Appropriate technologies including rainwater harvesting and community level arsenic/iron removal units for groundwater will be employed.
- ***Hill tracts:*** Surface water sources such as springs and streams have seasonal fluctuations, and despite exposed to heavy pollution, are mostly used for drinking and other purposes. Sanitation coverage is also low due to lack of proper facilities. To meet drinking water needs, individual or community rainwater harvesting systems with adequate storage will be developed to mitigate the problems.
- ***Urban slums:*** Urban slum dwellers are often deprived of basic facilities such as WASH services due to various reasons, including the legal status of the land and gaps in development plans. Urban slums are affected by waterlogging due to their location on lowlands and wetlands. Due to the dense nature of slums, community water points and sanitation blocks to be maintained by community-based organizations will be employed as appropriate solutions. Construction of these facilities and their effective operations will ensure proper accessibility of women, children, and persons with disabilities. Proper operations and maintenance, including maintaining hygienic conditions, will ensure that a large number of people using these shared facilities get proper access to WASH.

8.4.5 Implementation of the Bangladesh Delta Plan 2100

The Government is giving priorities to the execution of the Delta Plan 2100 under the 8FYP and reduce the vulnerability of the population to natural hazards and climate change by implementing the Delta plan 2100 (BDP 2100). The BDP 2100 includes major policies, investment programmes and institutional reforms which if adopted and implemented properly, will address the sources of long-term climate change vulnerability at source thereby reducing the adverse effects of climate change on the population. To address the challenges associated with the effective implementation of the Delta Plan, the Government under the 8FYP has identified some specific objectives, which are:

- Establishment of a "Delta Wing" within the General Economics Division (GED) of the Bangladesh Planning Commission for offering technical support, guidance and coordination for the implementation of the BDP 2100.
- Establishment of a "Delta Fund" and the institutional framework necessary for its usage.
- Establishment of the "Delta Knowledge Hub" for hosting and offering intellectual support to the implementation of the Delta Plan by hosting, updating, collecting and sharing new data and information that can aid the agendas of the Delta Plan.
- The Government will present the BDP 2100 to the Development Partners to secure their investment in projects enlisted in the Investment Programme under the DP.
- The Government will also develop and review new pricing policies for Water and Sewerage services.
- The Government will also form a high-powered committee to manage coordination and cooperation with the upper riparian countries for the effective implementation of the BDP 2100.
- The Government will support the formation of a "Delta Coalition" to be formed by 13 countries for mutual benefit and the transfer of knowledge through exchange of water technologies for improved production and consumption of clean water.
- The Government will also form a team with ERD to pursue the US$100 billion to LDCs for achieving SDGs, particularly for climate change adaptation.

The Government has also adopted specific targets under the Delta Plan, which will be prioritized for implementation under the 8FYP period. This constitutes specific goals under six key areas, which are: (i) Ensure safety against disasters linked to water and climate change; (ii) Ensure water security and efficiency of water usages; (iii) Ensure integrated river systems and management of estuaries; (iv) Conserve and preserve wetlands and ecosystems, and promote their wise usage; (v) Develop effective institutions and equitable governance for intra and trans-boundary management of water resources; and (vi) Achieve optimal use of land and water. Moreover, concentrated efforts will be undertaken to achieve the targets as described in Table – 8.5.

Table 8.5: Identified Indicators and Targets for 2025

No.	Indicators	Sub-Indicators	Quantity	2016-2018	Target for 2025
(Goal 1: Ensure safety against water and climate change related disasters)					
1A	Risk zone susceptible to natural hazards	Average flood extent	% of total area of Bangladesh	30	20
		Extreme flood extent	"	50	30
		Cyclone damage extent	"	10	2
		Average drought extent	"	9	9
		Extreme Drought Extent	"	47	20
		Dry season saltwater intrusion	% of total coastal area	40	30
		Water logging extent	"	2.5	0.25
		Length of bank-line erosion	% of total river length	15	8
1B	Population vulnerable to natural disasters	Flood vulnerable people	Nos. in million	88	40
		Cyclone vulnerable people	"	8	5
		Erosion vulnerable people	"	1	0.5
		Water logging vulnerable people	"	0.9	0.1
(Goal 2: Ensure water security and efficiency of water usages)					
2A	Dry season water availability	-	% of total flow	15	30
2B	Dry season irrigation coverage	-	million ha	6	6.5
2C	Irrigation water efficiency	-	% of supplied water	30	40
2D	Urban domestic water efficiency	-	% of supplied water	67	75
2E	Internal Renewable Water Resources	-	cumec/ person	714	1,300
2F	Surface water sources polluted by industrial wastes	-	% of total river areas	11	6
2G	Surface water sources polluted by other wastes		% of total river areas	10	5
(Goal 3: Ensure integrated river systems and estuaries management)					
3A	Erosion along major rivers	Area eroded along Jamuna	ha/year	1,750	1,050
3B	Area of reclaimed lands	-	Ha	N/A	35,500
(Goal 4: Conserve and preserve wetlands and ecosystems and promote their wise use)					
4	Habitat protection	Area of perennial aquatic habitat	Ha	13,200	13,200
		Area of seasonal aquatic habitat	"	30,880	30,880
		Area of marine habitat	"	32,300	32,300
(Goal 5: Develop effective institutions and equitable governance for intra and trans-boundary water resources management)					
5A	Rural people with adequate capacity for WRM	-	% of rural population	20	40
5B	Equitable share of water among users	-	Qualitative judgment	Poor	Moderate
(Goal 6: Achieve optimal use of land and water)					
6A	Flood control, drainage and irrigation capacity	Area under irrigation schemes	Ha	672	900
6B	Sectoral use of water	Surface water used for irrigation	km^3	6.62	15
		Groundwater used for irrigation	"	24.88	22
6C	Navigation capacity	Wet season navigation course	km	5,968	5,968
		Dry season navigation course	"	3,865	5,500

Source: Bangladesh Delta Plan 2100

8.4.6 Specific Activities to Improve Green Growth

The Seventh Plan made a specific commitment to promote green growth through a wide array of activities. Some of them however, have remained unaddressed, which demands key attention under the 8FYP. As a result, the following activities are going to be prioritized under the 8FYP:

Promote Green Accounting and Green Budgeting: The Government will undertake initiatives to improve the state of green accounting at the both macro and micro levels. At present, such endeavours at the macro level are hindered by the lack of essential data. The Bangladesh Bureau of Statistics (BBS) acknowledges this "data gap" and is committed improve the statistics on environmental performance in its National Accounts. Moreover, the Government will aid all endeavours to harness more accurate data on the environmental costs of economic activities. In particular, specific focus will be given to:

- **Emission Accounting:** The Government is committed to develop a comprehensive data on the emissions from all major sources of economic activities. This is particularly important for enforcing the "polluter pays" principle, while initiating Environmental Fiscal Reforms (EFR).

- **Natural Resource Accounts:** The BBS will generate physical statistics about the stock of natural resources and their changes over time. This also entails calculating the monetary costs of losing natural resources.

- **Computation of Green GDP**: After developing the necessary environmental statistics by undertaking emission accounting and estimating the costs of depleting natural resources, the Government will compute Green GDP by factoring in the environmental consequences of growth – after accounting for the depletion of resources, degradation of the environment and restorative environmental initiatives.

- **Green Budgeting**: Government shall endeavour to greening the overall budget and integrate environmental considerations including budgetary provisions for offsetting or minimizing the adverse impacts of development interventions in all development sectors. Government will consider Tax Exemptions for Green Investment, Tax Exemption on Income from Green Investment and Imposition of Green Tax on the product of green investment, Tax exemption for the amount invested on Biodiversity and Ecosystem conservation activities. To prevent environmental degradation, stringent or higher tax could be considered for polluting activities.

Commitment to Renewable Energy: As a part of its commitment to reduce CO2 emission, the Government plans to sharply increase the total generation of power from renewable during the 8FYP. The target is to generate some 3700 MW of power from renewable energy. To achieve this the Government would explore new technologies that can reduce cost and enhance Bangladesh's usage of renewable energy options, provide incentives to IPPs to invest in the production of renewable energy, and also provide incentives to households to use renewable energy, The Government will expand the work programme of the Infrastructure Development Company Limited (IDCOL), which has facilitated the use of renewable energy in economic activities.

Decarbonisation or A low-carbon economy (LCE)

A low-carbon economy (LCE), low-fossil-fuel economy (LFFE), or decarbonised economy is an economy based on utilization low-carbon power sources as well as attaining energy efficiency and energy conservation resulting in a minimal output of greenhouse gas (GHG) emissions into the atmosphere, specifically carbon dioxide. Shifting to a low-carbon economy on a global scale could bring substantial benefits both for developed and developing countries. Many countries around the world are designing and implementing long term low-emission development strategies (LEDS). These strategies seek to achieve social, economic, and environmental development goals while reducing long-term greenhouse gas emissions and increasing resilience to the effects of climate change. Decarbonised economy or low-carbon economies are therefore proposed as a means to avoid catastrophic climate change and as a precursor to net zero-carbon economy.

Improved Waste Management and Introduction of Circular Economy:

Waste can be utilized as resource. It also considered as a great source of environmental pollution if not properly managed. A study projected that mixed municipal solid waste generation may rise up to 47,000 tons/day by 2025 which is equivalent to 17.2 million tons/year. Local government division is trying to manage municipal mixed solid waste with their insufficient logistics and infrastructures. In addition, DoE along with concerned stakeholders have been working for sound management of waste through few pilot projects. Since waste collection rate ranges from 44.30% to 76.47% in major cities, therefore improved waste management is highly required. Improved waste management includes proper collection, segregation for reuse, recycles and environmentally sound disposal. Capacity building of concerned stakeholders, public awareness, strengthening monitoring and enforcement would be favourable for the improvement. In addition, relevant rules, guideline should be put in place for better implementation.

Current study shows that every year Tk. 10,706 million is being saved through recycling. Only 4 to 15% of the total generated waste is being recycled by the informal sector. Circular economy approach would be an appropriate solution to this problem, which allows the materials constantly flow around a 'closed loop' system, rather than being used once and then discarded. Circular economy confirms the best use of the recyclable items, which would result us several benefits such as resource efficiency, less waste generation, less land fill. Eventually, introducing circular economy for recyclable goods such as paper, metal, glass and plastic would create an employment opportunity if the business model runs sustainably. Government support such as capacity building, incentives, creating a market through bridging the supply and demand might be required for initiating recycling, waste to compost/biogas as well as energy project. 8th five-year plan will focus on the fruitful application of the improved waste management and introduction of circular economy for sustainable use of resources.

Cleaner Coal: The Government is committed to diversify its fuel mix to reduce cost and ensure energy security for the future. In addition to reducing reliance on fossil foil for power generation, the government is also exploring options to adopt the cleanest technology possible while using fossil fuel. While use of coal remains a part of the least- cost power generation strategy, the government will actively pursue the adoption of the cleanest form of technology for generation which carries the lowest environmental implications. This can be attained by remaining committed to high efficiency super-critical gasifier

technology involving coal as the primary fuel; and also adopting any new "green" improvements to the technology of coal-based power generation.

Expansion of Special Economic Zones with Effective Environmental Regulations: Ad hoc industrialization harms both the usage of land and also reduces the scope of effective environmental monitoring. Hence, the Government is committed to increase the number of Special Economic Zones (SEZ) with proper environmental regulations and infrastructure to ensure that industrial pollution is monitored and regulated under the 8FYP. This will also allow the concerned authorities to effectively impose Environmental Fiscal Reforms (EFR) by effectively by monitoring pollution closely and enforcing any fines for the violation of environmental regulations.

Promoting Green Bricks: Traditional brick kilns have been a major source of pollution and land degradation. As topsoil is removed for clay in the making of the bricks, this results in the loss of almost three-quarters of soil fertility. Moreover, the burning of the soil in the process of brick-making also contributes to emission. The Government acknowledges this and thus has adopted the Brick Making and Kiln Establishment Act 2013. The Department of Environment (DoE) has banned traditional kilns and ordered their shutdown, even though the complete implementation of that instruction remains elusive. As a result, under the 8FYP, the Government will enhance its focus on moving to greener bricks by promoting the adoption of cleaner technological options. The Department of Environment has also decided to extend the timeframe to adopt efficient technology for those with valid environment clearance certificates. The 2013 Act prohibits the establishment of brick fields in residential, protected, commercial and agricultural areas, and also in forests, sanctuaries, wetlands and Ecological Critical Areas (ECAs), and lays down provisions for the imposition of heavy fines and prison sentences on violators. Under the Eighth Plan, the Government will continue to enforce this Act strictly to ensure that the brick makers switch to eco-friendly technologies that are less taxing on the environment.

Adoption and enforcement of Green Building Rating System and Low Carbon Construction Materials: The overall green building movement is nearly two-decade old phenomenon. Growing awareness about the adverse impacts of our use of resources on the environment and concern for national energy security across the world have led to the momentum to bring about transformation in the construction industry for achieving improved sustainability. Consequently, a national initiative will be taken to create public or private voluntary green building rating systems that serve the purpose of assessing buildings against a set of performance criteria and recognizing their superior environmental performance. Such rating programmes provide guidance for design, construction, and operational practices in order to significantly reduce the environmental impact of buildings. Expertise in sustainable buildings is promoted through training, sharing of practical resources, certification and professional accreditation.

Introduction of Extended Producer Responsibility (EPR) Policy in Plastic Management:

The uses of disposable plastic are increasing due to its low cost and multipurpose uses. Right now more than 10% of total mixed solid waste contains plastic. However, only 40% of total plastic is recycled and remaining 40% used for land fill/dumped and 20% dumped in to the water body. Since the single use plastic (one-time cup/plates, lollypop cover, sachet, Styrofoam, plastic cutlery, cigarette filter, cotton buds, coffee stirrers, small water/juice bottles, plastic bags) as well as multilayer packaging plastic is difficult to recycle, therefore producer/manufacturer/ importer/brand owner of the products should take

the liability as his extended responsibility (EPR) for ensuring the environmentally sound management of their products. On the other hand, there should be a phase out plan for minimizing disposable single use plastic with the promotion of biodegradable plastic/suitable alternatives. However, to successfully implement the EPR, an intensive monitoring requires capacity building of the monitoring authorities such as DoE with enhanced lab facilities, enhanced web-based online monitoring facilities, providing necessary support for sample collection facilities in the marine areas. In addition, relevant rules, guidelines need to be functional, where collection, reduction, and recycling targets should be fixed. An exclusive fee system and percentage of product recyclability, proportion of recycled material in products should be established for betterment of the environment. 8th five-year plan will focus on the managing plastic pollution through EPR principle.

Blue Economy: Bangladesh's development progress in the future is dependent on its capacities to explore in to untapped resources. Against that context, the 8th Plan will prioritize the exploration of marine resources is increasingly becoming an area that Bangladesh is looking forward to explore seriously, which makes Bay of Bengal an open a source for valuable asset that also facilitates international trade and commerce. Furthermore, with the settlement of maritime border disputes with India and Myanmar – there territorial waters are now a ripe for developmental exploration. In particular, the maritime settlements have given Bangladesh entitlement on 118,813 km^2 in the Bay of Bengal comprising her territorial sea. The shallow shelf sea and continental shelf constitute about 20% and 35% respectively, the rest (45%) lying in deeper waters. As a result, under the 8FYP, the Government will explore the potential of the Blue Economy through a sustainable mechanism and identify adequate policies which will help formulate an optimal investment plan which can contribute to sustainable and inclusive economic growth, employment, and well-being while preserving the health of the ocean. BCCT has developed its long-term, mid-term and short-term plan under Blue Economy. From CCTF, already a few projects have been undertaken which addressed the theme of blue economy. From CCTF, two projects are being taken for capacity building, awareness raising and socio-economic development under blue economy.

Promoting Green Technologies in the RMG Sector and promotion of green jobs and SMEs: Bangladesh has one of the highest numbers of green RMG factories in the world, resulting from the favourable monetary policies initiated by the Government. The prominent barriers to the adoption of green technologies in the RMG sector are: (i) large initial investments; (i) i incentives weigh in favour of the large companies which enjoy economies of scale; and (iii) limited commercial incentives from the demand side. Nonetheless, the Government will remain committed towards supporting the commercial initiatives which aim to "go green" through cheap financing instruments and favourable fiscal incentives that reduce their carbon footprints and environmental damages in Bangladesh.

Reducing Overuse of Chemicals in Agriculture: The Government of Bangladesh is committed to incorporate environmentally friendly technologies in the agricultural sector. This will involve undertaking measures that limit the use of chemicals which are harmful to the environment in the agricultural sector – and draw more lessons from the Green Commodities Program by UNDP, which aims to make agriculture more sustainable.

Drawing Lessons for an Effective Green Growth Strategy: Bangladesh can benefit from examining various strategies for green growth that have been adopted in other developed as well as developing countries. For instance, Rwanda introduced the Green Growth and Climate Resilience National Strategy

for Climate Change and Development in 2011, which hopes to establish a low carbon and climate resilient economy by 2050 through a secure supply of low-carbon energy, sustainable water and land use, and social protection (including reduction in the risks of disaster risk reduction). Moreover, Chile also launched its National Green Growth Strategy in December 2013, which pinpoints action including environmental management instruments, promoting a market for environmental goods and services, and measuring progress over the short, medium and long term. These country experiences can help inform Bangladesh – and the Government is committed to draw lessons from such experiences to support its agenda for green growth.

Increased Commitment to Green Transport System: During the 8FYP, the Government will support "green transportation system", which involves banning the vehicles that are old and emit excess smoke. Levels of pollution resulting from an inefficient transport system will be reduced by providing fiscal incentives for hybrid technologies, electric vehicles and imposing strict penalties for the violation of environmental **codes** by polluters in the transportation sector.

Supporting Eco-Tourism: The Government will increase fiscal support for ecotourism under the 8FYP, which protects the ecological integrity of tourist sites and facilitates the protection of bio-diversity in Bangladesh.

Promoting sustainable production & consumption system in industries (SDG 12): During the 8FYP, the Government will promote sustainable consumption and production, which is about getting more done with lesser resources. It is also about decoupling economic growth from environmental degradation, increasing resource efficiency and promoting sustainable lifestyles. Sustainable consumption and production can also contribute substantially to poverty alleviation and the transition towards low-carbon and green economies.

8.5 ACTIVITIES TO BE UNDERTAKEN TO ADDRESS CLIMATE CHANGE

Mobilizing Resources for Climate Change Trust Fund: The Government will remain committed to strengthening the Climate Change Trust Fund (CCTF) and will mobilize more than Taka 8000crore under the 8FYP to strengthen the Fund further as an instrument support programmes for adaptation and mitigation. The Bangladesh Climate Change Trust (BCCT), which is the Government body that overlooks the utilization of the CCTF, will also develop an international partnership with the leading organizations undertaking climate change adaptation and mitigation activities to draw lessons from the international experience, so that innovative projects are funded to support effective measures against climate change.

Utilizing the Green Climate Fund (GCF): The Green Climate Fund (GCF) is a fund established within the framework of the United Nations Framework Convention on Climate Change (UNFCCC) as an operating entity of the Financial Mechanism to assist developing countries in adaptation and mitigation practices to counter the effects of climate change. Furthermore, as of 3rd February 2020, an amount of US$ 10.3 billion was initially pledged to the GCF as climate finance; and some US$ 8.2 billion was confirmed. Now, in order to access to the GCF the recipient countries have to ready themselves by meeting certain criteria and standards. Quite understandably, the member countries have to assign a National Designated Authority (NDA) to operate the Fund and support the National Implementation Entity (NIE)/Multilateral Implementation Entity (MIE) to access the Fund. From Bangladesh, Economic Relations Division (ERD)

of the Ministry of Finance has been nominated as the NDA. Additionally, only two national entities so far – Infrastructure Development Company Limited (IDCOL) and Palli Karma Sahayak Foundation (PKSF) – have been accredited as NIE to partner with the GCF. And as of 30th April 2020, Bangladesh has received financing for four projects, with a cumulative support of US$ 94.7 million. Hence, under the 8FYP, the Government will take more measures to accelerate the accreditation of more NIES.

Increased Oversight of the Climate Change Fund: The Government will ensure third party monitoring of the Climate Change Trust Fund (CCTF), so that the funds are not misused by any actors undertaking unproductive projects. Proper usage of the CCTF is also essential as it will enhance Bangladesh's credibility as a responsible actor and will allow it to achieve greater access to the GCF.

Formulation and Advancement of NAP Process: National Adaptation Plan (NAP) is expected to be the main strategic document under the UNFCCC process including GCF in the future to implement adaptation actions in developing countries like Bangladesh. Bangladesh is formulating the NAP process that is expected to be completed by 2022 with financial and technical support from the GCF and UNDP. The NAP will facilitate the integration of climate change adaptation into relevant new and existing policies, programmes and activities in a coherent manner, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate. The NAP will give priorities in Nature Based Solution (NBS) and Ecosystem Based Adaptation (EbA).

Technology Transfer on Adaptation and Mitigation: DoE will enhance the activities to facilitate the technology transfer on adaptation and mitigation from developed countries through Climate Technology Centre and Network (CTCN) and Joint Crediting Mechanism (JCM).

Increased Commitment to Forestry and Biodiversity: Forestry is an import mechanism to store carbon from the atmosphere. It not only enriches the biodiversity in the environment, but also prevents the erosion of land and acts as a shield during cyclones and storms. Consequently, the Government will remain committed to both conserving and expanding the coverage of forests in Bangladesh to 15.2% by 2025 and to 20% by 2041. This will involve expanding the forestation programme and increasing resources for social forestry. In particular, the existing coastal afforestation, enrichment plantation and assisted natural regeneration will be continued. The existing mature coastal plantations will remain for reinforcing green belt. An area of 50,000 ha will be planted and replanted in the coastal areas. Additionally, an estimated 1,30,580 ha land of hill forests and 7,220 ha of plain land forests will be planted during the 8FYP period. Productivity of the plantations will have to be increased. Multipurpose trees will receive special attention to increase the productivity of land under forests. Lastly, greater importance will be given to the Sundarbans Reserved Forest for the conservation of its biodiversity. A wide array of measures will be taken to conserve and protect wildlife, with special attention to the Royal Bengal Tiger.

Improved Understanding of Climate Change in the Local Government: A key mechanism for the Government to enhance the national capacity to improve the measures for adaption to climate change is through an increased understanding of how climate change is likely to affect the livelihood of local communities within the local government administration. This will help identify localized solutions to improve the effectiveness of measures for adaptation – and enhance the state of adaptive capacity in the local government.

Increased Partnership with the NGOs and Civil Society Actors: Measures for adaptation to climate change require community wide cooperation, which emerge from partnerships with different stakeholders such as NGOs and relevant actors from the civil society. Such partnerships allow the community-based adaptation measures to gain efficiency by building a participatory process facilitating improved coordination and knowledge sharing at the local levels.

Developing Gender-Inclusive Climate Change Response Framework: The Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 7th Five Year Plan (FYP), and National Plan for Disaster Management (NPDM) all address the issue of women's greater vulnerability to climate change and sensitivity to disaster events. Therefore, the Government will take measures to increase women's knowledge of environmental management and conservation, and investments will be made in education, capacity building training, technology transfer, and environmental projects focusing on women.

Addressing Climate Change Induced Migration: Erosion of land and the loss of rural livelihood can trigger urban migration from rural communities. As a result, under the 8FYP, the Government will remain committed to design cities that make them more accommodative by installing efficient systems for facilitating migrant integration into the city, adequate housing for new populations, and job opportunities for those who are looking to work. The Government will closely work with the urban planners to ensure that the needs of the community are being met and that all who seek to migrate from the regions vulnerable to the impacts of climate change are able to do so.

Gender Focus of Climate Action: The gender transformative climate action will be a key government priority. The government has undertaken a gender transformative climate action in coastal district to support 700 thousand coastal populations with more climate resilient drinking water, livelihoods and early warning system. This project is going to ensure the women as a key change agent in promoting resilient livelihoods, drinking water and early warning systems. The government will also ensure that climate actions on the ground are also addressing the needs of the most vulnerable population so that the principles of LNOB are mainstreamed across climate actions of the government. This will continue will be scaled up after assessing results. Recently an initiative has been taken to review and update the Climate Change and Gender Action Plan under MoEFCC.

Governance of Climate Finance: Proper use of climate finance resources is an important aspect of overall country readiness to access and utilize the climate finance. The capacity and role of parliament, IMED, and OAG are will be enhanced in improving governance mechanism for climate finance. Climate budget report can be also mainstreamed into MP budget tracking system to those areas, which are climate hotspots.

Improved Management of Water Pollution: Improving the state of water management remains one of the most important objectives of Government. As discussed in the preceding section, the quality of surface water faces two distinct threats: salinity and pollution. As a result, under the 8FYP, the Government will implement effective measures to improve the state of water quality in Bangladesh. These measures are:

- Increased monitoring of the quality of water from tube wells in arsenic -prone areas on a routine basis and the implementation of remedial actions.
- Basin-wide management to check all sources of pollution.

- Increased protection of the resource base of surface water in greater Dhaka (Dhaka, Tongi, Gazipur, and Narayangonj) by taking appropriate actions for cleaning the rivers, especially: Buriganga, Balu, Turag and Sitalakhya.
- Protection and recovery of public water bodies from encroachment.
- Exploration of options for harvesting rainwater.
- Establishment and implementation of effective regulations to control the discharge of cooling water from the power stations.
- Improvement of the compliance monitoring system for industries and development projects and its effective implementation. On-line ETP monitoring of all industries and economic zones. IOT based metering and monitoring for reducing leakage and corruption.
- On-line water quality monitoring of Dhaka watershed area. Expansion of online water quality monitoring system to other ecologically significant areas and urban pollution hotspots.
- Developing strategy for managed aquifer recharge and introducing natural and artificial aquifer recharge systems using rainwater harvesting for groundwater recharge.
- Developing stringent water quality criteria for ECAs and RAMSAR sites to improve the ecosystem and biodiversity.
- Reduction of the use of harmful chemicals in agriculture and increase in the distribution of proper filtration and cleaning systems, either on a large scale or household-based, where water is already contaminated, to improve the access to clean water.
- Establishment and implementation of Central Effluent Treatment Plant (CETP) to control the discharge of wastewater from the industrial zone.
- Installation of ETPs in all the industries along with an online monitoring system to improve the surface water and groundwater quality Implementing Zero discharge plan in the effluent discharging industries to ensure better resource management.

Controlling Noise Pollution: The Government acknowledges that noise pollution remains a key environmental and health hazard in Bangladesh. Thus, under the 8FYP, the following activities will be carried out to control noise pollution: {i} Execution and enforcement of the 'Noise Pollution Control Regulation-2006'; {ii} Undertaking programmes through electronic and social media to raise awareness among drivers on noise pollution; {iii} The Government will Plantation of green trees and shrubs along roads, hospitals, educational institutions etc. by the Government to help reduced noise by a considerable extent; {iv} Collection of information/data on the level of noise in different divisional cities and publication of reports on it; {v} establishing silence zones near the residential areas, educational institutions and above all, near hospitals.

Managing Solid Waste: The Government is committed to build facilities for the treatment of waste in all major cities. This can be complemented with tax rebates and financial incentives for the production of environmentally friendly products, including energy efficient appliances, recycled materials, sustainable paper products etc. The Government will also be committed to establish waste-based power plants which will produce electricity from solid waste and create economic incentives for both municipalities and private sector waste management companies.

8.6 FOREST SUBSECTOR

8.6.1 Performance of Forest Sub-sector during 7FYP

There was a vision to achieve 20 per cent forest coverage by the end of 2020 as expected in the Twenty Years Master Plan (1995-2015) prepared for Forestry Sub- sector. In line with the above objectives, plantation target of 149,000 hectares was fixed for the plan period. Consequently, many development projects have been implemented with the financial assistance from development partners, Bangladesh Climate Change Trust Fund (BCCTF), Bangladesh Climate Change Resilient Fund (BCCRF) as well as government's own resources.

The forest subsector contributes to 1.6 per cent of GDP and 12 per cent of agricultural GDP. The sector grew at an annual average rate of 6.1 per cent during the first four years the 7FYP plan with the growth rates being more robust in the last fiscal year (8.3 per cent). The 7th plan objectives for the sector were to conserve and protect forest ecosystems for biodiversity and overall environmental stability, and expand afforestation programmes for poverty alleviation and employment generation. A visible progress has been made during the plan period which is reflected in the growth performance of the sector. The total forest land in Bangladesh stood at 2,300 thousand hectares, which is around 15.58 per cent of country area. The protected area increased from 11.56% to about 19.78% of the forest land during the 7th plan implementation period.

The ever-increasing population of Bangladesh is imparting pressure on existing government managed forest resources resulted to it's over exploitation. A number of programmes have been implemented to achieve the strategic objectives in the 7FYP. As such, marginal land utilization through peoples' participation for forest development have been launched in early eighties and continued till the present five-year plan. A participatory social forestry got momentum involving surrounding poor peoples and forest dependent communities during the plan period. Coastal afforestation in newly accreted chars in the coastal areas was given due emphasis. Plantation along road side and embankments were expanded. Between 2009 and 2020, a total of 104 million saplings, 113.1 thousand hectares block plantation and 24,633 km strip plantation were raised. Till to date, about 701,488 nos. poor people is involved in Social Forestry Programme. About BDT 1047.7 million distributed among 73,471nos. social forestry participants (female participant16,707nos.) under the program during the plan period.

The national forest inventory conducted during 2016-2019 shows that the forest cover is 12.8% of the country which is 14.1% of the country's land area. Field inventory shows that growing stock (commercial wood volume) is 384 million cu.m., carbon stock is 1276 million tons (considering 5 carbon pool), tree basal area is 4.52 sq.m, per hectare, seedling density is 1419 per hectare for the country. Forest area contains 22% of country's carbon stock and 66% of growing stock is coming from trees outside forests (ToF). Collected tree and forest products contributed 3.11% of 2018-19 GDP. Several modules e.g. Bangladesh Forest Inventory (BFI), BFIS Geoportal, Emission Factor Database, Tree Identification database, Allometrice Equation database etc. were developed and hosted in BFIS to support the assessment and monitoring the trees, forests, carbon and biomass etc. in Bangladesh. Forest reference emission level is estimated for the country and submitted to the UNFCCC which is available in the UNFCCC website and BFIS.

Botanical survey in the five districts of Chittagong division and the Chittagong Hill Tracts area (*viz*. Chattogram, Cox's Bazar, Bandarban, Khagrachari and Rangamati) has been done. An updated web-based plant species database has been launched as http://bnh-flora.gov.bd/ under the program.

Government emphasized to increase tree coverage in tree outsides forest (ToF) and will continue for the next plan period. Institutions, road and railway sides, embankments, chars, homesteads and other fellow lands were brought under plantations to increase the tree coverage, which is supporting the rural livelihood, supplying timber, fuel wood. At the same time ToF in Bangladesh playing key role in carbon sequestration. An assessment of tree coverage using satellite imagery showed that the tree coverage is 22.37% of the country.

Several initiatives were undertaken to conserve biodiversity in the forest area including the Sundarbans. Forest Department carried out 2nd camera trap-based tiger census in Sundarbans.

Government has taken initiative for watershed management in Chittagong Hill Tracts through participatory watershed co-management activity to regulate the water cycle, reduce soil erosion, reduce deforestation and forest degradation and enhance tree coverage and carbon stock. This activity will continue for the next plan period. About 28 co-management organizations have been formed in protected areas for wildlife and biodiversity conservation.

An updated Forest Policy 2016 is yet to approve which focuses on addressing the emerging environmental and socioeconomic challenges in the context of climate change and extensive loss of forest cover in the country The FIP, FMP and National Conservation Strategy (NCS) presents strategies and action plans aimed at conservation and sustainable management of forests which requires adequate funding to implement. The Bangladesh Delta Plan has been adopted where a special attention has been given on effective and sustainable biodiversity conservation in the country.

8.6.2 Challenges of Forest Sub-sector

To undertake necessary measures during this plan period, major challenges of this sub-sector are mentioned below:

- Land record and demarcation: The absence of proper documentation and conspicuous demarcation of forest lands and lengthy procedures for disposing land-related court cases have been encouraging unauthorized and illegal possession and encroachment by influential quarters.
- Protection of forest and forest resources: Increasing gap between demand and supply of timber, fuel wood and other forest resources created increased pressure on forest resulting into forest degradation and diminishing ecosystem services.
- Productivity: The productivity of wood in the government forest is in the range of 0.5-2.5 m3/ha/year which is 7-9 m3/ha/year for homestead. The low productivity is considered as a great challenge to meet increasing demand of timber in the country.
- Low per capita forest land: Available per capita forestland is the lowest in the world. Coastal afforestation in the newly accreted land is the only option to balance the per capita forestland under

increasing trend of population. Considerable proportion of hill forests is degraded due to law and order and socio-political situation and subsequently not bringing the areas under-vegetation cover.

- Lack of awareness: Lack of awareness about various services provided by the forest ecosystem, importance of planting trees to mankind and addresses the climate change impact.
- Regime shift in forest degradation: The recent influx of Rohingya refugees in the hilly areas of Cox's Bazar and Bandarban caused a large damage to the forest land. More than 2,000 hectares of forest area have been lost.
- Lack of financing: Inadequate financing has been observed during the last plan period and thus posed challenge to achieve forest restoration target. Similarly, private sector investment to expand eco-tourism facilities is relatively low in this country.
- Institutional coordination**:** To ensure optimum benefit of forest ecosystem services both from the forestland and tree outside forest need to enhance institutional coordination and establish effective multi-dimensional response system. It needs appropriate institutional framework with adequately trained manpower to confront challenges for sustainable forest management. At the same time, delayed process in land reservation, lease of forest land by the land administration, conflicts between sectoral plans and policies for using forest land for different economic activities is hampering the forest management.
- Inadequate human resources and logistics: Forest land and resources growing over it are both scarce and valuable and in an overpopulated country like Bangladesh suffering from unemployment and poverty, protection of these valuable open resources is quite difficult. Moreover, multidimensional activities like wildlife and eco-tourism management, periodical updates of national forest inventory and National Red List of Flora & Fauna, regular updating of plant species information for plantation and conservation, promotion of eco-system services, climate change mitigation and adaptation activities, carbon sequestration and trading etc. are now associated with forest conservation. It needs appropriate institutional framework with adequately trained manpower to face future challenges for sustainable forest management. It also requires re-structuring of Forest Department for strengthening capacities.
- Absence of knowledge network, information system and learning: In absence of knowledge network, information system and learning, forestland has been prescribed for other land uses such as private plantation of rubber, orange and non-traditional fruits like chalta, olive, wood apple, cashewnut, amloki, horitaki, bohera, lotkon etc. causing loss of ecosystem benefits and biodiversity. At the same time, updated information on plant and animal species is limited which needs to establish a knowledge sharing mechanism for better conservation and management of forest biodiversity.

8.6.3 Objectives of the Forest Sub-Sector during the 8FYP

The development vision of the forest sector is aligned with the Bangladesh Forestry Master Plan 2016-36 and National Forest Policy 2016 and other climate change and natural resources conservation plans. The objective of the forest sub-sector in the 8th Five Year Plan is to conserve and protect all existing forests, wildlife and other forestry resources, adhering to the principles of sustainable management and climate resilience; enrich degraded forest areas; and enhance land areas under forest/tree cover.

The specific strategic objectives and targets are as follows:

Sl. No.	Objectives	Targets
1	Bring 24% of the country's land under tree cover by the end of 2025.	• Hill Forest Restoration-1,30,580ha. • Plainland Sal Forest Restoration- 7,220ha. • Reed land- 1500 ha. • Agor plantation- 500 ha. • Bamboo and cane plantation- 2000ha. • Strip plantation- 15,000 km. • Homestead/institutional planting and seedling distribution/sale- 100 million • Medicinal Plantation-1200 ha. • Rare and Endangered Spp. (Seed Orchard and Arboretum Plantation)-600ha. • Management of bamboo regeneration area-10,000 ha.
2	Conserve eco-systems for biodiversity improvement.	• Co-management in PA -72,000 ha. • Wildlife Protection (SMART patrolling in all PA and Combat trans-boundary wildlife crime) • Species Conservation programme (Tiger, Elephant, Gharial, Dolphin, Vulture, Shark and ray etc.) • Habitat improvement-10,000 ha. • Wildlife corridor identification and plantation-5,000 ha. • Conduct one National forest inventory. • Establishment of Two Tissues-Culture Lab and • related research • Establishment of Seed orchard – 2 Nos • Capacity development: • Capacity development of FD and BFRI personnel -4,078 Persons • Programme Participants and local stakeholder-3,21,630Man Days • Infrastructure Development at Division and Field level-1,000 Nos. • Prey and predator survey in Sundarbans. • Identification of wildlife habitat and corridors.
3	Mitigate climate change impacts and increase adaptive capability.	• Mangrove plantation- 50,000ha. • Enrichment planting (Mangrove)-2,700ha. • Jhaw-900ha. • Golpata-1400KM • Conduct of one GHG Inventory.
4	Improve socio-economic condition of local poor and forest dependent communities	• Ecotourism development in Protected Area- 40 Nos. • Scale-up alternative income generating activity for forest dependent communities-55,000 nos. families. • Participatory/collaborative and sustainable management of NTFPs-40 Nos. PAs-55,000 nos. families.

8.6.4 Strategies for Forest Sub-sector during the 8FYP

The following strategies will be undertaken to achieve the strategic objectives:

Conservation of natural forests: All state forest land shall be mapped and demarcated clearly. Site specific protection plans shall be prepared to protect the remaining fragments of hill forests. Enrichment plantations shall be carried out where necessary. Information, education and communication (IEC) campaigns shall be undertaken. Legal provisions relevant to forest protection will be reviewed and improved. Local communities will be actively involved in conserving natural forests even through such measures as benefit-sharing. Protection and management of Sundarban will be particularly strengthened and navigation of ships in Sundarban will be regulated to minimise chances of oil spills. Watershed co-management activities to regulate water, increase tree cover and halt the deforestation and forest degradation will be implemented in hill forest. Reducing Emission from Deforestation and Forest Degradation (REDD+) mechanism to support the forest restoration and enhancement of the carbon stock in hill forest will be implemented.

Reforestation/restoration of degraded state forests: Degraded/denuded state forests will be reforested/ afforested on emergency basis. This will be attempted through reducing deforestation and forest degradation, assisted natural regeneration (ANR) and plantations, depending upon site and situation-specific requirements. Extent of land needing reforestation or restoration will be reassessed. A watershed management approach to reforestation shall be adopted and soil and moisture conservation measures will be included in plantation or ANR projects. Participatory forest management approach will continue for reducing the deforestation and forest degradation through involving the local and poor people. Inter-ministerial and departmental coordination will be strengthened to ensure the land in coastal region to establish the green belt to protect the coastal community and stabilize lands.

Coastal afforestation and creation of a coastal greenbelt: Creation of a coastal green belt shall be a high priority activity. Coastal afforestation with climate resilient mangrove and other species on unused public lands and char lands shall be carried out. Land may be acquired for coastal plantations if suitable public land is not available. Expansion of the mangroves for establishing green belt towards the coastal region will continue during the plan period. Institutional areas, roadsides, embankments, dykes and all available land shall be planted to complete the greenbelt. Special attention will be given in designing and allocating of funds for coastal forest management, along with polder and embankment management.

Management of protected areas and protection of wildlife: Conservation of wildlife and biodiversity shall be carried out in accordance with the Wildlife Master Plan 2015. The protected area management including co-management shall be strengthened. The PA network will be sustainably expanded up to 25 per cent of state forests within the plan period. Role and structure of Wildlife Divisions shall be reviewed. Wildlife circle shall be upgraded to the level of a wing of the department. The newly created Wildlife Centre, the Wildlife Crime Control Unit and the forensics laboratory shall be strengthened, among other things. Control on poaching of wildlife outside forests and PAs shall be given special attention. Feasibility studies will be conducted to identify the wildlife corridors, habitat and marine resources for biodiversity conservation. Management framework will be developed to manage the marine protected areas.

Promotion of fuel wood saving devices and technologies: Fuel wood amounts to more than 80 per cent of all wood consumed in the country and are a major demand on natural forests. Networking with relevant government agencies and NGOs promoting renewable energy will be strengthened and subsidies for adoption of improved cook stoves, solar cookers, biogas etc. will be provided among forest dependent communities.

Protecting and conserving the Sundarbans: Due importance will be given to the Sundarbans Reserved Forest for its biodiversity conservation. Different measures will be taken to conserve and protect wildlife with special attention to Bengal Tiger. The activities of 'Emergency Tiger Response Team' and 'Village Tiger Response Team (VTRT)' constituted with the local peoples of surrounding villages will be continued for relaying stray tigers. Community engagement will be strengthened for resource management. Status of prey and predator will be assessed during the plan period. Strategic environmental Assessment (SEA) for conserving outstanding Universal value of the Sundarbans is underway. A SEA report and Environmental Management Plan (EMP) will be developed for Sundarbans in the plan period which will be effective till 2041.

Strengthening forest & tree monitoring and information systems: National Forest Inventory (bio-physical, socio economic component and land cover mapping), tree cover assessment and mapping will be conducted for monitoring the forest and tree resources and policy formulation for forest management. Green House Gas inventory for forestry sector to update the forest reference level also will be conducted. Information exists in the existing modules of the BFIS will be updated and new modules will be identified and integrated in the BFIS to strength the monitoring of the natural resources in the plan period.

Expanding social forestry and urban biodiversity: Social forestry has become a social movement in Bangladesh. Social forestry programmes will continue for expansion and strengthening of upazila nurseries, union level nurseries, and for strengthening nursery training centres. An estimated 15,000 km. of strip plantations will be raised during the plan period. Forest Department will lead the afforestation and social forestry programmes at the root level with the help of Local Government and NGOs. Creation of riparian forest buffer along the bank of all the rivers and canals involving the local people will be encouraged to increase the tree cover in the country. Such strategy will not only create opportunity for increasing tree cover but also mitigate environmental challenges and improve agricultural productivity including enhance ecosystem services during the plan period. In addition, in the context of growing urbanisation, the 8FYP will pursue two major strategies: First, ensure that urbanisation does not expand to peripheral ecosystem and second, conserve the biodiversity of the cities and town with active role of local environmental actions.

Conservation of hill forest areas: Restoration and conservation of the hill forest for maintaining ecosystem has been one of the major focused areas of intervention under the Bangladesh Delta Plan 2100. Side by side, there has been considerable plantation target for forest cover improvement, watershed management, biodiversity conservation and soil conservation within the 7th Five Year Plan. But achievement of this target remained challenging due to the complex local politics and enduring land tenure conflict. Therefore, special measures will be taken for hill forest restoration and conservation through resolving existing complex local politics and land tenure conflict within the plan period. Side by side, increased access to the livelihood benefits will be offered to the dependent communities to enhance conservation of hill forest. Unclassed State Forest (USF) largely remained vacant and underutilized since long ago. Appropriate measures will be initiated in this USF land for enhancing economic growth, ecosystem services and sustainable development. Participatory watershed co-management activities through assisted natural regeneration and enrichment plantation will continue during the plan period.

It is vital for assessment of plant genetic resources as well as biodiversity loss of the country. Repeated botanic survey at 10 to 20 years intervals can help to understand changing pattern of biodiversity. The updated knowledge of botanic survey is very important for effective forest management and conservation of biodiversity. Botanical survey of Chittagong and the Chittagong hill tracts has already been completed under 7FYP. A strategic action plan has taken to complete the botanical survey remaining areas of the country.

Trees outside forests: Potential lands (e.g. marginal fellow lands, roadside, embankment etc.) can be used to increase the trees outside forest through signing agreements between Forest Department and related government organizations to increase the country's tree cover to 24%.

Strengthening institutional Capacity: Adequate manpower and logistics is essential to achieve the targets of 8FYP in forestry sector. It is crucial to approve the Forest Department's proposed organogram so that Forest Department could be adequately resourced to face the future challenges related to forest management and climate change issues.

Strengthening forestry and biodiversity research: The Bangladesh Forest Research Institute (BFRI), Bangladesh National Herbarium (BNH) and other institutions and universities involved in forestry research will be supported through regular research grants. Institutional issues, such as staff shortages, IT infrastructure, research facilities, etc. faced by the BFRI and BNH shall be resolved at the earliest. The capacity building training programmes for the people involved in the forestry and diversity sector with emphasis of scientist of BFRI will be organised on a regular basis for developing human resources.

Strengthen the Activities of Bangladesh Rubber Board

Being a new institution Bangladesh Rubber Board is planning to improve its institutional capacity through recruiting staffs, increasing modern equipment and laboratory facilities, strengthening the present manpower situation as well as human resource development.

Bangladesh has already become a member of two international organizations, Association of Natural Rubber Producing Countries (ANRPC) & International Rubber Research and Development Board (IRRDB. Finding out, collect and cultivate the most suitable rubber breed for our country, formulating and implementing international standard rubber policy and actively participating in the competitive rubber market are some key objectives of these memberships. Bangladesh Rubber Board aims to increase the production of natural latex to self-sufficient level, thus meeting the local demand and save foreign currency. The Government has formulated a wide array of measures to implement The Wildlife (Preserve and Safety) Act, 2012. Bangladesh Rubber Board is aiming to make liaison with forest department and help mitigating this wildlife crisis.

8.7 SUSTAINABLE DEVELOPMENT – THE WAY FORWARD

The Government aims to support the management of the environment in the long-run by adopting the broad strategies of the Delta Plan 2100, and also integrate Environmental Fiscal Reforms (EFR) into economic planning. The agenda is to ensure that economic necessities and aspirations are addressed in a sustainable manner, so that environmental concerns find a central place in developmental planning. As the Perspective

Plan 2041 aims to transform Bangladesh into an Upper Middle-Income Country by 2031 and a High-Income Country by 2041 – special attention is needed on the management of the environment to chart out a sustainable pathway of development. Hence, the Eighth Plan becomes a key strategic document to achieve these short, medium and long-term objectives. Against that context, the Government will use the Eighth Plan to guide economic progress while simultaneously maintaining a strong level on climate change adaptation and mitigation to climate change, the capacity to manage disasters and sound management of the environment to attain the dynamics of green growth.

Nonetheless, the Eighth Plan will remain a flexible document and it takes into account the fact that changes in the prioritisation of activities are possible if the economic, environmental or social needs demand such changes. As noted earlier, the Government has already formulated key strategic documents and policy directions such as the Delta Plan 2100, the National Sustainable Development Strategy, and National Plan for Disaster Management and the Standing Orders on Disasters, which collectively shape how the policymakers aim to prioritize the concerns about the environment. And to this end, Bangladesh is prioritizing both international partnerships for development and the mobilization of internal resources to address the constraint of resources in the environmental sector. In particular, under the Eighth Plan, initiating Environmental Fiscal Reforms (EFR) will become one of the central agendas in planning for the environment – as the Government is committed to introduce both "beneficiary pays" and "polluter pays" principles in managing the concerns about the environment. Accordingly, the Eighth Plan highlights a substantial increase in the allocations in the Annual Development Programmes (ADP) dealing with sustainable development programmes for sustainable development (Table 8.6) – which aims to keep Bangladesh on track to achieve the targets set out in the Perspective Plan 2041 and the Delta Plan 2100.

8.8 DEVELOPMENT RESOURCE ALLOCATION IN THE 8th PLAN

The sustainable development agenda is cross-cutting in nature and involve collaborative efforts of a large number of ministries. So, the total amount of resources involved in financing the implementation of the sustainable development strategy is large and spread over the work programme of several ministries including agriculture, water, land, local government division, etc. However, the Ministry of Environment, Forest and Climate Change provides coordinating functions and plays a lead role in developing and enforcing environmental policies. The capacity of this lead ministry will be sharply strengthened to play this coordinating role, to liaise with the international agenda for climate change and for monitoring progress. The management of forestry resources will also be enhanced through better planning, monitoring, investments and enforcements. Accordingly, the Eighth Plan proposes a significant increase in the ADP allocations for the Ministry (Tables 8.6).

Table 8.6: ADP Allocation for Environment and Climate Change during 8FYP

					(Taka billion Current Prices)
Ministry /Sector	**FY2021**	**FY2022**	**FY2023**	**FY2024**	**FY2025**
Ministry of Environment, Forest and Climate Change	9.4	11.5	13.3	15.5	18.6
Sector Total	**9.4**	**11.5**	**13.3**	**15.5**	**18.6**
(Taka billion 2021 constant prices)					
Ministry /Sector	**FY2021**	**FY2022**	**FY2023**	**FY2024**	**FY2025**
Ministry of Environment, Forest and Climate Change	9.4	11.0	12.0	13.4	15.3
Sector Total	**9.4**	**11.0**	**12.0**	**13.4**	**15.3**

Source: Chapter 5, Part 1, Annex Table A5.1

SECTOR 9:
HOUSING AND COMMUNITY AMENITIES

CHAPTER 9

URBAN DEVELOPMENT STRATEGY

9.1 INTRODUCTION

In view of the central role played by cities in most countries in creating national wealth, enhancing social and economic development, and attracting direct foreign investment, urbanization has now become synonymous with economic development. Analysis of macro data in different countries support this generalization, since the countries that have experienced the most rapid economic growth rates also have higher urbanization levels whereas those with slower growth rates continue to have a large percentage of their labour force engaged in agriculture, and have relatively low levels of urbanization. In fact, no country has ever reached upper income status without a significant population shift into cities. The way that cities are managed and administered has a direct bearing on their ability to combine safe and healthy living conditions that can improve quality of life for all citizens, including the poor.

Bangladesh has been experiencing rapid increase in its urban population ever since its independence in 1971. Urban population as a percentage of total population increased from about 8 per cent in 2074 to nearly 28 per cent in 2011. If this trend continues, by the year 2050 more than 50 per cent of the population is expected to be living in urban areas. Concurrently Bangladesh is undergoing profound changes in its economic structure. The dependence on agriculture has fallen sharply with commensurate increases in manufacturing and services. The availability of urban land, urban infrastructure, and urban services has lagged behind substantially compared to the demand for these services thereby creating supply constraints and cost pressures. Unless this urbanization challenge is managed effectively, there will be a serious risk that the growth momentum will be constrained by the urban pressure.

9.2 SUSTAINABLE DEVELOPMENT GOALS (SDGs), NEW URBAN AGENDA (NUA) AND THE 8th FIVE YEAR PLAN

On September 25, 2015 the UN General Assembly adopted the 2030 Development Agenda for Sustainable Development. The agenda outlines 17 sustainable development goals and its associated 169 targets. The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. It was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy-first session on 23 December 2016. The New Urban Agenda represents a shared vision for a better and more sustainable future by taking advantage of the opportunities presented by urbanization as an engine of sustained and inclusive economic growth, social and cultural development, and environmental protection.

The Sustainable Development Goal-11 calls for Making cities and human settlements inclusive, safe, resilient and sustainable. The targets for achieving this goal include the following:

- By 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums

- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations
- By 2030, enhance inclusive and sustainable urbanization and capacities for participatory, integrated and sustainable human settlement planning and management in all countries
- By 2030, significantly reduce the number of deaths and the number of affected people and decrease the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations
- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management
- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities
- Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
- By 2020 increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters.

The shared vision represented by the New Urban Agenda calls for a better and more sustainable future through the urban systems and physical form of our urban spaces that will ensure and enable people to have equal rights and access to the benefits and opportunities that cities can offer. To achieve this vision, the NUA lays out standards and principles for the planning, construction, development, management, and improvement of urban areas guided by the following interlinked principles:

- Sustainable urban development for social inclusion and ending poverty including the promotion of health and well-being and elimination of all forms of discrimination by providing equal access for all to physical and social infrastructure and basic services, as well as adequate and affordable housing.

- Sustainable and inclusive urban prosperity and opportunities for all by promoting full and productive employment and decent work for all and by ensuring equal access for all to economic and productive resources and opportunities.

- Environmentally sustainable and resilient urban development by promoting clean energy and sustainable use of land and resources in urban development, by protecting ecosystems and biodiversity, by building urban resilience, by reducing disaster risks and by mitigating and adapting to climate change.

As one of the member states involved in adopting the UN Resolution on Sustainable Development Goals and New Urban Agenda, Bangladesh is committed to work hard for reaching the SDG goals and NUA visions. SDG goal-11 and the NUA provides an opportunity for policy makers to mobilize collective efforts for inclusive and sustainable urban development. The 8th Five Year Plan puts special emphasis on formulation of strategies to reflect the recommendations of SDG and NUA. For making cities inclusive, safe, resilient and sustainable and empowering people to have equal rights and access to the benefits and opportunities that cities can offer concrete actions would be required on a number of areas: Spatial

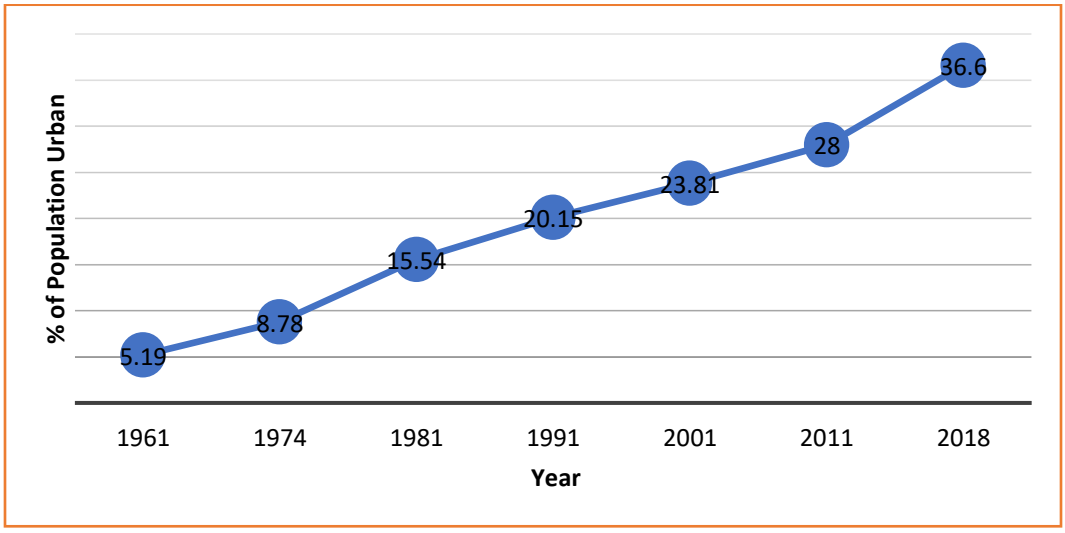
development, institutional development, development of infrastructure and services, urban land and housing development, urban environmental improvement, and climate change and disaster management. However, to do so and achieve the SDG Targets and NUA vision we need to analyse the processes and patterns of urbanization in the country, identify the issues and challenges, formulate strategies and translate the strategies into concrete actions.

9.3 PATTERNS AND TRENDS OF URBANISATION IN BANGLADESH

9.3.1 Spatial and Temporal Patterns of Urban Growth

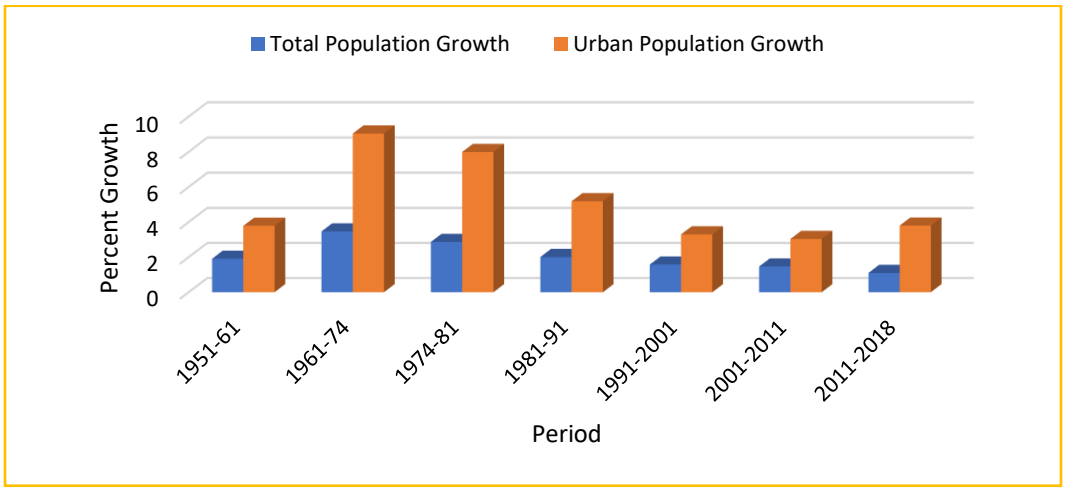
Bangladesh is a lowly urbanized country if compared with high income countries but its rate of urbanization is one of the highest in the world. Urbanization in the country has been more rapid during recent decades. In 1961 the urban population was 2.6 million or only 4.8% of the total population. The figure reached 22.45 million or 20.15 per cent of the total population in 1991. By 2011 around 28 per cent of the country's population became urban residents. More than 60 million people was estimated to be living in urban areas of the country in 2018 accounting for about 36 per cent of the country's population (Figure 9.1). This is indicative of the fact that growth of urban population and labour force is increasing relative to rural population and labour force. In fact, the annual exponential growth rates of population in the urban areas in Bangladesh have consistently outpaced the growth rate of total population in the country in each and every census conducted in the period 1951-2011 (Figure 9.2).

Figure 9.1: Level of Urbanization in Different Years



Source: Population Census, 2011, WUP-2018 Revision for 2018 estimate

Figure 9.2: Growth of Urban and Total Population

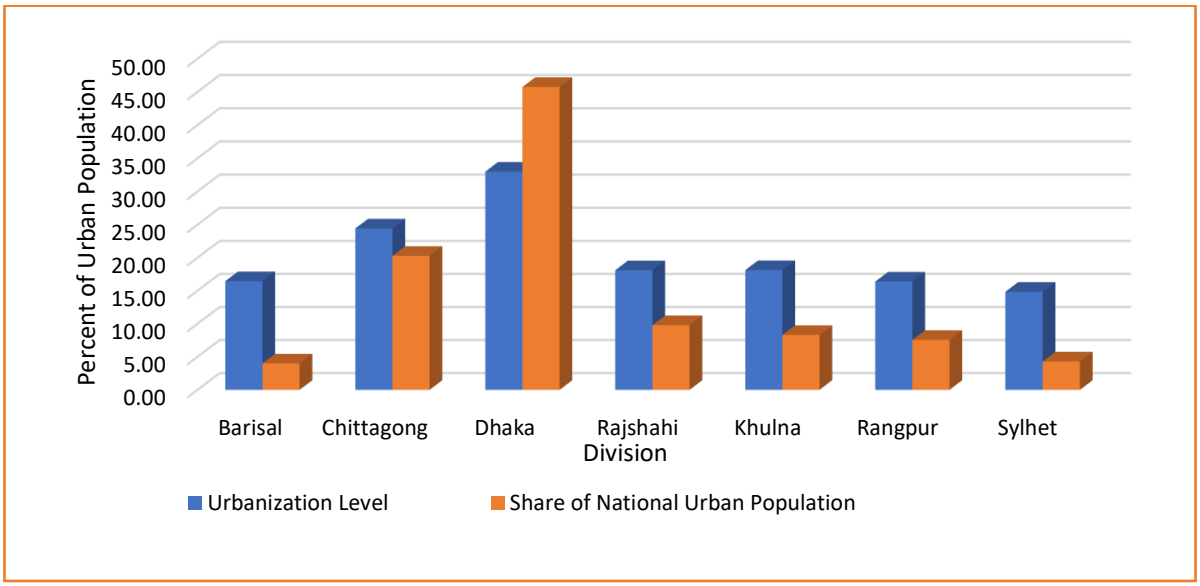


Source: BBS Population Census, 2011 (Analytical Report, 2015)

The population division of the United Nations estimated that nearly 58% people of Bangladesh will live in urban areas in 2051 (Figure 9.3). This is indicative of the fact that growth of urban population and labour force is increasing relative to rural population and labour force. In fact, the annual exponential growth rates of population in the urban areas in Bangladesh have consistently outpaced the growth rate of total population in the country in each and every census conducted in the period 1951-2011 (Figure 9.2 above).

An examination of the level of urbanization and share of national urban population for each of the six divisions reveals that Dhaka Division overwhelmingly holds the highest rank in all the census years both for level of urbanization and share of national urban population (Figure 9.3). On the other hand, the rank of Sylhet Division was the lowest for the share of national urban population while the rank of Rangpur Division was the lowest for level of urbanization (per cent of population urban).

Figure 9.3: Urbanization Level and Share of National Urban Population by Division



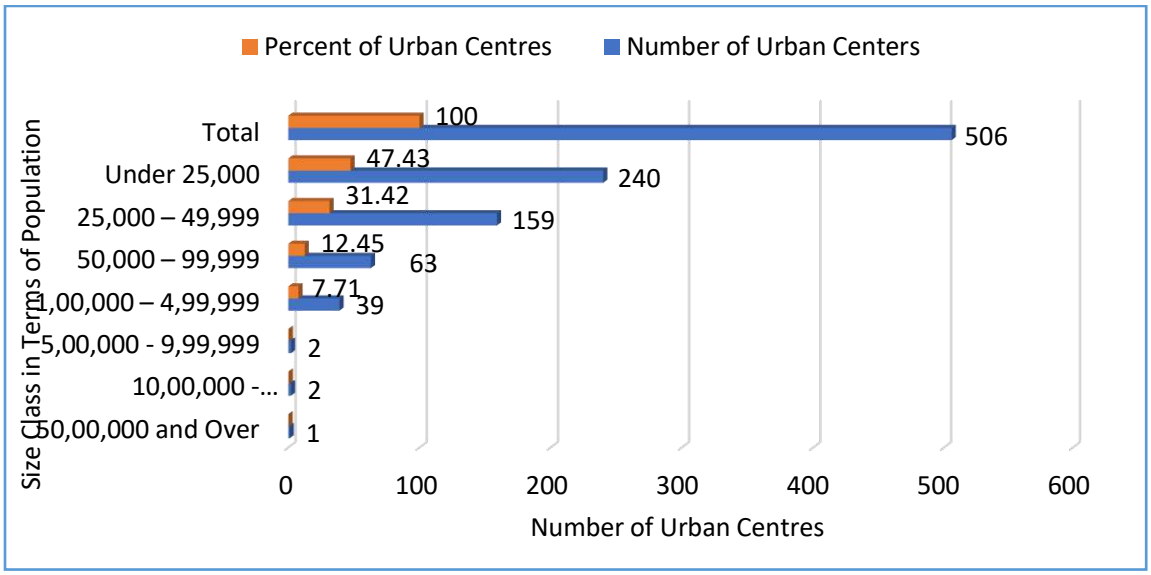
Source: BBS: Population Census 2011-Urban Area Report (2015)

9.3.2 Number and Size of Urban Centres: Spatial and Temporal Trends

According to the population census of 2011 there were 506 urban centres in the country. The distribution of these centres by population size class is presented in figure 9.4. Nearly half (47.43%) of these centres are small each having a population of less than 25,000. These centres serve the surrounding rural areas as service centres. Proper development of these centres is very important from the perspective of rural development. 222 urban centres are larger than these centres but smaller than the centres having one hundred thousand or more people. These are sub-regional centres and offer higher level functions compared to the smaller centres serving surrounding rural areas. Regional centres are those having one hundred thousand or more but less than five hundred thousand people. Some of these are industrial cities and other offer opportunities for industrial development because of agglomeration and urbanization economies.

One significant feature of urbanization in Bangladesh is that urban population is increasing at different rates in different urban centres. A considerable proportion of urban population lives in district towns and Pourashavas (Municipalities) in Bangladesh. According to population census report of 2011, Dhaka Metropolitan Area had a total population of 14.17 million comprising 33.78% of total urban population. Next in the hierarchy, Chattogram SMA had 3.72 million or 8.88% of the total, followed by Khulna SMA with a total population of 1.041 million or 2.49% of total and Rajshahi SMA with a total population of a 0.68 million or 1.62% of the total urban population. Thus, four Metropolitan Areas accounted for 46.78% of the total urban population.

Figure 9.4: Distribution of Urban Centres by Size Class



Source: BBS Population Census 2011-Urban Area Report (2015)

9.3.3 Primacy of Dhaka

Dhaka, the primate city of Bangladesh, accounts for about 12 per cent of the total population and 32 per cent of the urban population of the country at present (Table 9.1). The population of the city is about 4 times the population of the second largest city, Chattogram. Dhaka's primacy, by all counts, has been on the rise in Bangladesh, in the last 40 years. In fact, population of Dhaka has multiplied almost 6 times during this

40-year period. About 80 per cent of the garments industry in Bangladesh is located in and around Dhaka. In absolute numbers, Dhaka City is projected to reach 27.4 million by 2030, an increase of 86 per cent over the population in 2011.

Table 9.1: Primacy of Dhaka City in Different Years

Year	Population (million)	Per cent of Urban Population	Per cent of Total Population	Dhaka's Population as a Multiple of Second Largest City's Population
1981	03.44	25.42	03.94	2.47
1991	06.84	30.46	06.13	2.91
2001	09.67	34.47	08.20	3.33
2011	14.17	33.78	09.44	3.80
2018	19.57	32.11	11.76	4.06

Source: Population Census Reports (BBS); World Cities Report-2018 (UN)

Table 9.2 presents the characteristics of the primate city in selected Asian countries including Bangladesh. It is interesting to note that the degree of primacy is highest in Bangladesh compared to the primate cities of other countries both in terms of share of total population and total urban population. Bangladesh also has the lowest number of cities with more than one million people while there are 6 such cities in Vietnam, 14 in Indonesia and 10 in Pakistan. Such concentrated urban development is taking its toll on the liveability of Dhaka city. The city is afflicted with innumerable problems resulting from inadequate waste management, poor drainage, air pollution, lack of access to developed land and housing, exposure to excessive noise level, traffic congestion as well as inadequate health, nutrition and other basic services. As the country aspires to become middle income country by 2030 it is of utmost importance to address these problems and improve the liveability index of the city

Table 9.2: Size of Primate City and Urban Development in Selected Asian Countries

Country	Population (millions)	Urban Population Share of Primate City (%)	Share of the Primate City in Population (%)	Share of Population in other cities with more than 1 million people (%)	Number of Cities with more than a million people
Bangladesh	163.0	32.11	11.76	3.5	3
China	1378.7	3.1	1.8	23.4	102
India	1324.2	6.0	2.0	12.9	54
Indonesia	261.1	7.4	4.0	6.6	14
Pakistan	193.2	22.6	8.9	13.2	10
Vietnam	92.7	23.2	8.1	6.6	6

Source: World Bank database

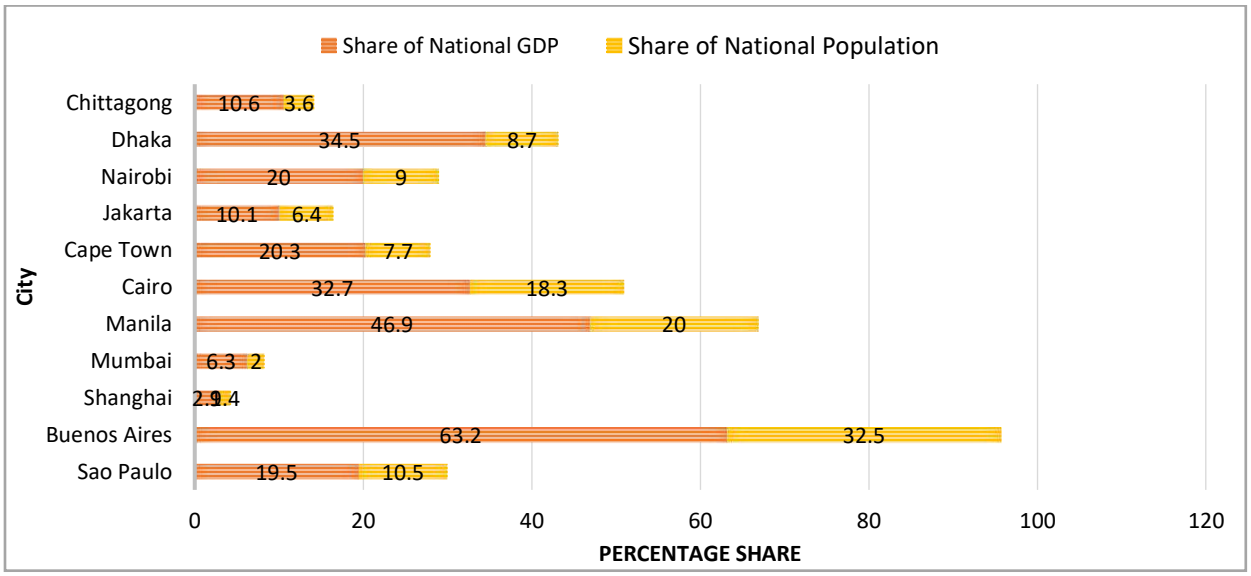
9.4 URBANISATION AND ECONOMIC DEVELOPMENT

9.4.1 Economic Role of Cities

The role of cities in national economic development is now well-established. Today, cities play a central role in creating national wealth, enhancing social and economic development, attracting direct foreign investment and manpower, and harnessing both human and physical resources in order to achieve gains in productivity and competitiveness. A recent study has shown that 123 largest metro areas in the world accounts for about one third of global output with only 13 per cent of the world's population. These cities

are located in developed as well as in developing countries. Higher urban productivity is more prominent in developing countries where cities are more productive than their rural counterparts. Although rising levels of urbanization and rapid population growth in large cities have often been considered problematic, the fact that major cities generally have a significantly higher concentration of the nation's economic output than its population is well-founded. Dhaka city, for example, accounts for only 8.7% of the total population while its contribution to GDP is about 35%.

Figure 9.5: Share of National Population and GDP in Different Cities



Source: World Development Indicators (WDI)); Economic Role of Cities 2011(UNHABITAT); Economist magazine, September 12, 2019,

Cities are now the predominant hubs of economic growth and wealth creation. The lure of employment opportunities existing in the cities is a reason for urban migration. In Bangladesh millions of people have benefitted from the process of urbanization as the agriculture sector is no longer able to absorb the surplus labour force entering the economy every year. Inability of the agriculture sector to provide sufficient employment or sufficiently high household incomes to cope with a growing number of dependents can encourage people to seek employment outside agriculture. In the case of Bangladesh, rural-to-urban migration has contributed to more than 40 per cent of the change in urban population.

Household income is found to be much higher in urban areas than in rural areas. Report of the household income and expenditure survey, 2016 (BBS, 2017) indicated that monthly income per household in urban areas was about 70% higher than the household income in rural areas. Cities also offer other advantages that are important for achieving sustainable development. Higher population density associated with urbanization provides an opportunity for governments to deliver basic services such as water and sanitation more cost-effectively to greater numbers of people.

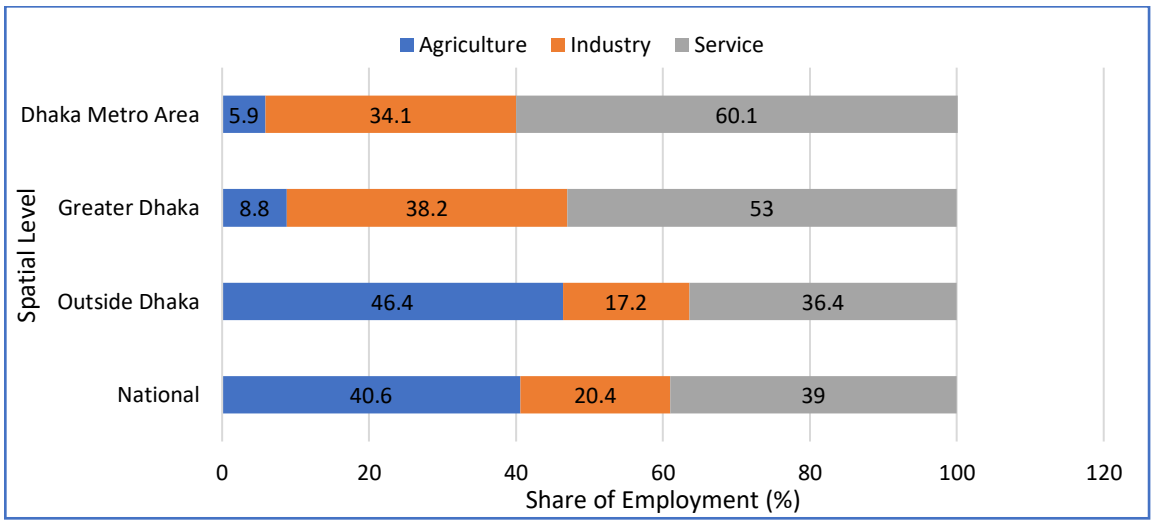
Cities not only offer various types of advantages to the city dwellers, but also facilitate country-wide development. As urban centres prosper, they provide new markets and increased demand for goods produced elsewhere in the country. Also, a portion of urban earnings are often cycled back to the countryside by way of remittances. Further, the gains in human capital and new technologies, while initiated in urban areas, often spread countrywide. Thus, urbanization can be a driver for national growth reaching all areas.

9.4.2 Economies of Agglomeration and Urbanisation

High concentration of national economic production in urban areas is usually explained in terms of localization and urbanization economies (also known as agglomeration economies). Localization economies arise from many firms in the same industry locating close to each other. There are three sources of localization economies: the first is the benefit of labour pooling which is the accessibility that firms have to a variety of skilled labourers, which in turn provides employment opportunity for the labourers. The second benefit is the development of industries due to the increasing returns to scale in intermediate inputs for a product and the third source is the relative ease of communication, supplies, labourers and innovative ideas due to the proximity among firms. Urbanization economies, on the other hand refer to advantages gained from an urban location. These include proximity to a market, labour supply, good communications, and financial and commercial services such as auditing, advertising, investment, industrial cleaning, and maintenance. Larger cities have a greater comparative advantage than small ones. The bigger the city the more likely is the match between specific demands and supplies.

In Bangladesh, Dhaka alone accounts for 80 per cent of the garments industry. The proportion of people engaged in non-agricultural employment in Dhaka Metropolitan Area or Greater Dhaka is much higher compared to the rest of the country or the nation as a whole (Figure 9.6). In Dhaka Metropolitan Area, for example, industrial and service employment accounts for about 34% and 60% of the total employment respectively while in the country as a whole only 20.4% of the employed people are engaged in industrial sector and 39% are employed in the service sector. Such percentages are even lower outside Dhaka (whole country excluding Dhaka). It is very likely that the localization and urbanization economies were mainly responsible for the agglomeration of activities in these major urban centres of the country

Figure 9.6: Share of Employment by Sectors



Source: Ahmed Ahsan (2019): "Dhaka centric-growth: At what cost?" in Policy Insight, November 2019, PRI, Dhaka

9.4.3 City Competitiveness

As the cities are now considered as engines of economic growth, countries are now striving hard to make their cities competitive to attract investment and create jobs that help reduce poverty and unemployment. Many developing cities have been able to do so by focusing on strategies to achieve higher productivity, greater capital intensity, higher levels of human capital, and a greater density of hard and soft infrastructure. For example, Singapore, Hong Kong, and Bangalore (India) have been able to make their economies globally competitive by moving away from an emphasis on low-cost infrastructure, low labour costs, and low taxes, toward fostering growth in high value-added industry clusters using skilled workers, advanced strategic infrastructure and innovation.

A 2011 study by the Asian Development Bank (ADB) assessed the competitiveness of top 10 cities in Bangladesh—Dhaka, Chattogram, Khulna, Rajshahi, Sylhet, Barisal, Rangpur, Mymensingh, Bogura, and Cumilla. Assessment of competitiveness was based on six key drivers—the cost of doing business, the dynamics of the local economy, the availability of human resources and training, the availability of infrastructure, the government's responsiveness to business needs, and the quality of life—were used in the completeness assessment. Each driver had several attributes, and each attribute had a number of indicators. Dhaka emerged as the most competitive city in Bangladesh with a total score of 7.31 out of 10 which was not unusual given its population size as well as its role as the most important administrative, commercial and industrial centre in the country. Chattogram, Sylhet, and Cumilla had the next-highest scores. Six of the 10 cities were not competitive nationally (their index scores are below 5). These cities produce mostly for local consumption. Chattogram, Sylhet, and Cumilla are considered competitive nationally, but they have a long way to go before they can have more export-oriented, and internationally competitive, economies. None of the cities studied are internationally competitive (index score of more than 7.5), although Dhaka is competitive internationally in some sectors, mainly in textiles and garments.

9.5 MAJOR ISSUES AND CHALLENGES OF URBANISATION

9.5.1 Urban Environment

Urban environmental problems are complex, multidimensional, and interactive. The adverse environmental conditions resulting from inadequate waste management, poor drainage, air pollution, lack of access to safe drinking water and sanitation, exposure to excessive noise levels, as well as inadequate health and nutrition services, exert a heavy toll on the quality of life. The declining quality of the urban environment results in the poor health and safety of urban residents, particularly the urban poor. It also causes irreparable damage to natural ecosystems in cities and surrounding areas. Dhaka is one of Asia's fastest growing cities, with a population currently around 19 million. With some 400,000 new residents arriving each year from rural areas seeking a better life, Dhaka is straining under the pressure of its rapidly swelling population. The city's environment is already threatened as a consequence of its expanding population. In 2015 these factors were responsible for about 80,000 deaths and about 2.6 million disability adjusted life years or DALYs (number of years lost due to ill-health, disability or early death) in urban areas of the country. In Dhaka corresponding figures were 18,000 and 578,000 (Table 9.3). The economic costs associated with death and disease or disability estimated at US$1.40 billion in all urban areas of Bangladesh, and at US$310 million in Dhaka alone. This is equivalent to 0.7 per cent and 0.2 per cent of Bangladesh's 2015 national GDP, respectively. If broader welfare impacts of mortality are taken into account, then the estimated economic

impact stands at US$6.52 billion in urban Bangladesh and US$1.44 billion in Dhaka alone, which are equivalent to 3.4 per cent and 0.7 per cent of the 2015 national GDP, respectively.

The declining quality of the urban environment also causes irreparable damage to natural ecosystems in cities and surrounding areas. With some 400,000 new residents arriving each year from rural areas seeking a better life, Dhaka is straining under the pressure of its rapidly swelling population. The city's environment is already threatened as a consequence of its expanding population. Air pollution is a major environmental problem in urban areas, especially, the big cities like Dhaka and Chattogram. To address the air pollution issues, it is important to know the possible sources, locations and their strengths, so actions can be taken that can effectively improve air quality.

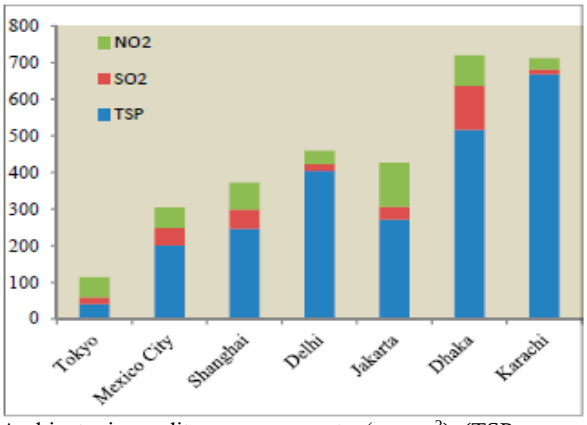
Table 9.3: Estimated Cost of Mortality in Urban Bangladesh and Greater Dhaka (US$ Billion) and National GDP Equivalences

	Urban Bangladesh				**Greater Dhaka**			
	Welfare Loss		**Forgone Output**		**Welfare Loss**		**Forgone Output**	
	Amount	**GDP equiv.**	**Amount**	**GDP equiv.**	**Amount**	**GDP equiv.**	**Amount**	**GDP equiv.**
PM2.5 air pollution								
Ambient	2.42	1.24%	0.49	0.25%	0.53	0.27%	0.11	0.06%
Household	1.27	0.65%	0.25	0.13%	0.28	0.14%	0.06	0.03%
Inadequate water, sanitation and hygiene								
Direct impact	0.43	0.22%	0.14	0.07%	0.09	0.05%	0.03	0.02%
Indirect impact	0.08	0.04%	0.04	0.02%	0.02	0.01%	0.01	0.00%
Arsenic in drinking water	0.80	0.41%	0.18	0.09%	0.18	0.09%	0.04	0.02%
Occupational pollutants	1.52	0.78%	0.29	0.15%	0.34	0.17%	0.06	0.03%
Total	**6.52**	**3.35%**	**1.40**	**0.72%**	**1.44**	**0.74%**	**0.31**	**0.16%**

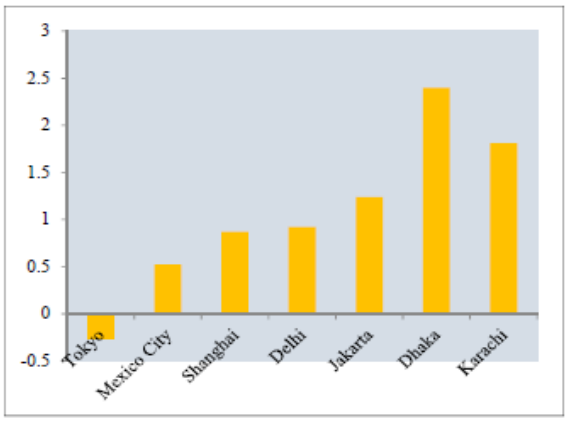
Source: World Bank, (2018): Enhancing Opportunities for Clean and Resilient Growth in Urban Bangladesh: country environmental analysis 2018

Urban air pollution in Bangladesh is on the rise due to upward trends in the number of vehicles on roads. Other sources include manufacturing and food processing, brick-fields, construction works, coal-fired power stations, metal refining etc. Four pollutants – suspended particulate matter (SPM), nitrogen dioxide (NO_2), sulphur dioxide (SO_2), and air-borne lead are mainly responsible for worsening of the situation). Figure 9.7 presents a comparative assessment of air quality in selected megacities of Asia. Dhaka has the highest air pollution in the context of ambient air quality and multi-pollutant index compared to other mega cities. Air pollution is thus a major environmental problem for the city. To address the air pollution issues, it is important to know the possible sources, locations and their strengths, so actions can be taken that can effectively improve air quality.

Figure 9.7: Comparative Assessment of Air Quality in Selected Megacities



Ambient air quality measurements (μg m^{-3}) (TSP = total suspended particles).



Multi-pollutant index (MPI) (MPI denotes the combined level of the three criteria pollutants (i.e., TSP, SO2, and NO2)

Source: Swapan et al, Urban Science, October, 2017

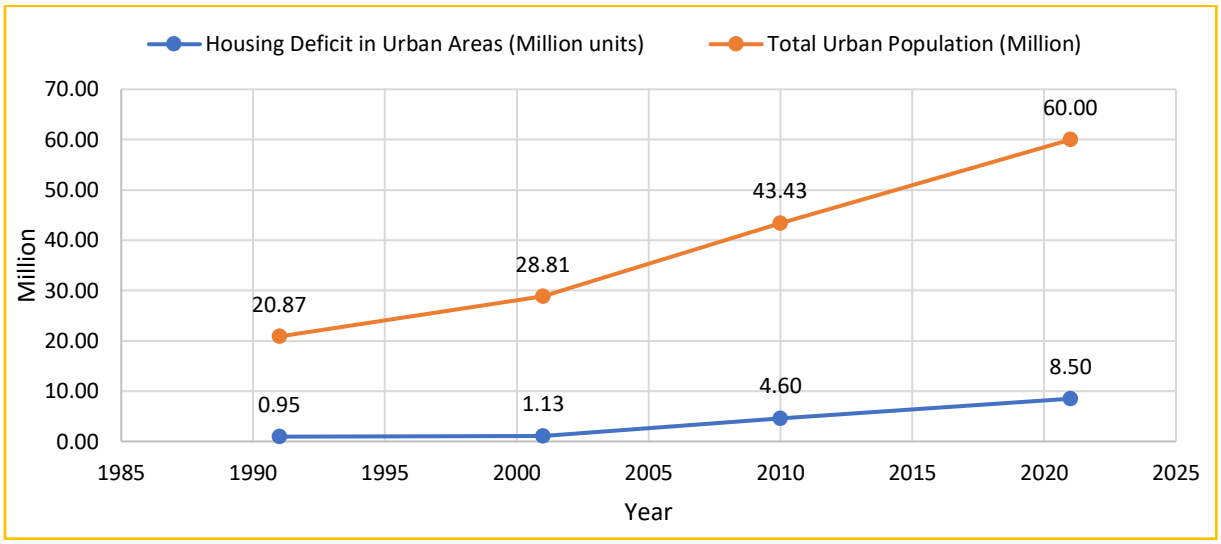
9.5.2 Land and housing

During the last few decades, the price of land in urban areas of the country sky-rocketed and in Dhaka city the increase was as much as 80 times. Ever increasing land price has also contributed to the deterioration of housing situation as the land prices have driven the poor households out of the formal land markets and forced them into the informal land markets which are characterized by slums and squatter settlements. The urban land market which directly affects the urban environment and quality of urban life suffers from many distortions due to lack of proper land planning, application of zoning laws, violation of building permits and inadequate infrastructure and services, thus leading to unplanned or ribbon development of land in the urban periphery.

Rapid growth of urban population and consequent demand for land and housing has made the situation even worse, particularly in big cities. Very few households have access to land and credit facilities. The situation is particularly worse for the lower income group and the poor who live on marginal settlements built by small land developers or by the occupants themselves without any security of tenure. Due to lack of tenure, the poor cannot meet the need for guarantees of loan repayment. This puts most conventional sources of credit for housing construction out of the rich of the poor resulting in lower level of housing investment. This led to overcrowding, lower quality of housing units and the proliferation of slums and squatter settlements.

Housing deficit in urban areas was estimated to be about 0.91 million units in 1991 which increased to about 4.6 million units in 2010 (National Housing Policy, 2017). Based on various studies, the National Housing Policy, 2017 indicated that by 2021 the deficit would be around 8.5 million housing units (Figure 9.8). This dismal housing scenario has also been a major factor contributing to extreme homelessness in urban areas.

Figure 9.8: Urban Housing Deficit



Source: National Housing Policy, 2017

Apart from the existing huge shortage in housing stock, the majority of the dwelling units is structurally very poor, lack services and utilities, and built without proper planning. According to Household Income and Expenditure Survey, 2016 (BBS, 2017), only 25.73 per cent of the houses in urban areas in 2016 were pucca (made of brick/cement) compared to 31.04 per cent semi-pucca and 41.77 per cent kutcha (Table 9.4). However, proportion of pucca and semi-pucca structures increased from 2001 while there was a decline in the proportion of kutcha structures and jhupries indicating improvement in the economic condition of the people.

Table 9.4: Per cent of Households by Structure Type

Type of Structure	2001	2010	2016
Jhuprie (Thatched house)	7.58	1.85	1.46
Kutcha (No cement/concrete used)	47.15	41.56	41.77
Semi pucca (Only wall made of cement/concrete)	23.26	27.88	31.04
Pucca (Roof and wall made of cement/concrete)	22.01	28.71	25.73
Total	**100.00**	**100.00**	**100.00**

Source: HIES 2010 and HIES 2016

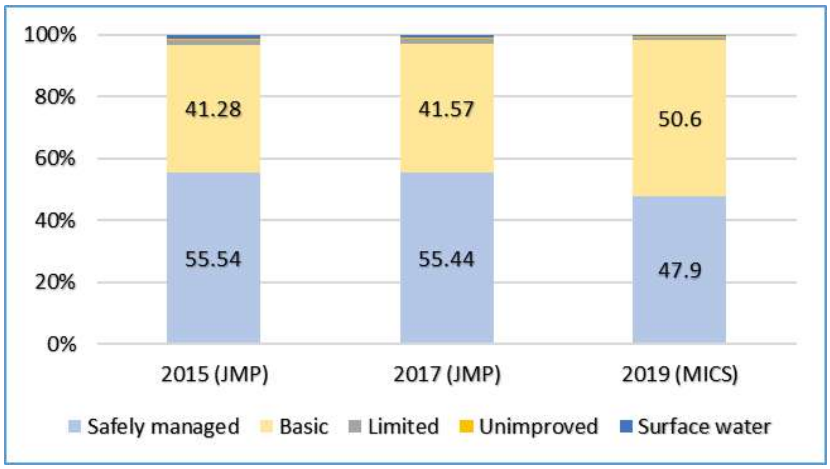
9.5.3 Basic Urban Services

Among the most important basic service for both the urban and rural population is access to water, sanitation and hygiene (WASH) facilities. The importance of WASH has grown in the context of the on-going Covid-19 pandemic in view of its important role in preventing the spread of the covid virus. Significant progress has been made in the WASH sector under the Seventh Plan in water supply, sanitation at the household, school and healthcare facility levels.

As regard household water access**,** Bangladesh is in good standing in terms of drinking water coverage. As of 2017, 97% of the population had access to at least basic water (basic and above). This compares favourably with other countries in the region, with India and Sri Lanka having 93% and 89% basic access,

respectively. Of the 97% access to at least basic water, safely managed services which are the topmost service ladder accounted for 55%. However, more recent data from the Multiple Indicator Cluster Survey (MICS) 2019 show that while the proportion using at least basic water has increased to 98.5%, the share of safely managed services has regressed to 47.9%. Figure 9.9 illustrates the progress household water.

Figure 9.9: Progress in Household Water Access



Source: WHO/UNICEF Joint Monitoring Program (JMP), MICS

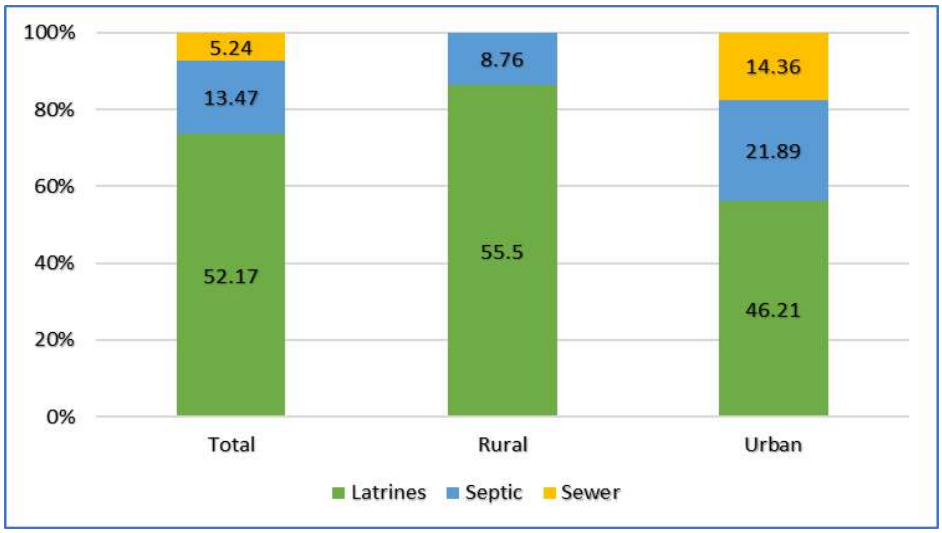
There has also been good progress with WASH in schools in Bangladesh. As of 2019, basic and limited water coverage accounted for 82.17% and 9.9% respectively, which combined results in improved water coverage of 92.07%. Improved sanitation coverage is 100% in schools, although 65% of schools have gender-segregated usable toilets. 50% of all schools have functional hand washing facilities with soap and water available to all. On average, there is one functional, improved, unlocked toilet for every 113 students.

According to the National Hygiene Survey 2018, an improved source of water for general uses such as cleaning, bathing, and washing, was available in all health facilities. However, 77% had an improved, functional water source with a concrete platform and no water logging. Many local healthcare facilities rely on tube wells for water access. Almost all healthcare facilities have improved sanitation and hand washing facilities, although only one in four healthcare facilities provide separate toilets for females. 11% of healthcare facilities have basic waste management services. (JMP Global Baseline Report, 2019). GoB has developed a WASH Guideline for Community Clinics in 2019 to ensure better operation and maintenance. The Directorate General of Health Services (DGHS) is also preparing a WASH Strategy for healthcare facilities.

There has been good progress in expanding sanitation coverage with Bangladesh being declared free from open defecation in 2015. The proportion of households having access to at least basic sanitation stands at 48%. An underlying factor behind this relatively low figure is that WHO/UNICEF Joint Monitoring Programme (JMP) considers shared facilities as a lower service level (limited as opposed to basic). In densely populated urban settlements, such as slums, individual toilets for each household are not feasible and shared toilets are a reality. This is illustrated by limited facilities accounting for a higher share in urban areas (32%) than at the national level (23%). Limited and basic facilities, which together constitute improved facilities, thus accounted for 71% of the population as of 2017. However, there has been good progress in increasing the coverage of improved facilities as shown in Figure 9.10. As of 2019, use of

improved facilities had increased to 84.6%, of which 64.4% was for basic services. Due to lack of data, the JMP does not report national figures for safely managed sanitation, although MICS 2019 show that 90.7% of households with improved on-site sanitation facilities (facilities not connected to sewer) have safe disposal of excreta.

Figure 9.10: Overall Access to Improved Sanitation Facilities (including shared)



Source: MICS 2019

Progress also continues to be made in access to hygiene facilities: 35% of the population had access to basic facilities with soap and water, while 54% had access to limited facilities according to JMP figures of 2017. The National Hygiene Survey 2018, which provides more recent figures, reports that 61%, had access to hand washing facilities with soap and water within 30 feet from toilets. These are great steps towards covering all population under improved sanitation. However, much remains to be done in bringing all people under improved sanitation.

Urban Water Supply

In 1990 nearly 81% of the urban population had access to improved water. By 2015 about 99% of the urban population were covered by improved water supply and 38% of them had access to piped water (Table 9.5). Majority of the people (about 60%) in urban areas, however, still use tube well as their main source of drinking water (BBS, 2017).

Table 9.5: Water Supply Coverage

Year	Total Improved (%)	Piped onto Premises (%)	Other Improved (%)	Other Unimproved (%)	Surface Water (%)
1990	81	23	58	17	2
1995	82	25	57	16	2
2000	83	27	56	16	1
2005	84	29	55	15	1
2010	85	31	54	15	0
2012	86	32	54	14	0
2015	99	38	61	01	0

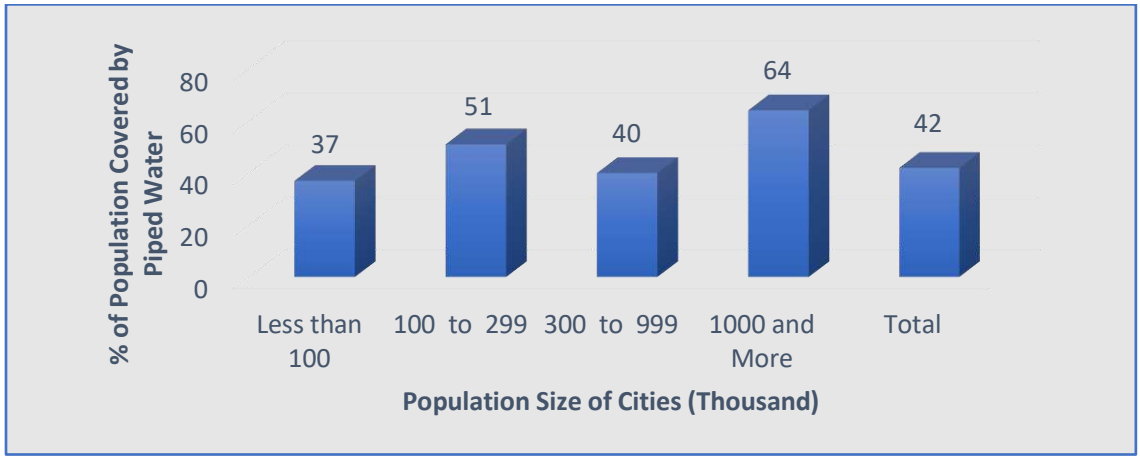
Source: JMP (Joint Monitoring Program), 2014 and 2017, WHO & UNICEF, Progress of Drinking Water & Sanitation

The overall urban situation with respect to water supply does not necessarily mean that all the urban residents have equal access to improved water. Figure 9.11 presents data on coverage of population by piped water supply in 7 city corporations and 31 Paurashavas grouped according to population sizes. In cities with one million or more people, 64% of the population get piped water on an average while in pourashavas with less than 100 thousand people coverage of population by piped water is only 37% on an average. Thus, the supply of piped water at the Pourashava level is quite unsatisfactory. Water supply situation is unsatisfactory in slums and squatter settlements. Despite the fact that the poor are supposed to benefit most from Government services, this is not always the case. The quantity of water the poor get is quite insufficient and far below the GOB basic service level standard for water supply of 20 litres per capita per day. With groundwater extraction reaching unsustainable levels, especially in urban areas and where infiltration of pollutants is also heightened, groundwater monitoring and improved management of surface water is urgently needed.

Urban Sanitation and Solid Waste Disposal

The use of sanitary toilet facilities in urban areas increased quite significantly during the last three decades. From Table 9.6, it is observed that there has been an increasing trend in the use of sanitary toilet facilities since 1981. In 1981, 32.4% of urban households used sanitary toilets which increased to 82.12% in 2016.

Figure 9.11: Average Coverage by Piped Water (% of Population)



Source: **World Bank (WSP)*, 2014; Bangladesh Delta Plan (2016)***

Table 9.6: Per cent of Urban Households with Sanitary Facility

Year	Toilet Facilities		
	Sanitary	Other	None
1981	32.4	54.5	13.2
1991	56.2	30.4	13.3
2001	67.3	25.34	7.36
2005	79.8	18.5	1.00
2010	76.12	23.11	0.77
2016	82.12	16.94	0.94

Source: BBS, 2005a; HIES (BBS), 2010 and 2016

Although a high proportion of population (nearly 85%) use some form of improved sanitation facility, connection to a sewer system is entirely an urban phenomenon, and particularly concentrated in Dhaka, where there is a sewerage connection of 22%. However, only 2% of the faecal sludge is effectively treated, and the rest find their way to the environment through leakage and ineffective treatment.

Given the limited coverage of sewers, the vast majority of the population using on-site improved sanitation facilities use some form of pit latrines connected to a septic tank where the sludge accumulates. Increasing population density and increasing levels of water use lead to overloading of septic tanks which discharge large volumes of untreated effluent directly into the environment, either through dysfunctional pathways or by deliberate discharge to surface drains. It is common for many households to connect pour-flush toilets directly to drains without any form of on-site containment. Currently, local authorities have limited arrangements for collection from septic tanks at household levels. Households using on-site sanitation with adequate containment usually depend on manual emptying services. The faecal sludge collected by the pit emptiers is often disposed directly into the environment, and only a fraction of faecal sludge collected is safely managed due to lack of disposal sites. Poor faecal sludge management (FSM) is thus a public health and environmental hazard.

Solid Waste Management

The impact of urbanization is felt more intensely in the area of waste generation in cities and towns of the country. Generation of solid waste in urban areas of Bangladesh has been increasing commensurate with increase in urban population. Table 9.7 shows the growth in solid waste generation in Bangladesh since 1991. It is quite clear that generation of solid waste in urban areas of Bangladesh has been increasing commensurate with increase in urban population despite the fact that the amount of solid waste generated per capita per day is lower compared to developed countries.

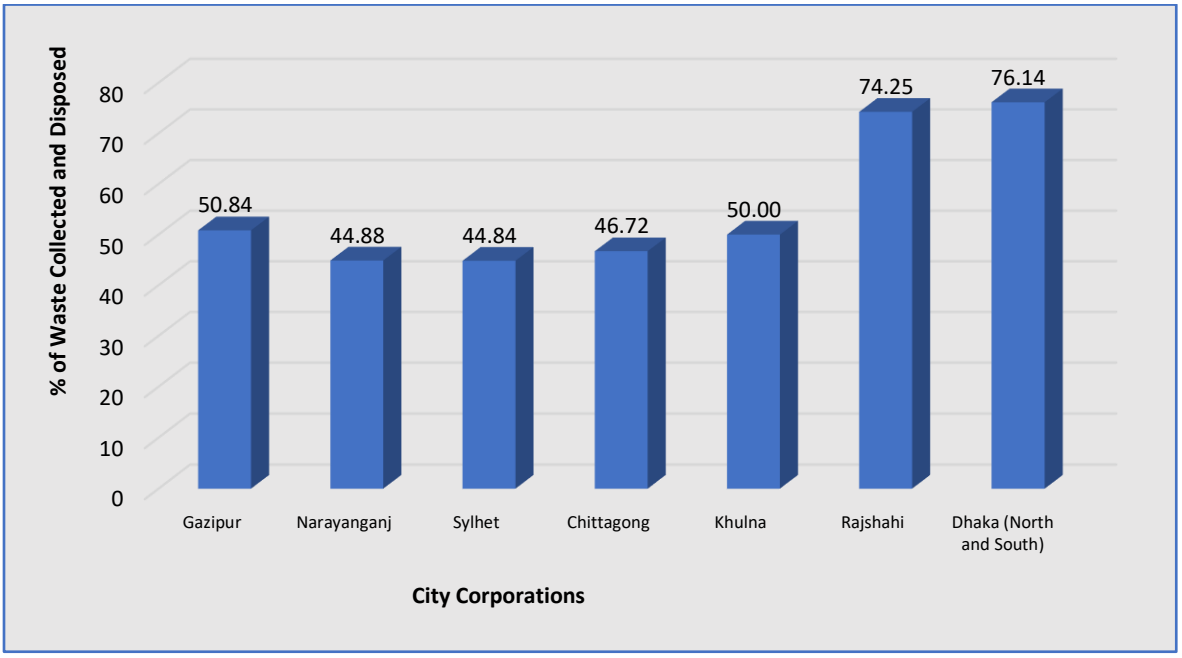
Table 9.7: Growth in Solid Waste Generation in Bangladesh since 1991

Year	Total Urban Population	Urban Population (in per cent)	Waste Generation (kg/cap/day)	Total Waste Generation (tonne/day)
1991	20872204	20.15	0.31	6493
2001	28808477	23.39	0.40	11695
2005	32765516	25.08	0.40	13330
2014	41940000	29.00	0.56	23688
2025 (projected)	78440000	40.00	0.60	47000

Source: Waste Concern: Bangladesh Waste Database 2014

Collection and disposal of huge quantities of solid waste generated daily in large urban areas is indeed a daunting task for the urban local governments. Waste collection efficiency defined as the proportion of generated waste collected and transported to disposal site, is generally low and varies widely across cities (Figure 9.12). A part of this waste either remains in the streets or on nearly open ground. Some of the waste flows to the open drains and blocks the normal drainage flow. As a result, water logging sometimes disrupts the normal city life for days during monsoon. The serious health hazard posed by this situation is of major concern.

Figure 9.12: Waste Collection Efficiency of City Corporations



Source: CEGIS: Baseline Survey on Waste Generation 2013; BIGD State of Cities: Solid Waste Management in Dhaka City, 2015; Khulna City Corporation, 2020

Urban Transportation

Rapid urbanization in Bangladesh during the last few decades led to manifold increases in the number of motorized and non-motorized vehicles on city streets. Continuous and rapid increase in the number of private passenger cars is considered primarily responsible for congestion on urban roads (Figure 9.13). Cars cause problems not only when they are moving, they also require an inordinate amount of space for parking. The problem is most acute in Dhaka where growth of car ownership has exploded. For example, private car ownership in Dhaka has increased from 5.85 vehicles per 10,000 persons in 1971 to 34.6 in 1992, an increase of about 490 per cent. By 2011 car ownership reached 160 per 10,000 persons and in 2017 the estimated number of cars per 10,000 persons was around 200, indicating near exponential increase in the number of cars on the roads Although private cars account for a small proportion of total number of trips in the city, they occupy much larger road space. Car is the most inefficient transport mode in terms of number of passengers and occupation of road space.

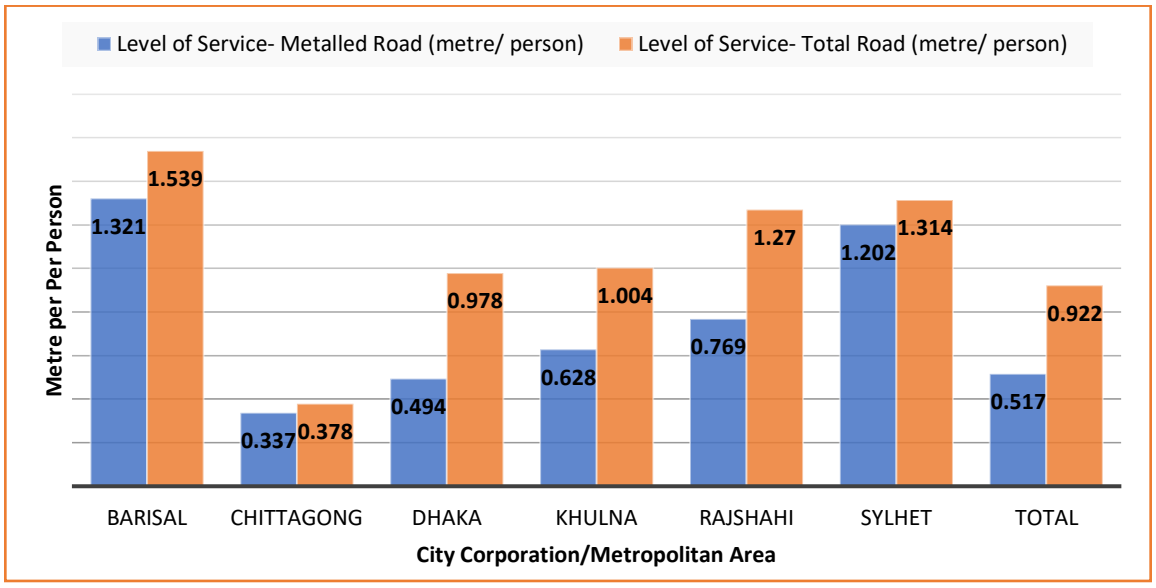
Road transportation dominates the transport systems in the country which provides passenger services and transportation of commodities. In urban areas also road transport system is the main means for carrying passengers and commodities. Rail and water transport systems are mainly used by commuters and for transporting commodities between urban areas.

Figure 9.13 represents the level of service of roads in six city corporations. Level of service (LOS) is defined as meter per person which is the most satisfactory condition in Borishal and is in worst situation in Chattogram. If all types of roads are considered best level of service is found in Barisal followed by Sylhet, Rajshahi, Khulna, Dhaka and Chattogram. Chattogram performs worst both in terms of paved roads and all types of roads probably due to physical characteristics of the city. Among the six city corporations, Dhaka

is confronted with the most serious transportation problems. The transport sector of the city is comprised of many different modes of travel-both motorized and non-motorized-often using the same road space – resulting in a high level of operational disorder that significantly diminishes the efficiency and effectiveness of the existing transport uses.

The capital city Dhaka receives most attention from the policy makers in terms of addressing its transportation problems while major secondary cities like Chattogram, Khulna, Rajshahi, Sylhet, Cumilla, Bogra and Mymensingh do not receive proper attention despite the fact that these cities also face significant transportation problems. In recent years CNG driven and battery-operated auto-rickshaws have flooded the city streets in these urban areas causing severe traffic congestion. Non-motorised transport modes such as walking, rickshaws and bicycles are also used by a significant percentage of people in S these cities.

Figure 9.13: Level of Service of Roads in Six City Corporations



Source: City Corporations and RAJUK, 2019

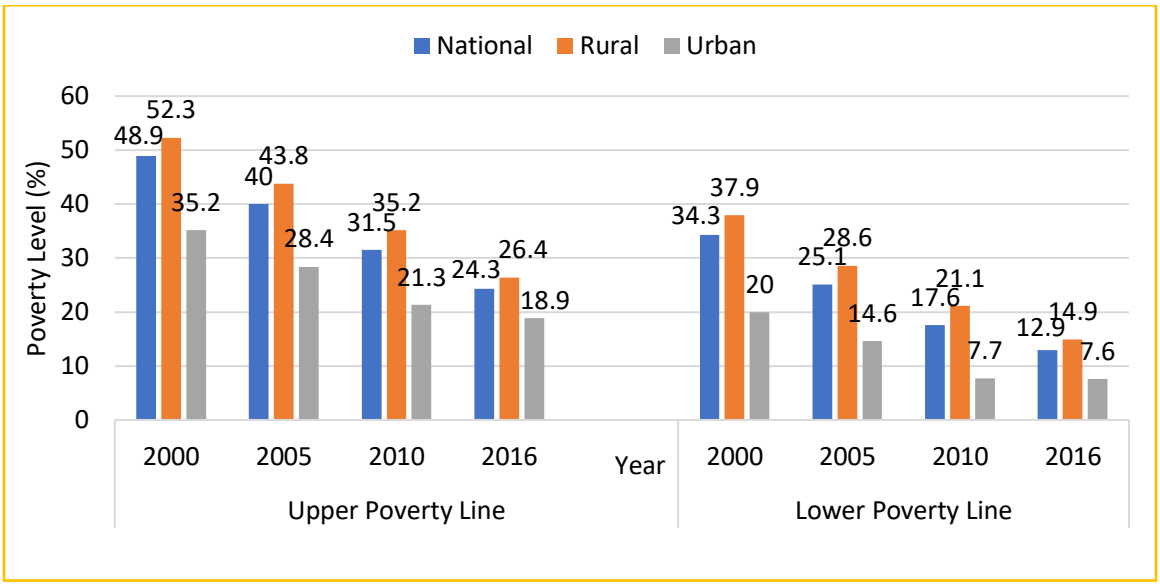
Non-existence of transport planning and inefficient traffic engineering result in low quality traffic management. Public transport systems are poorly organized and there is lack of integration with non-motorized vehicles. Buses are in short supply and there is inadequate rail system to handle day-to-day commuter traffic. Moreover, the growing dependence on private vehicles for intra-metropolitan trips is currently a crucial component in the debate on sustainable urban development, given the economic, social and environmental impact for which it is responsible. Considering all these factors, it has become a challenging task for the government as well as transport planners and engineers to cater the demand of mobility for the ever-increasing urban population in a more sustainable way.

Urban Poverty

Household income is found to be much higher in urban areas than in rural areas. Report of the household income and expenditure survey, 2016 (BBS, 2017) indicated that monthly income per household in urban areas was about 70% higher than the household income in rural areas. Consequently, the incidence of poverty is also higher in rural areas than in urban areas. Using the upper poverty line, the BBS estimated

the Head Count Rate (HCR) of incidence of poverty as 48.9% at national level, 52.3% in rural areas and 35.2% in urban areas (Figure 9.15) in 2000. In 2016 incidence of poverty was 24.3% at national level, 26.4% in rural areas and 18.9% in urban areas indicating that the incidence of poverty in urban areas was about 40% lower than in rural areas and nearly 29% lower compared to the national level. Level of extreme poverty estimated on the basis of lower poverty line is also found to be much higher in rural areas. In 2016 proportion of people living below lower poverty line (extreme poor) was about 50% higher in rural areas than in urban areas (Figure 9.14).

Figure 9.14: Poverty Level (%) by Upper and Lower Poverty Lines in Different Years



Source: BBS (HIES 2005 and 2010 and 2016)

One of the major causes of rapid urbanization in Bangladesh during the last few decades is the migration of rural people to urban areas. A significant percentage of these people have been forced to leave their homes in rural areas due to poverty. Rapid increase in urban population has contributed to the skyrocketing of land prices in urban areas. This has made it extremely difficult for the urban poor to get access to serviced land. Most of the urban poor live in slums and squatter settlements characterized by substandard living conditions. Slums and squatter settlements are found in all major cities in Bangladesh although their concentrations may vary depending on the size of cities. The largest concentrations are found in Dhaka followed by Chattogram, Khulna and Rajshahi. Secondary cities or district towns also have significant concentrations of slums and squatter settlements.

The urban poor are especially vulnerable to economic shocks as indicated by the adverse effects of COVID-19 (See Chapter 4, Part 1). They lack the access to services, safety nets, civil protections, and political representation enjoyed by upper-income groups. Urban living conditions, especially in large and fast-growing cities, are deteriorating relative to those in smaller towns. These changes are raising questions regarding conventional views of urban advantage and creating a potential for increasing social problems.

9.5.4 Climate Change and Disaster Management in Urban Areas

Flooding and water-logging have become a major problem of urban areas, especially the big cities. The problem becomes quite serious during annual monsoon with widespread and lengthy disruption of roads, telecommunications, electricity supply and water supply. Recurrent floods and water logging are the major natural events that create havoc and disrupt socio-economic life of the cities. With the changing climate the intensity of rainfall has also increased in recent years and extreme events such as floods, drainage congestions, and water logging have become a regular occurrence in the rainy season. The situation is likely to deteriorate further with increased urbanization accompanied by intense industrial and commercial activities, increases in built-up areas and consequent loss of green areas and wetlands.

Dhaka was declared as the most vulnerable megacity to climate change by the World Wide Fund for Nature (WWF) in 2009. This vulnerability has not changed much over the years. The intensity and pace of present and future climate changes induced by continuous emission of greenhouse gas will be a major challenge for the city as the frequency and intensity of flooding are likely to increase. This will threaten the critical infrastructure that supplies the city dwellers with essential services such as electricity, water, waste disposal, transportation, telecommunication etc.

There are two types of city inundation namely urban floods and river floods. Urban floods are classified as the city inundation caused by drainage congestion and water logging. And river floods are classified as the city inundation caused by river floods. Urban flooding in the built areas of Dhaka city is a major concern and a matter of serious discussion among the city dwellers. It causes unbearable sufferings for the people by creating difficult situation for traffic movement as well as unhygienic environment that has long lasting consequences. Following are the main reasons for urban flooding in different cities including Dhaka:

- Increase in covered areas causing higher rainfall run-off volume;
- Unplanned and uncoordinated development of the city;
- Continuous filling of wetlands for expansion of the city both by the public sector and private organizations;
- Unauthorized and illegal occupation and destruction of natural drainage system and retention basins;
- Inadequate storm water drainage facilities;
- Clogging of drainage channels and sewer lines due to indiscriminate dumping of solid wastes and inadequate cleaning of sewers, catch pits, etc.; and
- High water level in the peripheral river system.

The disappearance of the natural drainage system is one of the main causes for water logging. Rapid population growth and unplanned development, unplanned land filling to develop new residential areas, uncontrolled and haphazard disposal of solid wastes and garbage into the existing drainage system, and encroachment on lakes, khals/canals and rivers with unauthorized construction are the main activities that can be linked to the disappearance of natural drainage system.

Planning, construction and maintenance of drainage system in a city may be shared by a number of agencies. In Dhaka, for example, Development and maintenance of drainage system are shared by DWASA, DNCC, DSCC, BWDB, RAJUK and Cantonment Board. Lack of capacity and poor coordination among these

agencies are often cited as one of the major reasons for poor performance of Dhaka's drainage system. Dhaka's two DCCs are responsible for development and maintenance of the surface drains and roadside inlets. DWASA, on the other hand, is responsible for development and maintenance of the underground storm-water drainage system. As the performances of surface drains and storm-water drains are dependent on each other, strong coordination among these authorities is essential.

In Chattogram also governance of drainage systems does not belong to any particular authority. Several authoritative bodies are responsible for managing the drainage system of the city. The core responsibility for storm water drainage and sewerage belongs to CWASA. However, CWASA has neither developed any sewerage system nor storm water drainage infrastructure till date. CCC is mainly working on the local and tertiary drainage development and construction and is also responsible to keep the drains clean. CDA's role is to incorporate drains in land-use and structural plans and allot space in city designs. The Bangladesh Water Development Board (BWDB), another statutory body, is responsible to plan the flood management of CCC and they are both involved in linking embankment with the drainage system. Lack of capacity and coordination among these authorities are also cited as one of the major reasons for poor performance of the drainage system in Chattogram.

Apart from institutional coordination, there is also lack of involvement of civil society – local community, NGOs, private sector and academia in the planning, development and management of the drainage systems. The institutional arrangements are weak and the management organization lacks incentives for giving better outputs. The organizations do not as customer driven organizations and lack a holistic view of their management.

9.6 PLANNING, DEVELOPMENT AND MANAGEMENT OF URBAN AREAS: MAJOR CHALLENGES

9.6.1 Present System of Urban Governance and Management

At present urban development activities in Bangladesh are carried out mostly by national government organizations. There are at least eighteen main ministries and 42 organizations which are involved in the development of urban areas. National level agencies provide services to different urban areas including city corporations, Paurashavas and other urban centres as part of their national responsibilities. Some of the important national agencies are Urban Development Directorate (UDD), National Housing Authority (NHA) and the Public Works Department (PWD) under the Ministry of Housing & Public Works, the Department of public Health Engineering (DPHE) and the Local Government Engineering Department under the Ministry of Local Government, Rural Development and Cooperatives, the Roads and Highways Department under the Ministry of Road Transport and Bridges the Directorate of Environment under the Ministry of Environment, Forest and Climate Change and the Power Development Board under the Ministry of Power, Energy and Mineral Resources. Other Ministries such as the Ministries of Commerce, Education, Finance, Agriculture, Youth and Sports, and Water Resources Development are also actively involved in the process of urban development mainly through their regional and local level agencies.

At the local level, City Corporations and Pourashavas function as urban local governments. All divisional headquarters and some larger cities such as Gazipur, Narayanganj and Cumilla have city Corporations. At present there are 12 city Corporations and 335 Pourashavas. Separate planning and development organizations have also been created for the cities of Dhaka, Chattogram, Khulna, Rajshahi and Cox's Bazar. The development authorities in these cities are authorized to undertake local urban planning as well as infrastructure and site development activities for housing, commercial and industrial use. The authorities are also empowered to exert development control functions.

Table 9.8: Hierarchy of Urban Local Governments

Mega City	**For example: Dhaka Metropolitan Area**
City Corporations at Divisional Headquarters and larger cities	Dhaka North, Dhaka South, Chattogram, Khulna, Rajshahi, Sylhet, Barisal, Rangpur, Mymensingh, Narayanganj, Gazipur and Cumilla
***Paurashavas* (Municipalities)**	Number of Paurashavas - 335 at present
Category determined on income level	Annual income level
Class A *Paurashavas*	At least Tk. 8 Million
Class B *Paurashavas*	Between Tk. 4 Million and 8 Million
Class C *Paurashavas*	Between Taka 2 Million and Tk. 4 Million

Source: BBS and LGD

At some divisional Headquarters special purpose agencies have also been created that provide special services to the city dwellers such as the Water Supply and Sewerage Authority, Electricity Supply Authority, etc. The Water and Sewerage Authority (WASA) Act, 1996 empowers the government to establish WASAs and permits WASAs to carry out works related to water supply, sewerage and drainage systems. There are four water and sewerage authorities in Dhaka, Chattogram, Khulna and Rajshahi. Dhaka Electricity Supply Authority is mainly responsible for distribution of power while the gas distribution authority is responsible for distribution of gas to the residential, commercial and industrial areas. The functions of all these organizations are important in urban development

9.6.2 Regulatory, Administrative and Fiscal Framework for Urban Governance and Management

As discussed in some detail in Chapter 7, two fundamental constraints faced by all local government institutions (LGIs), urban and rural, are inadequate administrative autonomy and accountability and the lack of fiscal autonomy. Bangladesh has made good progress in setting up elected LGIs. It has also invested strongly in LGIs to improve their service capability. Nevertheless, the absence of administrative and fiscal autonomy has reduced the ability to respond effectively to the growing urbanization challenge.

The PP2021 recognized the gravity of the urbanization challenge and its long-term nature. The strategy called for a major overhaul in the approach to urbanization. It emphasized balanced development of many urban centres instead of Dhaka-centric urbanization. It suggested a major change in the urban governance by emphasizing political, administrative and fiscal decentralization and participatory development. It suggested improvements in land use planning and allocation. It laid focus on improving the urban physical environment. It advocated a major and sustainable expansion in urban services through a combination of public and private investments. Taken together, this constitutes a comprehensive and balanced approach to

urbanization and much different from the strategy prevailing in FY2010. The 6FYP and the 7FYP developed specific actions to implement the PP2021 urbanization strategy

Notwithstanding this visionary approach to urbanization, the PP2021 urban strategy and the programmes articulated in the 6th and the 7th Five Year Plans faced several constraints that reduced the implementation results. Much of the emphasis was placed on public investment support to LGIs for enhancing related services. Thus, substantial investments in urban infrastructure and services have been made. Yet, the large backlog of unmet demand and the continued rapid growth of urbanization have outstripped those investments. At the institutional level, solid progress was made in implementing political decentralization on the basis of elected management of City Corporations and Municipalities (Paurashavas). But the agenda for administrative decentralization did not proceed as envisaged in the PP2021, the 6FYP and the 7FYP. The urban LGIs have very little mandated responsibilities with considerable overlap with other government entities. Fiscal decentralization is yet to happen. Consequently, urban bodies remain heavily dependent on national government funding. Own resource mobilization is very low (collectively about 0.16% of GDP), which does not even meet their current expenses. Unbalanced urbanization has further accelerated as Dhaka's primacy increased further between FY2010 and F2018. Urban traffic congestion has further intensified, the urban slum population has grown, and the difficulties in managing urban sanitation, solid waste and drainage weaken the urban natural environment.

Urbanisation Constraints

Several factors constrain urban development in Bangladesh. These include unclear legal mandate, overlapping functions and accountabilities, weak capacities, poor governance and weak finances.

Legal Framework

However, proper allocation of responsibilities and financing has not happened. Only a limited number of functions are assigned to the urban LGIs. Even so, the demarcation of responsibilities is unclear and overlapping with other line Ministries. The governance structure in theory is democratic and is elections based, but in practice LGIs have little autonomy and are controlled by the national government. Resources available to LGIs are very limited. There is very little financial autonomy that creates a huge dependency syndrome on the national government.

Confused Overlapping Mandates

There are as many as nine specialised institutions and several line ministries providing urban services with little or no coordination, overlapping mandates, weak capacities and financial limitations. As a result, service delivery is inefficient and accountability is poor.

Weak Capacities

Capacities of city corporations and municipalities are weak primarily due to lack of financial resources. City Corporations tend to be somewhat stronger than the municipalities. But in general inadequacy of resources limits ability to recruit good quality and adequate number of staff. This in turn seriously constrains the quantity and quality of urban services.

Governance Problems

Although urban LGIs are elected local bodies, they have very limited political and administrative authorities). De facto, they basically function as extended arms of national political parties to which they belong. Urban LGIs that belong to the same political party as the national government tend to be favoured in terms of resource allocation. Lack of autonomy often results in favour distribution in matters of contract awards and selection of staff. At the administrative level, there are coordination problems with national government staff posted at the district level.

Weak Finances and Absence of Financial Autonomy

Perhaps the most fundamental constraint is the inadequacy of resources available to urban LGIs and associated poor financial autonomy. Under the Legal Framework, urban LGIs can obtain resources from a number of sources. These include:

a) property tax;
b) rents from markets owned by urban LGIs;
c) fees from licenses issued to traders and non-motor vehicles;
d) fees from advertisements, cinema and entertainment;
e) sale of property/assets and
f) grants and loans from the government.

However, in practice, the returns are very low and resources are grossly inadequate in comparison with needs. Other than property tax, all other taxes are assigned to the national government. Transfers from national government to LGIs are ad-hoc and are not based on well- defined principles in the context of assigned accountabilities enshrined in the legal framework. As analysed in detail in Chapter 7, government transfers account for some 61 per cent of total urban LGI resources; charges and fees account for 25 per cent; taxes account for only 14 per cent; and there is no scope for market borrowing. The government budget is responsible for all transfer funding including grants and loans. Since the urban LGIs do not have any capacity for loan servicing, these government loans stay in the books as outstanding dues. Furthermore, while urban LGIs have access to a major source of tax revenue, the property tax, they do not flexibility to define proper property values or set the appropriate tax rate without the approval of the Ministry of Finance.

The urban agenda has clearly assumed added urgency. Some high-level policy decisions relating to urban governance, especially decentralization is critical to move forward with the urban agenda. Decentralization reforms must address the assignment of responsibilities with no overlaps and financial decentralization. There is considerable good practice international experience that Bangladesh can draw on in this regard. The PP2041 has articulated a solid vision for the urban sector and identified a broad strategic framework for realizing this vision. The 8FYP will draw on this in defining the urban governance strategy.

9.7 PERFORMANCE OF THE URBAN SECTOR DURING 7th FIVE YEAR PLAN PERIOD

9.7.1 Ministry of Housing and Public Works: Recent Achievements

National Housing Authority

National Housing Authority has completed 15 (fifteen) projects in 7th five year plan period at different locations of Bangladesh of which 7 (seven) were flat projects (849 flats) and 8 (Eight) were plot projects (1605 plots). All those flats & plots have been handed over to the allottees. Currently 15 flat & 16 plot projects (7286 flats & 2558 plots) are running to minimize acute housing problem & provide affordable housing for all. The contribution of PWD encompasses the entire spectrum of physical and social infrastructure for national development, national security and international relations. The main responsibilities of PWD are construction and maintenance of government buildings and establishments including Key Point Installations (KPIs). In order to enhance the accommodation facilities of the government officials in Dhaka city PWD has so far implemented nine projects and handed over 3012 no. of flats. As a result, total residential facilities for government officials increased from 8% to 10.8%. Construction of another 9734 flats under 17 projects is going on in Dhaka, Narayanganj, Chittagong and Noakhali. To ensure sustainable urban development, PWD has focused on energy efficient buildings and introduced installation of solar panels, Sewerage Treatment Plants (STPs) and rain water harvesting in several newly constructed structures. Besides two parks (12 acre) with modern facilities has been constructed in Chittagong City and another 210 acres is preserved. Therefore, office spaces measuring around 2.51 lac sft, auditorium and other infrastructures have been built and upgraded during this period. Besides, government office and residential facilities measuring more than 15 million square meters have been repaired/maintained/refurbished.

For the last few years, PWD is working on disaster resilient structures and built its capacity in this area under foreign aided project. To bring disaster resilience to the existing vulnerable buildings, PWD has completed a project named CNCRP in cooperation with Japanese counterpart and prepared six manuals on earth quake resistant new construction and retrofitting mechanism for strengthening old vulnerable buildings. On piloting basis those technologies has been implemented to strengthen the old risky Tejgaon fire station building successfully. At present old vulnerable hospitals, office buildings and other important structures are being retrofitted under the supervision of PWD.

Directorate of Government Accommodation

Through e-management system, all kinds of information and services for government employees have been simplified including allotment of houses in Dhaka. During the plan period (up-to 2018), 1249205 square feet new buildings have been constructed and construction areas of 23 million square meter government accommodation have been repaired. Two environment friendly sewerage treatment plants have been constructed and rain water harvesting activities of five projects have been completed. One project of CNCRP has been implemented for creation of human resource to ensure security of vulnerable buildings. Training Academy and Testing Laboratory Buildings including ancillary constructions have been done and 4998 officers/staffs have trained in the Academy. In addition, 250 structural plans have been formulated,

preservation of park/playground of 650 acres has been done and about 20km internal connecting roads have been built. Solar panel of 60 KW capacities power generation has been constructed as renewable energy.

Department of Architecture

Department of Architecture has prepared structure plans of physical infrastructure projects of national importance under different ministries and departments, which include Construction of Residential Buildings for Judges at 32 Districts project, Construction of National Board of Revenue Office Building project, Construction of IT Village at Korail Mauza project and different disable friendly infrastructure projects. Around 400 different type of architectural drawing for different Ministry, Department and Directorate according to their requirements has been rendered.

Urban Development Directorate

Complying with the vision and mission statement of Ministry of Housing & Public Works, Urban Development Directorate prepared master plan for divisional towns, district towns and upazilas covering paurashava and surrounding rural areas. Up to the year 2020, UDD has prepared 28 master plans, among the 03 divisional towns and 25 upazilas including 4 district towns and 19 paurashavas within the upazilas, and a total population 72, 58,014 has been brought under planned areas. As a result, Master plan prepared by UDD covered an area of 9881.45 sq km which is 6.70 per cent of total Bangladesh.

Development Authorities

Rajdhani Unnayan Kartripakkha: Detailed Area Plan (2016-2035) for Dhaka Metropolitan Development Plan Area has been formulated as well as Transit Oriented Development (TOD) is introduced in DAP (2016-2035). Rajuk has handed over 17000 residential plots and 1101 lease dead registration in this period. Rajuk has handed over 4366 number of flat in Uttara and constructed 27 flats in a 10 storey building in Gulshan area. RAJUK also Completed 462.42 km road network, 60 bridges, 2 Flyovers, 4 Overpass, 2 U-loops, 71 km lake, 22.39 km walkway, 10 main sewerage diversion line and other beautification and social work under Purbachal, Uttara 3rd Phase, Jhilmil, Hatirjheel, Gulshan-Banani-Baridhara lake development. Apart from these Uttara lake development, Kuril Purbachal 100 feet khal, Madani Avenue to Balu river, road construction has been completed.

Chattogram Development Authority: Chattogram Development Authority has allotted 3180 plots in residential areas in this period. In addition, about 50 km new roads have been built and widened under different projects. 1100-meter-long Kadamtali flyover, 1331.60-meter-long Bahadderhat Flyover & 6.18 Kilo Meter Muradpur Flyover has been constructed by CDA. Another 560-meter-long and 8.5-meter- wide RCC over-bridge has been constructed adjacent to Dewanhat Junction at Doublemooring Thana to Kadamtali. Construction of 24 flats has been completed for mid-level officers at Mehedibag Officers Quarters of CDA.

Khulna Development Authority: Khulna Development Authority came forward with fast track service in land clearance. Reconstruction of 7.52 km road at Shiromoni industrial area and 730 No's of residential & commercial plots have been developed. Among those 500 No's plots have been allotted to the people. Land acquisition for "Widening & improvement of Khulna shipyard road" project has been completed.

Rajshahi Development Authority: To ensure the sustainable transport infrastructure of the city RDA has constructed three road projects and added further 8.50 kilometre roads, drains and about 1.00 km four lane overpass to city's road network and drainage system as per recommendation of Rajshahi Metropolitan Development Plan, 2004-2024. For the first time in Bangladesh the concept of common duct to underground the utility services has also been implemented by these projects. These projects helped the city to reduce the city congestion problem and improve the communication between the northern city periphery area and the main CBD area of Rajshahi. Moreover, to improve the housing demand of the city RDA has developed two planned residential area named "Banalota Residential Area" and "Barnoi Residential Area" and distributed about 493 Nos. residential plots to the people. As targeted during the 7th five year plan the Revision project of the Rajshahi Metropolitan Development Plan, 2004-2024 has achieved its goal by forming its planning and coordination cell and updating the Physical feature data of the city.

Cox's bazar Development Authority: Cox's bazar Development Authority is the beacon of development in Cox's bazar city. Visually pleasing sculptures, LED lights have been installed in Cox's Bazar city by the authority to enhance the beauty, safety and security. Almost 10,000 saplings of different varieties have been planted in different areas of the authority under Greening project. Conservation project possessing fences have been installed to protect biodiversity including red crabs, turtles, dolphins and sea creepers.

Housing and Building Research Institute

During the plan period (up-to 2018), 6 research works on house building materials and the innovation of technology have been completed.1500 samples of construction materials and load bearing capacity of 12,000 construction establishments were examined, and 1600 persons were provided with training on housing and construction. The construction material of alternative bricks of 30000 and other construction materials have been produced as part of the construction materials introduced by the Institute. So far, 2300 construction workers from earthquake prone districts have been provided with awareness building training. In order to generate awareness among the people, disaster-proof infrastructure objects have been constructed in different places across the country under the Research and Awareness Building Project. For the first time, earth-quake exhibitions have been organized and guidelines on fire-fighting have been published.

9.7.2 Local Government Division (Ministry of Local Government, Rural Development and Cooperatives): Recent Achievements

Secretariat

To strengthen the local government system, enforce the rule of law, ensure transparency and accountability and to make the local government system more effective, different laws have been enacted and rules have been formulated. In addition, to improve the performance of the Pourashava, necessary rules have been formulated. Training has also been provided to 80,922 elected representatives from different level of local government institutions.

Water Supply and Sewerage Authorities (WASAs)

Dhaka WASA: During the plan period (up-to 2018), one water treatment plant was constructed having the refining capacity of 22.50 crore litre of water per day. The production capacity of WASA increased to 242

crore litre per day over the same period. In addition, 1366.16 kms water pipeline were constructed and rehabilitated, 226 deep tube-wells were installed and replaced. Further, 11.00 kms storm waterline were constructed and rehabilitated. Water system loss was brought down from 40% to 22%.

Chattogram WASA: During the same period, 45 deep tube-wells were installed and 14 water tanks were constructed. In order to ensure water quality, 1860 samples at consumer points and 360 samples at deep tube well points were tested. Water supply connections were provided to 6974 new dwellers due to increase of water lifting and expansion of pipelines. Non-revenue water was brought down from 24% to 16-17%. 148 km new water pipe-line was installed. In addition, two underground and one surface water reservoirs were constructed.

Khulna WASA: Construction of water treatment plant completed in order to improve water supply facilities in Khulna city. It produces 6.75 MLD safe water and supplies to city dwellers. In addition, 25.00 km of water line and 5000 new connections were given. The 'Flow Meter' has been introduced to collect water bills.

Rajshahi WASA: In Rajshahi WASA area, 115 km of water supply pipe-line, 26 deep tube wells, 28 tube wells with motor pump were installed. In addition, 2 mounted water tanker and 20 mobile generators have been bought.

City Corporations

Dhaka South and North City Corporation: During the plan period (up-to 2018), one flyover, 682.25 kms roads development, 5618 kms drains excavation, 420 kms footpaths, 14 foot over bridges, 13 intersection traffic signals, 48 signal intersection solar panel timer count down and auto signal have been constructed. In addition, 11,787 LED lights were installed. One Girls College, 10 sweeper quarters and 15 community centres, 1 maternity centre, 1 temple were constructed.

Chattogram City Corporation: Development of 490 kms roads and 34 kms drains completed and 30 kms of drains were maintained. Besides, 400 kms of road lights were installed and 400 kms of road lights were maintained. In addition, 35 schools, sweeper's colony and other buildings, 9 matrisadan, 77 bridges and culverts, 33 schools were constructed.

Rajshahi City Corporation: Construction and development of 290 kms roads, 85.24 km. drains, 24.4 kms footpaths, 76 kms drains, 3 modern markets were done. To ensure public safety 25 kms of road lights were installed.

Khulna City Corporation: Construction and development of 145 kms roads, 328.60 kms drains, installation of 130000 energy saving lamps, construction of a sanitary landfill, beautification of the city and fountains, construction of 8 ward offices were completed up-to 2018. To improve the sanitation situation, 790 sanitary latrines were constructed.

Sylhet City Corporation: During the plan period (up-to 2018), 79 kms of roads, 83 kms of drains, 11 kms of canals 7.5 kms of footpaths were constructed and 17kms of street lights, 100 number of load centres were installed. In addition, 4 schools were constructed.

Barisal City Corporation: During the plan period (up-to 2018), 45.00 kms road were repaired and developed and 28.40 kms drains, 26 cross drains were built. 10 ward offices were also constructed. Besides, 1280 sanitary latrines were constructed in the slum areas.

Narayanganj City Corporation: Between 2015 and 2018, 93.48 kms roads were constructed and

21.50kms roads were repaired and developed, and 69.24kms drains, 135.97kms road lights and 19.68 kms footpaths were constructed. In addition, 3 multi-storied markets cum apartments and some commercial markets were constructed. Tk. 132.12 lakh were distributed as microcredit for the betterment of the marginalized people.

Cumilla City Corporation: 55.00 kms roads, 36 kms of drain, 9.5 kms of footpaths were constructed and 4 markets were developed. 6 garbage trucks were procured and 18kms of canals were re-excavated. Besides, as a part of beautification of the city 44 fountains, 39 street lights, garden lights were installed and gardens are created beside the roads.

Gazipur City Corporation: 18 kms of drains and 80 kms of roads were constructed in last three years. Besides, 28 deep tube well, 50 kms of pipe line and 10,000 road lights were installed. Notwithstanding, 65 metre culvert, 1 school, 1 mosque and 2 graveyards were constructed.

Rangpur City Corporation: Under Rangpur City Corporation, 161.00 kms roads were repaired and developed, 51 kms CC roads, 18.00 kms drains were constructed. Besides, different internal roads and drains of market places were constructed.

The Local Government Engineering Department (LGED*)*

LGED through its intervention since 1990s has tried to address planned intervention in infrastructure development, maintenance and rehabilitation needs and to develop the capacity of the municipalities, especially to raise income, improve financial management capacity and design municipal services in a planned way. Various development projects have been implemented related to a range of urban infrastructure services including water supply, drainage, sanitation, urban roads, and urban market places. Additionally, projects and programmes have been implemented to develop the capacities of urban LGIs. These projects have been implemented in nine city corporations and 328 municipalities, and they have directly benefitted around 50 million people having impact on urban economy, environment, and livelihood. The overall urban milieu has marched into an environment of accelerated growth.

Lessons Learnt from Past Development Interventions and Key Constrains

In addition to the constraint imposed by the inadequacy of the urban governance structure noted earlier, as an input to the development of the urban strategy for the 8FYP, it will be helpful to review the good practices of past interventions and constraints that were faced.

A. Urban Accessibility and Transport

To meet the growing infrastructure demand owing to rapid urbanization, the municipalities are being extended to service the adjoining villages gradually. Therefore, the adjoining villages are requiring more

and planned urban infrastructures which are not being met properly. For example, the urban infrastructure should be inclusive with drains, roads, footpath, median as well as streetlight. Under the 7FYP, a World Bank-supported Municipal Governance Support Project (MGSP) has shown good-practice examples of inclusive infrastructures in 26 municipalities. The urban infrastructures included roads along with drains, medians and footpath. The roads were developed with at least 6m width to meet the present and future traffic.

B. Urban Drainage

Bangladesh has been experiencing erratic rainfall owing to the effect of climate change, floods in some municipalities and water logging in a major number of municipalities has become a common feature during the monsoon period. In addition to human sufferings, the water logging is causing damage to roads and properties. The good practice response has involved the following:

- Construction of drainage system according to drainage master plan and considering a whole network from starting to outfall.

- The urban roads of the municipalities that remain water logged during monsoon are being constructed as concrete or block roads. Although the solution is good, it is not sustainable in some municipalities owing to defective construction practices or lack of knowledge of technical staff of the municipalities. Therefore, there should be a good research regarding the weaknesses involved in the design and construction methods of concrete roads and block roads.

Constraints

- In the coastal districts, drainage plans must include ebbs and tides. It should be designed carefully on a case by case basis. The usual and average design of technical staff may not be a good practice.

- The urban drainage does not work properly if not accompanied by waste management practices. The drains get clogged and leads to logging of sewage water.

C. Urban Amenities: Parks, Waterfront Parks, Children Parks, Playground, Public Plaza

Parks are the lungs of the cities as they can provide pure air to the citizen. During the 7FYP, some parks have been constructed. Some of the good practices here are

- Waterfront parks that can be constructed in synergy with other development projects such as river, canal dredging of BWDB, BIWTA or LGED. It that case, there is more value addition to these types of projects.

- In the bridge construction projects, LGED has been utilizing the river banks (the space acquired as approach of bridge or being used as ground level of viaduct) as waterfront parks.

- There were concerns regarding the management of children parks during its planning stage. The municipalities have been able to operate them effectively by leasing them. The parks have created a good number of employment opportunities in addition to providing public satisfaction.

Constraints

- Space is a major constraint for parks and public space development. More developed nations use the riverfront spaces for parks. In Bangladesh, the riverfront spaces have been occupied or being occupied for illegal settlements or business. The national river conservation commission and BIWTA have been active to restore the riverfront public spaces. LGED can also take the lead for restoration of riverfront spaces and development with help from the district administration.

- Urban land shortage is acute that constrains public space for parks, playgrounds etc. The school grounds and other available spaces can also be used for developing small parks, playgrounds. The municipalities can motivate people to donate land for recreational purpose.

D. Solid Waste Management

In the area of solid waste management, the traditional approach to collecting solid waste and burying them in a landfill dump is giving way to more scientific and environmentally safe approach to complete solution method. The complete solution method includes integrated waste management system that includes transfer station, compost plant, biogas plant, controlled landfill cell, faecal sludge management etc. Three LGED projects have been working for complete solution in waste management in four municipalities. In Jashore, an integrated waste management plant has gone under successful operation. By June 2021, three other municipalities will have complete solution for solid waste management. The same concept has been incorporated in a number of pipeline projects assisted by development partners.

E. Urban Governance

Urban governance involves a range of actors, institutions and dynamic actions that relates to the capacity to deliver the services to the citizen effectively. Since 1990s, through its different developing partner assisted projects, LGED has been working for improving urban governance in the municipalities. It has been always a challenge to sustain the good practices after the completion of the projects. Therefore, a good strategy is to be developed to mainstream urban governance in urban LGIs.

<u>The town level coordination committees (TLCC)</u>

To facilitate urban governance, a number of LGED projects had taken the initiative to form town level coordination committees in the municipalities. It was a part of the institutionalization process to promote urban governance. Although TLCCs have been formed in all the municipalities, their activities and influence over the development decisions vary considerably and depend on the attitude of the mayors.

<u>Revenue generation and self-reliance</u>

City corporations and municipalities remain strongly dependent on government transfers. Own resource mobilization has generally lagged behind. There is no good practice example so far. This is one area where the 8FYP will seek to make a break through based on the recommendations in Chapter 7, Part 2.

Capacity Development of Municipalities

a) ICT based office management & decision making

Based on several interventions of different projects of LGED, a number of software was developed for tax billing & collection, water billing etc. The municipal staffs were trained to operate the software. Yet, there is ample scope for improvement regarding tax assessment, improvement of transparency, office automation etc. Under the 8FYP, ICT-based office management and decision making will be a priority.

b) Training of Municipality Staff

LGED is entrusted with providing training to most of the staff of the municipalities. Every year, LGED provides training to around 5000 staff with a revenue budget of around 1.20 crore BDT and project budget of around 2.5 crore BDT. To provide training in a comprehensive way, the urban management unit of LGED requires more staff and capacity building.

c) Physical Development Plan/ Master Plan

To develop the municipalities in a comprehensive, sustainable and planned way, development plan is the most important tool. Local Government Division and Local Government Engineering Department have so far developed development plans for 256 municipalities. Six development plans of different municipalities were developed by RAJUK and other development authorities. Therefore, out of 329 municipalities, 67 municipalities are still waiting for a development plan.

9.7.3 Development Programmes for Addressing Congestion Problems of Dhaka

For addressing the transport problems of Dhaka megacity, the government has implemented several flyover projects and is currently implementing a metro-rail project. The capital city has witnessed seven flyovers built in and around it over the past 15 years, aiming to mitigate its nagging traffic jams. Seven flyovers --- Mohakhali, Khilgaon, Tejgaon, Banani, Kuril, Jatrabari and Mogbazar-- cumulatively offer an elevated road spanning of 29 kilometres and costing over Tk 4,000 crore.

As noted in the Transport Chapter (Chapter 6, part 2), the government has initiated a major program to introduce mass transit facilities for Dhaka. Some 6 MRT lines and 1 BRT line will be completed by 2035 at a cost of about US$23.2 Billion. Construction work of the Tk 22,000-crore Mass Rapid Transit (MRT Line)-6, which began in 2016 is expected to be opened to the public on December 16, 2021. This will be a major breakthrough in Dhaka urban transportation and is expected to considerably easy traffic congestion.

9.8 8FYP URBAN DEVELOPMENT STRATEGY

The PP2041 has developed a very thoughtful and well-articulated urban sector vision and broad development strategy to implement that vision. Essentially, the vision and strategy entail the development of a road map that will allow Bangladesh to have an urban environment in FY2041that is now found in HIC like Korea. To move towards that goal, the PP2041 envisages major institutional reforms for urban and rural LGIs. The reforms entail institution of an urban LGI governance structure that is characterized by the following features found in high-performing UMICs and HICs:

1) Cities will be characterized by a governance system that entails democratically elected, strong and accountable city governments. These urban governments are independent of the political dominance of the national government and are only accountable to the residents of the city.
2) City governments will have well-defined responsibilities that are enshrined in the legal framework. These responsibilities do not change based on national or local election results. There is no conflict or overlap in delivering service with higher levels of government.
3) The coordination mechanisms with higher levels of government in the management of common areas will be well defined within the principle that matters that involve exclusively the interest of the city are primarily the responsibility of the city.
4) Financial autonomy of cities will be ensured through a legally defined financial framework that involves sharing of taxes, national grants and market borrowing.
5) User charges and beneficiary-pays-principle will play a major role in city finances.
6) To protect public interests and provide a common reference point for the country, minimum standards will be defined for such issues as environmental protection, water quality and air quality and these standards are monitored by the higher government.
7) To ensure an adequate supply of certain merit /public goods, the national grant system will be used for co-financing or as incentive payments.
8) Urban planning and strategy will be a shared responsibility between the city and higher-level governments. At the city level, the planning process will be participatory with a well-defined and structured consultation process with the residents.

The above governance reforms of urban LGIs articulated in the PP2041 is based on a recognition that in a market economy urbanization will be linked to the growth of economic activities. The role of public policy to influence the pattern of urbanization will depend upon incentives, regulations, public investments and institutions. Global experience clearly shows the need for decentralized and autonomous urban governments as a key part of the political and administrative layout underlying a HIC. A sound strategy for reforming city management calls as articulated above calls for a three-pronged approach: (i) redefining public-private roles with a view to strengthening this partnership for better services; (ii) strengthening capabilities of public urban service institutions; and (iii) establishing an accountable city government. Under the 8FYP, the LGD will take the lead to develop the first phase of a time-bound actionable implementation plan for the periods FY2021-FY2025 in consultation with the LGIs, other ministries and national research institutions. This action plan will be submitted to the cabinet for approval by December 2021 with implementation targeted for July 2022.

Along with these over-arching urban governance reforms, the functioning of the existing urban institutions and service agencies will be strengthened to improve the delivery of basic urban services. The main strategic considerations that will guide this effort are discussed below.

9.8.1 Spatial Development Strategies

Promoting Balanced Urbanization with Focus on Secondary Cities

One major feature of urbanization in Bangladesh is the over-whelming predominance of the capital city Dhaka which accounts for about 32 per cent of the total urban population of Bangladesh. Dhaka is dominating not only in terms of its share of urban population but also in terms of the concentration of civil

administration, economy, trade, commerce and industry. Currently Dhaka accounts for about 34% of the country's GDP. Such excessive concentration of population and economic activities has probably exceeded the optimal limits and the ranking of Dhaka by Economist Intelligence Unit as the 3rd lowest city in terms of liveability bears ample testimony to this fact.

In view of the negative consequences of Dhaka's overgrowth, the 8FYP would focus on the development of secondary cities which are medium sized administrative, political, industrial, transportation, tourism and historical centres functioning at a level below primary or metropolitan cities. They range in population from 100,000 to 2.5 million and play a crucial role as economic, social and logistics hubs or centres. It is now widely recognized that systems of secondary cities will have a greater influence upon the economic development of nations and larger geographic regions in the future. There are about 42 secondary cities in Bangladesh. For making the secondary cities more competitive and attractive as places for investment the government would take measures for the development of infrastructure, services, innovation, human capital, good government and strong enabling environments. Special emphasis will be given on

- The provision of common user facilities (warehousing, infrastructure)
- Development of technology and innovation parks
- Streamlining import-export approval and clearance
- Investment in high quality training, research and development facilities.
- Attracting private investments in infrastructure and utilities that reduce production and distribution costs within their economies

The government will also adopt an urbanization strategy that will guide investment decisions around the country for balanced urban and regional development. Following steps will be taken during the plan period to implement the strategy:

- Preparation of urban development plans for all the urban areas/centres consisting of Structure Plans, Detailed Area Plans and Action Plans
- Enact appropriate laws to formalize the current building control practices in the urban areas around the country.
- Extending the Pourashava plans that were prepared the legal status via gazettes.
- Preparation of District level regional plans and Upazila level sub-regional plans. Through these linkages can be established between Macro (National) level planning (FYP, Perspective Plan) and Micro (Regional/Sub-regional/Local) level planning
- Preparations of infrastructure plan (road, drain, natural water course) that can help prioritize investment in drainage planning and sewerage infrastructure throughout the country.
- On a pilot basis, carry out one or more tools in land management such as guided land development (GLD), land readjustment, or land pooling in the fringe areas of some urban areas of the country.
- Land use regulation for areas outside the jurisdiction of the statutory urban plans will be developed and enforced in view of the fact that many areas will become urban soon.
- Undertake urban conservation and renewal projects for old, traditional and culturally rich areas. Such plans will use traditional tools such as provision of infrastructure and building control as well as transfer of development rights. Other appropriately designed incentives may include low or no holding tax for buildings worthy of conservation.

- Adopt building codes for the entire country. [Currently there are building codes for small number of urban areas such as Dhaka and Chittagong cities.]
- Enable concerned agencies in enforcing building codes to protect buildings against hazards such as fire.
- Prepare plans to deal with emerging hazards that will have implication for land development and urban expansion.

Promotion of Economic Development Corridor (EDC)

The promotion of economic development corridors within and between countries has become an important focus of attention in recent years. A corridor is a system made up of several components, including infrastructure (roads, railways, and ports), transport and logistics services and regulations which include several secondary cities and metropolitan areas. Secondary and metropolitan cities located in the corridor will be planned for development of specialized production, value-adding, export, distribution of goods and services, and logistics hubs. Priority will be given to investment in developing ICT systems and networks, and to soft infrastructure support, such as education and training of small and micro-business networking. The 8FYP will give special emphasis on the development of hard and soft infrastructure (i.e., roads, rail, air services and political, social, and business networks) for facilitating the flows of materials, people, trade, goods, services, and information among the cities of the development corridor.

Development of EDCs will be helpful in balancing population pressure and distribution of economic development across a range of cities (small, medium and large). This will also help development of Special Economic Zones (SEZs) in the country. SEZs closer to large cities will be able to specialize in knowledge-based and high-tech industries and activities because of the availability of appropriate business environment and thus would achieve higher efficiency and productivity. Similarly, SEZs closer to medium and small-sized cities will be able to specialize in agro-based and moderate technology manufacturing industries.

9.8.2 Institutional Development Strategies

Institutional Reform at the Local Level

Sustainable urbanization cannot be achieved without institutional arrangements capable of exploiting the economic potentials of cities and towns. Urban development therefore should encompass institutional strengthening and capacity building, decentralization, community participation, and involvement of the private sector in the development of the urban sector. Institutional reform at the local level, therefore, will focus on the following:

Involving Stakeholders in Planning and Development

All the organizations and institutions which operate at the local level in connection with the development and/or operation and maintenance of infrastructure and services as well as socio-economic development will be involved for implementation of Development Programmes. The local government would be the lead agency for coordination and integration of all the efforts of participating organizations including the local government, public sector agencies, private sector actors, non-governmental organizations and the community. This would maximize efficiency and effectiveness of development programmes.

Proper Definition of Institutional Responsibilities

Clear division of powers and allocation of resources in the major areas of urban planning, development and management across different levels of governments will be ensured so that there is no overlap or gap in implementation of an agreed urban plan. Steps will be taken for clear division of powers and allocation of resources at the municipal level among the various agencies and departments within the municipality.

Capacity Building of Urban Local Government

Capacity building of local government bodies would focus on strengthening managerial, technical, financial and regulatory capabilities. Area specific skills that are very important for enhancing capacity of urban local governments are the following:

- **Managerial:** Policymaking, conflict resolution, establishing administrative and public participation processes, and developing training programmes and information systems etc.
- **Technical:** Planning, operations and maintenance in key areas of urban development and management.
- **Regulatory:** revising laws and codes and setting regulatory standards.
- **Financial:** capital budgeting municipal accounting and finance tariff and tax structures, revenue collection procedures etc.
- **Urban Planning:** capacity development of municipalities for updating and enforcement of master plan. Adequate staff with urban planners and necessary instruments for enforcement should be developed.

For reducing dependence of Paurashavas and City Corporations on central government agencies steps would be taken for improving the staff capabilities of these urban local bodies. Emphasis would be given on quantitative as well as qualitative aspects. It is obvious that professionals such as urban planners, engineers, doctors, veterinary specialists, finance and management professionals, economists, etc. would be required and such requirements should be reflected in the staffing patterns of the Paurashavas, especially the 'A' class Pourashavas. Organograms of Local Government Bodies therefore should be revised on the basis of such needs.

9.8.3 Strategies for Development of Infrastructure and Services

Basic Urban Services

This sub-sector includes water supply, sewage and waste water treatment, drainage, and services such as street lights. National government agencies and the local government bodies have the primary responsibility to provide or enable delivery of services. There are, however, a host of other actors, including the private sector, communities and non-governmental organizations that can participate in service provision and management under the coordination of local authorities /urban local bodies. To ensure more equitable provision of basic infrastructure and service delivery system, steps will be taken to establish support mechanisms to enable people living in poverty and the disadvantaged to have access to basic infrastructure and services.

One important objective that deserves emphasis is that reaching a quantitative target is not enough. Sustaining the achievements in light of the growing population also requires planning, resource allocation and action. The strategic focus of the plan in this sub-sector would be the following:

- Preparation of strategic plan for sustainable water supply (both surface and underground)
- Development of appropriate and affordable technological options in the hydro-geologically difficult and problematic areas.
- Technologies such as rainwater harvesting needs to be explored (this might have added benefit of reducing run-off)
- Ensure enforcement and capacity building against polluters
- Preparation of sewerage master plan
- Implementation of Faecal Sludge Management (FSM) master plan to serve the decentralized septic task
- Strengthen sewage collection services from slums and low-income communities
- Development of sewage treatment plant for all cities
- Use energy efficient and low maintenance street and community lighting systems
- Help to urban local government bodies in preparing waste management master plans. This is important for smaller urban areas where there is still room for setting aside land for transfer stations and dump sites.
- Incentivize private sector investment in solid waste recycling
- Make citizens aware to sort waste at source and dump appropriately.

Water and Sanitation Services

Creating an enabling environment

- Preparation of strategic plan for sustainable water supply (both surface and underground)
- Development of appropriate and affordable technological options in the hydro-geologically difficult and problematic areas.
- Technologies such as rainwater harvesting needs to be explored (this might have added benefit of reducing run-off)
- Ensure enforcement and capacity building against polluters
- Preparation of sewerage master plan and in that context creates an enabling environment for FSM. The following activities will be conducted to enable FSM systems to flourish:

➢ ***Implementing the Institutional Regulatory framework:*** The Institutional Regulatory Framework for FSM (IRF-FSM) was published and disseminated by the Policy Support Branch (PSB) of the Local Government Division (LGD) under the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C) in 2017. DPHE established an FSM support cell to plan, design and monitor the activities of capacity building, awareness campaigns, and standardization of the services and implementation of IRF-FSM through different projects. With the IRF-FSM established, GoB will now focus on putting the framework into practice and scale up existing efforts under the 8th Plan.

- ***Strengthening institutional capacity of municipalities:*** The very limited institutional capacity of municipalities is one of the major drawbacks in the operationalization of not only FSM but broader water and sanitation services. Municipalities suffer from inadequate human resources as well as financial constraints and lack the technology and means to ensure sustainable service delivery. During the 8FYP period, the GoB will take necessary steps to equip the municipalities and strengthen their capacity to provide universal access to improved water and sanitation services in a financially sustainable manner. Special attention will be given to provide skill development trainings to potential women's group for operation of sanitation services and to encourage municipalities to deploy women workers.

- ***Stimulating private sector engagement:*** The Sector Development Plan (SDP) advocates increasing private sector participation in sanitation services. However, the country is yet to see large scale private sector engagement in the sector. Experts consider private sector engagement as a key factor behind successful operation of FSM services. Some private sector entities are currently engaged in FSM services. However, awareness surrounding FSM in secondary towns is low. Private sector will be involved in the planning stages of FSM services which create a gap when it comes to service delivery. At present, incentives for private sector to engage in FSM services remain low. Suitable business models and availability of attractive financing will be ensured to encourage/stimulating private sector engagement towards sustainable service delivery.

- ***Developing Sanitation Safety Plan:*** Bangladesh has already developed a water safety plan (WSP) to promote a risk-based approach to water safety and to subsequently protect public health. Similarly, a sanitation safety plan will be prepared with a view to articulate a step-by-step risk-based approach to assist in the implementation of local level risk assessment and management for the sanitation service chain. The sanitation safety plan would be targeted for the local level authorities but could also be used in other sector actors such as community-based organizations and NGOs.

In the area of sanitation, the strategy entails capturing the entire sanitation value chain for an effective faecal sludge management (FSM) in all cities and pauroshavas. It will aim at containing the faecal sludge by empting properly and transporting those to a treatment facility so that there is no leakage to the external environment. The treatment facilities or plants would need to be widely built and maintained in pourashovas to process faecal sludge for further use as compost or for safely discharging into the environment.

FSM services are yet to gain significant foothold in Bangladesh. However, GoB has been active in operationalizing FSM. One of the first initiatives in FSM was by DPHE under the "Secondary Towns Water Supply and Sanitation Sector Project" (GoB-ADB) from 2006 to June 2014, in which faecal sludge treatment plants (FSTPs) were constructed in 11 secondary pourashavas. DPHE implemented the construction and handed over the completed FSTPs to the pourashavas for ownership, operation and management. More recently, GoB has taken the initiative to build more than 100 FSTPs across the country with support from development partners such as World Bank, ADB, and Islamic Development Bank. Many of these projects also involve the provision of vacutugs which are used for mechanized collection and transportation of faecal sludge. The Local Government Division (LGD) has recently established CWIS-FSM (city wide inclusive sanitation-FSM) support cell in the DPHE in a notion to accelerate overall sanitation target of SDG6.2. The CWIS-FSM support cell will work in collaboration with the sector actors

for sustainable FSM operation. To ensure sustainability of these FSTPs and efficiency of the overall FSM, it is also essential to draw lessons from previous experiences as well as on-going good practices in the sector. One such model of FSM is illustrated in Box [9.1].

Box 9.1: Sakhipur FSTP and Co-Composting Plant

The Sakhipur FSTP and co-composting plant is located in Tangail district, 3 km from the town centre. The municipality owns the plant with technical support from WaterAid and NGO partner BASA. With operations beginning in 2016, the plant and associated service has demonstrated a feasible mechanism for operating FSM. The vacutug owned by the municipality is used to collect faecal sludge from households after interested households submit an application and pay emptying fees. The vacutug is then used to transport the collected sludge to the FSTP and co-composting plant.

The treatment consists of 10 unplanted drying beds, and the dried sludge is co-composted with organic waste in the co-composting plant located within the FSTP compound. The compost is packaged and sold in the market. Local farmers use this compost as a soil conditioner and their feedback is encouraging. The Department of Agricultural Extension at Sakhipur has been providing further technical guidance for reuse and distribution among local farmers.

Currently, the operation and maintenance of the plant is managed jointly by the Municipality and WaterAid. Income is generated from the tariffs for waste collection and from compost sales, recovering about 70% of the cost. Although the plant is yet to be financially self-sustainable, it has demonstrated a working modality of FSM services capturing the entire sanitation value chain, which can be scaled up further.

Urban Transportation

Cities are the major sources of national economic growth while transport is considered as the lifeblood of cities. Poor transport inhibits growth of cities and makes them dysfunctional. Urban transportation strategies will focus on developing an integrated and balanced transportation system taking into consideration the needs of the road system, non-motorized transport, public passenger transport and mass transit issues such as a city's balance in the locations of employment and housing, demand management, and the roles for the public and private sectors.

Reducing congestion in city roads, especially in Dhaka Metropolitan Area, would depend on considerable reduction of dependency on private automobiles, taxi cabs, baby taxies, and non-motorized transport modes such as rickshaws. Steps, therefore, have been taken to introduce rail-based mass transit system and Bus Rapid Transit in Dhaka. Such systems will also be introduced in other primary cities, especially in Chattogram. Other strategies to address the problems of urban transportation would include the following:

- Preparation of comprehensive traffic management plan for major cities which includes establishment of hierarchy of roads, ensure footpath and pedestrian ways, provide sustainable and efficient public transport services and ensure multi-modal integration.
- Provision of sustainable and appropriate public transport services in cities and ensuring regulatory measure for efficient, reliable, affordable, and convenient public transport services.
- Controlling car population by introducing appropriate taxation mechanism and incentivizing public transport user.
- Controlling emission by enforcing maintenance standard, fuel standard etc.

- The Government will provide fiscal incentives for hybrid technologies, electric vehicles and imposing strict penalties for the violation of environmental codes by polluters in the transportation sector.
- Preparation of city specific comprehensive plan for Non-Motorized Transport fostering safer non-motorized vehicle operations.
- Urban road projects in large, medium and small municipalities should be developed as inclusive infrastructures i.e. roads, drains, footpath, median simultaneously. The urban roads should be at least 6.0 m wide.
- Imposition of traffic and road discipline strictly taking help of loses circuit infrared cameras.
- Ensuring training and appropriate skill for drivers
- Patronizing Transit Oriented Development (TOD) in cities with high capacity public transportation (MRT/LRT/BRT).
- Linking major cities with surrounding towns with good road, water and rail infrastructure and good public transport services
- Establishment of water ways where appropriate and integrate with rail and road
- Restructuring institutional arrangement to manage transport and public transport services and enhance capacity of the concerned institution.
- Introduction of traffic demand management to reduce traffic volume through such measures as parking prohibitions, fuel pricing, charges for use of specific routes, limiting entry to city centre, encouragement to public transport, pedestrianization of congested areas, etc.
- Introduction of Intelligent Transport System (ITS) in Dhaka for covering such areas as electronic road pricing, traffic management, integrated ticketing systems for different public transport modes, and coordination of public transport modes and online timetables.

9.8.4 Urban Land and Housing Development Strategies

Urban land development and management

Sound land management policies are crucial in solving urban land problems. The government will take appropriate measures to promote sustainable land-use planning and innovative land management practices with particular focus on:

- Developing land information system to support planning and decision-making by local authorities, private sector investments and infrastructure development decisions by the government.
- Using appropriate planning tools (structure/strategic planning, urban/detailed area planning, action planning) for promoting land use patterns in the desired direction.
- Applying participatory approaches to land development to promote efficient and sustainable land development through techniques such as Land Pooling / Readjustment and Guided Land Development
- Policy instruments such as land pooling and land readjustment will be used in innovative public-private-community partnerships to manage and coordinate urban expansion. Existing laws regulating transaction, development and access to land will be reviewed and modified to support innovative land development and management practices that facilitate land pooling, land readjustment, guided land development, development of the informal sector and poor's access to land.

- Following the National Housing Policy (NHP)-2016 urban land bank will be established in coordination with land ministry to materialize housing development process with unutilized abundant government land (*Khas* Land).

Housing Development

The government's main role will be to act as an 'enabler' rather than a provider of housing. The strategies will focus on.

- Helping the land market to work efficiently by modernizing the legal and regulatory framework, computerizing the land record system and improving the efficiency of the recording, registration, and mapping of house ownership and transactions.
- Creating Efficient Housing Market through continuous assessment of housing demand and supply as well as collection, analysis and dissemination of information about housing markets on a regular basis.
- Improving the Mechanism for Financing Housing by stimulating the efficiency and the dynamism of the mortgage market by ensuring a level playing field, carrying out reforms in land administration and regulatory environment, and restructuring BHBFC
- Providing Basic Infrastructure and Services.
- Supporting Development of Appropriate Building Materials and Technologies.
- Extending housing Loans through Financial Institutions to vulnerable and disadvantaged groups, low-income people and people living in poverty. The range of financial institutions will be broadened particularly to cater for the provision of small loans.
- Consider construction of social housing projects with particular emphasis on developing model and design of projects in view of the fact that large apartment buildings in social housing projects may be turned into poverty ghettos.
- Undertaking programmes for physical improvement of the slum/informal settlements that will greatly facilitate the integration of the settlements with the wider urban area and also improve quality of life of their residents.
- Development of rental housing, which caters for the needs of the majority of the low-income households. This renting ranges from getting and / or sharing a room in a slum area to being provided affordable cluster housing by private developers.
- Exploring the possibility of providing collective tenure security for communities so as to eliminate the need for individual titling and ameliorating land speculation and price increases. Group tenure arrangements, whereby block is registered under a lease agreement to the group or a local authority will also be explored.
- To Ensure equitable distribution of resource, special quota will be kept for poor and challenged people in allocation process of publicly developed plots. Land development activities commenced by community organization and non-profit organizations will be given special support (NHP-2016)
- For addressing backlog in housing supply PPP can be used. Government can release government owned land for PPP for lower and lower middle-income people.
- As emphasized by the National Housing Policy low income people will be subsidized in land allocation process through the profit gained from selling of land at proper price to high income

people for housing, industrial/commercial and other similar non-residential uses. Similar system will be adopted for flat distribution.

- Providing housing for all including the shelter less and implementing the goals and objectives of the Housing Policy through construction of residential flats, and plots.
- Enforcement of real estate development and residential land development laws to accommodate low income population.

9.8.5 Urban Environmental and Disaster Management strategies

Urban Environmental Management

The adverse environmental conditions resulting from inadequate waste management, poor drainage, air pollution, lack of access to safe drinking water and sanitation, exposure to excessive noise levels, as well as inadequate health services not only exact a heavy toll on the quality of life but also cause irreparable damage to natural ecosystems in cities and surrounding areas. Since the environmental problems are complex, multidimensional, and interactive, addressing these problems requires the combined efforts of many actors including the national and local governments, the private sector and the civil society.

The government would emphasize a holistic and integrated approach, with particular attention to participatory planning and management, public-private partnerships, capacity building and cost-recovery. Specific measures that will be taken during the plan period include:

- Designating all ponds/water bodies in Detailed Area Plan Map of Dhaka and protect them according to the ecological importance and public interest.
- Stopping housing estate, industries and other development work in wetlands through earth filling.
- Avoiding water bodies during planning of roads, housing and industrial estates.
- Enhancing plantation and gardening to increase the natural beauty in urban areas.
- Preserving the wetlands like ponds, beels, khals demarking buffer distance as lakes.
- Avoiding critical ecological area and refuge sites from development works.
- Promoting low/no polluting technology
- Introducing and promoting different environmental improvement initiatives and green initiatives e.g. green building, energy efficient building, zero emission building, green city, etc.
- Introducing environmental audit, energy audit and water audit along with financial audit
- Extending the sewerage network to cover 10% of households in city areas within the plan period and bringing all sewage in treatment plant
- Treating solid waste management as a system (i.e. together with collection, disposal and resource recovery) and as a priority sector as it is tied to many ills such as waterlogging. Some of the general tools to achieve the goals are:
    - Incentivizing firms for door to door collection where it still does not exist.
    - Awareness building to increase sorting and recycling.
    - Promoting 3R (provide easy access of financing)
    - Promoting Waste to Energy where appropriate
    - Given large organic content, encourage composting

- Improvement of Environmental/Ecological Health of Rivers flowing through or near the cities and urban areas e.g. Buriganga, Sitalakkhya, Turag, Balu, Bongshi, Moyuri (in Khulna), Karnaphuli (Chattogram), etc.
- Improvement of public transport- metro rail, Rapid Bus Transit, good rail network, good network of navigable rivers encouraging private sector participation.
- Enforcement of Polluter Pay Principle
- Capacity building of DoE in monitoring, investigating, and examining pollution

Urban Climate Change and Disaster Management

One of the key emerging issues that cities and towns are to contend with is climate change, with adverse impacts capable of undermining the ability of cities to achieve sustainable development. Urban areas in the country face a number institutional, planning and governance challenges to address the climate change. These include problems of coordination among various local government institutions and central government agencies, establishing more effective planning and urban management practices that take into account Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA), financing disaster management activities and climate change adaptation, and community participation in disaster preparedness, planning and climate change adaptation. Keeping in view the above-mentioned problems, the government will take following steps during the 8FYP period:

Strengthening Institutions

- Strengthen City Disaster Management Committee (CDMC) involving other stakeholders such as the private sector, research institutes, national agencies and utility companies.
- Strengthen monitoring and evaluation of the existing mechanisms for compliance and enforcement of laws, regulations etc. through conducting regular capacity building workshops of city personnel. Sensitize legislations, regulations and codes in relation to Climate Change (CC) and Disaster Risk Reduction (DRR).
- Promote close coordination and cooperation among national disaster management and environmental management agencies (i.e. Department of Environment (DoE), department of Disaster Management (DoDM)) urban local bodies (City Corporations and Paurashavas), non-governmental and private sector organizations;
- Integrate city CC-DRR policies and plans in national preparedness and response system. Strengthen partnerships with relevant organizations for technical assistance, researches and techno-environment projects.

Planning

- Prepare and implement integrated, environmentally-sound urban planning and management incorporating environmental and disaster related information and reflecting environmental and disaster management policies and standards. Considerations will also be given to spatial, intersectoral, inter-temporal and environmental media related factors with special attention to key aspects of land and water-use planning.

- Review and update the city's transportation plan to include disaster risk reduction measures (providing accessibility to and linkages with risk-prone areas). Integrate CC-DRR in all key sectors through multi-stakeholder and participatory workshops.
- Establishment of a comprehensive information system that identifies and assesses the risks involved in disaster-prone areas and integrate it into urban planning and design.
- Preparing community-based disaster preparedness and response plans putting emphasis on early warning system that reaches everyone, measures to protect houses, identification of safe evacuation sites and provisions to help those less able to move quickly.

Community Participation

- Enhance disaster preparedness and response capabilities through the contributions of the volunteers, local community groups and non-governmental organizations.
- Facilitate the operation of the disaster preparedness and response mechanisms in a much more coordinated but flexible manner through partnership arrangements with the private sector and in close coordination with all community groups
- Develop Municipal-Community Partnership (MCP) to improve, basic utilities, social services and neighbourhood environment.

9.9 8FYP URBAN SECTOR GOALS, STRATEGIES AND PROGRAMMES BY MINISTRIES/DIVISIONS

9.9.1 Ministry of Housing and Public Works

Goal

Development of sustainable and safe infrastructure through ensuring proper planning, adequate research and optimum use of land for cost effective housing and planned urbanization.

Major Urban Development Functions

- Planning and undertaking of activities to solve housing problem of the country
- Preparation of architectural and structural design of public buildings and other infrastructure, their construction and maintenance
- Preparation of laws and policies to promote housing sector
- Planned urbanization, proper use of land and development
- Undertaking activities to solve the accommodation problem of government officers and staff
- Conducting research and innovate technology on urbanization, housing, construction of buildings, construction materials and techniques
- Creation of opportunities for involvement of the private sector in solving urbanization and housing problems with monitoring of customer delivery services and help enforcement of contracts.

Table 9.9: Objectives, Activities and Implementing Agencies

Strategic Objectives	Proposed Activities	Implementing Departments/Agencies
Planned Urbanization	Formulate/modernize and implement Detailed Area Plan, Master Plan and Structural Plan	RAJUK, CDA, KDA, PWD, RDA, CoxDA
	Formulate detailed area plan, master plan and structural plan for areas outside Rajuk, CDA, KDA, and RDA	Urban Development Directorate
	Construct link roads, flyovers, underpasses, overpasses and bypasses	PWD, RAJUK, CDA, KDA, RDA, CoxDA
	Preserve and develop open spaces, playgrounds, parks, lakes, canals, water body and implement green programmes	PWD, RAJUK, CDA, KDA, RDA, CoxDA
	Construct multi-storied car parking and multipurpose complexes	RAJUK, CDA
	Identify, preserve and remove unapproved and vulnerable buildings	PWD, RAJUK, KDA, RDA
	Introduction of Density Zoning Tool	RAJUK
Ensuring affordable housing for people of different income groups	Develop residential plots	NHA, RAJUK, CDA, RDA, CoxDA
	Construct multi-storied residential buildings for sale on rental-purchase basis	NHA, RAJUK, CDA, KDA, RDA, CoxDA
	Construct, repair, and maintain residential buildings for government employees, dormitories/hostels for working and job seeking women	PWD
	Prepare architecture for residential buildings for government employees, dormitories/hostels for working and job seeking women	Department of Architecture
	Allot flats to government employees	Directorate of Government Accommodation
	Construct satellite towns under PPP	RAJUK
Innovation of technology on planned housing and construction techniques	Conduct research and promotion of low-cost eco-friendly housing technology with the special emphasis on Autoclave Aerated Concrete (AAC) blocks	HBRI
	Disseminate house building technology and conduct testing and training	
	Conduct research on matters related to urban Development	Urban Development Directorate
Ensuring infrastructural facilities befitting for Governmentactivities	Construct, repair and maintain infrastructures for various departments under different ministries	PWD
	Prepare architecture for new buildings and infrastructure for ministries/divisions/departments	Department of Architecture

Table 9.10: Priority Spending Areas/ Programmes

Priority Spending Areas/ Programmes	Strategic Objectives
1. **Ensuring the optimum use of land in urban areas** In urban areas, it is extremely critical to protect lands from being used in an unplanned way. Due to ever increasing population, many unplanned housing infrastructures are being built in urban areas. To improve this situation, optimum use of land has been considered as the number one priority.	Planned Urbanization
2. Construction of planned infrastructure in urban areas Environmental degradation in the urban area occurs due to the inadequate open water areas, play grounds, parks *et9.*, and traffic jams created by the construction of unplanned infrastructure. Considering the urgency associated with development and preservation of the environment, this has been identified as the second priority area.	Planned Urbanization
3. Develop befitting housing management for different income groups Housing is one of the basic needs of human beings. The present government is committed to ensure proper housing for all by 2021. Development of an optimum number of appropriate plots and flats will ensure accommodations for different income groups with a view to fulfilling the government's commitment. This has, therefore, been considered as the third priority sector.	Ensuring affordable housing for people of different income groups
4. Research and training related to house building, and modern and planned urbanization In the light of the importance of innovation of house construction technology for the low-income group and the provision of training to all concerned on the innovated technology, this has been identified as the Ministry's 4th priority sector	Innovation of technology on planned housing and construction techniques

9.9.2 Local Government Division

Goal

Improve the living standard of the people by strengthening local government system, developing rural and urban infrastructure and implementing socio-economic activities.

Major Urban Development Functions

- Manage all matters relating to local government and local government institutions
- Construct, maintain and manage Upazilla, union and village roads including the roads and bridges/culverts of towns and municipal areas
- Develop, maintain and manage growth centres and hats-bazaars connected via Upazila, Union and village roads
- Manage matters relating to drinking water
- Develop water supply, sanitation and sewerage facilities in rural and urban areas
- Finance, evaluate and monitor local government institutions and offices/organizations under Local Government Division.
- Develop, maintain and manage small-scale water resource infrastructures within the Timeline determined by the government
- Enactment of Law, promulgation of rules and policies related to local government

Table 9.11: Objectives, Activities and Implementing Agencies

Strategic Objectives	Proposed Activities	Implementing Departments/Agencies
Facilities development for the citizen	• Construction of safe water sources	Department of Public Health Engineering
	• Water supply through pipe lines in urban areas	Department of Public Health Engineering and Gazipur City Corporation; Dhaka, Chattogram, Khulna, Rajshahi WASA
	• Test, monitor and observe the quality of water sources on a regular basis	DPHE Dhaka, Khulna, Rajshahi, Chattogram, and Narayangonj WASA
	• Installation and construction of safe water sources and sanitary latrines in slum areas	Dhaka, Chattogram, and Narayangonj WASA
	• Collection and disposal of organic and inorganic waste of households	All city Corporations
	• Collection and management of hospitals' waste	Dhaka South and North City Corporation
	• Collection and management of information about birth and death	Office of the Registrar General, Birth and Death registration
Environment-friendly Planned urbanization	• Construction, rehabilitation and maintenance of city roads, footpaths, drains, street lights, bus-truck terminals, parking lots and other infrastructure.	Local Government Engineering Department All City Corporations
	• Construction and maintenance of community sanitary latrines.	Local Government Engineering Department; Department of Public Health Engineering
	• Construction of flyovers, foot over bridges and link bridges in city areas • Construction of graveyards and development of lakes in city areas • Construction of wholesale and retail markets in city areas	Dhaka South City Corporation Dhaka North City Corporation

Table 9.12: Priority Spending Areas/ Programmes

Priority Spending Areas/ Programmes	Strategic Objectives
1. Safe water supply and sanitation facilities for all Supply of safe water and sanitation facilities contribute to the reduction of water-borne diseases and prevention of contagion. As a result, the incidents of diseases and premature deaths will be reduced. This will increase people's productivity.	Facilities development for the citizens
2. **Expansion of civic amenities for citizens** Expansion of civic amenities will contribute to improvement of the environment leading to reduction of diseases caused by environmental pollution.	Facilities development for the citizens

9.9.3 Ministry of Road Transport and Bridges

Urban Transport Goal

Building sustainable, safe & quality road infrastructure and integrated modern mass transport system for achieving desired socio-economic development in the country.

Major Urban Road Development Functions

- Introduce long-term network planning
- Maintain the road network at a level which, protects the value of the investment
- Secure a sustainable means of funding road maintenance
- Proper management of road-side activities
- Develop an integrated planning approach in road construction
- Involve the private sector more in infrastructure, services and maintenance
- Protect the environment from road construction program
- Foster inter-city Links
- Regulate vehicle weights
- Reduce pollution from vehicles

Table 9.13: Objectives, Activities and Executing Agencies

8FYP Target	Activities (policy/program/project/action)	Impact indicators	Executing Agency
On time Commissioning of the Elevated Metro Rail of Bangladesh or MRT Line-6 ensured.	Construction of MRT Line-6 completed in all respect.	Reduce congestion of Dhaka City and its adjoining areas. Improve environment of Dhaka City and its neighbouring areas.	Dhaka Mass Transit Company Limited (DMTCL)
Construction of first ever underground Metro Rail of Bangladesh (MRT Line-1) completed.	Dhaka Mass Rapid Transit Development Project (Line-1) [E/S]		
60% construction of East-West MRT Corridor (MRT Line-5: Northern Route) completed.	Dhaka Mass Rapid Transit Development Project (Line-5): Northern Route		
Project Readiness Financing (PRF) of MRT Line-5: Southern Route completed.	Detailed Design Report produced and Tender Assistance Documents prepared.		

The Revised Strategic Transport Plan (RSTP) has proposed the following Urban Transport Corridors and Ring Roads in Dhaka to be implemented by 2035:

Transport Corridors

i. <u>CBD – Tongi, Gazipur Corridor (N3):</u>

Gazipur area is a rapidly expanding town in the north of Dhaka. This corridor is the main gateway to the north serving the northern suburbs of RAJUK area and beyond to Mymensingh.

ii. CBD – Purbachal Corridor:

Purbachal is the biggest Planned Township in Bangladesh. This new town area comprises of about 6,150 acres land located in between the Shitalakhya and the Balu River at Rupgonjthana of Narayangonj district and at Kaligonj Thana of Gazipur district, in the north-eastern side of Dhaka. The Township will be linked with 8 (eight) lane wide expressways from the Airport Road/ Progati Swarani crossing with the distance of only 6.8 km.

iii. CBD – Narayanganj Corridor:

Narayanganj is a centre of business and industry, particularly trading and processing plants of jute and the textile sector of the country. This corridor comprises of a four-lane road and BR single-track rail line is on the transport corridor with several stations and grade crossings.

iv. CBD – Jhilmil Corridor:

Jhilmil new town project is located at Keraniganj across the Burigonga River. The Project area comprises of 381.11 acres of land. There will be about 1,740 residential plots and 9,500 apartments for lower- and middle-income groups with available necessary infrastructure and urban services. This transport corridor will play as an important logistic corridor after the opening of the Padma Bridge.

v. CBD – Savar Corridor:

Savar is a new center of industry, specifically jute trade and processing plants and considered to be the textile centre. There is a major bus terminal, Gabtoli Bus Terminal on Dhaka – Aricha Highway and this area is one of the most congested areas in Dhaka

Ring Roads

Inner Ring Road

It is also known as the Dhaka Circular Road. The western portion (Abdullahpur - Dhaur - Birulia - Gabtoli - Babubazar - Kadamtoli - Teghoria - Postogola - Fatulla – Chashara - Haziganj - Shimrail - Demra) will be implemented by RHD. There will be few changes in the RSTP shown alignment due to changes in the plan and new infrastructures.

Bangladesh Water Development Board (BWDB) will construct an embankment on the Eastern Bypass side (25.85 km, Demra - Purbachal Road - Teromukh - Abdullahpur). A project is already underway. There is also a proposal from Bangladesh Bridge Authority (BBA) to build an elevated expressway along the median in this section.

Middle Ring Road

The alignment of the middle ring road is Hemayetpur - Kalakandi - 3rd Shitalakkhya Bridge - Madanpur - Bhulta (along Dhaka bypass) - Kodda (Gazipur) - Bypile (DEPZ) - Hemayetpur. RHD has signed a contract with China Joint Venture Company to construct 48 km Dhaka bypass (Joydebpur - Debugram - Bhulta - Madanpur) in eastern side by PPP which will be completed in September, 2022. The western side of Middle Ring Road (Hemayetpur - Kalakandi - 3rd Shitalakkhya Bridge - Madanpur) is under consideration for construction with G2G on PPP basis with Marubeni Corporation of Japan. Most likely it will be at-

grade. On the other hand, BBA has completed a feasibility study for an expressway starting from Baliapur (on Dhaka - Aricha Highway) along Nimtoli - Keraniganj - Fatullah - Bandar to Langalband (Dhaka - Chattogram Highway). It is under consideration to build by G2G with Malaysia.

Outer Ring Road

Dhaka Transport Coordination Authority (DTCA) has taken steps to conduct a feasibility study for the alignment.

9.9.4 Development Results Framework (DRF) for the Urban Sector

National Priority

Sustainable and Inclusive Urban Development (SDG-11)

Outcome Statement

Reduced urban poverty and improved living conditions through planned, inclusive and sustainable urbanization, better city governance, and improved infrastructure and service provisions

Table 9.14: Sub-Sectoral Goals, Performance Indicators and Targets

Performance Indicator	Lead Ministry/ Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)
1. Sub-Sector: Urbanization Pattern *Goal*: Promote balanced urbanization with focus on secondary cities and economic development corridors (EDC)							
Share of urban population in total Population (%)	MoHPW, MoLGRD&C	36 (2018)	37.75	38.25	38.80	39.40	40
Number of primary cities	MoHPW, MoLGRD&C	02 (2019)	02	02	02	02	02
Share of Dhaka Metropolitan City in total urban population (%)	MoHPW, MoLGRD&C	34 (2011)	33.60	33.20	32.80	32.40	32
Share of 7 other primary cities in total urban population (%)	MoHPW, MoLGRD&C	13 (2011)	13.40	13.80	14.20	14.60	15
Economic Development Corridor: (a) Planned (b) Execution in progress	MoP, MoHPW, MoLGRD&C MoRTB	(a) 0 (b) 0	(a)01 (b) 0	(a) 01 (b) 01	(a) 01 (b) 01	(a) 02 (b) 01	(a) 02 (b) 01
2. Sub-Sector: Urban governance and management *Goal*: Strengthening local level institutions including local governments by building appropriate capacity and skills so that these institutions become financially healthy and technically capable of ensuring access for all urban dwellers to basic urban services							
Share of urban LGI spending in total government spending (%)	MoLGRD&C	5 (2017)	6	7	8	9	10
Urban LGI spending as percentage of GDP	MoLGRD&C	0.70 (2017)	0.80	0.90	1.10	1.30	1.50
Urban LGI taxes as percentage of total taxes	MoLGRD&C	2.30 (2017)	2.60	3.00	3.50	4.20	5.00
Urban LGI taxes as a percentage of GDP	MoLGRD&C	0.20 (2017)	0.23	0.28	0.34	0.41	0.50
Per cent of Cities having urban plans	MoHPW	55 (2018)	55	60	70	80	90

Performance Indicator	Lead Ministry/ Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)
Compliance with building construction rules	MoHPW	05 (2018)	09	13	17	21	25
3. Sub-Sector: Basic Urban Services *Goal*: Ensure access for all to adequate, safe and affordable basic services including water, sanitation, public health and waste management							
Percentage of urban population having access to safe drinking water	MoLGRD&C	78 (2016)	82.4	86.8	91.2	95.6	100
Percentage of urban population having access to sanitary toilet facilities	MoLGRD&C	80 (2016)	84	88	92	96	100
Percentage of households with sewerage connection	MoLGRD&C	05 (2017)	06	07	08	09	10
Per cent of urban centres with modern waste disposal facilities	MoLGRD&C	0	02	04	06	08	10
Per cent of urban centres with wastewater treatment facilities	MoLGRD&C	0	02	04	06	08	10
Percentage of urban population having access to public health service	MoLGRD&C	87 (2016)	89.6	92.2	94.8	97.4	100
4. Sub-Sector: Urban Transportation *Goal*: Provide access to safe, affordable, accessible and sustainable transport systems for all by developing an integrated and balanced transportation system taking into consideration the needs of the road system, non-motorized transport, public passenger transport, mass transit facilities and road safety							
Cities having urban streets/ roads with modern traffic signals	MoLGRD&C	01 (2017)	01	02	03	05	07
Primary cities with mass rapid transit options	MoRTB	0	0	0	01	01	01
Compliance with traffic laws (%)	MoHA	10 (2018)	14	18	22	26	30
Length of Metro Rail Transit (MRT) network (km)	MoRTB	0	0	20	30	40	50
5. Sub-Sector: Urban Poverty and Housing *Goal*: Provide the urban poor with access to income, employment, housing and basic services and improve the condition of the slums/informal settlements that will greatly facilitate the integration of the settlements with the wider urban area and also improve quality of life of their residents							
Incidence of urban poverty (%)	CD, GED	15.7 (2016)	14	13	12	11	10
Proportion of urban population living in slums, informal settlements or inadequate housing (%)	MoHPW MoLGRD&C	33 (2016)	31.4	29.8	28.2	26.6	25
6. Sub-Sector: Urban Environment, Disaster Management and Climate Change *Goal*: Prepare and implement integrated, environmentally-sound urban planning and management incorporating climate change, environmental and disaster related information and reflecting environmental, climate change and disaster risk reduction policies and standards							
Mean urban air pollution of particulate matter (a) PM10 in $\mu g/m^3$ (b) PM2.5 in $\mu g/m^3$	MoEFCC	(a) 130.9 (b) 78.0 (2013)	(a) 125.0 (b) 77.0	(a) 120.0 (b) 76.0	(a) 115.0 (b) 75.0	(a) 110.0 (b) 74.0	(a) 105.0 (b) 73.0
Green area (parks, playgrounds etc.) Dhaka (square kilometre per million people)	MoHPW	0.70 (2014)	0.86	1.02	1.18	1.34	1.50
Green area other 7 major cities (square kilometre per million people)	MoHPW MoLGRD&C	Less than 1.50	1.50	1.75	2.00	2.25	2.50

Performance Indicator	Lead Ministry/ Division	Baseline (Year)	Target (2021)	Target (2022)	Target (2023)	Target (2024)	Target (2025)
Per cent of urban water bodies preserved with 100% compliance with water quality standards	MoHPW MoLGRD&C MoEFCC	0	02	04	06	08	10
Per cent of cities flood free with proper drainage	MoHPW MoLGRD&C	0	02	04	06	08	10

9.9.5 Mobilizing Resources for Urban Sector

Financing of urban infrastructure projects has traditionally been the domain of public sector development budget. In the past ten years Government has opened up scope for the private sector to participate in investment undertakings in the private sector. There is now an explicit role of private sector participation in infrastructure financing in Government investment policy and its poverty reduction strategy. A large part of the infrastructure projects for urban development would still require government interventions. These include in particular those which have high social return but less attractive to private investments. Such projects include water resource management, construction of physical infrastructures, roads and highways and similar investment projects which would yield financial return in the very long run.

Local Government Resources

A key policy and institutional challenge for the 8FYP would be to sharply strengthen resource mobilization capacity of local governments through a system of well-planned fiscal decentralization. The required reforms to implement fiscal decentralization were discussed in detail in Chapter 7, Part 2. As noted, all UMICs have implemented substantial fiscal decentralization to empower local governments and hold them accountable for improved service delivery. As Bangladesh approaches UMIC status, it will also initiate this key institutional reform. Reforms will happen in the 8FYP, but full implementation will happen over the next 10 years. The 8FYP will initiate the following critical reforms:

- Block transfers will be provided to all LGIs, including urban LGIs, based on pre-determined criteria that will include population, poverty, resource mobilization opportunities and performance. Some positive experience has already happened in the context of implementation of the LGSP projects.
- The property tax is the main tax assigned to LGIs. The tax will be modernized with proper valuation of property and a reasonable rate in line will be updated on a 3-year cycle with valuation changes spread over a 3-year period to ease the tax burden on the property owner.
- All LGIs will be required to implement full cost recovery of services provided.

Infrastructure Project Financing by Private Sector

There is ample scope for private sector investment participation in a wide range of infrastructure projects. Government has been successful in wooing private investment in power projects, telecommunications, airport maintenance and operation, toll bridge operation, land port development, small renewable energy projects, and other infrastructure projects. Government has now formulated mechanisms and incentives for greater participation of private infrastructure projects through the public private partnership modality. Additionally, Government has recently established clear guidelines on private sector investment in infrastructure projects.

9.9.6 Involving Local Stakeholders in Urban Development

Effective partnerships between local governments and the private sector can generate considerable benefits. Private companies, informal sector enterprises, CBOs, and NGOs can provide urban services, mobilize finance (or voluntary labour), introduce innovative technologies and undertake land development activities. For involving private sector in urban development and management activities supportive legal framework should be developed and institutional setting should be ensured.

9.9.7 Planning, Monitoring and Evaluation of Urban Development Activities

Monitoring sound implementation of urban development activities is extremely important for assessment of progress towards fulfilment of FYP and PP2041 targets. The Ministry of Local Government, Rural Development and Cooperatives can play a significant role in this regard. As emphasized by the PP2041, The Ministry can take the lead in defining and designing the national urban priorities and related urban reforms and ensuring their proper implementation in close consultation and coordination with the urban local governments. It will monitor progress with urbanization, identify emerging issues and challenges and seek to resolve them in consultation with the concerned urban LGIs.

9.10 DEVELOPMENT FUNDING FOR THE URBAN SECTOR DURING THE 8FYP

Since urban sector is cross cutting involving many Ministries and Public Agencies, the ADP funding is spread over several Ministries. Most funding will come from the Local Government Division, the ADP allocations for which were provided in Chapter 7. Most of the urban transport infrastructure will be funded through the Ministry of Road Transport & Bridges. Regarding housing and public works, much of housing activities are in the private sector. However, the Ministry of Housing & Public Works provides support to low cost housing schemes while the Development Authorities develop serviced land to facilitate urban housing. Taking into consideration the resource constraint and based on the projected overall resource envelope and a careful assessment of relative expenditure priorities, development resources for Ministry of Housing and Public Works are given in Table 9.15 below. These are only indicative figures to broadly support achieving of the 8^{FYP} strategic goals and objectives regarding development of the urban housing sector in Bangladesh

Bangladesh is enjoying sustained robust growth that is leading to higher urbanization levels. This has been creating new demand for urban services, which has already been facing a backlog of unmet demand. The resource needs are huge because there is already an existing backlog. Therefore, creative measures will have to be undertaken to mobilize additional resources. While improving collection of holding taxes, other taxes, user fees, levies etc. would be the usual revenue sources, there needs to be capacity building to undertake PPP projects. There also needs to be efforts to better leverage donor funding, particularly the concessional funds from World Bank, ADB, Government of Japan or any other source, and preparing for long-term debt financing through issuing of bonds. The allocation of development budget for the urban sector is not limited within Ministry of Housing and Public Works but also under the local government development (Chapter 7 of Part 2) to maintain consistency with the planning sectoral definition.

Regarding housing and public works, much of housing activities are in the private sector. However, the Housing Ministry provides support to low cost housing schemes while the Rajuk develops serviced land to facilitate urban housing. Taking into consideration the resource constraint and based on the projected

overall resource envelope and a careful assessment of relative expenditure priorities, development resources for Ministry of Housing and Public Works are given in Table 9.15 and Table 9.16 below.

Table 9.15: ADP Allocations for the Housing and Amenities in 8FYP

(Taka Billion current prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Housing and Public Works	42.8	52.7	60.8	70.9	85.1
Sector Total	42.8	52.7	60.8	70.9	85.1

Source: Chapter 5, Part 1, Annex Table A5.1

Table 9.16: ADP Allocations for the Housing and Amenities in 8FYP

(Taka Billion FY2021 constant prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Housing and Public Works	42.8	50.0	54.9	61.0	69.9
Sector Total	**42.8**	**50.0**	**54.9**	**61.0**	**69.9**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 10:
HEALTH

CHAPTER 10

HEALTH, POPULATION AND NUTRITION

10.1 OVERVIEW

The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.' Alongside education and training, health is now universally regarded as an important index of human development. Quality health care and effective population management are very essential for ensuring sustained human development because of their huge positive impact on the overall wellbeing of human in general and on their labour productivity and rapid economic growth in particular. For this reason, the WHO recognized human health as one of the fundamental human rights. Consistently in 1992, the United Nations declared that it endures that human beings are at the center of concerns for sustainable development and they are entitled to a healthy and productive life in harmony with nature. Both the MDGs and SDGs uphold the importance of universal health Coverage for sustained health and human development. Good health plays pivotal roles in the attainment of prosperous and happy livelihood by affecting human capitals such as educational attainment and income-generating capacity.

The importance of human health for national development and welfare has been dramatically exposed by the ongoing COVID-19 pandemic. The fast-spread viral disease affected the entire world unaware, causing millions of infections and hundreds of thousands of deaths. This has also led to a standstill in economic activities for a few months caused by lockdown measures undertaken by countries to stem the spread of the sdisease. Most of the countries affected by pandemic have slumped to an economic recession causing massive loss of income, output, investment, exports and government revenues. Importantly, it has demonstrated that without security of human health, economic development can easily fall apart. Bangladesh also has been affected by the COVID-19 pandemic. The health system has come under tremendous pressure and important gaps in health care on both the supply and demand sides have emerged. The supply side constraints have shown up in terms of weak capabilities, inadequate physical facilities, lack of emergency preparedness, shortage of manpower, critical supplies and materials, and unbalanced distribution of health care facilities across the country. On the demand side, the low capacity to pay for the poor and lower middle class for emergency health care needs has emerged as a major constraint. In addition to the pre-COVID-19 health challenges, COVID-19 has exposed the need for strengthening the healthcare system of Bangladesh and the need for Universal Healthcare financed through a combination of public and private health insurance schemes.

On the population front, population arguably is the most precious asset for a country. Proper harnessing of this asset is both a means to economic prosperity and end in itself, which is human welfare. History of economic development shows clearly that countries that have invested well and wisely in developing the population have performed well on the development front. The debate on addressing population issues for development emerged in the 1960s as a "numbers problem". There was a major concern about the high growth of world population and the risks of overpopulation leading to economic and social miseries. It was recognized that proper management of population for development was not simply a task of lowering the

growth of population through reduction in total fertility rates (TFR) but one of empowering women to take control over their reproductive health and reproductive decisions as well as to ensure the management of the population by reducing the risks and enhancing the quality of life at different stages of life cycle right from the conception stages to old age. This rethinking led to the landmark agreement on population management during the 1994 International Conference on Population and Development (ICPD) in Cairo.

The health of a population is built on good nutrition. Adequate nutrition is the basis for a healthy life, and can prevent susceptibility to disease by improving the immune system. Good health entails the intake of adequate and nutritious food. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and cognitive development, and reduced productivity. Similarly, population also influences health through a number of ways. A large population adversely affects health resources, water and sanitation facilities and food availability. From a policy perspective, the Health, Population and Nutrition (HPN) sector can be further broken down into the respective components, each meriting a thorough analysis with detailed strategies and goals. However, it should be recognized that these three sub-sectors are intricately related to each other, which raises the need to approach the HPN sector with a holistic policy framework that will allow the actions in one sub-sector to complement the actions in the others. Effective outputs in the HPN sector depends upon availability of resources, coordination, good planning, effective implementation and monitoring with proper accountability of the relevant agencies working on health, population and nutrition.

10.2 HEALTH SECTOR PROGRESS DURING 7FYP

Bangladesh has been following a Sector-Wide Approach (SWAp) in the HPN sector since 1998. The sector wide approach (SWAp) is an approach that brings together the Government, development partners (DPs) and other stakeholders within a single sector policy and expenditure program, under Government leadership, adopting common approaches across the sector, and progressing towards relying on Government procedures to disburse and account for all funds. However, Bangladesh health SWAp excludes the public sector health interventions implemented outside the Ministry of Health and Family Welfare (MoHFW) (i.e. by MoLGRDC, MoSW, MoWCA, MoCHTA, etc.). But, the MoHFW has been continuously trying to strengthen its coordination and functional relationship with other stakeholders/Ministries/Agencies involved in providing health services.

The ***first SWAp*** known as 'Health and Population Sector Program (HPSP)' (1998–2003), was implemented with a focus to decentralize the delivery of the essential service package (ESP) of primary health care (PHC) using a 'one-stop' service model, to deliver basic health and family planning (FP) services to rural communities. ***The second SWAp,*** titled as 'Health, Nutrition and Population Sector Program (HNPSP) was implemented during 2003–2011 with the objective of increasing the availability and utilization of user-centered, effective, efficient, equitable, affordable and accessible quality HPN services. ***In 2011, the third SWAp*** titled the 'Health, Population and Nutrition Sector Development Program (HPNSDP) was implemented for the period July 2011 to December 2016 with a focus on strengthening health systems and improving health and FP services. ***The Fourth Health, Population and Nutrition and Sector Program (4th HPNSP)*** covering the period from January 2017 to June 2022 has taken a holistic approach, which is unique in terms of its focus on (a) strengthening MoHFW's governance and stewardship roles in the HPN sector; (b) strengthening systems/ institutions for efficient service delivery; and (c) expanding HPN services and emphasizing service quality both in public and private sectors. The fourth SWAp – the 4th HPNSP - has

also been aligned with the sustainable development goals (SDGs) and is the first of the three successive phases in realizing the SDGs and achieving universal health coverage (UHC) by 2030. As the Government continued the SWAp in the 7th Five Year Plan period, the same modality will be followed during the 8th Five Year Plan for the HPN sector development.

All the SWAps including the current SWAp (4th HPNSP) laid high focus on pro-poor ESP, which contributed to the promotion of equity through reduction of the gap between rich and poor with respect to health outcomes in rural areas. While achievement against some of the indicators is satisfactory in general, there are pockets of underachievers geographically – which are linked to the socio-cultural as well as topographic features of the given areas. The Mission of the 4th HPNSP is to create conditions whereby the people of Bangladesh have the opportunity to reach and maintain the highest attainable level of health. The goal is to ensure quality and equitable health care and nutrition services for all citizens by improving access to and utilization of health, under two main components. The first component aims to improve health services, such as maternal and child health and nutrition, Family planning, Reproductive health, Adolescent health, Non-communicable diseases, TB etc. and support the service delivery system including primary health care. The second component focuses on strengthening health systems such as governance and human resources.

Overall, there has been good progress in improving health outcomes. Formulation and implementation of national health, nutrition and population policies along with maternal, neonatal and child health strategies, etc. are some milestone achievements in improving HPN service delivery in Bangladesh. Community based health care service provision helped increasing access of poor women to health services. Strengthening of health MIS through digitalization and the fiduciary capacity of MoHFW is noteworthy. Moreover, improvements in procurement, budget planning, sector coordination and management, fund absorption capacity, monitoring and supportive development of overall socio-economic conditions have contributed to reduction in NMR, IMR, U-5MR, MMR, TFR, malnutrition, stunting, under-weight, etc. and have resulted in increasing life expectancy at birth, thereby creating a platform for a population with better health and a prosperous society.

Commitment from the government for achieving universal health coverage (UHC) and for that, efforts are on to bringing primary health care (PHC) service close to the communities through provision of care from a single service delivery point. Mainstreaming of nutrition services through the regular government channels made service provision more cost-effective and led to improved coordination at different stages of service delivery including at the Community Clinics (CCs). The implementation of CC and UH&FWC based programmes have contributed to increasing access of the poor especially the women to HPN services. Updating of essential service package (ESP) and its expansion up to district hospital levels from the 4th HPNSP period has also been contributing to increased access of HPN services by the poor.

Revitalizing and making the CCs functional with adequate manpower, equipment and medicines from 2010 is another milestone achievement. Approval of Health Financing Strategy (2012-2030) and the National Social Security Strategy (NSSS) 2015 by the Government demonstrates high commitment for improving health of the population through sustainable financing. There has also been considerable recruitment of doctors, nurses, midwives, field level health and family planning workers, etc. with vacancy rates declining to around 15% in 2018 from above 20% level in 2011.

In line with the approaches envisaged in the 7th Five Year Plan of Bangladesh, monitoring and evaluation mechanism of the HPN sector has been developed based on results. Table 10.1 gives the current performance status of the HPN sector against the targets set in the 7th Five Year Plan.

Table 10.1: Progress against the 7FYP Targets

Sl. No.	Indicator	7FYP Target (2016- 2020)	Progress up to 2019
1	Life Expectancy at Birth	72	72.6 (SVRS, 2019)
2	Total Fertility Rate (TFR)	2.0	2.04 (SVRS, 2019)
3	Under 5 Mortality Rate (U5MR)/ 1,000 live birth	37	28 (SVRS, 2019)
4	Neonatal Mortality Rate /1,000lb	20	15 (SVRS 2019)
5	Maternal Mortality Ratio (MMR)/100,000	105	165 (SVRS 2019)
6	Proportion of underweight among U-5 children (%)	20	22.6 (MICS, 2019)
7	Proportion of stunting among U5 children (%)	25	28 (MICS, 2019)
8	Proportion of births attended by medically trained provider (%)	65	83.5 (SVRS 2019)
9	Contraceptive Prevalence Rate (%)	75	63.4 (SVRS 2019)
10	Proportion of children fully vaccinated by 12 months (%)	95	86 (BDHS 2017-18)
11	Proportion of births in health facilities by wealth quintiles (ratio of lowest and highest quintiles)	1: 3.5	1: 3 (BDHS 2017-18)
12	TB case detection rate (%)	75	73 (NTP 2018)

NB: SVRS = Sample Vital Registration System, MICS= Multiple Indicator Cluster Survey, BDHS= Bangladesh Demographic and Health Survey, NTP- National Tuberculosis Programme.

Source: Ministry of Health and Family Welfare

10.2.1 Progress of Health-related SDGs

Out of the 17 goals, SDG 3 specifically relates to good health and well-being and SDG 2 refers to nutritional improvement. The MoHFW is responsible *as the lead* Ministry for implementation of 20 indicators out of 27 indicators under SDG 3 and two nutrition related indicators under SDG 2. MoHFW has been pursuing to achieve the SDG targets through implementation of an approved SDG Action Plan. MoHFW conducted Divisional level workshops focusing on SDG related activities for enhancing knowledge and understanding of the stakeholders with key concepts and principles along with targets and indicators of the health-related SDGs, matching those with field level program activities. However, area wise implementation progress against each target and indicator of the SDGs relevant to Health Services Division (HSD) is described below-

The Maternal Mortality Ratio (MMR) decreased from 181 per 1,00,000 live births in 2015 to 165 in 2019 (SVRS, 2019). Under-five mortality rate has persistently declined from 36 per 1,000 live births in 2015 to 28 in 2019 (SVRS, 2019), that already achieved the SDG target of 2025. On the other hand, the neo-natal mortality rate (NMR) decreased to 15/1,000 live births in 2019 from 20 in 2015; that also achieved the SDG target of 2025.

Prevalence of HIV/AIDS (all ages) has been very low in Bangladesh (<0.01 for all ages and 0.015 for adults between 15-49 years per 1,000 uninfected populations, UNAIDS, 2018). The incidence rate of tuberculosis (TB) has been reduced to 221 in 2019 (WHO, 2019) from 225 per 1,00,000 in 2015 (WHO, 2015). The National TB Program (NTP) of Bangladesh along with its partners has been maintaining basic TB control services with reasonable case detection and excellent treatment outcomes.

Malaria incidence per 1000 population was 2.99 in 2015 (National Malaria Elimination Programme-NMEP, 2015), which has also been declining. The incidence rate decreased to 0.92 in 2018 (NMEP, 2018). The government interventions in collaboration with the Development Partners and NGOs for malaria eradication resulted in a decline in incidence nationally.

There is a huge burden of the Neglected Tropical diseases (NTDs) in Bangladesh, particularly for Kala-azar; Lymphatic Filariasis; and Dengue; etc. The progress regarding the indicator, "number of people requiring interventions against NTD" has been increased from about 50 million (WHO, 2016) to about 56.33 million (World Health Statistics, WHO, 2020). By 2030 it needs to be reduced to 35.0 million and efforts are on through various interventions such as integrated vector management; promotion of clinical management; and active engagement of the communities; etc. for reducing NTDs.

Non-communicable diseases (NCDs) have now formed major share of the overall disease burden and mortality. Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease was 21.6 in 2016 and the situation is unchanged since then (World Health Statistics, WHO, 2020). Awareness programmes on helpful behavioral patterns, changing dietary habits, lifestyle change, etc. are being implemented for preventing NCDs and facility readiness including training of doctors are going on for better treatment of NCD patients.

HSD is implementing anti-tobacco program based on WHO- FCTC and Tobacco Control Law of Bangladesh. The Global Adult Tobacco Survey (GATS) 2018 found that prevalence of tobacco uses among persons aged 15 years and older had decreased from 43.3% in 2009 to 35.3% in 2017, among whom 46.0% are men and 25.2% are women. Awareness raising activities against tobacco use are being implemented continuously.

Bangladesh has developed an effective national immunization program starting from 1979 with the implementation of the Expanded Program on Immunization (EPI). Proportion of target population (≤12-month-old children) covered by all vaccines increased from 78% (BDHS, 2014) to 86% (BDHS, 2017-18). It needs to be increased to 98% by 2025 and further to 100% by 2030. The Mid-Term Review of the 4th HPNSP conducted in 2020 thereby advised to integrate Growth Monitoring and Promotion (GMP) into the EPI platforms.

There has been considerable recruitment of doctors, nurses, midwives, field level health and family planning workers, etc. with vacancy rates declining to around 15% in 2018 from the above 20% level in 2011. Health worker density was 7.4 per 10,000 populations (WHO, 2016) and the distribution of physician: nurse: health technologist was 1:0.5:0.2 (HRH Data sheet, 2014, MoHFW). The density has been increased to 9.9 per 10,000 populations (Health SDG Profile, Bangladesh, WHO, 2020) and1:0.6:0.3 (HRH Data Sheet, 2019, MoHFW).. Moreover, since 2019 some 41 public nursing institutions and colleges and 28 private institutions have been in operation. The introduction of the Midwifery cadre reflects an important policy milestone that has supported the needs of maternal, neonatal and reproductive health, especially in the rural areas. This has been an important contributor to reducing maternal and neonatal deaths and also has led to a reduction in birth-related complications and recovery.

Medical Education and Family Welfare Division (MEFWD) leads two indicators related to universal access to family planning, reproductive and adolescent health, it has profound implications on achieving other indicators like maternal mortality and child mortality. Family planning can reduce MMR by 30%, neonatal

mortality by 20%, unintended pregnancy to more than 66% and abortion by 40%. Currently, the proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods is 77.4% according to BBS (MICS 2019), MEFWD is working hard to increase to 100% within 2030. On the other hand, adolescent birth rate (aged 10-19 years) per 1,000 women in that age group is 74 according to SVRS 2018, MEFWD also has taken huge activities to reduce it to 50 per 1000 adolescents within 2030. MEFWD also acts as co-lead for 7 indicators, and as associate for 13 indicators of SDG-3. MEFWD has key active role to achieve other health related SDG targets such as prevalence of stunting among children under 5 years of age, proportion of wasting and overweight of children under the age of 5 years, maternal mortality ratio (per 100,000 live births), proportion of birth attended by skilled health personnel, reduce under five mortality rate (per 1,000 live births), reduce neo-natal mortality rate (per 1000 live births) and universal health coverage. MEFWD conducted divisional level workshops focusing on SDG related activities for enhancing knowledge and understanding of the stakeholders with key concepts and principles along with targets and indicators of the health related SDGs, matching those with field level program activities.

10.2.2 Progress of 4th HPNSP

The Government approved the 4th Health, Population and Nutrition Sector Programme (4th HPNSP) in March 2017 for implementation during January 2017 – June 2022 with an estimated cost of USD 14.7 billion, 84% of which will be financed from Government's own resources. Of the 29 Operational Plans (OP) under the current 4th HPNSP, 19 OPs fall under the HSD in the areas of hospital services management; community based health and nutrition services; maternal, neonatal, child, and adolescent health care; nutrition service delivery; communicable and non-communicable diseases control; HR development; planning, monitoring and sector management; HIS and eHealth; health education and promotion of lifestyle changes; procurement, storage and supply management; etc. Besides, 38 discrete projects are being implemented.

The 4th HPNSP has been continuing to expand services and improve health systems through implementation of the strategies like capacity building, stronger governance for better quality services; greater functional coordination of services at the field level; partnerships with the private sector and the community; improvement in quality of care; comprehensive health workforce strategy and action plan; increased investment in prevention and primary care of public health; the rising burden of NCDs through cross-sector interventions on public health awareness and healthy lifestyles and healthy environment; tackling established and new communicable diseases; strengthening surveillance, data quality and information systems; and increasing investment in health.

Progress of new funding modality: The financing of the 4th HPNSP by the World Bank (WB) is under a new results-based financing modality known as Investment Project Financing (IPF) with Disbursement-Linked Indicators (DLIs). Disbursement of US$ 588.45 million by the WB and other DPs is to be made upon annual achievement of specifically defined Disbursement-Linked Results (DLRs) with targets covering a total of 16 DLIs. The Implementation Monitoring and Evaluation Division (IMED) of the Government has been engaged as the Independent Verification Agency (IVA) for verification of the DLRs.

The MoHFW formed a DLI Monitoring Committee in order to monitor progress towards achievement of DLIs, support the line directors (LDs) in implementation and produce reports to be submitted for verification by the IMED. The Committee comprises of representatives from the concerned departments of the two Divisions (i.e. HSD and MEFWD), the World Bank and the other DPs. The Planning Wing in collaboration with the WB also organized two workshops to orient the relevant LDs on year-wise targets and significance of achievement of DLRs, evidence, reporting requirements and verification method. During January 2017–June 2019, the disbursement for achieving the results was supposed to be US$ 275.99 million, but an actual amount of US$ 140.19 million was received by GOB, meaning an achievement rate of 51%. Achieving this rate is noteworthy as the funding modality is a new one to the implementers of MoHFW and also new to IMED with respect to verification of DLIs. However, all the players involved – concerned LDs, MOHFW, IMED and the WB – have to play their part to cover up the disbursement gap.

Nutritional Issues: Malnutrition (including anemia) is a major concern in Bangladesh. Good progress has happened between 2007 and 2019. More specifically, malnutrition has been reducing over the past decades and stunting (height-for-age) of children decreased from 43% in 2007 to 28% in 2019, while during the same period, the proportion of underweight (weight-for-age) children decreased from 41% to 22.6%; wasting also decreased from 17% to 9.8% (MICS, 2019). Moreover, the Exclusive Breastfeeding Rate increased from 55% in 2014 to 65% in 2017, consumption of a Minimum Acceptable Diet (MAD) has increased from 21.2% to 34.1%, and Minimum Dietary Diversity (MDD) from 24.25% to 37.5% during the same period. These are outstanding achievements at any point of time and indicate social transformation of the Bangladeshis.

10.2.3 Progress in Tackling Inequality in Health

HSD is implementing a pilot social health protection scheme in three upazilas known as "Shasthyo Shuroksha Karmasuchi (SSK) under which free hospital services are being provided to the poor- below poverty level (BPL) card holders, which are contributing to reducing inequity in health. The Maternal Health Voucher Scheme (MHVS) in operation in 55 upazilas is another health protection scheme, the beneficiaries of which are poor and vulnerable pregnant women. Specified services under this scheme are provided by designated providers and facilities from the public and the private sectors as well as the NGOs for ensuring safe delivery of the poor mothers.

The Community Clinics (CCs) have provided a woman-friendly platform where about 95% of service seekers are women and children availing various PHC services near their home. The CC based model is also an example of participation and accountability of local communities in health service delivery (e.g. community support groups and community groups for management of the CCs).

However, there are still other equity issues involving geographical, ethnic, gender and different forms of marginalization. Gradual expansion of service coverage in the hard-to-reach (HTR) areas, effective implementation of ethnic minority health plan and health workforce management, etc. activities programmed under the 4th HPNSP for addressing inequity issues, will be continued during the 8FYP as well.

10.2.4 Progress in Approaches to Universal Health Care (UHC)

Bangladesh had always prioritized a focus on making public health services available and accessible to all its citizens since, at least, the last three decades–through Health for All (HFA), Primary Health Care (PHC), Essential Service Package (ESP), etc. The ESP, being implemented from the levels of CCs to district hospitals as priority intervention for providing PHC services, represents Government's commitment to ensure the right to health and nutrition and that the whole population has access to the most essential health and nutrition services. The CC based service provision at the doorstep of the people is a step forward towards achieving the UHC. The CCs are also contributing to reducing the gap between rich and poor with respect to health outcomes in rural areas.

The 4th HPNSP has been serving as the first, and the foundation, of three subsequent SWAps and is aligned to the goal of achieving UHC by 2030, which highlights the right of every citizen to gain access to quality health care (whether these are obtained from the public or private) without incurring economic hardship. The WHO in its Progress Review Report on SDGs (2020) assessed that Bangladesh achieved a score of 53% on a UHC index of essential health services, which was 50% in 2017.

Progress in Family Planning: There has been progress in other FP indicators as well. The population growth rate has now been reduced to 1.32% in 2019 from 1.37% in 2015 (SVRS 2019). There has also been reduction in dropout rates and unmet needs which stood at 37% and 12% respectively (BDHS 2017-18). The proportion of women of reproductive age (Age 15- 49 years) who have their need for FP satisfied with modern method has increased to 77.4% (MICS, 2019) from 72.6% (SVRS 2014). Antenatal care rate has increased from 31.2% in 2014 to 47% in 2018 and post-natal care has also increased from 33.9% in 2014 to 52.1% in 2018 (BDHS 2017-18). Household data of about one crore population had been collected and stored through the Population Registration System (PRS). Some of the mentionable FP activities are popularization of long acting permanent methods and increasing the use of contraceptives, providing clinical contraception and maternal, child and reproductive health services, BCC for awareness raising, etc.

During the implementation of 7FYP, the Government reorganized and upgraded the Directorate of Nursing Service into the Directorate General of Nursing & Midwifery (DGNM) on 6 November, 2016 in order to strengthen, modernize and speed up the development programmes related to nursing education and services, and making the nurses more effective in discharging their responsibilities. The Nursing Council has also been reconstructed into Bangladesh Nursing & Midwifery Council (BNMC). The DGNM has been strengthened with additional 77 new positions including one Director General and an Additional Director General. 3,000 posts of Midwives have been created. 3-years diploma course in midwifery is now in operation in 38 public nursing institutions. Web-based Masters in midwifery course is also being run. Of particular note is the development of Midwifery policy, accreditation of Midwifery educational institute, introduction of quality midwifery educational system, development of dedicated midwifery faculty, introduction of Midwife led maternal and newborn care, quality licensing examination for the midwife, creation of post in addition to existing post. This policy is particularly helpful to improve access of the rural population to trained birth support staff that is so critical to prevent birth complications and reduce maternal mortality rates.

There have been improvements in the availability of medical educational institutions (universities, colleges, dental units, nursing colleges, nursing and midwifery institutes, MATs, IHTs) both in the public and private sectors, raising the number from 190 in 2009 to 786 in 2018. During the same period, number of seats in these medical institutions has increased from 17,105 to 53,473.

The MEFWD has also been strengthened training and research activities through NIPORT by establishing regional population training institutes and providing continuous training to the service providers of DGFP, DGHS, DGME, DGNM and others. In 2018-19, NIPORT provided in-service training to 36,197 program managers, service providers and field staff. NIPORT has developed Digital Registration System to link it to Training Management System and also completed Bangladesh Health Facility Survey, 2017 and Bangladesh Demographic and Health Survey, 2017-18.

10.3 CHALLENGES OF THE HPN SECTOR

Even before COVID-19, the Government has been facing changing health sector challenges due to existence of dynamic characteristics as the population has been changing in age stratification, demand-supply situation due to income change, unabated rural-urban migration and rapidly increasing urban population, epidemiological changes, and changes in medical technology, research and innovations, etc. Some of the major challenges are as follows.

1. Childhood, adolescent and maternal malnutrition have been decreasing slowly, however, there is still a long way to go for the overall improvement of the nutritional situation in Bangladesh. Only 65% of children below 6 months of age are exclusively breastfed and 34% of children 6-23 months aged are fed with appropriate feeding practices (BDHS-2017-18). Micronutrient deficiencies among the children and women of reproductive age are still a challenge. Unsafe food has been long standing challenge in the country and poses a serious public health risk leading to increased prevalence of food borne diseases. Hygiene and sanitation standards still remain unsatisfactory and the caregivers rarely wash their hands before feeding the children.

2. There is a concern about the non-communicable diseases like diabetes, cardio-vascular diseases and cancer, which have become leading causes of morbidity and mortality. The are also related to poor nutrition practices and overnutrition related to lifestyle changes and increased consumption of food with high levels of salt, sugar, and fat. Moreover, a number of new health challenges are emerging, which include: increasing incidence of injuries including acid and burn injuries, drowning and road traffic injuries; ageing and geriatric diseases; the spread of infectious diseases such as TB, Dengue, Chikungunya, Hepatitis B and C, COVID-19 etc. as well as emerging and re-emerging diseases; treating severe and acute malnutrition and the health effects of geo-climatic disasters.

3. Many challenges still remain in the service delivery areas of ensuring skilled attendance at birth, addressing the epidemiological transition and the double burden of communicable and non-communicable diseases- including detection, prevention and control of emerging and reemerging diseases, improving overall nutritional situation, improving quality and safety of food and drugs, providing adequate health response to gender-based violence, improving health care for mental and neurological disorders and geriatric population, service expansion to hard-to-reach (HTR) areas, assuring quality of care, etc.

4. The engagement of the MoHFW in environmental health and climate change issues is of recent origin. Children, women and elderly people are likely to be more affected by the environmental health hazards. Increasing salinity in the coastal belt areas due to climate change is posing threat to increased water-borne related morbidity and mortality. The complex relationship between environmental factors, climate change and human health warrants re-prioritization of public health interventions to achieve national and global objectives for improved health status under the SDG agenda.

5. Expansion of city areas and expanding coverage of city corporations and municipalities up to upazila level, rural-urban migration and a rising urban population pose new threats for effective urban primary health care (PHC) service delivery. Rapidly increasing demand for urban primary health care and nutrition services; and prevention and control of NCDs continue to remain as challenges during the SDGs period. With the demographic transition taking place it has become urgent to review the present urban health and nutrition services delivery arrangement and take measures to expand coverage and improve quality, keeping in view the needs of the urban poor.

6. Continuously rising per capita out-of-pocket expenditure (from 64% in 2012 to 67% in 2015, this could have been raised further in recent times) has been pushing the affected lower income and poor people to hardship, thus creating hindrances to achieving UHC by 2030. According to WHO, 24.7% people suffer the pressure of catastrophic health expenses and a family has to spend 10% of total family expenses on health. Although Bangladesh has made laudable progress in reducing poverty, every year 7% people are going down the poverty line for meeting health care expenses. So, reducing out-of-pocket expenditure is a huge challenge.

7. Availability of yearly data on output/outcome level indicators of the SDGs also remains as a challenge. Other specific challenges are shortage of human resources at all stages of health services, regulating the private sector clinics and diagnostic centres for maintaining their service quality and bringing in uniformity in urban health services in the city corporation areas.

8. There are issues of inadequate and ineffective service delivery in the hilly, char and the coastal areas where provision of human resources remains a problem. Settlements in those areas are quite dispersed due to geographical reasons making it difficult for service seekers to access facilities miles apart.

9. Major inequities in health and nutrition outcomes still exist and need to be addressed. In general, women, adolescent girls and children have less access to health care and their health status is relatively worse than their male counterparts, even though continuous efforts are on-going to address the issue of health inequity. There are inequities in the distribution of health benefits by income groups and by geographical location.

10. There are several institutional issues that require attention. These include: quality assurance of health care facilities through proper accreditation; ensuring availability of skilled human resource (HR) based on an effective and efficient Health Workforce Strategy (HWS); utilizing full capacity of the existing and upgraded public facilities at the district and Upazila level; strengthening governance, stewardship and regulatory functions; mobilizing more resources for the HPN sector efficient and effective use of budget including a proper balance between new facilities and adequacy of materials and supplies; and retaining skilled health service staff in rural areas;

11. Bangladesh has a large public health service network covering field-based domiciliary services and facilities at different levels like villages, unions, upazilas, districts, divisions, and several specialized hospitals. To fully utilize the potential of such a vast network is a big challenge. Recognizing the challenge, the Government has undertaken programmes under the 7FYP to address many of them.

10.3.1 Challenges in Medical Education and FP Services

- Shortage of human resources in all stages of medical education, nursing and FP services.
- Ensuring quality in the training of doctors, nurses, midwives and medical assistants.
- Regulating the medical education institutions of the private sector and maintaining their teaching quality.
- Increasing use of modern methods of contraception and reducing dropouts and unmet needs.
- Reducing the rate of early marriage and subsequent early pregnancy.
- Bringing in uniformity in FP services in the city corporation areas.
- Limited availability of Post-Partum Family Planning, Post MR/MRM, PAC-FP services in District Hospitals, Medical Colleges Hospital, Private Hospitals and Upazilla Health Complexes;
- Inadequate Social Behavioral Change Communication (BCC) activities for motivating and referral of LARC & PM services by field level workers;
- Shortage of skilled Doctors and paramedics to provide LARC & PM, PPFP services.
- Lack of Quality of Care like-clinical Supervision & monitoring by the managers and supervisors.
- Family Planning curriculum of different level medical education is not updated according to national family planning program.
- Readiness of FP Service Facilities: only 25% of the public facilities that offer FP services are ready to provide quality FP services; Half of the NGO facilities were found to be ready; in private sector 5% facilities are ready to offer quality FP services (BUFS,2014)
- Shortage of Human Resources: The vacancy situation is high in facilities located in hard-to-reach areas, including coastal belt, chars, hill tracts, etc.
- To increase long acting & permanent method of contraceptives: Only 8% LARC acceptors;
- To increase male participation in CPR: almost 90% users are female
- Early marriage, early child bearing and low contraceptive use among young married couple
- To address slum & urban areas for family planning activities and to reduce dropout rate & unmet need for family planning
- Fragmented MIS: Urban service data are insufficient and not properly linked.
- Menstrual Regulation (MR) and Post-Abortion Care (PAC) Services: Information on MR and PAC is not readily available in health facilities, especially regarding post-MR care.
- Inadequate Family Planning/back-up services for disable people, during disaster and emergency situations;
- Increase the percentage of Institutional Deliveries with a focus to union level facilities where 24/7 services are established.
- Establishment of effective monitoring system at all levels for digitalization.
- Data gap prevails due to vacancy at service delivery points (SDP).

10.3.2 COVID -19 Challenge and Bangladesh's Responses

Bangladesh took quick action to address the risks posed by COVID-19. Bangladesh adapted following "Whole of Government Approach" to ensure interactive process among all Ministries and to achieve the best results though openness, sharing information and cooperation amongst all concerned. MoHFW initiated necessary preparation since January 2020 to control and contain the pandemic and prepared "Bangladesh Preparation and Response Plan (BPRP) for COVID-19 as a living document. The National Guidelines on Clinical Management of COVID-19 was also prepared on the basis of latest evidence and the WHO guidelines to be followed by every clinic/hospital, for treating COVID-19 'confirmed', 'probable', or 'suspect' cases.

From the very beginning, the Hon'ble Prime Minister has been overseeing the national response and taking feedback from the grassroots represented by government officials and political leaders and different stakeholders through videoconferencing. The MoHFW, under guidance of Hon'ble Prime Minister, has taken all-out efforts to prevent and control spread of COVID-19 as well as to provide health care services to the infected people. A National Committee headed by the Minister of Health and Family Welfare was constituted to take necessary steps for the prevention and control of corona virus. Besides, committees had been formed at City Corporation, municipality, district, Upazila, and union levels. Some existing public hospitals have been made ready to provide specialized services for corona virus patients and more hospitals are being prepared. In addition to government hospitals, a number of private sector hospitals are involved in testing and treatment of corona virus. The country has been implementing the response activities with the multi-sectoral involvement representing the relevant ministries/divisions, private sectors, development partners through a pillar-based multi-sectoral coordination mechanism. The other major actions taken to contain the COVID-19 pandemic are as follows-

- A novel Community Support Team (CST) intervention was piloted so that individuals with symptoms could be evaluated and those who meet the clinical criteria are isolated at home with their families with the full support of rapid response. The CSTs are comprised of MoHFW Community Clinic, BRAC community health, available medical students, intern doctors, staff and volunteers. The CST has also been facilitating access to hospital care for those who develop a severe disease.

- MoHFW has rapidly implemented community-based prevention practices, case identification, and quarantining utilizing local community health capacity for slowing the spread of disease following lockdown. Immediate action was taken to procure PPE, hospital equipment and supplies required to expand care of critically ill and severe patients.
  Besides, healthcare workers' training programmes were initiated for improving infection prevention control and case management. Also, risk communication and community engagement has been focused on encouraging the spirit of solidarity, empowering individuals and communities to stop the spread of COVID-19 through behavioral change, informed individual decisions and collective community action.

- MoHFW recruited additional 5000 nurses, 2000 medical doctors and expanded the diagnostic capacity to 91 laboratories. Healthcare worker trainings were conducted for improving infection prevention control and case management skills of the frontline health care providers. Testing

capacity has been expanded and some other measures have been taken for public health management at designated Points of Entry. Necessary measures were taken to prevent and control spread of Covid-19 in the camps of forcibly displaced Myanmar nationals located at Cox's Bazar district.

- IEDCR has always been updating the information of COVID-19 in their website. A COVID-19 dashboard has also been developed by MIS, DGHS and is updated daily. In response to COVID-19, Government has increased capacity of mhealth services "Shastho Batayon 16263". Shastho Batayon 16263 is an online application where general people are able to get 24/7 health services.

- Preparedness for procurement of vaccines has also been completed with detailed vaccination plan to cover 80% of the total population in phases.

Response strategy for tackling the COVID-19

Some key strategies to limit spread of corona virus and to reduce pressure on the national health systems.are highlighted as follows:

- Enforcement of compulsory mask-wearing and safe hygiene practices outside the home, including within the workplace, school and, public transport.
- Zoning approach to containment of the spread of corona virus is being followed.
- Community-based prevention practices, case identification, and quarantining utilizing local community health capacity will be continued to tackle the virus.
- Maintaining communication and liaison with relevant countries and institutions for timely procurement of vaccines.
- Use of digital platform for slowing spread of disease and sustaining behavior change following lockdown.
- Maintenance of social distancing regulations based on latest expert and industry guidance as developed by MoHFW and to be enforced by higher-level committees.
- Empowerment of frontline health workers and other essential workers through BCC training to make them agents of change to turn the epidemic around and address their potential COVID-19 related fears and concerns.
- Continuous use of electronic and print media for raising awareness of mass people in hand washing, mask wearing, maintaining social distance, other safe hygiene practices.
- Providing necessary funds to tackle the COVID pandemic. In addition to providing increased budgetary allocation, a block amount of Tk. 10,000 crore (approximately USD 1176.5 million) has been earmarked in the FY 2020-21 budget to address the issues related to corona virus pandemic. Efforts will be continued to mobilize more resources from Development Partners (DPs) to finance BPRP 2020, etc.

10.4 8FYP GOALS, STRATEGIES AND TARGETS FOR THE HPN SECTOR

Bangladesh aims to attain a number of targets in the road towards universal health coverage, consistent with the proposed major targets under the proposed UN Sustainable Development Goals (SDG) framework. Promoting and sustaining health and nutrition along with containing population growth are priorities in the human development strategy. Vision 2041 envisions a High-income Bangladesh with no poverty and with

conditions that allows individuals to reach and maintain the highest attainable level of health. It incorporates appropriate strategies and activities for focused improvements in health service delivery for increasing access to, and quality of care and improving equity along with financial protection in order to meaningfully realize the objectives of universal health coverage (UHC) by 2030. At present, Bangladesh does not have adequate health insurance scheme that has made it very difficult for the poor and lower middle class to finance any health shock. Both issues will be given top priority in the 8FYP.

Goal: The goal is to ensure that all citizens enjoy health and well-being by expanding access to quality and equitable health care in a healthy environment.

Objective: The main objective is to build on existing achievement to improve equity, quality and efficiency with a view to gradually moving towards UHC and achieving the HPN related SDGs.

Targets: Past and ongoing programmes have promoted good health, nutrition while managing population growth. In order to carry on with the progress achieved and address areas of deficiency, some of the specific targets for the HPN sector under the 8FYP are shown in Table 10.2.

Table 10.2: Health, Population and Nutrition Targets for the 8FYP

Sl.	Indicator	Baseline and Source	8FYP Target (2025)
1	Life expectancy at birth	72.6 (SVRS,2019)	74
2	Proportion of stunting among under-five children (%)	28% (MICS, 2019)	20%
3	Prevalence of other aspects of malnutrition among children under five a. proportion of wasting b. proportion of underweight c. proportion of overweight	a) Wasting: 9.8% b) Underweight 22.6% c) Over weight: 2.4% (MICS,2019)	a) 7% b)15% c) 1%
4	Maternal mortality ratio (per 100,000 live births)	165 (SVRS, 2019)	100
5	Proportion of births attended by skilled health personnel	59% (MICS, 2019)	72%
6	Neonatal mortality rate (per 1,000 live births)	15 (SVRS,2019)	14
7	Infant mortality Rate (per 1,000 live births)	21 (SVRS,2019)	18
8	Under-five mortality rate (per 1,000 live births)	28 (SVRS, 2019)	27
9	Tuberculosis incidence per 100,000 population	221 (Global Tuberculosis Report, WHO, 2019)	112
10	Mortality rate attributed to NCDs (cardiovascular disease, cancer, diabetes or chronic respiratory disease)	21.6% (Health SDG Profile: Bangladesh, WHO,2019)	16.8%
11	Proportion of children fully vaccinated by 12 months (%)	86% (BDHS, 2017-2018)	98%
12	Proportion of births in health facilities by wealth quintiles (ratio of lowest and highest quintiles)	1:3 (BDHS, 2017-2018)	1:1.5
13	Total Fertility Rate (TFR)	2.04 (SVRS, 2019)	2.0
14	Contraceptive Prevalence Rate (%)	63.4% (SVRS, 2019)	75%
15	Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods (%)	77.4% (MICS, 2019)	80%
16	Adolescent birth rate	74 (SVRS, 2019)	60

HPN Strategies

On the basis of experience in the previous SWAp periods a set of strategies will be followed to achieve the 8FYP targets: -

- Focusing on the oversight of service delivery and strengthening the regulatory functions and stewardship role for ensuring universal health coverage.
- Exploring various innovative approaches (e.g., purchasing service to offset inadequate service provision to disadvantaged groups) for improving service delivery particularly for hard-to-reach areas.
- Increasing access to and utilization of quality services by adopting more inclusive approach – engaging the private sector for ESP delivery, public – private partnership (PPP) and NGOs.
- Ensuring SBAs at birth; newborn care; adolescent care; etc. and accelerating initiatives in low-performing and hard-to-reach areas.
- Expanding regular nutritional services and EPI programmes at the CC level in collaboration with DGFP.
- Continue to strengthen HPN system that may require reorganizing various systems and institutions based on needs of the day.
- Adopting new technologies to strengthen surveillance, data quality and information systems.
- Increasing efficiency as well as absolute funding and strengthening M&E activities.
- Incorporating activities in relevant OPs on women's right and voice and conducting orientation training, workshops, focus group discussions, etc. for ensuring gender equality.
- Promote development of human capital through investment in health sector throughout the life cycle. In this context, take into account the changing needs of people as they age, as well as the different needs of children, women and men; internal and international migrants; and rural and urban populations; etc.
- Provide targeted health support to the most socially and economically disadvantaged and vulnerable populations, including those affected by climate change and natural disasters; and help to strengthen their resilience to social, economic and environmental shocks.
- Provide universal access to reproductive and maternal health care as well as NCDC, HIV/AIDS prevention, treatment, care and support.
- Provide higher coverage and adequate levels of health care including social protections, and ensure a balanced distribution of the human and financial costs of care.
- Develop appropriate technologies, care services and infrastructure to accommodate the needs of older persons, commensurate to the stage of economic development and societal norms, structures, etc.
- Plan to ensure that the growing number of urban residents, including the poor, have secured access to primary health care services including water, sanitation, etc. by addressing the safety concerns of women, girls, children and older persons, and by ensuring more coherent and coordinated service delivery at the national level.
- Respond orderly to the conventional as well as new health challenges given the expected mismatch between demand for and the supply of resources.

10.4.1 Health Program in the 8FYP

MoHFW has been pursuing focused improvements in increasing access to quality health services and improving equity along with financial protection in order to achieve universal health coverage (UHC) by 2030. Notable future activities are highlighted below:

- Expansion and consolidation of community based primary health care services.
- The UHFWCs will be upgraded with increased human resources for provision of 24/7 services.
- Quality of medical education & training and HPN services will be ensured through upgradation of the educational facilities/institutes and service facilities, modernization of examination process, inclusion of new subjects in curricula, provision of specialty and sub-specialty positions etc.
- Reviewing and restructuring of urban primary health care services for catering to the needs of rapidly expanding urban population.
- Up-gradation of existing and creation of new facilities for service expansion with a view to bringing in more people under universal coverage and reducing individual out-of-pocket expenditure.
- Expansion of health protection schemes (e.g., SSK, MHVS) for wider coverage of the poor.
- Extensive digitalization at all levels of MOHFW and development of digital data management, incremental use of IT in health, population and nutrition services.
- Establishment of laws, rules and formulation of new policies, updating existing policies, etc. for improved governance, equity and inclusiveness.

The 8FYP will need to lay emphasis on the continuation of efforts to strengthen core systems to support overall improvement in service efficiency, e.g., the reorganization of the financial management, restructuring of CMSD as the major procurement unit and other agencies/institutes. It will continue to emphasize on PHC, EPI, MNCH, NCD, nutrition etc. on consideration of achieving the equity goal and to implement the updated ESP as part of its strategy to achieve the UHC as proposed in SDG (Goal-3). The health sector Program under the 8FYP period will therefore need adequate financial and technical support to implement, monitor and manage the multifarious challenges posed by the ambitious health goals within the dynamic development process of Bangladesh.

With a view to realizing the cherished goal of SDGs by the MoHFW, future activities/programmes including expansion of the on-going ones need to be developed, which are giving good results. However, area-wise future activities of MoHFW to be pursued during the 8FYP are highlighted below.

Pathways to achieving Universal Health Care and reducing Out of Pocket Expenditure

According to WHO recommendations, to achieve Universal Health Care (UHC), countries must advance in at least three dimensions- expand priority services, include more people, and reduce out-of-pocket payments. Expanding coverage for high-priority services to everyone includes eliminating out-of-pocket payments while increasing mandatory, progressive prepayment with pooling of funds. Bangladesh had always prioritized a focus on making public health services available and accessible to all its citizens through Health for All (HFA), Primary Health Care (PHC), Essential Service Package (ESP), etc. The ESP, being implemented from the levels of CCs to district hospitals as priority intervention for providing PHC services, represents Government's commitment to ensure the right to health and that the whole population has access to the most essential health services. The CC based service provision at the doorstep of the

people is a step forward towards achieving the UHC. The CCs are also contributing to reducing the gap between rich and poor with respect to health outcomes in rural areas. The 4th HPNSP has been serving as the first, and the foundation stone, of three subsequent SWAps and is aligned to the goal of achieving UHC by 2030, which highlights the right of every citizen to gain access to quality health care (whether these are obtained from the public or private) without incurring economic hardship.

Furthermore, during the 8FYP period, exploration of various innovative approaches will be continued for expanding PHC services along with improving service quality, which would include review of existing field-based service delivery; diversification of service provision (inclusive of public-private partnership) particularly for Hard to Reach (HTR) areas; development of functional referral systems involving all levels of facilities; ensuring quality of care, etc. Public hospitals at all levels will be upgraded with additional beds and modern equipment for ensuring access and utilization of quality health services by the people.

Assistance will be provided in the Hill District Councils (HDCs) in the Chittagong Hill Tracts (CHT) to develop district-specific health service in co-operation with MoCHTA and with interested DPs. Steps will be taken for providing improved health services to the geriatric populations, the ethnic minorities and the other categories. Disability issues (autism, mental health, etc.) will also be properly addressed in collaboration with various actors (public, private, NGOs) through preventive and curative services including expansion of services to cater the need of those who are physically or mentally challenged with a view to bringing in more people under universal coverage and reducing individual out-of-pocket expenditure (OOPE).

The social health protection scheme in the name of "Shasthyo Shuroksha Karmasuchi (SSK) is providing free hospital services to the poor and vulnerable people. The Maternal Health Voucher Scheme (MHVS), in operation in 55 upazilas, is another health protection scheme for ensuring safe delivery of poor pregnant mothers. During the 8FYP period, coverage of the above-mentioned schemes will be expanded further. Besides, new areas of health protection will be explored including taking up health insurance schemes for different income groups.

Urban Health Service:

Bangladesh is going through significant social and demographic changes, including rapid urbanization, expanding industrialization, rising incomes and increase in non-communicable diseases, partly due to poor nutrition related to lifestyle changes. Population growth in urban areas is 2.5% whereas the national population growth rate is less than 1.4%. The biggest city, Dhaka alone accounts for 40% urban population. Rapid influx of migrants and increased numbers of people living in urban slums in large cities are creating continuous pressure on urban health and nutrition care service. The urban areas provide a contrasting picture of availability of different facilities and services for secondary and tertiary level health care, while primary health care and nutrition facilities and services for the urban population at large and the urban poor in particular are inadequate. With the implementation of three urban primary health care projects (UPHCPs) since 1998, services have been delivered by the City Corporations and Municipalities through contracted NGOs under MoLGRD&C in the project's areas, but without any sustained arrangement for continuation of urban primary health care (UPHC) service after project completion. Besides public institutions, private health and nutrition care facilities as well as school health clinics play an important role in the provision of

health and nutrition services in urban areas which requires increased efforts for coordination and quality control through sustained regulatory mechanisms.

There is need to establish a permanent coordination structure between the two Ministries to take up the mutual mandated responsibility in a sustained and effective manner. MoHFW will join in tackling this challenge through a consultative process with MoLGRD&C, city corporations and concerned stakeholders to jointly assess, map, project and plan HPN services in urban areas. The emphasis on coordination of urban health and nutrition will be a new (and very different) element compared to past programmes. It will involve MoHFW working in new ways with its partners, notably MoLGRD&C, NGOs, Private sector service providers and others.

MoHFW will seek to extend the coverage of UPHC services through the urban dispensaries under the DGHS, which are in the process of improvement by strengthening referral system in the facilities, so that the population receives better health and nutrition services. MoHFW will also provide UPHC services through the outdoors of secondary and tertiary hospitals of urban areas that will continue to be strengthened. Moreover, the UPHC service will be strengthened through introducing evening shifts in terms of coverage, quality and equity of service delivery in response to demand. However, some other priority activities will include:

- Developing an urban health and nutrition strategy with time bound action plan in collaboration with MoLGRD&C.
- Commissioning a study to review and determine how the urban population can be best served and the two Ministries can jointly work together to provide quality HPN services.
- Establishing a permanent institutional arrangement and governance mechanism incorporating relevant ministries, agencies and institutions with responsibility to urban health and nutrition.
- Expanding/upgrading urban dispensaries for quality PHC services (including services for reproductive health, nutrition, health education and screening of diabetes and hypertension).
- Defining an adequate referral system between the various urban dispensaries and the second and third level hospitals, and exploring feasibility of introducing General Physician (GP) system.
- Developing and utilizing urban HIS for effective management of urban health care.
- Building capacity of the various service providers under MoHFW and MoLGRD&C.
- Determining the role and accountability of different NGOs and the private sector in the delivery of urban health.
- Expanding health service delivery through PPPs and through diversification of strategies.

Maternal, Neonatal, Child and Reproductive & Adolescent Health

Maternal and newborn health (MNH) services are inter-related and need to be delivered simultaneously covering preconception, pregnancy, childbirth and the immediate postpartum periods. The services need to be delivered by skilled providers along with prompt and appropriate management of complications in adequately staffed and equipped EmOC facilities, functioning at 24/7 levels gradually. As such a two-pronged strategy will be followed: (i) promotion of institutional services in all districts and upazilas and (ii) sustaining and expanding home-based services, in varying degrees based on local needs, particularly in places with geographic or social restrictions on seeking care from facilities.

Institutional births will be promoted actively through BCC at personal, group and national levels through innovative strategies incorporating the mass and electronic media. Preconception and pregnancy related services will be provided by trained providers at the CC level and by NGOs where found feasible and appropriate. Priority will be given to areas with high rates of MMR and to the economically, geographically and socially disadvantaged. Strategies to improve effectiveness of referrals will be developed and implemented. There is great need to strengthen regulation of the private sector, given the high levels of cesarean sections in these facilities.

Specific attention will be given to promote essential newborn care services with emphasis on prevention and management of asphyxia and neonatal infections, and care for the Low Birth Weight and pre-term babies. This will require extensive training of the existing community-based workers and the new community health care providers (CHCP) and supporting them through operational guidelines. Sick newborn services will be strengthened at the UHCs and district hospitals with rapid referral systems of sick newborns to these facilities. However, some other priority activities will include:

- Promoting MNH services nationwide including the urban slums, in collaboration with other health care providers including NGOs and using mass media.
- Improving quality of maternal and neonatal health services from preconception to the postnatal period in facilities from the medical colleges to CCs and including evidence-based interventions, notably to address hemorrhage and eclampsia.
- Strengthening 24/7 EmOC services gradually through improving HR development, placement and retention with skill mix at various tiers of service delivery and in identified facilities through a detailed mapping exercise considering emergency referrals, communication and transportation.
- Improving strategies to expand skilled birth attendance at institutional level and at home through continued CSBA training program.
- Expanding the maternal voucher scheme and other health protection schemes.
- Strengthening the maternal morbidity (Obstetric Fistula, Cervical Cancer, Breast Cancer, Uterine Prolapsed) related treatment, prevention and rehabilitation services with referral mechanism.

Building on the current success, efforts will be strengthened to maintain and increase coverage of the immunization program, incorporating vaccines for greater number of diseases with especial focus on low performing areas. The next sector program (during 8FYP) will sustain and expand all the on-going child health and nutrition initiatives with special emphasis on reaching the poorer and disadvantaged children more effectively and through partnering with NGOs following a mapping exercise, where appropriate. Key activities to improve Child Health will include:

- Expanding IMCI particularly community based IMCI including child nutrition services.
- Tackling ARI and diarrhea through expansion of IMCI particularly at the community level to cover the whole country with special emphasis on hard to reach areas.
- Ensuring growth promotion with counseling on exclusive breast feeding.
- Strengthening and sustaining of routine immunization and disease surveillance along with Supplementary Immunization Activities, NID, Measles/ MNT Campaigns etc.
- Developing and implementing strategies to prevent childhood injuries including drowning, accidental poisoning and other injuries.

- Sustaining and expanding the ongoing School Health Teachers' Training activities including promotion of healthy school environment and practices, nutrition education etc.
- Carrying out appropriate training of the doctors, nurses, paramedics and field and community workers as per need.

The National Reproductive Health Strategy and the Adolescent Health Strategy including national standards guide the services to be provided. Based on these strategies, the reproductive and adolescent health improvement related activities will include:

- Improving knowledge of women, men and particularly the adolescents, on reproductive health (RTI/ STI, abortion, infertility, etc.) including HIV/AIDS, relevant legal and gender equity issues through the activities of DGHS, DGFP, MoWCA, MoY&S, MoE and NGOs.
- Increasing access to reproductive and adolescent friendly health services through the frontline health personnel and appropriate NGO workers at individual level, school-based programmes, CCs, strong social/community mobilization and opening up adolescent corners.
- Creating positive change in the behavior and attitude of the protectors of adolescents (parents, guardians, teachers, religious leaders, Peers, etc.) towards adolescent RH issues.
- Carrying out appropriate training of service providers of health and community health workers.

Diseases Control Program

(a) Communicable Disease Control (CDC)

Priority Communicable diseases are poverty-related diseases and improvements in overall living conditions and nutrition status, increase in household income, etc. impact on reducing the burden of communicable diseases, including the neglected tropical diseases (NTDs).

TB control is an active public health program which will be maintained to reduce all forms of TB prevalence and incidence rates by emphasizing DOTS implementation with effective referral. About 12 million people in 13 districts of the north-eastern border belt and Chittagong Hill Tracts, live in malaria high-risk areas and account for about 98% of malaria cases. For this, further strengthening of diagnostic procedures, RDT and emphasized training of staff will be made during the 8FYP. Bangladesh has low prevalence of HIV, but an increasingly large number of laborers live abroad and therefore risk of spread of HIV is significantly high and requires constant vigilance. For this, the national AIDS/STD program (NASP) will be rolled over to the 8FYP as well with the objective to minimize the impact of the HIV/AIDS epidemic. Leprosy was practically eliminated (prevalence of less than 1 per 10,000 people) nationally in 1998 except in 5 districts. Leprosy elimination target is to be achieved for every district during the 8FYP through training of health care staff, raising awareness among the population, active detection and patient management in pockets of high leprosy prevalence.

Bangladesh is among the first four countries (Bangladesh, Bhutan, Nepal and Thailand) in the South-East Asia region to achieve Hepatitis B control, with the disease dropping to less than 1% among under five-year-old children. However, control of Hepatitis B & C remains a critical public health concern. Government interventions including establishment of a multi-sectoral approach for activities related to prevention and control; introduction of vaccine to high risk group and establishment of surveillance system for Hepatitis virus infected cases are continuing. During the 8FYP period, prevention and control of

Hepatitis B & C related activities will be strengthened and intensified. Control of NTDs such as filariasis, kala-azar, soil transmitted helminths are some of the priority communicable diseases requiring further attention during the 8FYP. Strategies for controlling and eliminating the NTDs will be revisited and updated in collaboration with relevant private sector and NGO actors. Other communicable diseases, like dengue, chikungunya, avian flu, swine flu, Nipah virus, anthrax, mass psychogenic illness and Hepatitis etc. as emerging and re-emerging diseases will also be addressed. For this, as per the global standard Infection, Prevention and Control Unit (IPCU) is needed to be established.

(b) Non-Communicable Disease Control (NCDC)

Reduction of morbidity and premature mortality due to the 'conventional' NCDs require appropriate actions at all levels and in an integrated manner from primary prevention to treatment and rehabilitation. The government, in partnership with local government bodies and the private sector, will create greater awareness with the assistance of Bureau of Health Education and provide services for the control of unhealthy diet and lifestyle related major NCDs such as cardio-vascular diseases, cancer and diabetes. Existing preventive and curative measures for the NCDs will be further strengthened and expanded to increase access through providing effective number of personnel, training, logistics and funding. Moreover, NCD corners will be established in each UHFWC in phases during the 8FYP period.

Eye Care: Studies have shown that 4 to 11% of the Bangladeshis suffer from permanent disability due to blindness. To facilitate prevention, case identification, referral, management, treatment and rehabilitation, the relevant activities need to be integrated with primary health care (PHC) especially through the services of the community clinics. School Sight testing will be included in primary schools and the past emphasis on successful vitamin A administration will be continued. More attention will be given to postnatal vitamin A administration through CC staff, in collaboration with school teachers and senior students as relevant. The National Eye Care Plan will be upgraded and implemented in the 8FYP.

Mental and Autism Health Care: Mental health problems are increasing amid changing life styles. COVID-19 has aggravated the situation. In pursuance of the government's strong commitment for adequately addressing the counseling and treatment of mental health, partnerships with the media and NGOs will be developed to raise public awareness about appropriate attitude and behavior towards mental patients. Public sector, NGO/ CBO workers and school and religious teachers, will be trained to identify and counsel substance abuse and mental and emotional cases, provide and follow up simple treatment as feasible, life skill training and refer serious cases to public facility, where treatment facilities will also be expanded. For autism health care development, autism corners and child development centers will be established in medical colleges and upazila and district level hospitals. Genetic testing facilities for autism (in genetic origin) will be developed in every medical college hospital.

Elderly and Palliative Care: Life expectancy is gradually increasing and is now 72.6 years and as a result the proportion of elderly people has also been increased. There is a need for reorienting the existing institutional arrangements for health service delivery and to increase investment – both financial and human resources – in developing an appropriate Elderly and Palliative Health Care (EPHC) service system. MoHFW will promote multi-sector collaboration with other ministries (e.g., Ministry of Social Welfare), private sector, NGOs, CSOs, etc. for providing EPHC- friendly health care in the country. During the 8FYP period, awareness building, establishing palliative care units in all medical college hospitals, introducing modern medicines and advance equipment to all medical college

hospitals, capacity development of health personnel, etc. steps will be taken up regarding palliative care. Special card for the elderly people to reduce health expenditure in hospitals will be introduced. Capacity of the health workforce regarding handling the geriatric patient will be enhanced.

Hearing Disability (Deafness): About 13 million people are suffering from variable degree of hearing loss (HL) in Bangladesh of which 3 million have severe to profound HL and are major but neglected causes of disability. Early detection of impaired hearing and proper management could prevent permanent hearing disability. Early detection at the primary level and management of these cases at the secondary and tertiary level will be initiated for control of hearing disability (Deafness) during the 8FYP.

Oral Health: Lack of knowledge and awareness regarding oral hygiene are the main issues which cause oral diseases to be a public health problem. Preventive approach through mass education and raising awareness will be prioritized. Adoption of proper cleaning procedure of the oral cavity and bringing strict restrictions in bad habits (such as smoking, chewing paan, eating excessive sugary food) can reduce most of the common and complicated oral diseases. Oral health awareness should start early in life and this best done both through parent counselling and care and through integration in the school curriculum. Mass media public campaigns are also useful tool for improving public knowledge and awareness.

Non-conventional Non-Communicable Diseases

Road Safety and Injury Prevention: Approximately 70,000 deaths occur each year due to injury (burning, drowning, acid and accidents at work). Some 40 to 45% of injuries are due to road traffic accidents in urban areas and 54% of them involve pedestrians. Dialogue with the Ministry of Road Transport and Bridgesfor safety policies and regulation, enhance skills of DGHS service providers to handle injury patients, build up awareness of the people on pedestrian safety measures will be emphasized by HSD during 8FYP. Community mobilization will be done in collaboration with urban NGOs and city corporation authorities to keep walkway free of any hindrance which discourage people from using walkways.

Violence against Women: Violence against women and girls devastates lives, fractures communities, and stalls development. In collaboration with the Ministry of Women and Children Affairs (MoWCA) and Ministry of Social Welfare (MoSW), HSD will carry out expansion and strengthening of the one stop crisis centers to serve the affected women. Besides, all health care providers will be sensitized through relevant programmes to pay special attention and prioritize women violence survivors in all public health facilities.

Emergency Preparedness and Response: Based on past experience, during 8FYP the main strategic aims are to increase the level of readiness at all tiers of the health system and improve the capacity of the sector for coordinated post-disaster management. Standard national guidelines for mass casualty management as well as manual for local level health response will be issued and necessary training will be conducted.

Occupational Health and Safety: The occupational health and safety services in Bangladesh are inadequate, both in terms of quality and quantity. A major portion of workers in the informal sectors are at risk of developing acute and chronic toxicity due to exposure to toxic pesticides, chemicals and fertilizers, occurrence of occupational diseases and injuries. During 8FYP, HSD will continue its preventive and control measures in collaboration with other relevant ministries (e.g., Ministry of Industries, Ministry of Labor and Employment) to address occupational health hazards, diseases and risks in a cost-effective manner.

Tobacco Control and Substance Abuse including Narcotic Drug: Tobacco causes huge deaths and a massive financial loss in Bangladesh every year.[10] The recent Covid-19 pandemic has demonstrated how tobacco users are highly vulnerable to such outbreaks.[11]Bangladesh has ratified WHO Framework Convention on Tobacco Control (FCTC) and a National Tobacco Control Cell (NTCC) has been formed by the MoHFW to streamline tobacco control activities. During 8FYP, the NTCC will be strengthened by building capacity, advocacy and awareness campaigns. Innovative community-based management programmes, training material development, support for research on substance abuse etc. will be promoted by the Bureau of Health Education for mounting anti-tobacco and anti-substance use messages.

Abuse of narcotic drugs and substance abuse is an emerging social problem particularly among the youths. During the 8FYP period, MoHFW will continue public awareness building activities against illicit use of drugs including 'Yaba', 'Phensedyl, and 'Heroine' abuse. Health education programme against addictive substance abuse will be introduced in educational institutes. Capacity for diagnosis, treatment and rehabilitation of substance abuse will be increased. Necessary steps will be taken to establish required specialized rehabilitation centers for the drug addicted patients during the 8FYP.

Medical Waste Management:

Medical waste management has recently emerged as an issue of major concern that needs to be addressed. Current practices for management of medical waste from public hospitals are inadequate to keep the public facilities hazardous free. An appropriate, safe, and cost-effective strategy will need to be developed with treatment, recycling, transport, and disposal options for proper waste management and ensuring health and environmental safety.

Environmental Health and Climate Change

Natural disasters and climate change are increasingly impacting upon health and wellbeing. Respiratory diseases, heat strokes, cardio-vascular illness and exposure to vector-borne diseases like malaria, dengue, risk of water-borne diseases such as cholera are on the rise while reduced food availability is leading to increased malnutrition. Creating a well-coordinated approach for protecting health from climate change and post disaster health hazards still remains a challenge for the government. To build capacity and strengthen health systems to combat the health impact of climate change, the Climate Change and Health Promotion Unit (CCHPU) has been formed to strengthen necessary activities.

During 8FYP, the level of readiness at all tiers of the health system will be strengthened for emergency response; capacity of the sector will be increased for coordinated post-disaster management and protecting people's health from climate change. Standard national guidelines for mass casualty management as well

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[10] Tobacco-attributable diseases caused nearly 126,000 deaths in 2018 and tobacco-induced diseases cost the economy BDT 305.6 billion (USD 3.6 billion) in Bangladesh, which is equivalent to 1.4% of the national output (GDP) in 2017-18. Source: The economic cost of tobacco use in Bangladesh: A health cost approach 2018, According to the study by Bangladesh Cancer Society. Available at: *https://www.cancerresearchuk.org/sites/default/files/tat004_factsheet_proactt_final_print.pdf*

[11] According to World Health Organization (WHO), smokers are likely to be more vulnerable to COVID-19 as the act of smoking means that fingers (and possibly contaminated cigarettes) are in contact with lips which increases the possibility of transmission of virus from hand to mouth. Smokers may also already have lung disease or reduced lung capacity which would greatly increase risk of serious illness. Available at: *https://www.who.int/publications/m/item/covid-19-and-ncds*

as manual for local level health response will be issued, necessary training will be conducted and emergency health supplies and their stockpiling will be standardized. Partnership will be forged with disaster management agencies, groups and individuals for improving emergency preparedness, prevention and mitigation. The existing health research agenda will include the adverse effect of climate change on health, and field surveys and studies will be conducted to identify effects of climate change on health.

Disease Surveillance

A functional disease surveillance system is necessary for planning, resource mobilization and allocation, prediction and early detection of epidemics, pandemic alert and response, monitoring and evaluation. During 8FYP, IEDCR will be strengthened to turn it into an apex institute for epidemiological surveillance in the country for carrying out epidemiological surveillance of communicable and non-communicable diseases with laboratory support. The goal of integrated disease surveillance is to ensure that each person has the capacity to define, detect and respond to communicable public health threats. To this end, an integrated disease surveillance programme will be developed during the 8FYP period to provide timely, complete, regular and high-quality information; early detect and predict epidemics (early warning systems); assess interventions during epidemics; and monitor intervention programmes efficiently. A Central Surveillance Unit will be established for strengthening/maintaining decentralized laboratory-based IT and responding to outbreaks in early rising phase through trained Rapid Response Team (RRTs). A country-based referral laboratory network will be established by utilizing the existing functional labs in the identified medical colleges and other major centers in the country and linking them with adjoining districts and upazillas for providing diagnostic services for epidemic prone diseases during outbreaks. DGHS will coordinate all activities currently carried out by relevant institutes/ agencies to establish an effective NCD surveillance system. Capacity of all hospitals will be strengthened to assist in disease surveillance and diagnosis. Teachers of primary schools, NGO workers and community volunteers will be trained to identify the clinical features of the most common endemic diseases. Partnering with private health care providers for better surveillance, reporting, referral and case management will be established. Mapping of all major diseases, on the basis of their incidence and prevalence, will be constructed for each district and upazila.

Alternative Medical Care (AMC)

Unani, Ayuverdic & Homeopathic medical services have been extended to outdoor departments of district hospitals and herbal centers at the upazila health complexes. AMC is weakened by the lack of standards of the system, poor job opportunity, research, publication, information and awareness about AMC. During 8FYP, required strengthening of the research, monitoring, production and publication, workshop and training will be made. Existing two AMC colleges and hospitals including outdoor services will also be strengthened.

Behaviour Change Communication (BCC)

BCC activities of the Bureau of Health Education (BHE) are intended to bring about behavioral changes among the people towards safe motherhood, breast feeding, climate change, emerging and re-emerging diseases, food safety, vaccination, vitamin A administration, neonatal care, violence against women, nutrition etc. through special emphasis on interpersonal communication, electronic and print media. Comprehensive BCC programmes will be developed in building community knowledge and skills to promote use of MNCH services and to enhance basic health education in schools/madrassas for children

and youth. Promoting health and nutrition services through electronic and print media and motivational programmes in the form of feature films, posters, local dramas, etc. will continue to be the materials of BCC activities.

Strengthening Health Systems:

Human Resources for Health: In addition to address the issue of HR shortage in the health sector, MoHFW will focus on improving quality of public and private pre-service health workforce education system; capacity development to ensure better management at all levels of service delivery; operationalization of the Human Resources Information System (HRIS) for evidence-based decision; and strengthening quality assurance of medical education at both private and public sector institutions through licensing and accreditation. During the 8FYP period, all vacant positions of MoHFW will be gradually filled up. The organograms of all health and family planning agencies along with their facilities will be reviewed and updated for provision of quality HPN services.

Governance and Stewardship: There is widespread public perception about the quality of health services provided either by the public or the private/ non-state actors, as being low. Weak governance in the public sector has contributed to unavailability of designated health personnel, reported pilferage of drugs and other essential supplies, alleged mistreatment and negligence, unauthorized and illegal payments in health facilities while internal monitoring and oversight mechanisms remain weak. The poor and the vulnerable members of the society bear the brunt of the weak governance both in terms of cost and deficient service delivery.

During 4th HPNSP period, governance and stewardship has been made a component to prioritize its importance and continuous efforts are being made in improving the system. The stewardship role and capacity of the MoHFW will further be strengthened through improved monitoring of quality of care and safety of patients in both public and private sectors. DGHS will develop a periodic inspection system of facilities and services, with necessary support, on a regular basis at all levels and act upon the findings to improve client satisfaction.

Legal and Regulatory Framework: The main regulatory functions under the HSD are: i) accreditation of hospitals, private health services, diagnostic centers and training institutions (including medical colleges); ii) licensing and control of pharmaceuticals and of some cadres of health workers; and iii) overall setting of standards, including for alternative medical care and medical waste management. In the 8FYP, HSD will continue to update the mandates, structures and build capacity of the various national regulatory bodies to increase their effectiveness and functionality and review structure and capacity of the HSD Directorates to strengthen supervision and enhance institutional management. HSD also intends to partner with NGOs and private sector for strengthening existing regulatory mechanisms and creating new ones.

Supply of Essential Drugs and Rational use

Essential Drugs Company Limited (EDCL), a company owned by the Government produces all essential drugs for consumption at the public facilities (CCs, UHCs, DHs, MCHs). It has production factories in Dhaka and Bogura. In addition, EDCL also has one latex plant at Khulna for producing condoms. EDCL has also undertaken a programme for establishing one world class modern pharmaceutical industry at Gopalganj, which in addition to essential medicines will also produce birth control pills, injectables, iron tablets and IV fluids.

A growing concern in disease control is the irrational use of medicines. Irrational use of antibiotics, which results in increasing trends of MDR-TB, and few other communicable diseases in the country. Limited awareness of the patients regarding proper dosage, reliance over the counter availability of prescription drugs and import of illegal drugs of doubtful quality are the principal challenges to ensure rational use of drugs in our country. During the 8FYP period, national clinical guidelines as well as antibiotic use guidelines will be prepared and made available to the health care professionals. Mass awareness will be created about rational use of drugs and the adverse effect of irrational use of antibiotics.

Gender, Equity and Voice

The Government of Bangladesh has made it a priority to eliminate discrimination against women and girls and promote gender equity. The MoHFW will uphold the same during the 8FYP period as well. The existing Gender Equity Strategy of HSD are being implemented to overcome barriers of various gender related issues including human resource management at facility level, housing, promotion for women workforce, etc. The 8FYP will adopt specific measures and adjustments in approaches and services to ensure that the needs of the various regions and groups are identified, analyzed and appropriate measures taken through decentralizing authority and allocating special funds. Voice and accountability mechanisms will be mainstreamed into the governance and stewardship functions of the overall health program. A local level accountability mechanism will be developed in participation with the community people and local NGOs to improve utilization of health services by the local communities and the disadvantaged groups.

Health Card and Digitalization

To meet the challenges of 21st century and commencement of 4IR, Government has been preparing to introduce Health Card for its citizen. This card will be electronically readable and Electronic Medical Reports of citizens will be linked to the card and stored in Central Online Data Base. There is strong commitment from the Government to capitalization of 4IR, and to act on that health care system needs to be fully digitalized and optimized through automation as much as possible. This will reduce cost of service delivery and improve the quality of service as well as act as real time disease & resource surveillance. This will enable better planning, resource allocation and logistics & inventory management. During the 8FYP period, Health Card with linked EMR database will be established along with scaling up of electronic tracking system of the citizen's health. Integration of Health information and eHealth Platforms amongst different agencies and stakeholders will be made including optimization and automation of Health Care system through digitalization.

Non-Governmental Organizations and Public Private Partnership

Non-Governmental Organizations (NGOs) are a significant and growing means of health service delivery in both rural and urban Bangladesh. There are some well-established and institutionally strong NGOs as (i) health care providers, (ii) innovators in diversifying modalities of service delivery, (iii) training formal and informal health providers, (iv) research and development and (v) catalyst/facilitator for demand creation and linking community with health facilities. Building and strengthening linkages with the NGOs will be an approach to complement government efforts in increasing access of the poor, the disadvantaged and the hard-to-reach populations to HPN services.

Public Private Partnership (PPP) is also being practiced in the health sector by the government as an approach for enhancing effective health service delivery. PPPs can help address innovations in service design and management expertise, empowerment of the service recipients, protection of environment, social justice and right based service provision. The PPP in service delivery and in the areas of medical and allied education will be further expanded and strengthened during the 8FYP with effective regulatory mechanisms.

In-service Training

DGHS, DGFP, DGME and DGNM will continue to provide pre-service and in-service training in various fields of health and nutrition services to develop skills based on a good diagnostic of the skills mix and the skills gap and generate information through research/ studies for having quality human resources in HPN services. For this, during the 8FYP period, MoHFW through the agencies under it will continue to perform with the preparation of training curriculum, modules, etc.; organizing orientation and other in-services training courses for the newly recruited medical officers, doctors, health technicians, other health professionals and workers, etc.; conducting training of the trainers on competency based training, updating of curriculum and printing; developing new ideas/thoughts for training and exchanging information/data on required technology; and conducting disease/area specific surveys, research and studies on facilities, health service, etc. Similar in-service training activities will also be performed by other institutes (e.g., BIHM) of MoHFW for skill development.

Multi-sector Approach

During the 8FYP, efforts will be made to further improve upon existing platforms of coordination between MoHFW and relevant stakeholders including the private sector and explore feasible new modes for maximization of available resources to ensure equity. Key areas of such coordination and collaboration would include - urban health (MoLGRDC) and ethnic minority health (MoCHTA) for resource sharing, program planning, implementation and review; parallel projects (both GoB and DP) to avoid duplication and develop complementarities; NGO/private sector for management/operation of non-functional facilities and/or providing services in hard-to-reach areas or for exploring feasibility of new services/technology; community, public representatives and local government's involvement in augmenting resources, management and oversight of service facilities in their locality; etc. The 8FYP will also put increased focus on establishing stronger coordination and collaboration among multiple sectors affecting health outcomes (e.g. malnutrition, NCDs); addressing issues like PHC coverage in urban areas; and promoting healthy lifestyles and environment through comprehensive social behaviour change communication (SBCC) in collaboration with all relevant Government agencies, private sector participants, DPs and other stakeholders.

Mechanisms for Improving Implementation Capacity

With a view to realizing the objectives of the 8FYP and improving capacity to implement programmes /activities, continuous and further actions will need to be undertaken on the following:

- In-service training in various fields of service delivery of the officers and technical support staff at all levels including those of managers/administrative personnel need to be continued.

- Operationalize harmonization of services of the service providers (DGHS, DGFP, DGNM) towards a more effective and efficient service delivery.
- Enhance capacity for evidence -, need- and result-based budgeting and planning through development of a five-year training plan for skill development training of the key workforce.
- Review of the existing strengths and weaknesses of the Agencies for strengthening health systems and improvement of service quality.
- Reduce and rationalize projects outside the SWAp Program and establish risk pooling and purchasing mechanism towards UHC.
- Update and implement the Health Workforce Strategy (HWS) and a 5-yearly rolling plan to guide production (number with skill-mix) of doctors and nurses.
- Synchronize construction facilities with equipment and human resources. Also strengthen increased use of health facilities along with their professional management.
- Health personnel specially physicians who working in the field level should be given more emphasis for in service local and foreign training to keep them in locality
- Facilities and opportunities need to be created for the health personnel to keep them working in upazila level
- Demand based higher studies should be made available for health personnel specially physicians
- Rationalize procurement management.

Institutional Mechanism for Monitoring

MoHFW through the two divisions viz., HSD and MEFWD has been monitoring progress of regular programmes and other project activities in line with government's existing monitoring systems. These are Monthly ADP Review; IMED's Quarterly Review, Annual Program Review (APR), Mid-term Review (MTR), etc. mechanisms. Besides, there are committees to review OP/Project Implementation, inter-ministerial committees for reviewing multi-sector issues like nutrition, urban health, food safety, etc. mechanisms are also regularly followed. In addition, as the HPN sector program is also financed by a large number of DPs, well-tested platforms of monitoring consisting of GOB and DP representations, such as Local Consultative Group on Health, and various Task Groups and the Steering Committees will be continued with focus on improving results from specific HPN services and their supporting health systems.

Besides, a number of activities to support capacity building, streamlining, and scaling up of M&E systems are being implemented during the 7FYP period through the financing from 4th HPNSP. These activities are linked to the achievement of results as defined by the Results Framework (RFW) and a set of OP level indicators to monitor implementation progress. The OPs are currently formally reviewed to assess implementation progress and a six-monthly/annually report is produced regularly. Given the renewed focus on tracking progress under the current global (e.g. SDG) as well as national (e.g. 7FYP) and ministerial (e.g. disbursement linked indicators) commitments, development of six-monthly program implementation report (SmPR), annual program implementation report (APIR) internally and annual program review (APR) by independent review team (IRT) to monitor progress of OP implementation and sector performance; tracking of DLI progress through DLI Monitoring Committee, etc. institutional mechanisms along with capacity building of relevant staff will continue to be pursued during the 8FYP period as well.

10.4.2 Medical Education Program in the 8FYP

The Medical Education Program under a new Division of MoHFW with new focus started its operation during mid-way of the implementation of 7FYP. But with a view to realize the cherished goal of SDGs, future activities/programmes including expansion of the on-going ones will need to be developed with due emphasis on producing quality human resources for health. The main activities for the 8FYP include:

Medical and Nursing Education:

- Bringing in all post-graduate degrees of medical education under one platform and coordinate the activities for quality education.
- Establishment of medical accreditation council.
- Modernization of examination process and inclusion of new/specialized subjects in the medical/dental/nursing/paramedical education curricula in accordance with international standards. Expansion of super-specialty medical education will be promoted.
- Establishment of nursing/paramedical education board.
- Continuous training of teachers for improvement of quality medical education as well as health services.
- Enhance research activity of teachers in medical education and health related issues.
- Implementation of Government's commitment for establishing medical university at every Division for promoting post-graduate medical education and medical college at each district of the country.
- Development of digital data management, incremental use of IT in medical institutions and making quality medical and nursing education service easily available to all concerned.
- Strengthening medical and nursing education research activities for improving quality in teaching and services.
- Establishment of laws, rules, procedures, and formulation of new policies, updating existing policies, etc. for promoting quality medical, nursing and paramedical education and services.
- Establishment of new physical facilities & upgradation of existing ones and repair and maintenance of the facilities.
- Ensure the standard of medical and nursing education in private sector.
- Encourage specialization of basic subject in medical science.

Nursing & Midwifery Services:

- Increasing the number of nurses and midwives through creating additional seats in nursing institutions and continue to provide skill development training to them.
- Strengthen technology-based education and training programmes for quality improvement and effective monitoring.
- Improve and control the standard of nursing education through the Accreditation Guidelines.
- Strengthen and expand online nursing services.
- Preparation of nursing and midwifery work plan for realizing the SDGs and preparation of training plan for on the job training.
- Produce specialized nurses as demanded by the specialized hospitals.
- Establishment of a Nursing Teachers' Training College for producing quality nurses.

National Institute for Population Research and Training (NIPORT)

NIPORT will have to continue to provide in-service training to develop skills and generate information through research/ studies with a view to have quality human resources for nutrition service provision and promotion in HPN services. For this, NIPORT will continue to perform with the following:

- Preparation of training curriculum, modules, etc. and organize orientation courses for the newly recruited medical officers, senior staff nurses, FWAs, FWVs, other health and FP professionals and workers including nutrition workers, etc.
- Conduct training of the trainers on competency-based training, updating of curriculum and printing.
- Develop new ideas/thoughts for training and exchange information/data on required technology
- Conduct operations research and collaborative research for improvement of HPN services and improve research capacity building.
- Conduct surveys on facilities, demography & health, etc., research and studies and disseminate the findings.
- Construct new multipurpose (Office/Academic/Hostel) building for NIPORT Head Office and renovate existing facilities with modern equipment.

Facilities Development

The Health Engineering Department (HED) is responsible for physical facilities development of MoHFW. Facilities will be developed during the 8FYP period to cater to the needs of making public HPN services accessible to the entire population. These include up-gradation, new establishment, rebuilding & repair, renovation of existing ones of UHFWCs, repair, renovation & remodeling of RDs/Union Sub-centres, establishment of MCWCs, up-gradation & new construction of FWVTIs, IHT, MATS, Nursing Colleges, repair and remodeling of Nursing Institutes, construction of boundary walls of different facilities, etc. Besides, HR, equipment, machineries and other logistics will also be required to make the facilities fully ready for service delivery.

The work volume and speed of HED has to be matched with the increasing demand of creating facilities for medical education and FP services. This necessitates the need for strengthening HED with additional skilled manpower, logistics, training facilities, etc. Therefore, HED needs to be reorganized during the 8FYP.

10.5 NUTRITION PROGRAM IN 8FYP

In Bangladesh both chronic and acute malnutrition levels are higher than the WHO's thresholds for public health emergencies, although there has been considerable progress in decreasing malnutrition, in particular undernutrition and micro nutrient deficiencies. Moreover, over nutrition due to life-style changes and intake of junk food is an emerging problem in urban areas as well, increasing the burden of NCDs such as obesity, diabetes and cardiovascular diseases. The key strategies and actions to be pursued during the 8FYP are continuation of nutrition service through regular government channels, micro-nutrient supplementation, treatment of severe acute malnutrition, strengthening BCC to promote good nutritional practices, coordination of nutrition activities across different sectors and mainstreaming gender into nutrition programming and promoting equity. Simultaneously, availability of adequate skilled human resources and nutrition logistics and commodities through improved supply chain management will be prioritized and ensured.

Strategy for Nutrition

It is important to note that nutrition is a multi-sectoral issue that requires a multi-sectoral approach and multi-agency actions. Nutrition is intimately linked with the quality and quantity of food consumption. Food security and food-related nutrition issues including the problem of food adulteration is discussed in detail in Chapter 14. It is important, however, to note that nutrition is a multi-sectoral issue that requires multi-sectoral approach and multi-agency actions. Table 10.3 lists the major public sector agencies that play a role in the nations nutrition outcome. This multi-sectoral multi-agency approach was advocated in the 7FYP through the development and approval of several policies and guidelines (e.g. NPAN2, CIP2, NSSS, FSNP, 4th HPNSP), strengthening the enabling environment for nutrition security significantly. The 8FYP will build on the progress and strengthen the nutrition strategy to achieve the targeted nutrition outcomes. The roles and responsibilities of the stakeholders for nutrition will be further specified, and arrangements of appropriate coordination and synergistic action will be made in line with the aforementioned enabling environment. Nutrition related policy guidance and inter/intra ministerial linkages will be facilitated through the revitalized Bangladesh National Nutrition Council (BNNC). Moreover, existing cabinet committees that address food and nutrition security will contribute to effective coordination of nutrition programming. The MoHFW will collaborate with the Ministry of LGRD&C, the Ministry of Agriculture, and the Ministry of Food to address nutrition and food safety issues.

Table 10.3: Multi-sectoral, Multi-agency Approach to Improving Nutrition

Domain	Role and activity towards scaling up nutrition	Ministry/Division
Education	• Incorporate nutrition and hygiene education in curriculum, including school vegetable garden and cooking demonstrations • Ensure regular Health and Nutrition Days in the school's calendar • Ensure completion for girls' education at least up to high school • Promote and protect good dietary practices among children in places where there are school feeding programmes • Improve sanitation facilities in schools	Education, Health and Family Welfare, Information
Water and sanitation	• Contribute to increased levels of hand-washing and hygiene • Ensure availability of safe drinking water • Improve availability of sanitary facilities in different settings • Prioritise the availability of water to women for agriculture and fishing	Local Govt., Rural Development & Cooperatives, Health & Family Welfare, Water Resources.
Food	• Ensure improving availability of diverse foods of quality • Promote best practice to ensure food safety in agriculture sector, food processing industries, food distribution system and in food value chain • Ensure adequate food safety regulatory framework in place and monitored	Food, Industry, Disaster Management & Relief, Fisheries & Livestock, Health & Family Welfare, Agriculture
Agriculture, Fisheries and Livestock	• Improve production of diversified food (source of animal protein) • Empower women to access agriculture extension services, resources • Incorporate basic nutrition into agriculture extension training and tasks • Build agriculture extension and agriculture input supply system to ensure nutrition is considered in planning and implementation	Agriculture, Fisheries and Livestock, Water Resources.

Domain	Role and activity towards scaling up nutrition	Ministry/Division
Women and children affairs	• Emphasis on empowerment of women to make decisions about their own and their children's wellbeing • Highlight child marriage/early pregnancy and childbearing, and their harmful implications for nutrition • Ensure 6-month fully paid maternity leave is implemented in all sectors	Women and Children Affairs, Health and Family Welfare, Primary and Mass Education, Information
Industry	• Increase availability of fortified staples e.g. salt and oil • Adhere to high standards in advertising/marketing, focus on children	Industry, Food and Agriculture
Environment, forestry and natural resources	• Restoring or enhancing natural resources • Protecting forests, promoting forest-derived foods to benefit poor/ women • Securing ownership, access and management rights to land and other productive resources for poor or marginalised groups (e.g. ethnic minorities, emergency-affected populations) • Pro-poor, efficient and integrated management of water resources including control for negative impacts, such as water-borne diseases • Risk mitigation and management of water-related shocks (e.g. droughts, floods, water insecurity) through adequate infrastructure, storage and flood control, supporting adaptation to the effects of climate change • Strengthening early warning and nutrition surveillance systems • Increase collaboration with other sectors and joint programming to increase household/community resilience, especially in emergencies • Monitoring & evaluation systems include nutrition relevant indicators	Environment, Forest and Climate Change, Chittagong Hill Tracts Affairs
Law and Justice	• Protect, promote and monitor rights and non-discrimination: right to adequate food and to be able to feed oneself in dignity; and all other – related rights (employment, children's rights, women's rights, focus on marginalized groups, poor households and women) • Uphold refugee and humanitarian law in protracted crises	Women and Children Affairs, Law, Justice and Parliamentary Affairs

Addressing Child, Adolescent and Maternal Malnutrition

Under the 8FYP, increased attention will be paid to the high rate of malnutrition among children, adolescent and women of reproductive age and the elderly. This is also part of efforts to mainstream gender issues in nutrition programmes. To that end, the Government will consider a multidimensional approach to address the intergenerational health impact. Among other things, such an approach will include awareness on child/women nutrition, food value and food diversity. Nutrition-specific interventions, for example infant and young child feeding, and promotion and distribution of micronutrient supplementation such as iron-folic acid supplementation among pregnant, lactating women and adolescent girls to cover iron-deficiency anaemia will be undertaken through health and family planning facilities. The national strategy for infant and young child feeding will be implemented. Existing half-yearly Vitamin A capsules distribution for children will be continued. Post-partum Vitamin A distribution to improve vitamin A status of neonates through breast milk will be scaled up. Monitoring of salt iodization will be strengthened. Zinc for treatment of diarrhoea will be adequately promoted. Expansion of intestinal parasite treatment, including the distribution of albendazole tablets, along with a separate deworming programme will be considered. With the coverage of IMCI, zinc tablets are expected to be freely provided to children with diarrhoea.

Some activities to improve nutrition services will include:

- Providing high potency Vitamin, A supplementation and de-worming to children during measles vaccination and to children 1-5 years during national events and through fortification of food with vitamin A, iron and iodine for children.
- Providing micronutrient supplementation to pregnant women (Iron folate) and Vitamin-A supplementation to mothers and neonates at postnatal period.
- Providing nutritional education and counseling to adolescent girls, pregnant and lactating mothers on appropriate caring and feeding practices, breast-feeding, supplementary feeding, micronutrients, etc.
- Strengthen quality improvement of the wasting prevention and treatment programme, and other nutrition services at facility level.
- Ensuring expansion of community-based prevention approach of malnutrition with nutrition services through C- IMCI programmes as preventive measures to malnourishment along with programmes in the CCs and managing malnourished cases at community and facility level, IYCF, etc.
- Improve positive nutrition practices through Social Behaviour Change Communication (SBCC) including awareness on uptake of essential nutrition services from public and private facilities and at community level, as well as on food safety and healthy diet, as well as complementary issues such as water and sanitation, EPI, and prevention of NCDs.
- Ensuring timely and quality reporting and follow up of nutrition services
- Strengthening inter-sectoral and inter-OP collaboration and efficient program implementation for nutrition.
- Introduce/revise/strengthen education on nutrition and healthy diets for students in the curriculum
- Integrate growth monitoring and promotion in EPI platforms
- Develop and strengthen the regulatory mechanism and ensure implementation of policies, action plans, and acts on nutrition, food safety, and healthy diets.
- Increase coverage of services by aligning with relevant services and interventions hosted by other ministries, such as Maternal Allowance and Lactating Mothers Allowance/Child Benefit programme
- Expedite the recruitment of relevant nutrition staff where required at community and facility level

Capacity Building and Awareness

To improve the knowledge base and capacity of health personnel regarding nutrition, health and family planning workers as well as agricultural extension workers will be appropriately trained in nutrition education. This will ease the mainstreaming of nutrition in health and family planning services through community clinics, union health and family welfare centres/sub-centres, Upazila health complexes, and agriculture extension services. Capacity building in nutrition of Upazila health and agriculture workers, school teachers and women farmers will be undertaken through the NNS Operational Plan of IPHN. Community awareness regarding health and nutrition will be strengthened through disseminating messages. Community based arrangements will also promote preparation of low-cost nutritious recipes, processing

and preservation of micronutrient rich foods. Issues that are supplementary and complementary to nutrition, like water and sanitation, dietary intake, EPI and health education will be addressed through a comprehensive approach.

Monitoring, evaluation and research

Strengthen monitoring, evaluation and research to generate evidence to inform policy decisions by improving interoperability of routine information management systems, surveys, assessments and surveillance, establish feedback mechanisms, and closely monitor provision and utilization of essential nutrition services with innovative approaches to understand the level of sustainability and accountability in terms of equity, access, coverage and quality, to generate evidence for informed policy decisions.

10.6 POPULATION AND DEVELOPMENT

Bangladesh has already witnessed how changes in the population growth rate and the structure creates opportunities along with challenges. Rapid reduction in the population growth rate and changes in the population structure in Bangladesh over the past 48 years since independence due to successes of social policy interventions including progress with women empowerment and gender equality have driven down child mortality, maternal mortality and high fertility rates and extended life expectancy. The formulation of PP2041 has given an opportunity to revisit the long-term role of population management during the next 20 years or so. The structure of the population now and the one that will evolve in the next 20 years will be vastly different than 20-30 years ago. The development context of UMIC and HIC are also very different from the context of low income (1972-2014) and LMIC (2015- ongoing). Consequently, the opportunities and challenges are vastly different and need a strategic review for proper integration in the upcoming development agenda, starting with the 8FYP.

10.6.1 Progress in Population Management

The first post-independence National Population Census of 1974 counted some 74 million Bangladeshis. The Census found that the TFR was at a high 6.9 and the population growth rate was 2.5% per year. The child population (0-14 age group) constituted 48% of the total population and the dependency ratio was a high 100. Life expectancy was a mere 48 years, infant mortality rate was an alarming 139 per thousand live births and maternal mortality rate was an astounding 750 per 100,000 live births (Table 10.4). These dismal population characteristics were indeed alarming. Bangladesh policy makers fought back with determination. Less than 40 years later, the last Census done in 2011 found tremendous success with population management. The TFR fell dramatically to 2.3; population growth rate declined to 1.2%; life expectancy increased to 69 years. Infant mortality climbed down dramatically to 39. Progress was also made in bringing down the incidence of maternal mortality, although this progress was relatively modest compared with other areas. The changing population dynamics brought down the share of child population to 35% and the dependency ratio fell drastically to 67%. Sample survey data show that the progress with population management has continued since the last Census (Table 10.4).

Table 10.4: Bangladesh Population Progress 1974- 2019

Population Indicators	1974	2011	2019
Total fertility rate (TFR)	6.9	2.1	2.0
Population growth rate (%)	2.5	1.4	1.32
Life expectancy	46.2	69.0	72.6
Infant mortality rate (per 000 live births)	139	39.0	21
Maternal mortality rate (per 1,00,000 live births)	750	239	165
Share of 0-14 age group (%)	48.1	35.4	28.5
Dependency rate (%)	100.0	67.2	51.0

Source: Bangladesh Bureau of Statistics (BBS)

The UNFPA provides an annual update on the state of progress with the global population challenge. It provides two summary tables on progress with the population management agenda adopted at the Cairo Conference (ICPD 1994). One deals with progress with sexual and reproductive health rights and the other deals with the youth and adolescent agenda. A third table compares progress with key demographic indicators. These three tables combined provides a snapshot of the progress made by Bangladesh relative to the rest of the world in the area of population management in the context of the ICPD framework and also provides a summary of the agenda moving forward.

Table 10.5 provides an overview of the progress on the ICPD agenda for sexual and reproductive health rights. The progress made by Bangladesh in the adoption of contraceptives compares favorably with the world average and is better than the average progress made in developing countries. Importantly, this progress is better than the South Asian countries of India, Nepal and Pakistan. The Bangladesh performance is however weak in the area of reduction of female mortality and birth attendance by skilled health personnel. Compared to 1974, Bangladesh has done well in reducing the incidence of maternal mortality and compares favorably with the averages for both the world level and the developing countries. But it is substantially behind the solid performance achieved by the dynamic East Asian countries of Malaysia, Thailand and Vietnam in reducing the incidence of maternal mortality. Regarding birth attendance by trained staff, Bangladesh is lagging way behind and is even below the average performance secured by least developing countries. This is a serious performance gap in an otherwise commendable performance record that requires urgent attention.

Table 10.5: Bangladesh Progress with Sexual and Reproductive Health Rights ICPD Goals

Region / Countries	Contraceptive prevalence rate, women aged 15-49, any method (%)	Contraceptive prevalence rate, women aged 15-49, modern method (%)	Unmet need for family planning women aged 15-49	Proportion of demand satisfied; women aged 15-49	Proportion of demand satisfied with modern methods; women aged 15-49	Maternal mortality ratio (MMR) (deaths per 100,000 live births)	Births attended by skilled health personnel (%)
Year	**2019**	**2019**	**2019**	**2019**	**2019**	**2015**	**2017**
World	63	58	12	84	78	216	79
More developed regions	68	61	10	88	79	12	
Less developed regions	62	57	12	84	77	238	
Least developed regions	42	37	21	67	59	436	56
Asia and Pacific	67	62	10	87	81	127	84
Bangladesh	**64**	**57**	**11**	**85**	**76**	**176**	**50**

Region / Countries	Contraceptive prevalence rate, women aged 15-49, any method (%)	Contraceptive prevalence rate, women aged 15-49, modern method (%)	Unmet need for family planning women aged 15-49	Proportion of demand satisfied; women aged 15-49	Proportion of demand satisfied with modern methods; women aged 15-49	Maternal mortality ratio (MMR) (deaths per 100,000 live births)	Births attended by skilled health personnel (%)
India	57	51	12	82	74	174	86
Pakistan	42	33	19	68	54	178	52
Sri Lanka	65	54	8	90	74	30	99
Nepal	54	48	22	71	63	258	58
Malaysia	53	39	17	76	56	40	99
Thailand	78	76	6	93	90	20	99
Vietnam	79	65	6	94	77	54	94

Source: UNFPA 2019

Comparative progress with the ICPD goals for Adolescent and Youth is indicated in Table 10.6. Bangladesh made excellent progress on the education front for both boys and girls, but especially for girls. It achieved near universal primary education for female and in excess of net enrolment for male. Female progress with net secondary enrolment also exceeded male, although there is still much room for growth to come close to 100% net secondary school enrolment for both boys and girls. Importantly, the progress with girl's education exceeds the average progress for the world and thee developing countries and is very close to the average for Asia and Pacific. Bangladesh is however lagging substantially behind in making progress in the areas of child marriage and adolescent fertility rates.

Table 10.6: Bangladesh Progress with Adolescent and Youth ICPD Goals

Countries/ Regions	Adolescent birth rate per 1000 girls age 15-19	Child marriage by 18 (%)	Net enrolment rate primary education male (%)	Net enrolment rate primary education female (%)	Gender parity index primary education	Net enrolment rate secondary education male (%)	Net enrolment rate secondary education female (%)	Gender parity index, secondary education
	2018	**2017**	**2017**	**2017**	**2017**	**2017**	**2017**	**2017**
World	44	21	92	90	0.98	66	66	1.00
More developed regions	14		97	97	1.00	93	93	1.01
Less developed regions	48		91	89	0.98	62	62	0.99
Least developed regions	91	40	83	80	0.96	38	36	0.95
Asia and Pacific	28	26	95	94	0.99	67	68	1.02
East and Southern Africa	93	35	86	83	0.97	35	33	0.93
West and Central Africa	114	42	79	71	0.90	39	34	0.86
Bangladesh	74	59	92	98	1.07	57	67	1.17

UNFPA 2019

When it comes to the demographic progress, Bangladesh again scores very well. Its progress in reducing TFR and the population growth rate outperforms the progress made for the world, developing country and the East Asian country averages. Within South Asia, Bangladesh performance is better than performances

in India, Nepal and Pakistan. Only Sri Lanka does better along with the dynamic East Asian countries of Thailand and Vietnam. Malaysia outperforms on life expectancy, but its performance falls short on TFR and population growth rate. However, this is possibly a conscious Malaysian policy to encourage birth rates given the excess demand situation and rising wages in the labor market. In summary, Bangladesh has achieved strong progress in improving its population management based on freedom of choice and women empowerment. Excellent progress has been made in lowering TFR, reducing the population growth rate, reducing infant mortality, raising life expectancy and increasing primary and secondary enrolments for girls. The areas where further progress is needed includes lowering maternal mortality rate, increasing availability of skilled birth attendants, reducing child marriage, lowering adolescent birth rates and addressing comprehensively the menace of violence against women.

Table 10.7: Comparative Progress with Demographic Indicators

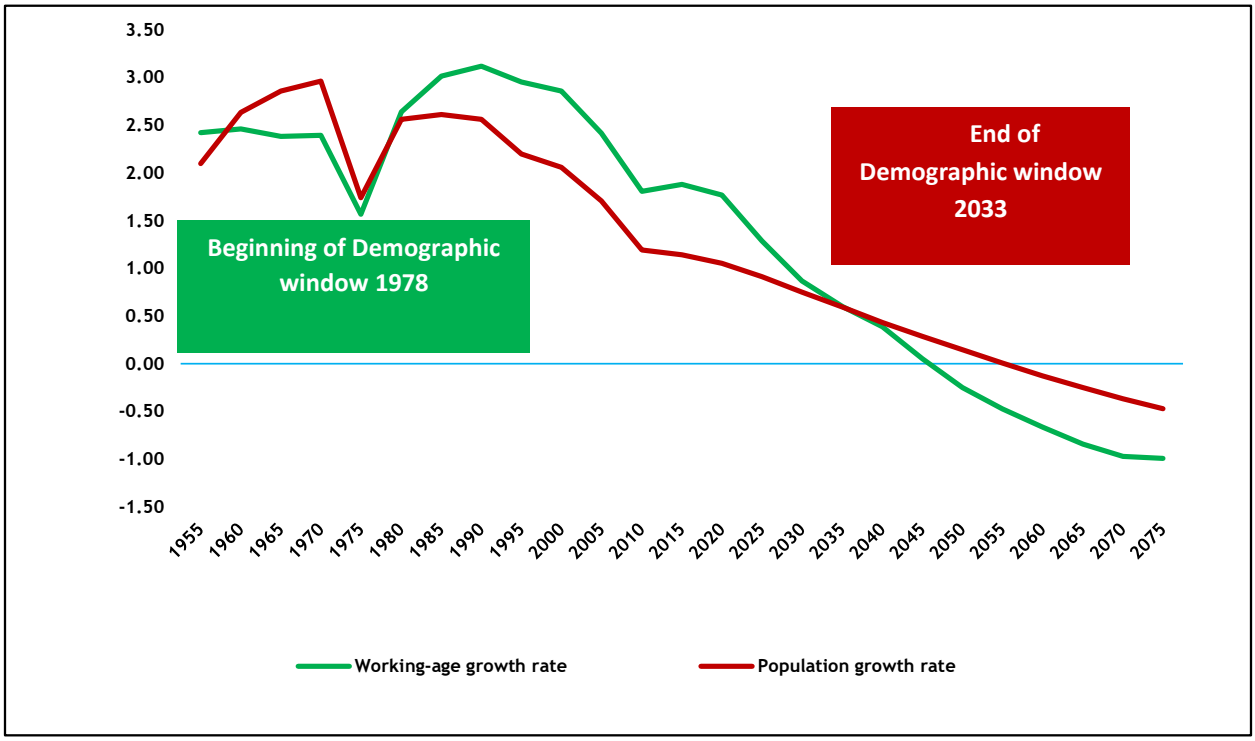
Indicators/ Countries	TFR	Population growth rate (%)	Life expectancy (years)
	2019	2019	2010-19
World	2.5	1.1	72
More developed regions	1.7	0.3	80
Less developed regions	2.6	1.3	71
Least developed regions	3.9	2.4	65
East Asia and Pacific	2.1	1.0	72
Bangladesh	**2.0**	**1.1**	**73**
India	2.3	1.2	69
Pakistan	3.3	2.0	67
Sri Lanka	2.0	0.4	76
Nepal	2.0	1.1	71
Malaysia	2.0	1.6	76
Thailand	1.4	0.3	76
Vietnam	1.9	1.1	77

Source: UNFPA 2019

10.6.2 Demographic Dividend and Ageing

Demographic window of opportunity is the period when the proportion of a country's working age population aged 15 to 64 years is pronounced compared with dependent populations, i.e. young dependent population aged 0 to 14 years and old age dependent population aged 65 years and above. This means that numbers of working people are larger than the non-working population. Thus, other things being equal, this is a more favorable situation for a country's economic development. In other words, it is a "sweet spot" of a country's development. However, the duration of demographic window of opportunity differs from one country to another depending on how it has gone through its Health and Demographic Transition. In the case of Bangladesh, the share of country's working age population started to increase vis-à-vis the total population in 1978 which is the beginning of its demographic window of opportunity. It will start to shrink in 2035-2036 which is the end of the country's demographic window of opportunity.

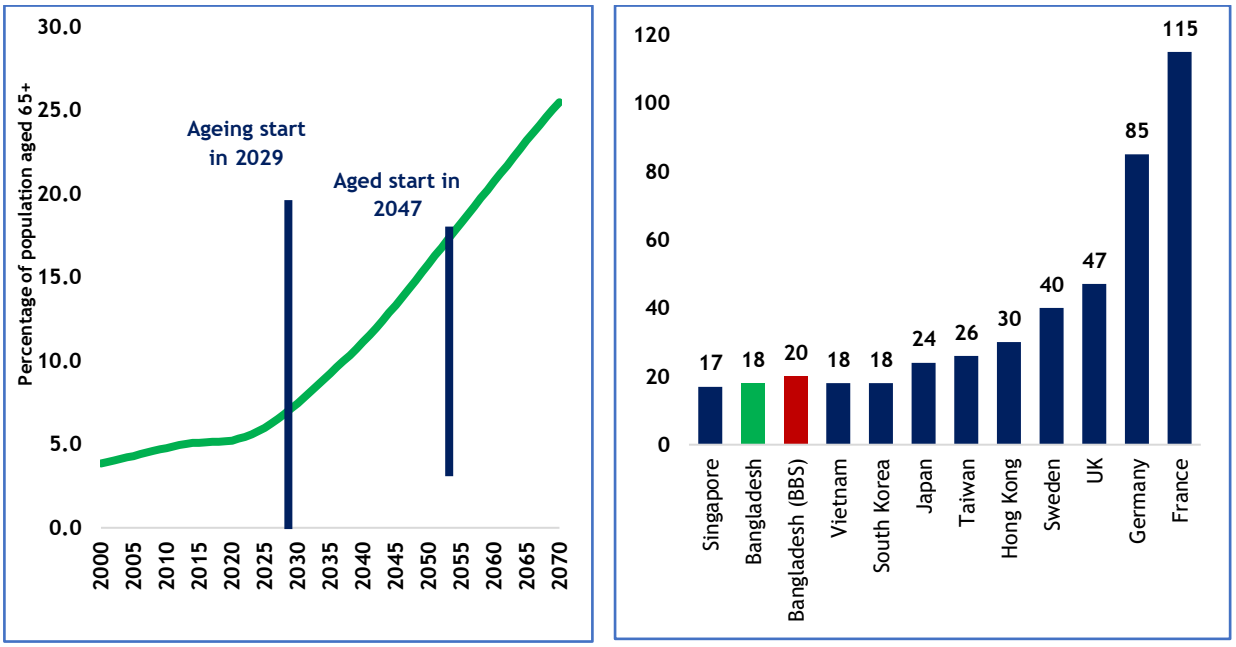
Figure 10.1: Bangladesh Demographic Window



Although the age-wise population structure of Bangladesh is still "young" today, it will age very fast in the next several decades. Following Oizumi (2013) and others, a society is referred to as "ageing" if 7 per cent of the total population is 65 and above. A society is transition to an "aged" stage when the share of 65 and older population in total population is 14 per cent. The time required for Bangladesh's shift from an ageing to an aged society following the above definition is shown in Figure 10.2. Bangladesh will transition to ageing in 2029, just 9 years from 2020. It will take only 18 years from "ageing" to shift to an "aged" society (i.e. in 2047). The speed at which Bangladesh is likely to transition to "ageing" to "aged" stage in 18 years (i.e. 2047—2029) that is faster than Asian advanced countries and rich European countries (see Figure 10.3). This is by far one of the fastest speeds of ageing compared with both historical (e.g. France, UK, Germany, and Sweden) and contemporary data of other countries. The above statistics also suggest that Bangladesh may experience transition at a much lower stage of development compared to the Asian advanced countries and European rich countries where transition took place at significantly advantage stages of their development.

Figure 10.2: Population Ageing Trends in Bangladesh

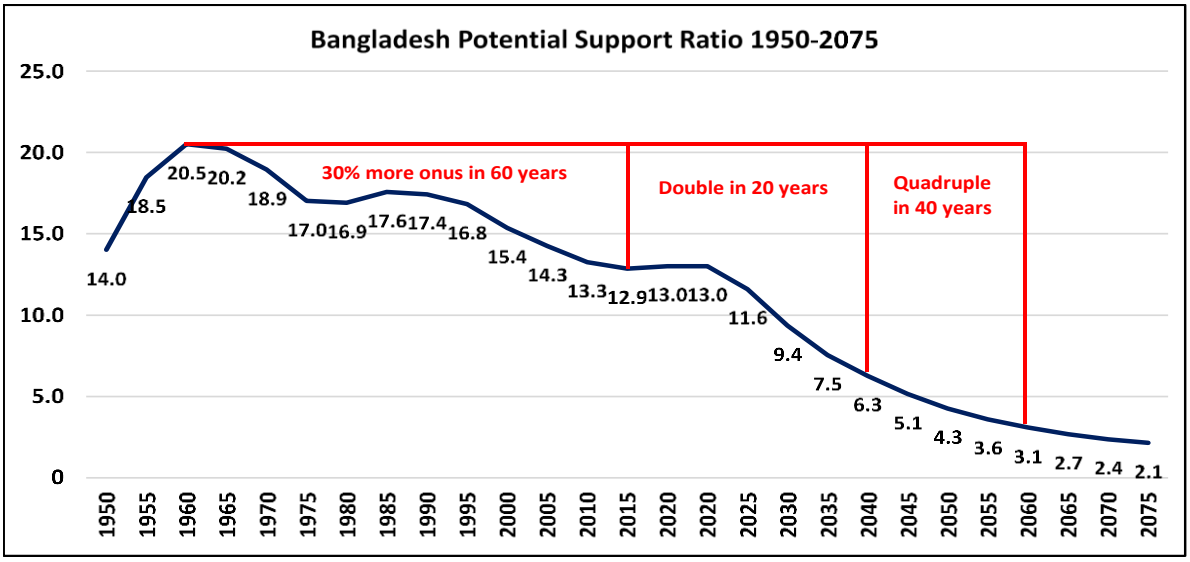
Bangladesh population aged 65 and older **Transition speed (number of Years)**



Source: UNICEF (2020), "Emerging Trends and Implications for Policy: Demographic Diversity of Bangladesh"

An implication of the ageing trend is that, the potential support ratio – the number of working age population (15 to 64) required to support one elderly person (65+) – has declined and projected to decline even faster in future (Figure 10.3). In 1960, about 20 working age persons were supporting 1 senior dependent – a decline of 35 percent in support ratio over 59 years (i.e. 2019—1960). The support ratio fell to 13 by 2019. By 2040, this ratio will become 6 persons of working age to 1 senior dependent, i.e. half of today's ratio in 21 years calculating from 2019. Finally, by 2065, this ratio will become 3 persons of working age to 1 senior dependent – ¼ of today's ratio in 46 years, calculating from 2019. This will be feasible only if the productivity of today 's children becomes twice and four times higher than today's adults by the time they become adults themselves – hence the need to make prioritized and highly time-sensitive investment in today's children for them to be equal to these challenges. Today, Bangladesh is standing at a cross road for its sustainable development. She needs to make prioritized investment for the nation's human resource development, particularly in social sector encompassing health, nutrition, WASH, education, early childhood development and protection of children and women in a highly time-sensitive manner.

Figure 10.3: Number of Working-age Persons (15-64 Years) Supporting One Old Age Person (65 Years +) in Bangladesh



Source: UNICEF (2020), "Emerging Trends and Implications for Policy: Demographic Diversity of Bangladesh"

10.6.3 Challenges on the Population Front

Despite progress, a number of challenges have also emerged. On the population front, the population growth rate at 1.3% per year is still on the high side. Despite successes in reaching out families on sexual and reproductive health interventions, the adoption of modern contraceptive practices is uneven across districts. Solid progress has been made on women empowerment, especially in eliminating gender parity in primary and secondary enrolment. Yet gender gaps in tertiary education and employment remain. Despite laws, early girl-child marriage and violence against women prevail. On the development front, employment growth has slowed in recent years, the youth unemployment rate is very high, there is a very large proportion of youth who are not in employment, education or training (NEET), female labor force participation rate remains low, the quality of education is weak, healthcare facilities and affordability are inadequate relative to the needs of the changing population, and social security outreach is not very responsive to the life cycle risks of the changing population age structure[12] These suggest that the changing demographic dynamics have not been fully internalized in the development strategy and the associated policy making. Challenges in population front are summarised below:

1. Child marriage is still very high (below 18 for girls) that contributes to a high adolescent fertility rate
2. Adoption of modern contraceptive practices still low relative to Asian countries and uneven progress across districts, rural, urban, income groups and age groups
3. The incidence of maternal mortality still too high
4. At only 59% (MICS 2019), the attendance of skilled staff during birth is among the lowest in the world

[12] *The Bangladesh Employment Challenge Policy Briefs*, Sadiq Ahmed, Report Prepared for World Bank and the ILO, July 2020. Also, *Implications of Emerging Demographic Profile for Bangladesh Development Strategy, Sadiq Ahmed and Bazlul Khondker*, Report Prepared for UNFPA, Dhaka, February 2020.

5. High incidence of gender-based violence (GBV) - a serious threat to the progress with the women empowerment agenda
6. The gender gap in tertiary education and vocational training remains substantial
7. Bangladesh is ageing fast - major challenges for old-age pension support and geriatric health care and Bangladesh is not well-prepared for either of the two challenges.

10.6.4 Population Program in the 8FYP

The 8FYP is the first plan aimed at implementing the PP2041. It is expected that the 8FYP will incorporate the changing population dynamics and the associated population management agenda in defining the national and sectoral development strategies and policies for FY2021-FY2025. Based on the analysis of the Report and the summary presented above, the policy reforms related to population management and the associated implications for development for the 8FYP can be summarised as follows.

- Strengthen the outreach and campaign on sexual education and reproductive health issues to increase the adoption of modern contraceptive practices with special attention to the lagging districts, the rural poor, the urban slums and the adolescent girls. The rural health clinics (Community Health Clinics and Union Health and Family Welfare Centers) need to be adequately staffed and equipped to meet the demand for modern contraceptive devices and counselling. Partnership with NGO-based community health workers should be strengthened to reach out the women in the urban slums and to provide services to rural women at the door step.

- Enhance the capacity to increase the percentage of births attended by trained staff from 59% to 72% by the end of the 8FYP by increasing resources and staffing in the rural health clinics and the district level hospitals.

- Strengthen the implementation of the law against child marriage with support from local government agencies, education staff, NGO-based health and social workers and the community leaders. The full legal provisions should be enforced against violating families. Education campaign against child marriage should be enhanced through use of national TVs and the print media.

- Undertake a comprehensive study on estimating the economic cost of Gender based Violence (GBV) focusing on direct, indirect and induced economic costs for both public and private sectors. The study should also provide a holistic strategy and policy framework for addressing GBV drawing on good practice international examples. Bangladesh may formulate strategies in line with the 'whole system' that focuses on all three important aspects: prevention, provision and protection. This is a high-priority agenda for the 8FYP.

- The ongoing demographic transition will continue to support a faster growth of labor force than the population growth. In addition to continuing with efforts to further increase the rate of growth of GDP, the recent slowdown in the growth of employment must be arrested by increasing efforts to increase the employment elasticity of GDP growth. Important policies include spurring the growth of RMG by reversing the sharp appreciation of the real exchange rate and reducing the cost and improving the quality of infrastructure and trade logistic services; sharply lowering trade protection to reduce the anti-export bias of trade policies and promote export diversification; and promote the growth of a dynamic cottage, micro, small and medium enterprises (CMSMEs) sector through improved access to institutional credit and other supportive measures.

- The female labor force participation has stagnated at around 36% and is considerably lower than the rate found in East Asian economies. The government should seek to increase female labor force participation rate to around 64% by FY2041 as found in South Korea. For the 8FYP, the corresponding target should be about 43%. The policies noted above relating to education, training and women empowerment including actions against GBV should help. Additionally, to enable labor force participation of young mothers, efforts should be made to increase the supply of low-cost day care facilities. This could be done in collaboration with private enterprises and NGOs.

- The youth employment challenge will increase progressively as demographic changes continue. This requires urgent policy attention to ensure that the demographic dividend is not wasted. A detailed review and policy analysis of the youth employment challenge have been done in December 2019 based on the request from ILO. The main policy recommendations relevant to the 8FYP include: strengthen education quality through sharp increases in public spending on education and training; enter into formal partnerships with private sector, donors and NGOs in increasing the job relevance of training; promote the spread of ICT by reducing high taxation; promote self-employment of youth through entrepreneurship based on training and access to institutional credit; and support international migration in districts that are not benefitting from this facility through training, finance and information.

- The rapidly growing ageing population needs strong policy attention. It requires policies to support the income of the old-age population and policies to support their healthcare and physical well-being needs. Bangladesh has an Old Age Allowance (OAA) program that is poorly targeted and misses out most of the poor and vulnerable population. The monthly allowance is also well below the poverty income level. The changing population dynamics will sharply increase the size of the ageing population and will challenge the already strained fiscal capacity. On the health care front, Bangladesh does not have the readiness to address the growing needs of the old -age population. Among the reforms needed during the 8FYP include: consider redefining the old age for retirement and pensions purposes from 60 plus years to 65 plus years as per international convention; implement the Old Age Program as defined under the NSSS 2015; consider implementing a universal old age pension scheme based on a combination of public and private funding and partly voluntary as explained in the Report; consider moving towards an universal health care (UHC) system that uses a mix of publicly and privately funded health insurance and low-cost public health care facilities.

Family Planning (FP)

Progress with the implementation of the highly successful family planning activities will continue in the 8FYP with focus on reaching out the less-served areas and adolescent girls who face the greatest risk of early pregnancies. The main activities will include:

- Gear up all kinds of activities for achieving FP related targets by 2025 through increasing use of CPR by 75%, institutional delivery by 72% by the SBAs and through 24/7 services, etc. Also reducing dropout rates and unmet needs to 15% and 8% respectively.
- Strengthen urban FP services by expanding FP, mother, child, reproductive and adolescent health services in the city corporations.
- Expand unit-wise FP activities in the Sitmahals.
- Establish additional adolescent friendly 200 service centres.

- Implementation of eMIS activities; DHIS2 activities; e-Filling activities in DGFP, etc. all over the country.
- Digitalization of the registration of all FP related NGOs working with DGFP.
- Establishment of new physical facilities & up-gradation of existing ones and repair and maintenance of the facilities.
- Upgradation of Maternal and Child Welfare Centers (MCWCs) for increasing institutional delivery and quality Maternal, Child, Reproductive and Adolescent Health (MCRAH) services through 24/7 service.
- Expansion of FP service in City Corporation, pouroshova, cantonment areas, etc.
- Prevention of child marriage and delay of first birth to get the best of Demographic dividend.
- Promoting setting up of contraceptive manufacturing plant such as Implant, IUD for availability of product as and when required.

10.6.5 Harnessing Demographic Dividend in the 8FYP

- Demography is not destiny. At the same time, it does set clear and strong parameters within which countries need to make conscious decisions and take actions in a time-bound manner. Countries need to make the best out of a given situation in one demographic stage and be well prepared for opportunities and challenges for the next stage. Based on the above-mentioned analysis, it is right; justifiable and necessary both morally and economically to invest in Children as an act of "***paying forward***" to the future generations who will support us in our old age and continue to develop our society in future – concept and practice of old-age benefit has been well accepted by now as a legitimate act of "***paying afterward***" to those who worked hard and supported us in our young age. This perspective is much need for Bangladesh today.

- Nutritional deficiency hampers early childhood development with lasting impact on productivity and life time earnings. Despite progress, there are concerns with regards to current state of Nutrition (Stunting, Wasting and Underweight) among children in Bangladesh. Poverty and lack of awareness are two identifiable sources of nutritional deficiency in Bangladesh. Adequate and effective investment in Health and Social Protection is required to improve the situation. Bangladesh must at least investt 2 per cent of GDP on Health from existing level of less than 1 per cent of GDP within the 8FYP period. Similarly, investment in Social protection should be increased to 2 per cent of GDP by the end of 8FYP from the current 1.2 per cent of GDP (excluding civil service pensions). A large part of the additional allocation (i.e. 0.8 per cent of GDP) should go to Child focused social protection programmes.

- A large number of global evidences envisaged that economic expansions are positively associated with educational attainment not just in later stages in life but also during the early childhood. In the context, Bangladesh must increase the investment in education from 2.5 per cent of GDP in FY2019 to at least 3.5 per cent by the end of 8FYP.

- Finally, it is imperative to point to the urgency and time sensitivity of these investments. The window of opportunity is short in Bangladesh. Following considerations are critical:
  a) Demographic window of opportunity in Bangladesh will close within 15 years. Against the backdrop of the rapid process of ageing, Bangladesh must learn from the experience of ageing

societies struggling to maintain social security systems by adopting a strategy to ensure old-age support through recognizing the critical role of immediate investing in children.

b) To attain these gains, it is essential for Bangladesh to invest in children now as the time left to reap the benefits of the demographic window of opportunity is finite with

c) Bangladesh already passed 66 per cent of the window of demographic opportunity in 2020 that opened in the early 1980s and is projected to cease in 2035-36. Therefore, adequate and effective investment on Children now is an absolutely necessity to make best use of remaining 18 years of the window.

d) Bangladesh's transition has progressed in terms of fertility and mortality even while the nation is at a relatively low stage of development. The demographic transition started in Bangladesh while age at marriage and first birth remained low, which may present a new kind of opportunity. There is thus room for investments in policies to prolong the demographic window of opportunity through later age at marriage and later births.

10.7 DEVELOPMENT RESOURCE ALLOCATION IN THE 8th PLAN

The rapid response to COVID-19 and the need to sharply enhance the health sector capacity of Bangladesh calls for substantial increase in budget and ADP allocations. The ADP allocations have been designed to meet the 8FYP target to increase health care spending from 0.7% of GDP in FY2019 to 2.0% of GDP by FY2025. Accordingly, the planned development resource allocations in current prices and FY2021 constant prices are shown in Table 10.8 and 10.9. The ADP allocations undergo a steep increase to meet the healthcare objectives of the 8FYP.

Table 10.8: ADP Allocations for Health Development in the Eighth Plan

(Taka billion current prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Health Services Division	151.7	195.8	252.7	310.4	372.4
Medical Education and Family Welfare Division	18.4	22.6	26.1	30.4	36.5
Total Health Sector	**170.0**	**218.4**	**278.7**	**340.8**	**408.9**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 10.9: ADP Allocations for Health Development in the Eighth Plan

(Taka billion FY2021 constant prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Health Services Division	151.7	186.0	228.3	267.2	306.1
Medical Education and Family Welfare Division	18.4	21.5	23.5	26.2	30.0
Total Health Sector	**170.0**	**207.5**	**251.8**	**293.4**	**336.1**

Source: Chapter 5, Part 1, Annex Table A5.

SECTOR 11:
EDUCATION AND TECHNOLOGY

CHAPTER 11

EDUCATION SECTOR DEVELOPMENT STRATEGY

11.1 INTRODUCTION

Education sector development is crucial for building human capital of a country. Theoretically, a country can sustain economic growth even without technological progress by accumulating human and physical capital. Research shows that the return to education is higher in developing countries. Investing in education has shown remarkably strong persistence across generations, which makes education-interventions an effective policy tool worldwide. Moreover, human capital helps countries in their structural transformation from agrarian to manufacturing and service-based economies and regarded as the key driver of inclusive growth, poverty and inequality reduction and social development particularly in developing countries.

As elaborated in Part 1 of the 8FYP document, Bangladesh achieved remarkable success in accelerating growth, lowering poverty and improving human development during the Sixth and Seventh Five Year Plans. The associated education and training sector strategies and policies played a major role in securing these achievements. These strategies and policies were guided by the PP2021 and the National Education Policy 2010 (NEP). The Plans emphasized on providing appropriate education and training to a large group of the population; expanding coverage in both urban and rural areas, to both males and females; improving quality of education; increasing availability of technical and vocational education and ICT education; and addressing the dropout rates. Evidence shows that in recent years Bangladesh has made remarkable progress in providing education to its citizens; the literacy rate has risen substantially and the share of the workforce with secondary, higher secondary and tertiary education has also risen.

Building on the success of PP2021, Bangladesh has now embarked on implementation of PP2041. The human capital development challenges underlying PP2041 is enormous. While a semi-skilled workforce with basic education has served Bangladesh well in its structural transformation from agriculture to industry, as the country looks to accelerate growth and develop further to secure UMIC status by FY2031, the focus beyond literacy rates and universal primary enrolment will become necessary. It is critically important that Bangladesh avoids the so called 'middle-income trap.' International examples indicate that countries that were able to rapidly escape the middle-income trap are almost exclusively those that invested heavily in education and skill development. Currently, Bangladesh is experiencing the 'demographic dividend' in addition to the fact that more than thirty per cent of the population is less than 15 years old. If this age group is not converted into a workforce equipped with the required skills, the potential demographic-dividend may become a wasted opportunity. This highlights the importance of having a robust and holistic education strategy with regulatory framework. In addition to continuing the successful policies of the previous plans, the 8FYP will articulate the strategies and policies to address the challenges in the education sector.

11.2 HUMAN CAPITAL AND ECONOMIC GROWTH

Human 'capital' refers to a set of skills or abilities, which a worker possesses through education, training, and experience that can be 'rented out' to employers. Higher investments in human capital increase worker's productivity with a resulting positive effect on economic growth. The relative demand of these skills and abilities determine how much is paid for it - the labour wage. As the structure of an economy changes with technological changes, certain workers become redundant while others with different skills-set become high in demand. This is why, as a country transitions from one type of economy to another its further development requires better 'human resources' with higher skills and abilities. While during the preliminary years of development basic education may be sufficient for the economy, that does not hold true as the economy expand and interact in the global arena. To achieve sustained economic growth, the country's human capital base has to grow and this is done by developing the education system, updating pedagogy, and equipping the graduates with training and experience to acquire new skills and abilities that the growing economy needs.

Knowledge and skills are acquired in three-stages. In the first stage, acquisition of human capital is mostly done passively, through the actions of others. Family environment, social norms, culture, and early schooling all impart human capital including basic verbal and numerical skill, attitude towards learning, etc. However, the importance of cognitive and behavioural development at this stage is crucial. In the second stage, young adults actively absorb knowledge and skills from schools, universities, vocational training centres, etc. In the third phase, adults enter the job market and accumulate human capital through learning-by-doing, work experience, part-time programmes, training schemes, night schools, etc. The education policy of Bangladesh necessarily seeks to encourage participation in all these three phases.

The East Asian countries are a good example of how investment in human capital contributed to their miraculous economic growth. Before 1960s these countries were very poor. What they did, particularly South Korea, invested heavily in basic education, along with other economic and social policy measures. Workforce with basic competencies through primary education helped in the initial phases of growth in South Korea. The government facilitated the scaling-up of human capital (secondary education, vocational training, etc.) at later stages of development of the country. Similarly, other East Asian countries witnessed along their growth path respective government's high investment in education for its population. Vietnam, similarly, has achieved literacy and numeracy levels that are comparable to that of developed countries. These focuses on human development have been attributed as one of the main reasons of their impressive development success.

For Bangladesh, research shows that growth in the average wage rate has been largely driven by rise in wage of unskilled workers, narrowing the gap between wages of workers with secondary and tertiary education and workers with no-education. This may be the reason why enrolment and completion at the secondary and higher education levels have not increased at the desired rate and why the average number of years of schooling in Bangladesh remains low (5.1 years) compared to other South-Asian countries (India, 5.8 years; Sri Lanka 10.9 years; etc.). This needs to be changed as the economy is transitioning towards a service-based economy, which will require a different type of workers. However, when the demand pattern changes, the education sector has to stand ready to deliver a different composition of graduates. This points to the need for a long-term human capital development policy, otherwise, rigidities in the sector may act as a constraint to growth of the country.

11.3 EDUCATION SECTOR PROGRESS DURING THE SEVENTH FIVE YEAR PLAN AND EMERGING CHALLENGES

According to the latest labour force survey 2016-17, 31 per cent of the population under 15 years and above in Bangladesh does not have a primary education. However, high enrolment and completion rates in primary education in recent years indicate that this illiteracy comes mostly from older cohorts. Urban illiteracy is lower (22 per cent) than rural (34.8 per cent). At the pre-primary level, enrolment is low but the trend is on the rise. At the primary level, gender-gap exists with the literacy rate but gender-parity in enrolment and completion of primary education has been achieved in recent years, indicating that this gap will continue to narrow. Gender parity is also achieved in the secondary level. However, enrolment in science subjects at the higher secondary level has become lower. Under the madrasa stream, the more popular Qawmi schools operate entirely independently, free from government initiatives, which remain as a concern for quality.

At the higher/tertiary education level, the number of students, teachers, and institutions has increased rapidly in recent years. However, the preparedness of the workforce for the Fourth Industrial Revolution (4IR) needs to be enhanced, as there is lack of interest in STEM (Science, Technology, Engineering and Mathematics) subjects among students. Technical and vocational education and training (TVET) is also not very popular among students as being considered a second-class education system. Industry-academia collaboration is often missing, generating skill gap and unemployable graduates.

11.3.1 Progress in Pre-Primary and Early Childhood Education

The government under the 7FYP identified investment in pre-schooling schemes as a tool to reduce inequality and disparity in society. Studies have shown that the exposure to pre-primary and early childhood education leads to better cognitive, numerical, and literacy skills later in life. Early evidence in Bangladesh shows that pre-primary school children perform better on language and vocabulary, verbal reasoning and nonverbal reasoning, basic numeracy, and school readiness. Enrolment in pre-primary increased from 0.9 million in 2010 to 1.7 million in 2018. Another 1.9 million students received pre-primary education from other types of institutions. Recent data shows that the percentage of grade-1 students with pre-primary education increased almost double in less than ten years; from 42.25 per cent in 2010 to 92.7 per cent on 2018 (Table 11.1)

In 2019, the proportion of under-5 years of age children who are developmentally on track in health, learning, and psychosocial well-being was 74.5 per cent. The enrolment of special needs children in the mainstream primary education is one of the core elements of the PEDP-IV. A total of 25,156 special needs children were enrolled in the DPE managed pre-primary classes in 2018.

Table 11.1: Grade 1 Students with Pre-Primary Education (%)

Students	2010	2014	2018
Boys	40.58	50.55	91.6
Girls	43.94	51.63	93.5
All	42.25	51.07	92.7

Source: Annual Primary School Census, 2010, 2014 and 2018

The major challenge in pre-primary and early childhood education are training of teachers, since type of pedagogy necessary at the pre-primary level is substantially different from the primary (or higher) levels of education. Initiatives must be taken to improve the quality of teachers engaged in pre-primary education.

11.3.2 Progress in Primary Education

Primary education in Bangladesh comprises of grade-1 to grade-5 levels. Most key indicators in primary education have moved up over the 6FYP and the 7FYP. In 2018, a total of 17.3 million children were enrolled in both government and non-government primary schools. Net enrolment rate in primary education has been hovering around the 97.7 per cent to 97.9 per cent region since 2014. This trend is visible for both male and female, with growth rate stagnated at around 97 per cent and 99 per cent respectively, as opposed to the PP2021 goal of 100 per cent enrolment by FY2021. However, gender parity has been achieved. Annual dropout rate has fallen gradually from a high 50 per cent in 2006 to less than 20 per cent by 2018. Reduction in the student-teacher ratio has been another success story of the sector, coming down from 42 in 2012 to 25 in 2018. 34 per cent of primary schools have adapted infrastructure and material for students with disabilities.

The number of teachers in the government primary schools has gradually increased from 215,000 in 2012 to 349,000 in 2018. The proportion of trained teachers in primary education has also increased over time. Under the provision of PEDP-IV in 2018, around 92.7 per cent Head and Assistant Teachers received the subject-based training. The number of primary institutions has also increased. In 2012, total number of primary schools in Bangladesh was 104,017 including the government, non-government, madrasa and NGO managed primary schools. The number of the primary schools has gradually increased to 134,147 by 2018. This increase has been primarily due to the rise in number of public schools.

The government has taken major steps to improve the quality of primary education. Considerable progress was made in terms of teacher training and recruitment, upgrading of textbooks, introduction of ICT along with internet connections and distribution of laptops, and improved school facilities. To continue with this progress, the PEDP-IV was launched in July 2018 with an aim of providing quality primary education to all Bangladeshi children by enhancing institutional management through decentralization. The PEDP-IV envisages that all children in the appropriate age group will participate in pre-primary and primary education and acquire necessary skills and learning from school. Importantly, families of these children will be given incentives so that they can continue sending their children to school.

The Primary Education Stipend Project (PESP) was introduced in 2002 to provide a fixed monthly stipend to the mothers of primary education students meeting certain performance and need-based-conditionalities. This scheme was universalized in 2016 and no longer poses a challenge of targeting of beneficiaries through the eligibility criteria. However, the monthly stipend of BDT 100 per month was set in 2002 and has not been revised upwards since. In addition, indirect and overhead costs continue to be very high. To reduce overhead cost, since mid-2017, the government has been transferring the stipends directly to the mobile banking accounts of nearly 10 million mothers of 13 million children enrolled in the project.

Distribution of free textbooks to primary and secondary students is an on-going and popular practice of the government. In December 2019, more than 350 million textbooks were distributed to more than 40 million students for the academic year 2020. This annual event started in 2009 and has since distributed 2.2 billion

books to students. Moreover, more than three million students in 15,700 primary schools are covered under the National School Meal Policy, which provides midday meals to students to meet a minimum 30 per cent calories and 50 per cent micronutrient needs of primary school going students. The target is to bring students of all government primary schools under the universal midday meal coverage by 2023. In addition, a review of primary education is being undertaken to modernize the curriculum and introduce new educational activities at the primary schools.

Under the PEDP-III, leadership trainings were provided to 60,000 head teachers. Computer with Internet connectivity has been provided to 1,139 field offices associated with primary education management and ICT education has around 35,000 teachers and 400 officers. Modern ICT lab has been set up in over 50 Primary Teachers' Training Institutes (PTI). Laptops, multimedia projectors, sound systems, and modems have been provided in around 8,925 classrooms in 5,432 public elementary schools.

Overall, substantial progress has been made in terms of school enrolment rate, which is close to 100 per cent. Dropout rate also decreased to below 20 per cent and repetition rate is below 10 per cent. Gender parity in enrolment has been achieved. Schemes such as stipend distribution to mothers of primary students through mobile banking have been undertaken to encourage increased participation by students/families from disadvantaged backgrounds. Progress has been made on quality front through supply of better inputs like materials and supplies, teacher training and introduction of ICT.

Major Challenges

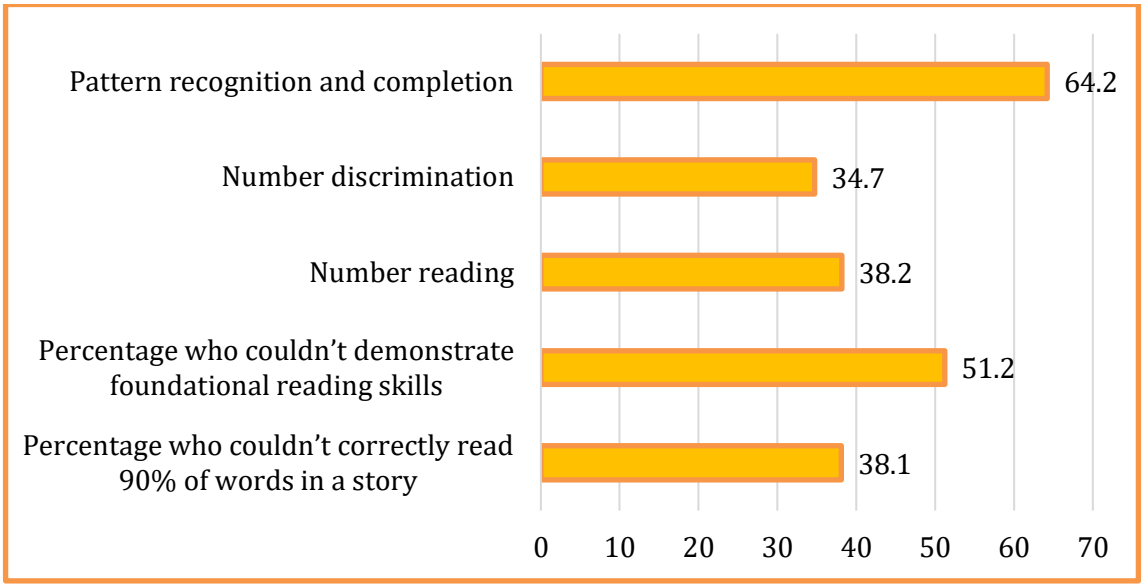
Despite the progress made during the 7FYP, some challenges remain. Eliminating the dropout rate, which is still high (at almost 20 per cent and the rate is higher for girls than boys) is necessary to achieve government's objective of Education for All (EFA). Absenteeism is also high, among both students and teachers. School contact hours for grade 3 and grade 5 were set 791 hours in a year, according to Annual Sector Performance Report (ASPR) 2019 report, which is below the standard of many developing nations. International standard recommends having 1,000 hours of teaching time at primary level.

The average pass rate of Primary Education Completion Examination (PECE) increased from 92 per cent in 2010 to 97 per cent in 2018. However, the National Student Assessment (NSA) suggests that the students do not learn much at the primary level. NSA findings suggest that learning competencies are drastically lower for students in grade-5 compared to students in grade-3 in mathematics and Bangla. In Bangla, students tend to score around 70 per cent in grade 3, which falls sharply to 25 per cent by grade 5. In Mathematics, grade 3 students got 41percent in 2015 and 2017, much lower than the 50 per cent and 58 per cent in 2011 and 2013, indicating a worsening trend. By grade 5, the math learning situation deteriorates even more, with the students scoring a high 33 per cent in 2011 and low 10 per cent in 2015.

Data from the latest Multiple Indicator Cluster Sample Survey (MICS) 2019 suggests that despite progress the quality of primary education continues to present a major challenge. Regarding the quality of education, reading and numeracy skills are taken into consideration for children aged 7-14 years as reported in MICS 2019. Quality is assessed by using two indicators to assess the reading skills and three indicators for numeracy skills. For reading, the indicators include 'not being able to correctly read 90 per cent of words in a story' and 'not being able to demonstrate foundational reading skills'. For numeracy, the indicators are 'not being able to read numbers', 'not being able to discriminate numbers' and 'not being

able to recognize and complete patterns. Results in these respects are not encouraging. More than one-third of children couldn't correctly read words in a story and more than half of the children failed to demonstrate foundational reading skills. For numeracy, once again, more than one-third of the children couldn't successfully complete the tasks of number reading and number discrimination, and about two-third couldn't complete the task of pattern recognition. These clearly indicate that the average competence level of the children is rather poor, and hence the quality of education is really a matter of concern.

Figure 11.1: Indicators of Primary Education Quality (2018)



Source: MICS 2019

11.3.3 Progress in Secondary Education

Secondary education occupies an important place between the different stages of education in Bangladesh. Students with primary education view secondary education as a bridge through which to improve their job readiness. For others, secondary education represents the bridge through which they move on to tertiary and other higher education. With the expansion of the primary education across the country, and steady rise in completion rates, the demand for secondary education has also increased.

Enrolment rates in the secondary level have gone up for both boys and girls in recent years. There were over 20,000 institutions offering secondary education to 10.3 million students in 2019, with the help of 246,845 teachers. Out of the 10.5 million enrolled students, 5.6 million (54.41 per cent) were girls indicating that gender parity has been achieved. This ratio has experienced gradual rise over the past decade. At the beginning of the millennium, secondary enrolment rate for girls was less than 40 per cent. Enrolment has now reached 70 per cent, more than the same rate for male students. Schemes such as the Female Secondary School Assistance Program (FSSAP) I and II and Higher Secondary Female Stipend Project (HSFSP), which aimed to increase female enrolment through financial assistance, have played key roles in making this turnaround in female secondary enrolment possible. However, completion rate at the secondary level is low, around 64 per cent, and this rate is noticeably higher for boys than girls. 21.77 per cent secondary schools have adopted infrastructure and material for students with disabilities. The government aims to reach 80 per cent by the end of 2025.

ICT courses in secondary education have been introduced as well as setting up computer centres in institutions and providing training to teachers to use them. The Ministry of Education (MoE) and the Ministry of Primary and Mass Education (MoPME) has undertaken two initiatives, Multimedia Classroom (MMC) and Teacher-led Digital Content Development. Digitalization of classrooms is currently an ambitious on-going venture operating through two separate projects under MoE and MoPME. These projects are aimed at establishing 20,500 MMCs at the secondary level, with classrooms featuring internet connectivity, one laptop and one multimedia. By 2019, 94.86 per cent of secondary schools have access to electricity and the aim is to reach 100 per cent by 2025. Similarly, 76.72 per cent and 37.64 per cent secondary schools have a computer and access to internet respectively for pedagogical purpose and the goal is to reach 100 per cent by 2025.

Although the numbers of students and institutions have increased rapidly in recent years, a worrying trend is that the number of teachers has not grown at a similar rate. The number of students per institution has increased from 413 in 2012 to 500 in 2019. With 12 teachers per institution between the period of 2012 and 2019, the number of students per teacher has increased from 34 to 44 in the period. Some projects have however sought to improve the quality of teachers at the secondary level, such as the Teaching Quality Improvement in Secondary Education Project. Under this project, almost 220,000 secondary school teachers (98 per cent of total) were trained. The project has made a significant impact on improving the quality of teaching in secondary education through organizational development and capacity building, improved teacher training facilities, strengthened in-service and pre-service teacher training, increased equitable access, and improved community involvement.

The Directorate of Secondary and Higher Education (DSHE) are currently implementing a number of projects to improve the quality of education and access in the secondary level. The largest and most prominent out of these projects is the Secondary Education Sector Investment Program (2013-2023) (SESIP). The objective of the program is to achieve the goals envisaged under both the National Education Policy 2010 and Vision 2021, such as, enhancement of quality and relevance of secondary education; better access and retention (leading to better completion rates) of students; and improvements to the governance, management, and administration structure of secondary education. Table 11.2 lists the goals and result areas of SESIP.

Table 11.2: SESIP Result Areas

Goals	**Specific Results**
Enhanced quality and relevance of secondary education	Improved quality and relevance of curriculum
	Strengthen teacher capacity
	Improved classroom assessment and national examinations
	Enhanced use of ICT for pedagogy
	Improved labour market relevance
Increased equitable access and retention in secondary education	School infrastructure improvement
	Flexible learning pathways
	Improved access & retentions
Strengthen governance, management and administration	Strengthened decentralized education management
	Strengthened education information management
	Improved teacher management
	Effective planning, management, coordination, and harmonization
	Strengthening monitoring, evaluation and reporting

Source: SESIP, Directorate of Secondary and Higher Education, Government of Bangladesh

Other DSHE Projects

The Secondary Education Quality and Access Enhancement Program (SEQAEP), which ran from 2008 to 2017, assist in improving the quality of secondary education and monitoring of learning outcomes systematically and in increasing access and equity in education in project upazilas. Before the project, less than 30 per cent of Grade 6 entrants were expected to complete Grade 10. The ratio has more than doubled to 60 per cent by the end of the project, making a significant dent in tackling the low internal efficiency of secondary education. Other project targets such as increasing female enrolment, lowering the percentage of poor students, et cetera were all achieved. In addition, the government is implementing the Transforming Secondary Education for Results (TSER) program, to enhance the quality of teaching and learning in secondary education; improve retention and completion with special focus on the girl students and students from poor households by providing financial assistances, stipends, and school grants; modernize the curriculum; and facilitate professional development and accountability of teachers. Since 2009, students are distributed free textbooks every December for the upcoming academic year.

Major Challenges

Low enrolment in secondary education is one of the major challenges in the education sector. The gross and net enrolments were 61 per cent and 53 per cent respectively in 2019. Even bigger challenge is low enrolment in science subjects in the higher secondary level. 20 years ago, just less than 50 per cent students passing SSC were science students. That number stands at only 28 per cent in 2019. Business students represented 19 per cent of SSC graduates in 2019, compared to only 7 per cent in 1998. On the other hand, only 21 per cent students who appeared for HSC in 2019 were science students. This changing pattern of enrolment is a cause of concern. The country will need a large pool of science graduates in the coming years to achieve its development objectives. However, the current trends would indicate a move in an exact opposite direction. There is a perception that science subjects are more difficult, which is probably true and may justify why students are unwilling to study them. Lack of qualified science teachers is a major problem. According to a recent study 36.8 per cent teachers buy question papers from associations, 14.4 per cent from open market. About 37 per cent teachers use guidebooks to teach in classrooms. About 33 per cent mathematics teachers and 23 per cent science teachers are found to use unauthorized guidebooks. In essence, lack of qualified science teacher and the perceived difficulty as well as poor job market relevance may be contributing to the low share of science students in higher secondary education in Bangladesh. Similar to the case of primary education, enrolment shows slight progress without corresponding decline in dropout. Gross enrolment for poor and non-poor are 24 per cent and 76 per cent respectively indicating high inequity, which is another challenge.

11.3.4 Progress in Madrasa Education

Different education streams - Bangla medium, English medium and madrasa - is a debatable issue in the education sector of Bangladesh. Out of these, madrasa stream faces most questions about the quality and the content of learning, as well as the labour market relevance and employability of the graduates. The presence of both a registered stream (Aliya) and a non-registered stream (Qawmi) exacerbates the situation. Not only in terms of learning-outcomes and employability, but the presence of different education-streams is also widening the division between different strata of society.

In 2018, there were about 9,200 Aliya madrasa and 14,000 Qawmi madrasa in Bangladesh, while 86 per cent of all madrasas are located in rural areas. They serve 3.1 and 3.8 per cent of school-going children respectively. Aliyah madrasa consists of five levels of education: Ebtedayee (primary equivalence; grade 1 to 5), Dakhil (grade 6 to SSC), Alim (equivalent to higher secondary), Fazil (equivalent to BA degrees), and Kamil (equivalent to Master's degree). Dakhil and Alim have four streams: arts, muzabbid, science, and business studies. Fazil and Kamil include specialization only in religious subjects such as Tafasir, Hadith, Arabic, and Fiqh. From 2010, Junior Dakhil Certificate (JDC) Examination has been introduced in the country, which is equivalent to grade 8 JSC examinations in Bangladesh.

The number of institutions has been fairly stable over the last decade. In 2008 there were around 9,384 Aliya madrasas (less than 1,186 female-only), which had changed to 9,294 by 2018 (1,134 female-only, only 12 per cent of the total). The share of different types of madrasa has also remained constant over the last decade. Similarly, the number of teachers, students, and male-female ratio has remained fairly constant over the years. There were around 107,000 registered madrasa teachers in 2011, rising to about 113,000 by 2019 (only about 16,000 female teachers; 7 per cent of the total). Number of students in 2011 was around 2.20 million (1.17 million female), which had increased to 3.8 million (2.03 million female) by 2019. There are more girls than boys in madrasa. In 2019, the total number of madrasa students were 2,491 thousand among them 55.24 per cent were girls. Over the years, female students increased from 1170 thousand in 2011 to 1370 thousand in 2019.

In 2019, the average number of students per institution was 410 and average number of teachers per institution was 12. Teacher student ratio was 1:21. However, there are variances in these ratios between different levels of education. Nearly 60 per cent of all enrolments are for Dakhil level, the primary-equivalent level. Kamil, the most advanced level, has the lowest enrolment rate. The opposite is true of student-teacher, student-institution, and teacher-institution ratios, with the Dakhil level experiencing the lowest ratios and the Kamil level experiencing the highest ratios. The trend in all these ratios since 2011 has been fairly constant, with some minor fluctuations between years.

Currently, there are around 6,300 Ebtedayee madrasas in the country. There are plans to bring the Ebtedayee madrasas under Monthly Pay Order (MPO). Under this guideline, the Ebtedayee teachers will receive the same benefits as primary school teachers. Better pay is expected to attract higher-quality teachers to the sector. At present, around 33,800 Ebtedayee teachers and employees are getting salaries and benefits. An initiative was taken at the end of 2019 to provide ICT training to 19,200 madrasa teachers and special communicative Arabic courses to 9,600 teachers. In addition, smart classrooms were to be established in 560 senior madrasas and around 120,000 students trained in basic ICT, computer training, and use of Internet.

Qawmi madrasa has been the most uncharted area in the education system of Bangladesh. Qawmi madrasas are not registered and most of them run on private donations. In terms of education and curriculum, Qawmi madrasa is different from Aliya. There are six levels of education which takes on an average 7-8 years to complete. In the primary level, children are taught to read Arabic, Urdu, and Persian language. Bengali, Mathematics, and English are taught very briefly. After completing primary, students are taught more about Quran, Hadith, Islamic Jurisprudence, and Islamic History. Unlike general stream and Aliya students, science is rarely taught in.

No major reform or review of curriculum has been undertaken in the Madrasa stream during previous five-year plans. However, minor changes have been made. In 2019, the madrasa board decided to emphasize spoken Arabic in its new national curriculum, to capitalize on skilled job opportunities in Middle Eastern countries. Middle East is already a popular destination for job-seekers from Bangladesh and this latest prioritization offers potential career-paths to many students. However, it is unlikely that spoken Arabic alone can help madrasa-graduates find better jobs. Lessons on jihad and militancy were decided to be dropped from 2021 academic year, and sections on inter-religious harmony added to the curriculum. Perhaps most significantly, in 2017, the government announced that Dawra degree from Qawmi madrasas would be officially given the status of a masters' equivalent degree to reduce the disparity faced in the job market by madrasa students. Initially, no change to the Dawra curriculum has been mandated. However, there are plans to integrate the existing six Qawmi madrasa education boards under one umbrella and task them with updating and modernizing the syllabi, preparing question papers and conducting exams, and award certificates. Establishment of this board, coupled with formal recognition of the Dawra degree should provide a better and transparent career-path to 1.4 million students currently enrolled in the Qawmi system.

Major Challenges

The overall quality of Madrasa education and relevance to real world job markets is very limited. Experts believe that there has to be greater focus on science, technical, and other employable skills education in this system. Moreover, the quality of teachers, availability of facilities (books, supplies, ICT, etc.) remains an issue. Research has shown that there is large gap in learning-outcomes between general school students and madrasa students and girls have lower test scores compared with boys in this stream. Other important problem is that the Qawmi stream, which is more popular than the Aliya stream, is run independently, without any input from the government. This raises questions about timely review and updating of their curriculum, and teaching methodology. Fund management and transparency is also an issue, especially with the Qawmi stream, as they run mostly on private-donations and do not disclose their accounting books.

A self-selection bias prevails in madrasa enrolment, with a disproportionate number of poor and rural families sending their children to madrasas in lieu of general schools. Since the learning-outcomes and employability of madrasa-graduates is much lower compared to graduates from the general-stream, the former gets potentially lower return from education. Therefore, the presence of the madrasa-stream, with its current structure of pedagogy could perpetuate a poverty-cycle. The advent of the fourth industrial revolution will only exacerbate this situation.

Moreover, the continued existence of a madrasa-stream - in its present format - has been questioned and there have been calls for reforms. In addition to perpetuating a vicious poverty-cycle among the poorest families sending their children to school, the structural and pedagogical differences between the general and madrasa-stream of education is creating/maintaining artificial strata in society, in terms of both income and culture. Under the 7FYP, one of the goals for secondary education was to minimize multiplicity in education by modernizing madrasa education and to reduce the gap in resources and facilities in secondary education between general education and madrasa education. Progress in this front has been less satisfactory.

11.3.5 Progress in Higher Education

Higher education plays a critical role in developing skilled human resources of a country. Moreover, it plays a central role in the quality improvement of both primary and secondary education outcomes. If there is a learning deficiency in the pre-tertiary level, the tertiary level itself cannot produce desired outcomes. Importantly quality tertiary education produces quality teachers which can substantially improve the quality of primary and secondary education. Therefore, primary, secondary and tertiary education will need simultaneous focus as their development is inter-linked. Furthermore, standing on the verge of the fourth industrial revolution, the need for Bangladesh to focus on its tertiary education is now more important than ever. Bangladesh has a structured system of tertiary education. The tertiary education providing institutions can broadly be divided into three categories: universities, tertiary colleges under general education system, and the polytechnics under the TVET system.

Bangladesh witnessed a major growth of the tertiary educational institutions during 2009-2018. The total number of universities in the country has increased from 82 in 2008 to 145 in 2018. The subset of private universities more than doubled during the same period, increasing from 51 to 103. This has also translated into a large increase, more than double, in the number of university students from 0.4 million in 2009 to 1 million in 2018. Rate of increase in number of students is higher than the rate of increase of universities, indicating that the rise in students is not only an outcome of greater opportunities, but also of greater demand for higher education. The number of teachers per institution has increased from 245 in 2008 to 345 in 2018. In 2009, there were 21 students per teacher in the public universities, whereas in 2018 the number increased to 49. The number of tertiary colleges increased during this period as this master's degree providing colleges. This progress has been greatly facilitated by the government's policy to allow the private supply of tertiary education, as seen by the rise in number of private universities over the concerned period. In order to keep up this positive trend in the sector, the government has adopted the Strategic Plan for Higher Education in Bangladesh: 2017- 2031.

Notwithstanding this progress, the total coverage of tertiary education is still very limited. Only12.1 per cent people of Bangladesh have higher education. This rate is 8.7 per cent for females and 15.5 per cent for males. Geographically, 19.9 per cent people in urban areas and 8.8 per cent people in rural areas have higher education. In addition, female students account for only 26 per cent of total students in public and private universities. Therefore, wide gaps exist across the gender and socio-economic groups.

Professional institutions provide education related to a particular profession, such as engineering universities, medical colleges, dental colleges, law colleges, art colleges, etc. The number of professional institutes increased from 242 in 2009 to 425 in 2018. Number of medical colleges increased from 48 (18 public, 30 private) in 2010 to 111 (37 public, 74 private) in 2018. Dental colleges increased from 11 (1 public and 10 private) to 35 (9 public, 26 private) during the 2010-2018 period. Only three Textile Technology Colleges were established during this period (increase from 8 to 11). In case of Leather Technology Colleges, the number remained unchanged at one. For all the public institutes the number of students per teacher has decreased significantly from 12 to 6 during this period. But for the private institutes we witness an increase from 17 to 19 during this period.

The 7FYP targeted to minimize the gap in enrolment between male and female, poor and non-poor, and the urban and rural population. To bring the curriculum of higher education on par with the demands and expectations of 21st century, the government has undertaken various steps. In 2017, the Accreditation Council Bill was passed in the parliament that stipulates an independent council to evaluate programmes of both public and private universities. The bill allows extensive monitoring of academic activities at the universities. The Higher Education Quality Enhancement Project (HEQEP), which was implemented with the help of the World Bank through the University Grants Commission, aims to improve the quality, and relevance, on higher education institutions in Bangladesh by i) encouraging innovation within universities, ii) demanding greater accountability from the university authorities, and iii) Instituting capacity development of higher education institutions and the sector as a whole. The project was implemented between 2009 and 2018 and focused on industry-university collaborative research including four other major points: promoting academic innovation in teaching, learning and research; institutional capacity building at the University Grants Commission (UGC) and universities; connectivity capacity building for research centres and universities and project management.

The Ministry of Education has also undertaken steps to further strengthen and empower UGC to improve the quality and scope of higher education and make it internationally competitive through appropriate curriculum development, support for Science and Technology (S&T), encouragement of research, and using high level training to prepare and equip the next generation to successfully meet the challenges of globalization and contribute to Bangladesh's socioeconomic development.

Major Challenges

The key challenges in higher education are quality of education and low enrolment as well as labour market relevance. Graduates from the STEM background are imperative for the current level of development of the country, particularly in the context of the fourth industrial revolution. Gender parity is also one of the major challenges; roughly 45 per cent (26 per cent) students in the tertiary sector (universities) are female. Net enrolment is also low, at less than 20 per cent.

Although there has been an increase in the enrolment in tertiary education in recent years, a large portion of this increase accounts for increase in enrolment in humanities and social science discipline. Once all the tertiary institutions are included, STEM-enrolment as a share of higher education enrolment stands at only 21 per cent. The quality and job-readiness of the graduates is less than par. Tracer studies on university and college graduates indicate lack of marketable skills and job-readiness on the part of students. A recent study on the graduates from universities under the University Grants Commission showed 38.6 per cent unemployment among the graduates, and that 34 per cent of the graduates get a job within 2 to 3 years of their graduation. For the labour market relevance, another challenge is the absence of industry-academia collaboration. This leads to a lack of coordination between what is being taught and what is expected at workplaces. Increasing enrolment (and completion) without paying attention to industry linkage will merely create a pool of highly educated but potentially unemployable graduates, as studies have shown.

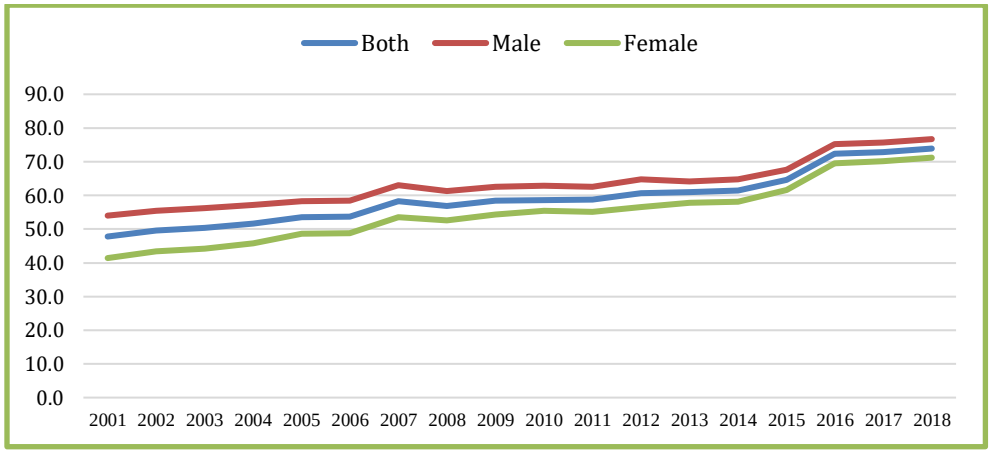
11.3.6 Progress with Non-Formal Education

Literacy is a basic tool for all individuals, regardless of age, should possess. It is an effective instrument of social change that empowers individuals with the essential skills of numeracy, communication and problem solving. One of the main focuses of the PP2021 strategy is to achieve Education for All (EFA). An important component of the government's EFA is the coverage of non-formal education (NFE). Non-Formal Education (NFE) especially literacy and Literacy is a basic tool for all individuals, regardless of age, should possess. It is an effective instrument of social change that empowers individuals with the essential skills of numeracy, communication and problem solving. Non-Formal Education (NFE) especially literacy and continuing education for adults and youths including life skills & livelihood skills development, is considered as the process of empowerment that contributes to human resource development and poverty reduction.

The Government has been implementing Literacy/NFE programmes in various forms since its Independence in 1971. The commitment to battling adult illiteracy prompted the Government to launch a major non formal education Programme in the 1990s, focusing on basic literacy. The government has adopted NFE Policy in 2006 aimed at reducing the number of illiterates, offering need-based continuing education, promotion of equivalency between formal and non-formal education, ensuring community ownership and sustainability of NFE programmes.

Bangladesh has continued to make progress in improving adult literacy rates, growing from 58.6 per cent in 2010 to 75.0 per cent in 2019. Figure 11.2 shows the progress made in addressing adult illiteracy. There has been a slow but steady progress with increasing the adult literacy rates for both male and female. The gap between male and female literacy rates has also been reduced. The progress was maintained under the Sixth and Seventh Plans.

Figure 11.2: Progress with Adult Literacy (%)



Source: Bangladesh Bureau of Statistics Yearbook, Various Years

A Non- Formal Education Act (NFEA) was adopted in 2014 to provide a legal framework for fulfilling the obligation regarding adult and non-formal education.

Since 2014, the BoNFE have been implementing the Basic Literacy Project (64 Districts), with an aim of providing transformative basic literacy skills to 4.5 million between the age of 15 and 45. A total of 39,331 continuing education centres have been opened nationwide, housed with 78,621 teachers (equal number of male and female students and teachers), and 1,967 supervisors. So far, around 2.4 million students have passed through the centres.

Emerging issues and challenges: Notwithstanding this progress, there is still a substantial unfinished agenda. Some 29 per cent adult female and 23 per cent adult male remain illiterate. There is a substantial rural-urban gap, with the average rural literacy rate at only 66 per cent. Rural adult women are particularly deprived of basic literacy; some 37 per cent of women are illiterate. Additionally, there are concerns about the limited scope of the literacy achieved, especially in terms of numerical skills and there is no link to lifetime learning concept adopted under the SDG. At the institutional level, the BoNFE has been an important institutional change that is playing an important role in furthering the cause of NFE. However, the Bureau is not fully equipped to operationalize the broad vision of the NFE policy framework. The capacity of BoNFE needs substantial upgrading to move to the goal of lifelong learning. Coordination, accountability, transparency, people's participation and monitoring mechanism are essential. Attention must be given to the multifaceted and multi-layered governance to reduce the above-mentioned challenges in different levels of education.

11.4 PROGRESS WITH SKILLS DEVELOPMENT

Application of new technology change production process that make some workers redundant in the short run and, creates 'technological unemployment'. An updated TVET sector with proper industry linkage can help the displaced workers learn the necessary skills. More importantly, TVET provides an alternate option to those individuals who may not be comfortable in a traditional education institution or could not continue school/college due to family or other reasons. The perspective plan (2010-2021) and the 7th Five Year Plan emphasizes the role of expansion and modernization of TVET for building a skilled workforce. One sub-goal under SDG-4 is about ensuring equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. Studies have shown that the return from TVET education is higher than from regular schooling for a below average student. For Bangladesh's transition towards an upper-middle income country, increased investment in TVET will be crucial. Global experiences suggest that TVET sector expands with level of development of a country. The academic streams will not be able to absorb all the children (who are over one-third of the population currently) and importantly it will not be able to provide every necessary skill that will be demanded in the future. In Bangladesh, formal TVET consists of SSC, HSC, and Diploma courses, HSC (vocational), SSC (vocational), and HSC (BM). The courses are offered by Engineering Colleges, Polytechnic Institutes, Technical School and Colleges (TSCs), Technical Teachers' Training College (TTTC), Vocational Teachers' Training Institute (VTTI), Business Management Colleges and other technical and vocational institutes.

Bangladesh has gradually transformed from an agriculture-based to an industrial and service- based economy. Low and less skilled workforce with basic education served this transition well so far. But to achieve upper middle income status by 2031 and particularly to take advantage from the fourth industrial revolution, up-gradation of both hard skills (job specific skills such as project management, cloud computing, computer technology, data analysis, marketing etc.) as well as soft skills (abilities such as communication skill, problem solving, work ethics, interpersonal skills, team management, creativity, time

management, adaptability etc.) will become crucial. Unfortunately, the existing education system including TVET gives relatively less emphasis on developing these particular skills. Hence the skill levels and productivity of the workers have not increased sufficiently. Private sector consistently identifies lack of relevant skills they require.

According to LFS 2016-17, Bangladesh has a working-age youth population (between the age of 15 and 29) of 41.25 million. Among various age groups of the labour force, unemployment among the youth is the highest. The unemployment rate of young people in the country is 10.7 per cent and this accounts for 79.6 per cent weight in total unemployment. Moreover, almost 30 per cent of the youth population was not in NEET (not in employment, education or training) in 2017. Among this group, 97.8 per cent of male and 98.7 per cent of female in age group 15+ did not have any access to training. Those who got training were mostly short courses of two weeks duration. According to Bureau of Manpower, Employment and Training (BMET), there were 13 million Bangladeshis working abroad at the beginning of 2020, most of whom are less or semi-skilled. A more skilled pool of migrant workers from Bangladesh would readily translate into higher remittance for the country.

The enrolment rate in TVET increased from 1 per cent in 2009 to 16 per cent in 2018. The number of TVET institutions more than doubled between 2008 and 2018 (Figure 11.3). Public institution contributed 335 and 866 institutions out of these; the rest were private. During the same period, the number of students increased from around 464,000 in 2008 to 1,067,000 million in 2018 (Figure 11.4). For public institutions, this rise was 123,000 to 329,000. The rest were from private institutions. The ratio between students and teacher slightly decreased, from 22:1 to 21:1. However, NEP 2010 suggests that this ratio should be around 12:1.

Figure 11.3: No. of TVET Institutions

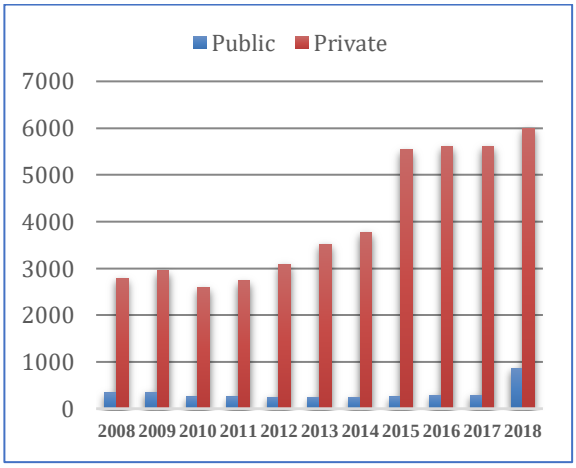
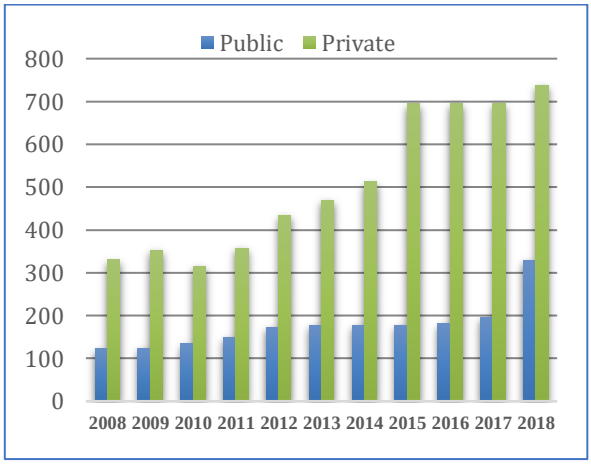


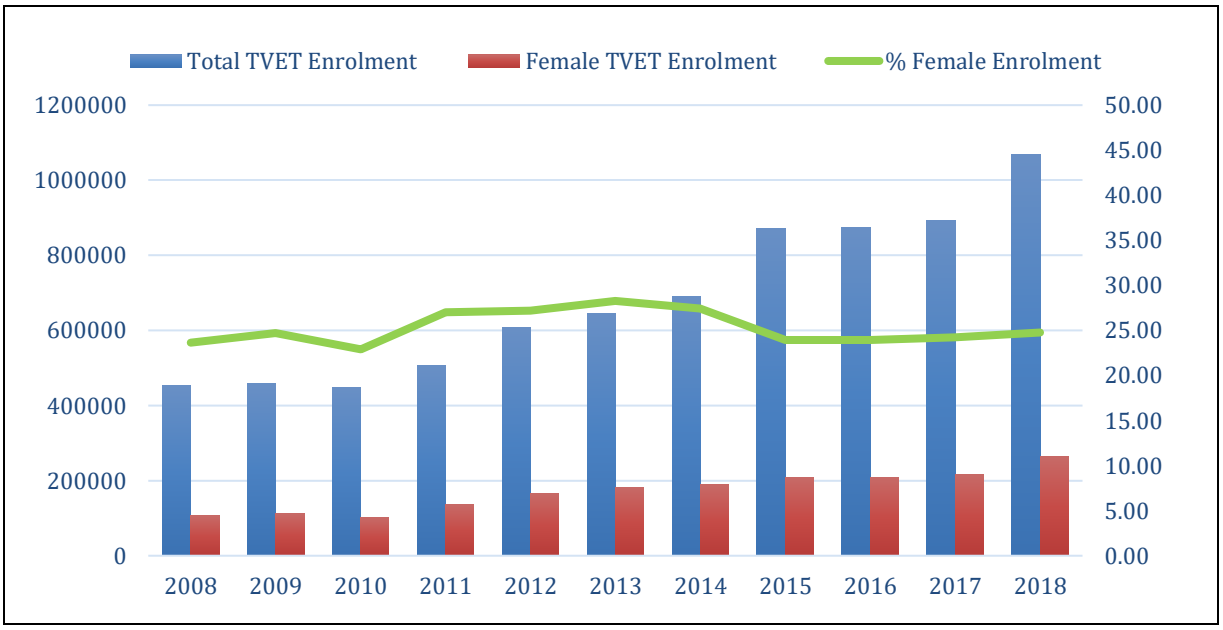
Figure 11.4: No. of TVET Students ('000s)



Source: BANBIES 2019

A major problem in the TVET sector is low-female participation. As discussed already, there has been a rapid rise in the absolute size of enrolment in TVET in the last decade. This is true for both male and female enrolment. However, growth rate in female enrolment has been on par with the growth rate in male enrolment. As a result, the gender-mix ratio has stagnated at around 25 per cent female students in the last 10 years (Figure 11.5). This represents a gender-imbalance that remains to be addressed. Achieving SDG target 4.3 of gender equality will require ensuring equal access for all women and men to TVET and in University by 2030.

Figure 11.5: TVET Enrolment by Gender



Source: BANBIES 2019

The Government has implemented the National Education Policy (2010) and National Skills Development Policy (2011) to improve the TVET system and address the issues of the sector. To address the skill-gap, the Government initiated the TVET Reform Project of 2008-15, the National Skills Development Project 2011 (NSDP 2011) and the Skills for Training for Employment Program (STEP). The government has also substantially stepped up the institutional arrangement for skills development (Table 11.3). These institutional reforms are expected to bring about a major transformation in the delivery of skills for Bangladesh.

In addition, under the NSDP, the National Technical and Vocational Qualifications Framework (NTVQF) has been designed to standardize the technical and vocational qualifications. The framework is comprehensive and is coherent with international top practices. ADB is helping the government to implement the NSDP2011 with a major skills enhancement program called the Skills for Employment Investment Project (SEIP) which has partnered with a number of industry associations such as BASIS, BTMA, BGMEA, AEOSIB and others to impart vocational training with globally recognized skills certifications where appropriate. The Technical and Madrasa Division (TMED) has also been created in the Ministry of Education to introduce TVET into the madrasa stream.

These policy and institutional reforms and investment programmes have started yielding important benefits in terms of availability of skills. A particularly useful instrument is the SEIP that has shown considerable promise in terms of delivering results (Table Box 11.1). Programmes introduced by various NGOs are also helping improve the skill base of the rural population and in the informal sector. Yet, the skills gaps are large and will require concerted efforts during the 8FYP to close the gap. Additionally, the new skills challenges emerging from the 4IR require constant monitoring and change to adapt to market demand.

Table 11.3: Government Initiatives for Skill Development during 7FYP

Policy Instrument	Objectives and strategies
National Skill Development Authority Act 2018 (NSDA)	The goal of NSDA is to formulate and implement all strategies to develop skills and bring coordination between different institutions and stakeholders regarding skills training, etc. The NSDA bill specifically targets disadvantaged people and people with specialized needs and provides them with access to education and training.
Industry Skill Councils (ISC)	ISC provide linkages between industries and TVET institutions. By bringing workers, employers, and government together, ISCs improve the skills development system. There are 12 ISCs in Bangladesh. Functions of the ISCs are as follows: a) Introducing skills training institutions to the latest employment and technology trends. b) Improving social dialogues to encourage public-private-donor partnerships. c) Increasing the efficacy of the skills data system to strengthen industry's role in data collection and ensuring the demand side data is correct.
National Skills Development Authority (NSDA)	Currently multiple institutions are providing the same skills-training while much needed niche skills are being provided by no, or not enough, institutions. To deal with these challenges National Skills Development Authority (NSDA) has been established. NSDA is one of the major players in improving the coordination of skill development across Bangladesh. NSDA is working on ensuring the efficacy of the public institutions in using resources and implementing arrangements to facilitate private training providers to access public facilities, to enhance the scope of skills training.
Competency Based Training and Assessment (CBT&A)	This training material is designed to develop a system to deliver demand-driven training, primarily through encouraging private sector industry partnership with training institutions. Therefore, industry is expected to increase its engagement and support to training institutions, so that programmes and graduates are more likely to meet the needs of employers and their staff.

Box 11.1: Performance of SEIP

Tranche 1 outcome: Increased employment in priority sectors and skills for males and females. With a target of 260,000 trainees with at least 30 per cent female participation, the following have been achieved under the Tranche 1 of SEIP as of 30 June 2019

- 256,715 trainees were enrolled (30.7 per cent female). 229,325 have been certified (32.01 per cent females);
- 280 trainers completed overseas training; 820 trainers completed technical training locally; and 205 assessors completed training;
- The number of certified new entrants was 188,247 out of whom 132,638 (70.5 per cent) were placed in jobs;
- A total of 45,675 disadvantaged trainees received special stipends (44 per cent female);
- 45 Job placement officers (JPO) are currently deployed; and

Management and refreshers' training implemented for 150 principals and TVET managers from public and private training providers

Tranche 2 outcome: Inclusive access to basic, mid-level, and managerial skills training in priority sectors increased. The following have been achieved under the Tranche 1 of SEIP as of 30 June 2019:

- 54,732 trainees have been certified out of whom 36,231 have been placed in job;
- 3,008 trainees have been enrolled for up-skilling training. Out of 2,327 certified trainees, 1,848 are currently in job;
- Training programmes are on-going by industry associations and public institutes. 78,812 trainees have been enrolled (32.79 per cent female). 11,781 trainees have been enrolled in mid-level skills program (40.57 per cent female). Executive Development Training has started in three universities, enrolling 669 trainees so far;
- Special stipend has been paid to 16,363 trainees (30.51 per cent female); and
- NSDA bill was passed by the parliament. Detailed operational plan will be prepared by the Prime Minister's Office under which the NSDA will be operating.

11.5 EQUITY ASPECTS OF EDUCATION

In a market economy like Bangladesh, the best policy to reduce long-term poverty and income inequality is to improve the access of the poor and the underprivileged to formal education. Accordingly, the government has adopted various policies to improve the equity of education during the 6FYP and the 7FYP. These include endorsing the education for all (EFA) policy, adopting universal education up to grade 8, providing stipends to girls and the needy, ensuring better access to education facilities at all Thana levels and in remote areas, and spreading the reach of non-formal education. These policies had secured considerable success reflected in near universal primary education, substantial increase in secondary education enrolment rates, elimination of gender disparity in primary and secondary education and the sharp increase in male and female literacy rates. Nevertheless, the Government recognizes this is an unfinished agenda.

In the matter of school attendance, data from 2016-17 HIES and 2010 HIES show that despite progress there is still considerable gap in school attendance by poor at all school going age group, from primary (6-11 years) to secondary (12-18 years) and higher secondary and tertiary education (19-24 years). The per cent of poor children out of school increases progressively by levels of education, with the largest gap at the higher secondary and tertiary level (Table 11.4). The per cent of school attendance for the poor has increased at all levels of education between 2010 and 2016, which is good news. However, the gap between the rich and poor remains stubbornly large.

Table 11.4: School Attendance of Children by Poverty Status, 2010-2016

Year	Poverty status	Children Not Attending School		
		Children aged 6-11 years	Children aged 12-18 years	Youth Aged 19-24 years
2010	Poor	24.7	38.8	60.9
	Non-poor	12.0	24.5	33.3
	Total	**16.2**	**35.2**	**48.8**
	Poor – Non-Poor Ratio	**2.1**	**1.6**	**1.8**
2016	Poor	10.8	28.5	49.2
	Non-poor	5.1	19.1	28.7
	Total	**7.9**	**22.6**	**31.3**
	Poor – Non-Poor Ratio	**2.1**	**1.5**	**1.7**

Source: GED estimates based on HIES 2010 and 2016.

Regarding the quality of education, reading and numeracy skills are taken into consideration for children aged 7-14 years as reported in MICS 2019. We have taken two indicators into consideration here to assess the reading skills and three indicators for numeracy skills. For reading, the indicators include 'not being able to correctly read 90 per cent of words in a story' and 'not being able to demonstrate foundational reading skills'. For numeracy, the indicators are 'not being able to read numbers', 'not being able to discriminate numbers' and 'not being able to recognize and complete patterns. Results in these respects are not encouraging. More than one-third of children couldn't correctly read words in a story and more than half of the children failed to demonstrate foundational reading skills. For numeracy, once again, more than one-third of the children couldn't successfully complete the tasks of number reading and number discrimination, and about two-third couldn't complete the task of pattern recognition (Table 11.5). These clearly indicate that the average competence level of the children is rather poor, and hence the quality of education is really a matter of concern.

Alongside quality concerns at the aggregate level, there are also inequalities amongst the children of the poorest and richest families in the quality of education that they receive. As the data shows, children from the poorest families are more than 2 times more likely not to receive quality education (in respect of simple reading and numeracy tests) than that of the children from the richest families (Table 1.13). For relatively a bit more complicated tests (i.e., foundational skills for reading and pattern recognition and completion in numeracy), there still exist disparities (poorest children are about 1.5 times more likely not to complete the tasks compared to the richest children), but the magnitude is lower than the simple tests.

Table 11.5: Quality of Education for Children Aged 6-14 Years in Bangladesh, 2018

Year	Wealth Quintile and Ratio of the Poorest Quintile over the Richest	Reading Skills		Numeracy Skills**: Percentage of children who couldn't successfully complete tasks of		
		Percentage who couldn't correctly read 90% of words in a story	Percentage who couldn't demonstrate foundational reading skills	Number reading	Number discrimination	Pattern recognition and completion
2018	Lowest	52.3	64.6	52.3	49.5	73.3
	Second	43.0	56.1	42.1	38.8	67.3
	Middle	35.9	49.4	36.6	33.4	64.0
	Fourth	32.0	45.5	32.3	28.8	60.6
	Highest	23.4	36.4	23.8	18.9	52.9
	Total	**38.1**	**51.2**	**38.2**	**34.7**	**64.2**
	Poorest-Richest Ratio	**2.2**	**1.8**	**2.2**	**2.6**	**1.4**

Source: MICS 2019

An important aspect of equity in schools is access to water, sanitation and hygiene (WASH) facilities at educational institutions, which are a prerequisite for improving the learning environment and for enhancing girls' attendance. Significant progress was made in the WASH front at schools in Bangladesh with 92% of schools having improved water coverage in 2019.—. All schools have improved sanitation facilities, although 65% of schools have gender-segregated toilets, and when considering the availability of soap and water, the figure drops down to 39%. On average, there is one functional, improved, unlocked toilet for every 113 students.

A major development regarding WASH in schools is its increasing acknowledgement by the government. Using findings from the National Hygiene Baseline Survey 2014, the Ministry of Education issued a circular in June 2015 instructing relevant authorities to improve the WASH scenario in schools, including gender-friendly sanitation and MHM. The ministry issued another circular in January 2019 on ensuring an enabling learning environment in schools, which entailed the provision of separate WASH blocks for male and female students. These actions underline government's full committed to close or significantly narrow the remaining gaps through proper implementation of WASH in schools' program.

11.6 8th FIVE YEAR PLAN TARGET FOR EDUCATION AND TVET

Tables 11.6 and 11.7 summarize the main education sector targets to be achieved under the 8FYP. These targets are based on SDGs as well as the targets for PP2041. Specifically, the targets as shown are commensurate with achieving the following SDG goals: SDG4- quality education; SDG5-gender equality; SDG10- reduction in income inequality. Importantly, the PP2041 target to eradicate extreme poverty and

reduce moderate poverty will be helped by achieving these targets. Other PP2041 targets, such as industrialization and developments of the service sector will be assisted by progress made in the TVET and higher education sectors.

Table 11.6: 8FYP Targets for Education and TVET in Bangladesh

Indicators	2020	2021	2022	2023	2024	2025	SDG Goal
	Primary Education[1]						
Gross Enrolment Rate (%)	110	109	107	106	105	104	4, 5 & 10
Net Enrolment Rate (%)	99	99	100	100	100	100	4, 5 & 10
Repetition Rate (%)	6	6	6	6	5	5	4
Dropout Rate (%)	15	14	12	10	10	9	4 & 10
Survival Rate (%)	85	86	88	88	88	91	4 & 10
Teacher-student ratio	1:31	1:30	1:29	1:29	1:30	1:30	4
Student per institutions	142	139	138	140	142	140	4
Teacher per institutions	5	5	5	5	5	5	4
Teacher to student (GPS)	1:34	1:33	1:31	1:30	1:29	1:28	4
Student/institutions (GPS)	240	238	237	238	240	239	4
Teacher/institutions (GPS)	7	7	8	8	8	9	4
	Secondary Education[2]						
Gross Enrolment Rate (%)	64	66	67	69	70	72	4, 5 & 10
Net Enrolment Rate (%)	56	58	59	61	62	64	4, 5 & 10
Teacher-student ratio	1:40	1:38	1:36	1:34	1:32	1:30	4
Student per institutions	498	502	502	502	500	502	4
Teacher per institutions	12	13	14	15	16	17	4
	Madrasa Education[3]						
Teacher-student ratio	1:25	1:26	1:26	1:27	1:28	1:30	4
Student per institutions	263	264	264	264	264	264	4
Teacher per institutions	18	18	18	18	18	18	4
Science Enrolment	17%	20%	23%	28%	32%	35%	4
	TVET [4]						
Teacher-student ratio	1:18	1:16	1:15	1:14	1:13	1:12	4
Student per institutions	171	160	165	161	156	156	4
Teacher per institutions	10	10	11	12	12	13	4
	University Education[5]						
Teacher-student ratio	1:28	1:27	1:26	1:23	1:20	1:17	4
Student per institutions	6,779	6,704	6,778	6,864	6,819	6,799	4
Teacher per institutions	242	248	261	298	341	400	4

***Note**: [1]PEDP Targets; [2]SESIP Targets; [3]Standard Secondary Rate; [4]NEP 2010 Targets; [5]Top 100 Universities in the world*
SDG Goal 4: Quality Education - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. SDG Goal 5: Gender Equality - Achieve gender equality and empower all women and girls. SDG Goal 10: Reducing Inequality – Reduce income inequality within countries.

Source: MoPME, SHED & TMED

Table 11.7: Additional Education Sector Goals and Targets for 8FYP

Indicators	Base Year (2018)	Target (2025)
Per cent of poor children attending secondary school	72	80
Per cent of poor children attending higher secondary schools	51	60
per cent of children attending tertiary education	18	30
Female-male tertiary education ratio (%)	25	60
Adult literacy rate (%)	77	100

Source: MoE, MoPME

11.7 8FYP STRATEGIES FOR EDUCATION SECTOR DEVELOPMENT

Notwithstanding the improved coverage and access to education as discussed in the previous sections, there are still serious bottleneck affecting the development of the education sector. Universal access, enrolment and gender parity at the primary and secondary level has not ensured quality education. The quality issue remains a great concern for all the streams of education including TVET. The quality issues include low teacher to student ratio, in terms of learning outcomes, low cognitive skills, variation among schools, teachers' pay scale and students tuition fees, absenteeism of both teachers and students, limited or non-existent incentive for better performance, and low levels of accountability in the usage of funds. At the higher levels, participation is low across the board, but especially low for poor people and females. Moreover, the share of science graduates is considerably lower than that of humanities, social sciences, business, etc. This creates a substantial gap between employers' demand and graduate skills. An estimated 54 per cent of South Asian youth leave school without the necessary skills to get a decent job in the next decade.[13] Only 26 per cent of secondary-age children in the region were on track in 2019 to complete school and learn the basic skills needed for employment - rising to just 46 per cent by the year 2030. The figure was 26 per cent for Bangladesh in 2019, rising to only 55 per cent by 2030.

Consequently, a large number of graduates remain unemployed or under-employed. The low-quality teachers, curriculum, and pedagogy make science and mathematics subjects 'difficult' for the students, creating low-quality graduates. The high unemployment of educated youth suggests that the education and training sector strategies need to be better linked to job creation.

To achieve UMIC status by 2031, the 8FYP will align country's human capital development strategy with the overall economic development strategy. A holistic approach and a regulatory framework for skill development will be adopted, where all tiers of education and vocational training will be interlinked. All education and skill related policies will complement each other to achieve the broader goal of creating a knowledge and skill-based society. In addition, the skill development policy will specify how to incentivize the training of the workers for the employers since learning or skill acquisition occurs most at the industry level through on-the-job training. Furthermore, the importance of soft skill will be integrated and strategic guidelines will be prepared on how to educate these skills. This training will start from the pre-primary level of education and will be an integral part of the curriculum.

[13] UNICEF & Global Business Coalition for Education (2019). *2030 Skills Scorecard, South Asia Edition*.

Table 11.8 Children in South Asia on Track to Complete Secondary School and Learn Basic Skills by 2030

Country	2019	2030 Projection
Bangladesh	26	55
Bhutan	47	81
India	19	47
Maldives	16	46
Nepal	13	46
Pakistan	18	40
Sri Lanka	61	68

Source: UNICEF and GBC-Education, 2019

11.7.1 Addressing Cross-Cutting Issues in Education and Training

The main strategies and policies to achieve the goals and targets of the 8FYP education sector development are highlighted in Tables 11.5 and 11.6 which comprise of several cross-cutting strategies and policies that encompass the entire education sector as well as sub-sector-specific strategies and policies as well as several cross-cutting strategies and policies that encompass the entire education sector. The cross-cutting strategies and policies include:

Sharply increase public education expenditure, as a percentage of GDP: A major constraint that has limited the progress with education and training is the scarcity of public resources. Despite efforts, public education spending continues to be low, reaching a maximum 2.47 per cent in 2017, but falling again in the subsequent years to around 2 per cent of GDP. For most developed countries, education expenditure as a percentage of GDP tends to be over 5 per cent. For India, the latest figure is 4.6 per cent. The PP2041 set a target of increasing public spending in education to 4 per cent of GDP by FY2031 and 5 per cent of GDP by FY2041. In line with those targets, public spending is targeted to reach 3.5% of GDP by FY2025.

Involving private sector in education investment and curriculum development: Private sector provision of education was duly encouraged in the 6FYP and in the 7FYP, particularly in higher education. This has paid rich dividends as indicated by the rapid growth in the supply of private education especially at the higher secondary and tertiary level. The 8FYP will continue with this policy. Private sectors are the largest employer of the graduates. Hence it is important to involve them in the curriculum development process. The 8FYP will seek inputs from private businesses in curriculum development and develop public-private partnerships in the development and delivery of skills for employment programmes

Strengthen parent consultation process: It is also very important to inform citizens about the demands for specific skills in the market. It is not the degree or a certificate but the competence and proficiency in performing specific tasks that are mostly important. Demand side interventions can work on choosing the right stream of education and vocational training. The return from switching to vocational training for a below average student can be higher than in persisting with general education. But to take advantage of this outcome, students (and their parents) need to be aware of the skills demands. Accordingly, the 8FYP will seek to involve parents in education development.

Strengthen the relevance of education to skills and employment: The lack of adequate student learning outcomes remains one of the major concerns for Bangladesh. One potential low-cost intervention can be early-childhood development through pre-primary education. Studies have showed that early childhood interventions can have substantial and lasting impact on learning and earning outcomes later in life. Evidence shows that exposure to early childhood learning interventions lead to better school readiness through enhanced cognitive, numerical, and literacy skills. Providing remedial assistance to struggling students is also important. Additional teaching can be provided to those students willing to stay after school to improve their learning. Studies have shown that remedial assistance keeps students in school longer and lowers dropout rate. The 8FYP will undertake necessary reforms to strengthen the relevance of the education system.

Strengthen teacher quality and skills: Education outcomes are only as good as the quality of curriculum and the quality of teachers. Future curriculum reviews will focus towards developing competency, not content-learning. Teachers will be trained and made familiar with this approach, and be incentivized sufficiently in performing their jobs. South Korean students, for example, perform better than most of the developed world because of a shift away from the traditional means of learning towards critical thinking and problem-solving skills. South Korea also placed emphasis on teacher-training, pay, and other incentives. A similar strategy will be undertaken for Bangladesh under the 8FYP.

Decentralize primary and secondary education to the district level: Presently the delivery of primary and secondary education is highly centralized. For a nationwide student population of some 40 million, a million teachers, and 200,000 institutions, the structure of education governance regarding decision-making and management is concentrated in the capital city which will be reformed under the 8FYP. Education resource mobilization, budget making, management and service delivery will be strengthened by decentralization involving Upazila and district based-planning and management of primary and secondary school education. A permanent statutory National Education Commission, anticipated in Education Policy 2010, will be used as a mechanism for guiding, exercising oversight and assessing progress and impact of education reforms.

Strengthen research on education and skills improvements: There is a dearth of quality data that can be used to track skills mismatch in different sectors. This is essential to develop effective education and skills policies. For this BBS will regularly conduct separate surveys on skills and create a separate database. Also, new indicators to be developed that measures the quality-aspect of education and training. This latter will make it easier to align education objectives with industry-demands and the industry development policies.

11.7.2 Strategies for Pre-Primary and Early Childhood Education

Implementation of pre-primary and early childhood education is still in the early inception stage in Bangladesh. The 8FYP will place strong emphasis on the development of pre-primary and early childhood education drawing on the Bangladesh and relevant global experiences.

- *A tool to reduce disparity*: Early childhood interventions are the first and foremost tools to narrow the size of inequality in a country. By targeting the disadvantaged group, especially first-time learners, and helping them not fall behind other privileged students, earnings and wealth inequality

will be reduced in the country, which is the 10th SDG. So, the 8FYP will expand the pre-primary education on the basis of equity.

- *Develop appropriate curriculum and train teachers for pre-primary*: Appropriate curriculum design and training of teachers is vital at this stage. The very aim of pre-primary education is to provide foundation to the cognitive skills of a student and make him or her ready for lifelong learning, creative problem solving, and greater adaptability to change. However, without the proper environment, pre-primary education may fail to impart these life-skills. A successful pre-primary program in Bangladesh means that the teachers have been trained to undertake pre-primary pedagogy, which includes understanding of child psychology, and a carefully designed play-based curriculum has been developed. Therefore, under the 8FYP, a new group of teachers specializing in early childhood learning will be trained to keep up with the expanding coverage.
- *Strengthen public-private partnership*: More students are receiving pre-primary education via NGOs and other private organizations than through public institutions. The 8FYP will continue encouraging these institutions to upscale and involve more interested private stakeholders and strengthen the public-private partnership.

11.7.3 Strategies for Primary Education

Building on the progress in the 7FYP, the 8FYP will address the outstanding issues and challenges related to primary education.

- *Reduce dropout, absenteeism*: Despite schemes such as stipend distribution, school lunches, free textbook distribution, etc., dropout rate at primary education is still almost 20 per cent. Dropping out at the primary level does not represent any value-addition to human capital for students and is a resource-drain. Greater incentives to families to keep their children in school, specially the girl, will be developed under the 8FYP. In addition, regular parents–teachers meeting will be done to discuss students' performances and progress, inform parents about the current system and children's future career path, and deliberate on feasible future options. Greater accountability of teachers and heads to maintain regular attendance and timeliness will be maintained. ICT and development of digital rosters for the teaching staff will be done.

- *Better quality outcome in education*: The 8FYP will place emphasis on improvements in the quality of education outcome. This includes updated curriculum and pedagogy, improved physical facilities, teaching professionals, curriculum, books and supplies and parent involvement in student's education. Strong attention will be placed on ICT subjects.
- *Create better citizens*: upgrading of the curriculum may comprise inclusion of modules about basic moral, safety, and awareness issues of day-to-day lives (such as daily health care, climate change, environmental pollution, etc.) at the primary, and perhaps all levels. There may also be some activities/practical experience in the curriculum on community engagement for developing social responsibility of the future generation.
- *Develop better tools to measure learning outcomes*: Under the 8FYP, there will be greater focus on developing tools to properly quantify the learning-outcomes by the students that focus on competency and understanding, not just ability to pass an exam.

11.7.4 Strategies for Secondary Education

The PEDP-IV and SESIP projects are very comprehensive and encompass all the aspects of the development of the primary and secondary education. Implementation of these programmes will be strengthened. Additionally, the following actions will be incorporated in the 8FYP.

- *Develop better tools to measure learning outcomes*: Secondary level is the stepping-stone for tertiary and vocational education. Weak learning at this level could potentially jeopardize any investment at the tertiary level. Steps will be taken to enhance quantifiable learning outcomes of the students. Since the NSA conducted by DPE indicates that learning outcomes are low at the primary level, a similar national assessment at secondary level will be undertaken as a first step.
- *Reforming the examination and evaluation method of students learning:* Ministry of Education has embarked on reforming the examination and evaluation method of students learning. Emphasis is being given to evaluate students 'acquisition of course contents and not rote learning. With a view to ensure quality, validity, and reliability of examination and assessment system in Bangladesh an autonomous institution National Examination and Assessment Centre (NEAC) will be established soon. Initiatives have already undertaken for setting up the body. Enactment of 'The National Examination and Assessment Centre Act 2020' is under process.
- *Increase science enrolment*: The low number of students who appear for science subjects in SSC and HSC is not aligned with the growth and development targets of the government. This will be changed in the 8FYP period. Training for science teachers, identification of high-potential students at a young-age and streamlining them into the science streams will address this problem. Regular correspondence between institutions and students/parents, to discuss future plans and career aspirations, and additional remedial assistance for struggling students will be provided.
- *Introduction of Common Curriculum up to class X:* Following the recommendations of the Hunter commission, constituted under the leadership of Sir William Wilson Hunter, a single stream Secondary Education System was introduced in British India in 1883. This system continued till 1959. Many education commissions were constituted from 1883 to 1959. All these commissions recommended continuing the common curriculum for all secondary level students. But, in 1959 during the martial law regime of Ayub Khan secondary education was divided into three groups: science, commerce and arts. In 1972 Bangabandhu Sheikh Mujibur Rahman constituted the Dr. Qudrat-i-Khuda education commission. The commission recommended introducing a unitrack curriculum for all secondary level students in 1974. It is difficult for a ninth grader to decide on his future education at this age (13+ years). This puts a lot of stress on him which can hinder his/her mental and physical development. Moreover, all secondary level students must be provided with equal and equitable education. This is one of the goals of SDG-4. In order to build a skilled manpower to cope with the challenges of the upcoming 4IR, all secondary level students have to study science, commerce and arts equally. Considering all these aspects government has decided introducing a unitrack curriculum instead of multi group curriculum up to grade-X.
- *Improve equity:* Disparity is another challenge in the secondary level. The gross enrolment for poor and non-poor at the secondary level are 24 per cent and 76 per cent respectively, indicating high inequity in this level. The most likely cause for this is that struggling poor secondary students particularly boys are employed in family farms/businesses by their parents who see no return in continuing the education of their child. The girls on the other hand are sent to perform paid/unpaid

household work. Child marriage, despite legal restrictions, is common practice too. Another common problem in poor households is that they tend to send the boys to school and use the girls to perform for paid/unpaid household works. Generous stipends to students and financial incentives to parents will be provided under the 8FYP to reduce this disparity.

- *Greater role of ICT-based learning*: A number of ICT labs have already been established in secondary level institutions and finally all institutions will be equipped with modern ICT labs. Teachers are given training on ICT subject and ICT-based learning system. Conversion of classrooms into Multimedia Classrooms is underway. Already 15% of classrooms have been converted into multimedia classrooms and remaining classrooms will be converted by 2023. During COVID19 pandemic, ICT based learning system has been proven as a very effective tools for conducting classroom activities remotely in emergency situation. On the basis of this lesson, Ministry of Education has undertaken initiatives to build permanent ICT-based learning infrastructure that would help keeping the students' losses at minimum level during any natural disaster. To speed up the integration of ICT with the education system, the Government's a2i project initiated several steps with the Ministry of Education. Shikhok Batayan is an exceptional example of such initiative. It has 245,049 contents with 953 model contents. The government has a plan to involve 900,000 teachers in this initiative by 2021. The 8FYP will adopt a framework to ensure that at least one hour of learning in using these web contents in all primary and secondary schools in school premises are in place.

- *Introduction of Pre-VOC and VOC in secondary level education:* Pre-VOC and VOC courses in different trade will be introduced in secondary level education so that students would complete their secondary level education with some vocational skills. Already piloting is completed in 640 schools and all the secondary students will be enrolled in such courses by 2023.

- *Improve the reputation of TVET stream*: In Bangladesh, the weak reputation of TVET largely prevents enrolment in it. The first step would be to introduce TVET courses at a very early age, from the primary level. Demonstrating a clear path to the students and their families from TVET education to reputable and gainful employment can be one mode of improving the social acceptance of TVET. In many developed countries, in Switzerland for example, from around age 16, more than two-thirds of students stop full-time education and start vocational education programmes in which, one-third of companies in the country participate. Students gain early and direct understanding of the job market demands and can make better decisions for their future. With a more immersive experience, all students naturally consider both their options (technical or higher education), mid-way through their secondary experience, and when time comes, make an informed decision based on their relevant and practical experiences. This is an example of the secondary education and TVET working in tandem. A similar set-up will be introduced in Bangladesh where students are encouraged to undertake internship/apprenticeship programmes to learn computer technology and other hard skills. This will create a better and firmer linkage between industries, institutions, and the students. Continuous communication between them will also facilitate early detection in skills-shortages and course-revisions. Early exposure to the workspace will also change the mind-set of students and their parents that it is not the particular education streams that provide degrees or a certificate but skills that allow one to perform well at a job.

- *Better industry-academia collaboration*: Despite the importance of it, some structural rigidities and lack of incentives are limiting the development of a formal framework for industry-academia collaboration. Fiscal incentives for industries, stipends for students, and recognition for TVET institutions for placing their students in industries will be adopted to overcome this. Labour Law 2013 states that all industries that employ at least 50 workers must have at least 10 per cent of apprentices. To make this law effective, the 8FYP will provide incentives to the industry. A similar support for the TVET institutions will be provided to help them expand technical and vocational training to the local level. The government will also provide subsidized training program with employment counselling to attract youths in skill training program.
- Under the SDG target 4.1, compulsory free education of the first 12 years has to be achieved for all children by 2030. This will imply that the children aged 15-18 will be at school, with a consequent reduction in the incidence of child labour and youth NEET. To achieve this target 8FYP will encourage more private sector investment in education in addition to more allocation of budget in education sector.

11.7.5 Strategies to Develop the Madrasa Stream

Greater involvement of external stakeholders in designing the curriculum and implementing innovative new teaching methods would improve the quality of the madrasa stream. To that end, under the 8FYP, madrasa education will be streamlined and brought under the national education board. While this will facilitate accreditation through more involvement of science, mathematics and ICT related subjects, the employability of graduates will be ensured.

***Teachers training*:** changes in the curriculum and pedagogy will not be fruitful unless they are coupled with better trained teachers. In Aliya madrasa only 23 per cent of the teachers are trained. Among 113,368 teachers only 19.66 per cent have NTRCA. As improvements are made to the curriculum and new subjects emphasized on, the existing teachers will be provided appropriate training to be able to teach the new material. In addition, the stream requires more female teachers; 55.24 per cent of female students are taught by 12.7 per cent of female teachers. The 8FYP will provide resources to encourage, train and subsequently recruit more female trained teachers for madrasas.

***Better linkage with TVET institutions*:** Studies have shown that many students who are struggling at the secondary education level will have better earning outcomes if they switch to the TVET stream. It is likely the TVET-stream can help a large number of madrasa-students as well. To make that happen, 8FYP will introduce technical education at the Dakhil and Alim level. Madrasa-TVET partnerships will play catalytic roles in transforming pedagogical architecture of the madrasa.

ICT in madrasa: Availability of computer and a multimedia-device in Aliya madrasas, introduction of ICT-based education, and programming courses will be undertaken under the 8FYP. All these will improve the quality of graduates coming out of the madrasa-stream, and reduce the learning-gap between madrasa-graduates and general graduates.

Better transparency and management of funds: Qawmi madrasas are privately funded, mostly by private donations. Under the 8FYP, transparency in funding will be established to help strengthen the management of these madrasas.

11.7.6 Strategies for Higher Education

The Government has already recognized the need for investing in tertiary education and has made it a priority sector for interventions during the 6FYP and the 7FYP. These strategies are drawn from the National Skill Development Policy 2011 and the Strategic Plan for Higher Education in Bangladesh 2018-2030. All of these strategies are consistent with the National Education Policy 2010. The implementation of these strategies will be further consolidated in the 8FYP. In addition, the following actions will be taken.

- *Increase focus on STEM fields*: The quality of the higher/tertiary level of education is of paramount importance in the current development process and targets of the country. Number of students studying sciences subjects in the secondary level is notably very low. The situation is exacerbated at the higher level where a large number of science students migrate to business/commerce/social science streams. The reverse-migration to science subjects almost never takes place. The 8FYP will encourage larger number of students (and parents) to persist with STEM subjects through scholarships, career counselling and information sharing through mass media. Since tougher curricula require better teachers, greater resources will also be mobilized in training and educating teachers at the STEM fields.
- *Government and private sector collaborations*: Public-private partnership (PPP) plays a vital role to develop market driven skills system and professional skills according to industries' demand. Both NEP 2010 and NSDP 2011 espouse the idea that PPPs are imperative in the establishment and management of new TVET institutions. Currently there are hundreds of large and small NGOs which are offering short, non-accredited training courses with duration of 4-6 months. Due to institutional constraints, their enrolment capacities are small. The 8FYP will undertake polices in this context and to strengthen the partnership between GO and NGOs.
- *Increase the number of training institutions*: Continuous training of the trainers will help develop a dynamic TVET system. There are only two major public teachers training centres with 37 teachers in Bangladesh as opposed to more than 50,000 teachers employed in various TVET institutions around the country. The 8FYP will take steps to increase the number of training institutions for trainers.
- *Reduce the gender-gap*: Gender-parity is established in primary and secondary level but not at the tertiary/higher levels and in the TVET sector. Male students outnumber female students almost by 3:1 ratio in universities. To ensure equal rights for men and women Bangladesh Government has adopted a National Women's Development Policy (NWDP) in 2011. However, anti-female social biases create challenges in implementing the policy and female labour force participation rate is considerably lower (36 per cent) than male (82 per cent). Establishing public universities just for women, generous scholarships and other funding packages under the 8FYP will help narrowing and eventually eliminating the gap.
- *Greater collaboration with internationally reputed universities*: In order to increase competition, reputed universities of the world may be allowed to open their campuses in Bangladesh. Student-exchange program between the universities, visiting professors from foreign universities, shared/joint courses and degree programmes can be offered. Such collaborations will have spill over effects in improving the management and performance of local university administrations and academic staff. Some Middle Eastern countries, Malaysia, and China have started this endeavour a

long time ago and have been reaping the benefits of it. STEM focused universities should be prioritized. If this proves to be a lengthy process to undertake, in the short-run, UGC can partner with a few universities and follow their guidance to regularly update the curriculum. 8FYP will expedite such collaboration.

- *More focus on research and publication:* Much emphasis is needed to place on faculty research and publication. In this regard, quality of publications will be stressed just as much as quantity. Salary increments, promotion, tenure, etc. will be linked with research and publications, in addition to other objective assessments.
- *The industry-academia linkage and placement programmes*: The industry-academia collaboration helps updating curriculum and prepares the students to find relevant jobs as well as help industries to find their required skills. The 8FYP will facilitate this collaboration.
- *Introduction of skill driven courses in post graduate colleges:* With a view to enhancing skills, different skill driven courses will be introduced in post graduate colleges under National University. This endeavour will definitely help increasing employability of national university graduates.
- *Strengthen the University Grants Commission (UGC):* The UGC is the lead institution for promoting higher education. It has played a major role in expanding the supply of higher education in Bangladesh through its accreditation role for private providers and through grants for both public and private higher education institutions. The UGC needs to be further strengthened to ensure expanded tertiary enrolment and quality enhancement. Accordingly, the 8FYP will strengthen the UGC to take a leadership role in strengthening university education and advanced academic research. This will include restructuring the UGC to boost its capacity as the leader in the policy matters and ensuring transparency and accountability in the academic, financial and administrative affairs in the universities. A unified teachers 'recruitment framework will be introduced for all public universities to bring the uniformity and transparency in this area.

11.7.7 Strategies for Adult Literacy and Non-Formal Education

The 8FYP will build on the progress made during the 7FYP and continue the march towards 100 per cent adult literacy rate for both male and female by the end of the plan. The strategy will emphasize imparting basic literacy skills with a view to moving towards the global concept of lifelong learning, which has been included in the SDG education goal and targets. This will be done by connecting literacy to basic skills development and lifelong learning opportunities and envisage learning provisions, facilities, and resources complementing and supplementing the formal education system. Widespread use of ICT resources for organised lifelong learning, e.g., through a nationwide network of community learning centres, and expanding self-learning opportunities, will be key features of non-formal education and lifelong learning. Literacy level of the population, non-formal and informal livelihood and life skills development, and ICT-based access to information and self-learning tools and resources would be supported and promoted in a coordinated way through a lifelong learning strategy.

Table 11.9 summarizes the goals, targets, and the input, output and impact indicators to monitor the progress in NFE under the 8FYP.

Table 11.9: Non-Formal Education, 8FYP Targets and Monitoring Indicators

Goals	Target to attain	Input indicators	Output indicators	Impact indicators
Elimination of illiteracy/ providing basic literacy	Basic literacy provided to 33.79 million[1] adolescent and adult illiterates	Financial allocation, development of learning material, etc.	33.79 adolescent and adult illiterates to become literate.	Socio-economic condition and lifestyle changed, zeal for education arose among the people.
Extending opportunities for effective skill training	Continued operation of the Basic Literacy Project; 5 million graduates of Basic Literacy Project	Financial allocation, update of training materials, etc.	5 million graduates of Basic Literacy Project became skilled in different trades	Improvement in lifestyle.
Establishment of Non-Formal Education Board	01 NFEB established	Financial allocation, making rules, etc.	Establishment of NFE Board.	Scope created for attaining higher education and skill through establishment of equivalence between formal and non-formal education

Source: Bureau of Non-Formal Education 2019

11.8 ADDRESSING THE SKILLS CONSTRAINT TO ACCELERATE GROWTH UNDER THE FOURTH INDUSTRIAL REVOLUTION (4IR)

The 4IR has transformed the process of production, which changed the patterns of skill demand across occupations in countries around the world. As artificial intelligence is replacing routine/repetitive jobs mostly performed by the low and semi-skilled workers, many developing countries including Bangladesh will lose their comparative advantage in low-skilled labour-intensive production process as a result. The fourth industrial revolution will make a structural transformation towards a knowledge-based society where the demand for high-income cognitive jobs, low-income manual jobs, and jobs that involve operating and maintenance of artificial intelligence, will be in greater demand. This implies that adapting to the 4IR will require workforce that is equipped with hard and soft skills. For combating the challenges of 4th industrial revolution, ICT specialist skills and basic programming are no longer enough. For instance, advanced engineering and experience with machine learning are increasingly important. In addition, ICT specialists also need domain-specific knowledge, given the potential applications of ICT in business, health, education and industry. There is a need to rethink the curriculum and pedagogy to make graduates more comfortable with critical thinking, collaboration, ability to continuously learn and adapt, and be prone to picking up the other necessary soft skills along the way. The strategies and policies that will be undertaken in the 8FYP to deal with skills constraints under the 4IR are discussed below.

Adapt to lifelong learning models of education: The overall approach to education in Bangladesh will be adapted to stimulate the curiosity, creativity, and inquisitiveness of students so that they become lifelong learners - open and able to adapt to new environment and experiences in the workspace - at all levels, including pre-primary, TVET, and the madrasa stream. This means changes to the entire framework of education, including syllabus, type of pedagogy used, modes of delivering lessons, modes of assessment, etc. Demands of the workspace are going to rapidly change and then continue to keep changing in the coming industrial revolution. Consistent with the global patter, schools and universities can no longer hope to equip students and graduates with all the skills they will need for a lifetime. This realization has to take root among the students and their families, educators, and policy-makers. Workers are no longer going to be picking a career and grow with that one singular role. Many of the existing jobs may disappear and

majority of the jobs of future does not yet exist. Therefore, the role of education institutions in developing lifelong learners is crucial. In addition, education and training systems of ICT need to better assess and anticipate changing skills needs in order to adapt programmes and initiatives offered and guide students/workers towards choices that lead to good outcomes.

Increase focus on ICTs: To ensure descent jobs and entrepreneurship under SDG target 4.4, substantial increases in number of youth and adults will need to have the relevant skills including technical and vocational training. Under the digital Bangladesh Initiative (DBI) of the Government several Acts and policies have been undertaken: The ICT Policy 2009, the 'Strategies Priorities for Digital Bangladesh 2011', and ICT Policy 2015. In addition, Prime Minister's office initiated the Access to Information (a2i) project with the objective of improving accountability and transparency of all government offices, to provide better services to citizens. ICT-based education is mainstreamed under the NEP, under which important progress has been made. Importantly, many youths trained themselves with ICT and are self-employed currently. Bangladesh is now the world's second largest supplier of online labour. The 8FYP will build on this progress and place greater emphasis on this sector by resolving the issue of high taxation and allocation of more funds, particularly in the public academic institutions, to fast track the spread of the ICT revolution in all academic institutions. Furthermore, there will be increased focus on technical and professional skills including ICT specialist skills for workers who can initiate innovation and to support digital infrastructure and the true functioning of the digital eco-system.

The Skill for Employment and Investment (SEIP): A major initiative to develop skill is the SEIP program taken by the government and supported by the Asian Development Bank. SEIP has been relatively successful in training a large number of workers, placing them in jobs, and these workers then maintaining their jobs. It is a multi-tranche program that has been implemented since 2014 and is planned to continue till 2024. Expected impact of the project is increased employment in priority sectors through creation of improved skills. The project has four major components/outputs: market responsive inclusive skills training delivered; quality assurance system strengthened; institutions strengthened; and effective program management and governance system ensured. The 8FYP will develop and convert this experience into an economy wide training program encompassing all formal employment activities. The successful performance under the first 2 tranches of SEIP funding is given in Box 11.2.

Increase focus on Science, Technology, Engineering and Mathematics (STEM) fields: The STEM subjects help to develop soft and hard skills as well as soft managerial skills, which are essential to take advantage from the 4IR. The 8FYP will seek to sharply increase the focus on STEM through scholarships, job counselling and advocacy using mass media. Parent-teacher conferences at school level will also be used to create awareness among parents to guide their children towards STEM subjects.

Making market-oriented training and curriculum: The education system needs to be adaptable and dynamic to changing market scenarios and demands of the new industries. One of the major reasons of the present supply demand mismatch and low employability of graduates of Bangladesh is the rigidity of curricula and age-old classroom-based teaching. NSDA has tried to make the curriculum up-to-date and flexible with little success. There are two major impediments to this: the lack of appropriate and timely input from industries to change the curriculum, and the lack of modern amenities and facilities available to students and trainers to facilitate upgrading the outdated curriculum to a more modern one. The government can obviously step-in and provide training, up-skilling, and re-skilling facilities that are frequently upgraded

to reflect the changing times. However, for these schemes to be successful, it is important to change the mind-set of the students in schools and universities as well. The meaning of getting an education has to change from learning a trade or learning a skill to learning how to learn and how to be a self-starter.

The role of TVET: TVET can be useful to utilize some of the potential benefits of the fourth industrial revolution. However, a revision of the TVET curriculum is crucial for this. The curriculum will be updated by including new courses, which can train the workforce with the higher order cognitive skills needed for example project management, cloud computing, computer technology, data analysis, marketing among other activities. The change in mind-set is also an important factor in this context, to enrol 'good' students at this stream. The government is rightly aware of this challenge. The TVET Reform Project of 2008-15, the NSDP 2011 and the adoption of the STEP and SEIP projects are all aimed at addressing this concern. In addition to modernize and update the education curriculum of TVET, importance would be given to up-skilling and re-skilling workers and creation inclusive digital infrastructure

11.9 8FYP INVESTMENT PROGRAM FOR EDUCATION AND TRAINING

The 8FYP seeks to build up the human capital base of Bangladesh to prepare for the increasingly growing demand for skilled labour in all economic activities. The education, training and skills strategy discussed in this chapter seeks to respond effectively to that need. Additionally, investments in science and technology and ICT services discussed in chapter 12 will play a complementary role in upgrading the skill base of Bangladesh required to move towards HIC status. The total allocations for education, training, science, technology and ICT will be substantially increased in the 8FYP. The ADP allocations for the education ministries / divisions are shown in Table 11.10 and Table 11.11 in current and constant FY2021 prices. Given limited resources, the 8FYP will focus strongly on good governance, sound program implementation and inter-ministerial coordination of all relevant ministries/ agencies that contribute to the development of education and training.

Table 11.10: ADP Allocations for Human Development in the 8FYP

(Taka billion current prices)

Ministry / Division	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Primary and Mass Education	89.5	113.0	133.0	158.3	193.7
Secondary and Higher Education Division	61.4	92.3	106.4	136.6	171.3
Technical and Madrasah Education Division	8.5	13.8	21.3	31.0	37.2
Total Education	**159.4**	**219.1**	**260.7**	**325.9**	**402.2**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 11.11: ADP Allocations for Human Development in the 8FYP

(Taka billion FY2021 constant prices)

Ministry/ Division	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Primary and Mass Education	89.5	107.3	120.1	136.3	159.2
Secondary and Higher Education Division	61.4	87.6	96.1	117.6	140.8
Technical and Madrasah Education Division	8.5	13.1	19.2	26.7	30.6
Total Education	**159.4**	**208.0**	**235.4**	**280.6**	**330.6**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 12:
DIGITAL BANGLADESH AND INFORMATION COMMUNICATIONS TECHNOLOGY

CHAPTER 12

LEVERAGING DIGITAL BANGLADESH AND ICT STRATEGY FOR HIGHER GROWTH

12.1 OVERVIEW

Gradually, Bangladesh economy and society are in the grip of a digital revolution that is changing the way we work, interact with people and institutions, produce goods and services, and trade across borders. Central to this fast-evolving phenomenon in human civilization is information and communications technology (ICT) - the internet and digital ecosystem - compounded by an endless series of technological innovation that constantly feeds into each other, creating a digital economy characterized by rising productivity. In a sense, GDP growth in Bangladesh is the aggregation of this rising productivity across all economic activities around the country.

In the most fundamental sense, there are only two ways of increasing the output of the economy: (a) increase the quantum of inputs that go into the productive process, or (b) innovate new ways to get more output from the same quantum of inputs. "Doing more with less" is the core feature of productivity growth. The widely accepted growth accounting methodology attribute GDP growth to factor inputs: physical capital (capital accumulation), labour force adjusted for skill attainments, and the residual role of increases in the efficiency with which those factors are used (total factor productivity--TFP). Lately, the focus of growth economics has been on TFP growth as a critical driver of growth acceleration. High productivity of factors of production depends on capital investment (human and physical), improvements in institutional efficiency and governance, all of which could be compounded by progress in digital economy.

In the past quarter century developed countries have experienced higher TFP growth arising from innovation and technological transformation in the overall digital economy. Evidence from Bangladesh reveals that TFP growth played little or no part in GDP growth during the first two decades after independence. Rise in labour productivity fuelled by capital accumulation (or capital deepening) was the primary driver of growth. But over the past quarter century the contribution of TFP growth has been rising. This rise in TFP growth stems in large part from the spread of ICT and the growing penetration of the internet and digital systems across the economy and society. Technological transformation has started playing an important part in growth acceleration.

Digital Bangladesh – both a source and product of the knowledge economy – has been underpinned by the ICT sector in all its manifestations of modern technology. Under PP2041, Bangladesh seeks to achieve HIC status by FY2041. To secure this target, it is imperative that Bangladesh keeps expanding value creation in economic output through ideas and knowledge so that the economy graduates from factor-driven stage to a knowledge-based economy—through both process and product innovation. Over the decades, ICT's humble beginning as computerization of information processing work, particularly within office environment, and its recent progress in digitization of public services have been progressing towards the development of the knowledge economy. Particularly, the technology track driving the Fourth Industrial

Revolution (4IR) has strong footing in ICT. Standing at the cusp of the fourth industrial revolution, the 8FYP is at a critical juncture in planning Bangladesh's journey to leverage as well as cope with the challenges of an ICT driven digital economy.

Despite all the progress made, the Government's mid-term evaluation of the 7FYP finds, "The global standards of the Knowledge Economy are far away from the present situation of Bangladesh. Bangladesh has performed as one of the low ranked economies in the World Bank's Knowledge Economy Index." This reality raises the bar for the 8FYP to target rapid progress in key indicators measuring the strength of digital and knowledge economy.

By the time the 8FYP will be in effect, the economy of Bangladesh will be at a recovery stage from the local and global shock caused by COVID 19. While the pandemic caused distress across all sectors it also revealed the significance of ICT as a tool to securing connectivity for maintaining and managing critical operations for sustenance. The education sector pivoted to online education system, farmers connected to consumers through e-commerce, mobile money became a major channel for trade, and telemedicine gained traction for health service delivery. ICT became the lifeline for finance, education, agriculture, health, skill and employment. Digital transformation has become pivotal for both the public sector and the private sector. ICT will thus work not only as a vertical but also as a cross cutting sector to boost the performance and progress against targets as stipulated in this 8FYP for other sectors.

12.2 LEVERAGING DIGITAL ECONOMY FOR HIGHER GROWTH

During the implementation of the 7FYP, significant progress was made in expanding Internet connectivity, and smartphone penetration in Bangladesh. The 8FYP is all set to further expand the role of digital data and technologies as instruments for growth acceleration. Access to data and the ability to transform data into digital intelligence have become crucial for the competitiveness of firms, and also for the Government. It's worth noting that mobile financial service in Bangladesh has been expanding its footprint from simple money transfer to preferred mode of retail and utility payments. Such progression has uplifted the role of ICT from offering connectivity, supporting information exchange, and business process automation to digital economy. The concept of the digital economy has become commonplace to describe how digital technology is changing patterns of production, distribution and consumption of goods and services affecting economic outputs, consequentially growth. Given the evolving penetration of the digital economy in our lives and livelihoods it makes strategic sense to leverage this technological evolution for achieving broad-based targets in the 8FYP. Some of the relevant aspects of the digital economy are outlined below.

Value and trend in digital economy: The evolving digital economy is closely associated with several frontier technologies and fuelled by data. Some of these frontier technologies are sensors, data analytics, AI, 3D printing, Robotics, Cloud computing and 5G connectivity. They also underpin the fourth industrial revolution. Despite the growth of global IP traffic from 100 GB per day in 1992 to 46,600 GB per second in 2017, which is likely to shot up to 1,500,700 GB per second in 2022, the world is only in the early days of the data-driven economy. And Bangladesh is showing similar trend. For example, as reported by BTRC, international internet bandwidth consumption increased by 228 GB per second (gbps) to 900 Gaps at the end of November, 2018 from 672 Gaps in June.

Bandwidth consumption by the country's internet users was 411 gbps in June, 2017. In June, 2016, country's total international bandwidth consumption was 265 gbps while it was 186 Gaps in December, 2015 and only 8 Gaps in 2009. Basically, over the last 10 years, data traffic in Bangladesh has grown by over 100 times. During this period, Internet penetration has also grown from less than 1 million to over 100 million. Unfortunately, there is no natural correlation between such growth in data consumption and socio-economic benefit, casual empiricism indicates fair contribution of mobile phone penetration or internet adoption driving economic growth. The 8FYP will promote deliberate measures to extract economic value from growing production and sharing of internet data to enhance productivity of public services.

The core components in driving this explosion of data are: (i) Devices and network connectivity supporting access and communication, (ii) Digital and information technology (IT) sectors, which produce key products or services that rely on core digital technologies, (iii) A wider set of digitalizing sectors, which includes those where digital products and services are being increasingly used, like e-Commerce and Internet of Things (Iota), and (iv) A set of technologies like sensors, artificial intelligence, block chain, 5G broadband, data analytics, and cloud computing.

Global review of value creation and capturing in digital economy: The growing power of digital platforms has global implications that are likely to accentuate inequalities. For example, Internet advertising revenue share in global advertising revenue grew from 15% in 2010 to 38% in 2017, which is expected to grow to 60% by 2023. And Google and Facebook, two US giants, took away 65% of this revenue in 2017. These two companies alone took away more than Taka 1,000 crore revenues from Bangladesh in 2018. As a result, the erosion of advertising as a viable revenue source for other businesses like newspaper outlets is a concern. Among other issues, monopolistic trends, how platform companies strengthen their market positions, expansion into other sectors, Information asymmetry and data, and the need for engaging in global policymaking are creating pressure on leveraging digital economy. Particularly, it has been a growing challenge to Bangladesh.

Assessing the scope of value creation and its capture in Bangladesh: As global data platforms have been already monopolised, developing countries like Bangladesh should focus on new product categories. To leverage it, focus should be on addressing challenges of (i) small and fragmented local markets, (ii) inadequate entrepreneurial knowledge and skills, (iii) lack of a highly skilled and affordable workforce, (iv) limited access to finance, and (v) poor intellectual asset base and R&D capacity.

In order to accelerate Bangladesh's GDP growth, we also need to focus on raising total factor productivity through increased application of digital technology. Widespread Digitization is still an untapped opportunity. TFP growth was 0.3 on an average for the period of 2005-2016. According to projections in the Perspective Plan (2021-2041), in order to achieve the high and sustained economic growth to be an UMIC country by FY31 and a HIC by FY41, in addition to capital deepening, TFP must grow at an average rate of 2.7% during 2021-2031 and 3.6% during 2032-2041 periods respectively. Increasing the average TFP from 0.3 observed in the last decade to 2.3%-4.5% range will be a massive undertaking and will essentially require increasing the productivity of all factors of production. That is where ICT and the Digital Economy come into play. A 2018 OECD report finds that firms with ICT use had, on average, 197% of the total factor productivity (TFP) level of other businesses in Viet Nam, 153% in Indonesia, 139% in Myanmar, and 139% in China.

12.3 OVERVIEW OF PROGRESS IN DIGITAL BANGLADESH PROGRAM

Digitization and service transformation are moving ahead. As a result, Bangladesh has moved up nine steps occupying 115th place among 193 countries in 2018 on the E-Governance Development index, published by the United Nations. The spread of ICT revolution has received particular emphasis based on the personal attention provided by the Honourable Prime Minister under her Digital Bangladesh Initiative. Digital Bangladesh is an integral part of the government's *Vision 2041*. The Digital Bangladesh initiative consisting of four key priorities are:

- Developing human resources ready for the 21st century.
- Connecting citizens in ways most meaningful to them.
- Taking services to citizens' doorsteps.
- Making the private sector and market more productive and competitive through the use of digital technology.

Bangladesh made important strides during the Sixth and the Seventh Five Year Plan in utilizing technology to bring in tangible transformation in all four areas. Progress made in bringing government services to the doorsteps of citizen is probably the area where Bangladesh registered most significant progress.

Information and Communication Technology Division (ICTD) has taken initiatives to encourage and provide support for ICT related activities, formulate national ICT strategy and policies, create standards and specifications of ICT tools for government organizations according to their necessity, work for human resource development in ICT sector while cooperating with the Government and other agencies to implement the Digital Bangladesh Vision. Digital Bangladesh Vision has four pillars: (I) Connectivity and Infrastructure, II. E-Government, III. Human Resource Development and IV. Industry Promotion

ICTD has undertaken numerous activities, projects, and policies to fulfil the vision of Digital Bangladesh. ICT covers a vast area; hence many of the following initiatives taken by ICTD may fall under multiple broad categories.

12.3.1 Connectivity and Infrastructure

Connectivity and infrastructure are the key components of the Digital Bangladesh vision. To ensure connectivity all across the country Bangladesh Computer Council under ICT Division has been working diligently. Bangla-GovNet project has been implemented by BCC to build the ICT Backbone Network up to 240 Ministry/Division/ Department, 64 Districts and 64 Upazila. Info-Sarker-II extends this network up to the Upazila level, connects the government offices at district and Upazila level. The Info-Sarker Phase-3 project has established broadband internet infrastructure in 2600 unions across the country through the optical fibre cable. 60 per cent of the people of the country got access to the internet through this. In addition, the establishment of Virtual Private Network 1000 police offices of Bangladesh has been done. Establishment of Information and Communication Technology Network in remote areas ("Connected Bangladesh") Project has established Information and Communication Technology Network to 772 remote unions of the country. BCC has established National Data Centre (Tier-3) where more than 25000 Government domains, 260 applications, 417 VPN, File Servers 109 managed services, 16 collocation services, and 18059 Network Services have been hosted. Also, IV Tier Data Centre has been established recently which is 7th largest in the world. BCC has established Computer Lab in 3544 educational institutions.

Bangladesh Hi-Tech Park Authority (BHTPA) has taken initiatives to establish Hi-Tech Park, Software Technology Park and IT Training & Incubation Centre throughout the country to promote IT/ITES sector and to attract local & foreign investment. The initiatives will create huge employment opportunities and demand of skilled human resources. It will develop knowledge and capital-based industries in the country. Information technology, Software Technology, Bio-Technology, Renewable Energy, Green Technology, IT Hardware, IT Enabled Services and R&D etc. are the major investment areas of IT/ITES sector in Bangladesh.

Bangladesh Hi-Tech Park Authority (BHTPA) has established 4 Parks: (i) Bangabandhu Hi-Tech City, Kaliakoir, (ii) Sheikh Hasina Software Technology Park, Jashore, (iii) Software Technology Park, Janata Tower, (iv) Sheikh Kamal IT Training and Incubation Centre, Natore. 7.41 lakh square feet space for IT/ITEs companies have been allocated. Basic infrastructure like fibre optic cable line, gas line, water line, electricity line, seaware line, water treatment plant and internal & external road, link road, solar street light, etc. have already been developed in those parks.

Government has declared attractive incentives for the promotion of IT/ITEs sector. BHTPA provides these incentives to the IT companies in the IT/Hi-Tech parks. The incentives are as follows:

- 12 years exemption of Income Tax for park developers.
- 10 years exemption of Income Tax for investors.
- Exemption of Import Duty, Regularity Duty and Supplementary Duty for locally production of ATM machine and CC camera;
- Exemption of Duties on importing Capital Equipment and Construction Materials by the Investors;
- Hi-Tech Parks are declared as Bonded Warehousing Station;
- Exemption of Income Tax on Dividend, Share Transfer, Royalty, Technical Fees for investors;
- Exemptions of Income Tax for Foreign Employees;
- Exemption of Income Tax on declared Dividend by Park Developers;
- Exemption of VAT during production level of goods by the Investors;
- Exemption of Duties on importing Goods/Materials to be used for the development of Hi-Tech Parks by the Park Developers;
- Exemption of Duties on importing Transport by the investor;
- Exemption of stamp duty on the deed registration/ mortgage deed registration;

To simplify and expedite service delivery BHTPA has launched online One Stop Service system under the One Stop Service law. As a result, an investor can easily get all kinds of information and service related to the investment. Already 7 kinds of services have been delivered through these windows. The total investment is about US$ 38 million and proposed investment is about US$ 281 million by the close of 8FYP. In the Hi-Tech Park, Mobile phone assembling company, Fibre Optic Cable Production Company, Bio-Tech Company, Software Developer Company and BPO, KOP, and Call centre related companies are already in operation.

12.3.2 e-Government

The Government has launched a Master Plan for Digital Bangladesh Project for effective and efficient implementation of Digital Bangladesh Vision through the learning's from e-Government implementation

experience of South Korean government. Besides, a roadmap has also been formulated to bring different ministries/departments and departments/agencies under the Bangladesh National Enterprise Architecture Framework. As part of the implementation of e-Government Master Plan 1 of the 46 initiatives suggested in Master Plan report is being implemented, titled 'Digital Municipality Services System'. The piloting has been implemented in 1 City Corporation & 9 Municipalities through which 5 online citizen's services will be provided to more than 20 lac people. Digital Sylhet City Project has been initiated to turn Sylhet into country's first smart city. For automation of different government organizations, Bangladesh E-Government ERP Project has developed common ERP software (nine modules) primarily for use of nine organizations under the Planning Division and ICT Division. Digital Island Moheshkhali Project has improved the quality of public services in an isolated region through the utilization of Information and Communications Technology (ICT) solutions. To ascertain the proper applicability of the software and hardware produced/developed/purchased by different government departments/agencies and maintain its quality Bangladesh Computer Council (BCC) has established Software and Hardware Quality Testing & Certification Centre. Based on leading standards, practices and frameworks, but aligned and tailored as per Bangladesh requirements and strategic objectives, Bangladesh National Digital Architecture (BNDA) project has created Bangladesh National Digital Architecture framework. Design, development and implementation of interoperability framework across the GoB have been developed through this project. To establish Bangla in computing as a leading language at the global platform, Enhancement of Bangla Language in ICT through Research & Development (1st Revised) project has been working to standardize various features of Bangla language and develop Tools, Technologies and Contents for Bangla computing. BCC has developed BGD e-GOV CIRT (Computer Incidence Response Team) to improve the cyber security defence capability of Bangladesh Government.

These six CA organizations are now providing digital signature certificates and related services to various government and private organizations and to interested individuals. In the meantime, digital signature is being used for E-TIN, e-File system of A2i, birth registration and online admittance letter of the National University. Different governmental and non-governmental organizations and banks have already started using digital signatures in their own websites and individual level.

A Virtual Private Network (VPN) connection was established to make link with NID database of the Election Commission to verify user information for issuing digital signature. E-Tender and e-file systems were launched at Office of the Controller of Certifying Authorities. This office received membership of the OIC-CERT (Organization of the Islamic Cooperation-Computer Emergency Response Teams). Website of this office was developed under the National Portal platform.

Digital Forensic Lab was established to control and investigate cybercrimes under the project "Improvement of PKI (Public Key Infrastructure System) and Capacity Building of the CCA Office" and PKI systems was upgraded. By establishing a world-class" PKI system, Cyber security would be ensured through the use of digital signature certificates for online transactions and information sharing.

Much progress has already been made on digital security awareness. Various groups in society, namely, girls, students, teachers, journalists, and government officials, have been imparted training on cybercrime, related laws, safety strategies on social network platforms, ways to get rid of crime, and specific procedures to register complaints, and so on. An online service called 'Digital Evidence Management & Reporting System (DEMRS)' was introduced in the CCA's office for the prevention of crime investigation and immediate detection of offenders online.

12.3.3 Human Resource Development

Human resource development for the ICT sector is one of the key focuses of ICT Division. Bangladesh Computer Council through Leveraging ICT for Growth, Employment and Governance Project has developed 32,000 skilled manpower for IT and ITES sector in the last five years. 536 women got Office Applications & Unicode Bangla training under the WID Project. To integrate persons with disabilities in the mainstream of development BCC has initiated Empowerment of persons with disabilities including NDD through ICT Project. Through this project, already 1480 persons with disabilities got ICT training. BCC is also introducing and promoting the ICT Professionals' Professional Certification (ITEE) system in Bangladesh through Capacity Building on ITEE Management Project. Students are trained with the skillset such as Japanese Language, IT skills (including ITEE Level 2 Exam preparation) and Japanese business manner through this project.

To enhance the quality of education through ICT, the Department of ICT (DoICT) is responsible to spread ICT based quality education and developed IT skilled resource pool. A milestone project named Sheikh Russel Digital Labs has been implemented all over the country along with 15 in Saudi Arabia. Under this project some 4,176 labs have been established nationally involving secondary schools, colleges, madrasas, technical institutions, and primary schools. Phase by phase another 15,000 labs will be set up in Primary, Secondary and Higher educational institutions. These schools will lead "School of future" with comprehensive plan. 100,000 students of primary & secondary level will be trained in "Basic Programming, IT Security and MS Office". 36,000 teachers as master trainers and 20,000 youth in 9 different languages will be trained in future.

For empowering women through ICT, a project has already been started named, "She Power Project: Sustainable Development for Women through ICT". The objective of the project is to increase nationwide awareness of the significance of women empowerment and to increase women self-employment and entrepreneurship through ICT. Through the "Sustainable Development for Women through ICT" Project, training was given to 4,000 women as Freelance to Entrepreneur, 4,000 women as IT Service Provider, and 2,500 women as Call Centre Agent.

12.3.4 ICT Industry Promotion

Bangladesh Computer Council has played a vital role to promote ICT industry both locally and globally. ICT project has promoted local IT and ITES capabilities into the global market leading to improved global awareness and perception of Bangladesh for IT and ITES business. This project has also conducted ICT Career camp in 64 districts and reached more than 80,000 students of Bangladesh. Innovation Design & Entrepreneurship Academy (IDEA) Project is promoting innovation and entrepreneurship across the country and provided funds to 64 start-ups totalling over Taka 5 crore. To promote local ICT Industry BCC has successfully organized Digital World 2015, 2016 & 2017.

Bangladesh Hi-Tech Park Authority is nursing and promoting IT Start-ups/IT Entrepreneurs to establish giant IT Company like Google/Apple/ Microsoft/Amazon/Alibaba. In this regard, BHTPA has allotted space, internet and electricity free of cost to 100+ selected local IT Start-ups/IT Entrepreneurs; some of them have already transformed into registered BPO/KPO/IT Company.

Bangladesh Hi-Tech Park Authority is promoting local BPO/KPO/IT Companies for getting international standard like CMMIL-5, CMMIL-3, ISO- 9001 and ISO- 27001 etc. Already 2 companies-CMMIL-5, 21 companies CMMIL-3, 47 companies ISO- 9001, 6 companies ISO- 27001 have received international standard certification by the patronization of BHTPA.

12.3.5 Acts, Guidelines, Rules and Policies by ICT Division

ICT Division has been formulating acts, guidelines, rules and policies related to ICT. In last 5 years ICT Division has formulated the following: National ICT Policy 2015, 2018, Digital Security Act 2018, Public Email Policy 2018, National Digital Commerce Policy 2018, Cyber Security Strategy, BNDA Guidelines, User Policy for National Data Centre, Secure Coding Guidelines, National Bangla Keyboard (BDS-1738: 2018), International Phonetic Alphabet (IPA) for Bangla (BDS 1970:2019), Bangla Sign Language (BDSL) (BDS 1971: 2019), Innovation Guideline Strategy & Policy, Innovation Guideline Strategy & Policy , National Blockchain Strategy, National Robotics Strategy, Big Data Strategy , Artificial Intelligence (AI) Strategy, Internet of Things (IoT) Strategy, Strategy to Promote Microprocessor Design Capacity in Bangladesh, E-Service strategy, Digital Service Design Guideline & Strategy, Educational Technology Portal Framework, E-Learning Guideline & Strategy, Covid 19 Protection & Remedy Guidelines, Critical Thinking & Problem-Solving Skills Strategy, Integrated Service Delivery Platform strategy, Integrated Payment Policy, Government to Person strategy, Digital Financial Ecosystem Strategy, R&D Equipment Import Policy , R&D Products Raw Materials Import Policy , R&D Products Standardization Strategy & Policy , Amendment of IP Policy , National Hotline Policy , E-Nothi Guideline, Amendment of Digital Government Act for e-Nothi, E-Nothi implementation Roadmap, Amendment in Secretariat Instructions & Rules of Business, 4IR-Based Future Skills Policy, Conceptual Framework for Future of Work for Bangladesh etc.

Different policy guidelines such as the Digital Certificate Interoperability Guidelines, PKI Auditing Guidelines, and the Certification Practice Statement (CPS) guidelines were prepared for enabling digital signature processes. A Cyber tribunal was set up for cyber-crime trial. Time Stamping Services Guidelines for Certifying Authorities was formulated in 2016. Cyber Security strategic Guidelines were formulated. The draft of the Cyber Crime and Investigation Rules has been drafted for cybercrime investigation. Beside this AI, IOT, Microprocessor Design and strategy have been formulated by ICT Division. Guideline for the Declaration of Privately Operated (Non-BHTPA) Software Technology Park has been formulated. Made in Bangladesh Policy is going to be finalized soon.

12.4 STRATEGIC DIRECTIONS FOR DIGITAL ECONOMY IN THE 8FYP

The critical success factor is the creation and demonstration of a scalable model of profitable exploitation of Digital Bangladesh Agenda, ICT and Knowledge Economy through the investment made in ICT infrastructure, R&D, and innovation, and adopting policies for creating the demand of scaling up this model by the private sector. The overall strategy is to (i) make the Government smart lead user of digital innovations in meeting line ministries' targets, (ii) strengthen the supply side of physical infrastructure, (iii) develop human resources and prime the knowledge creation and exploitation through R&D, (iv) encourage private sector to leverage ICT innovations in addressing competitiveness, (v) empower ICT industry to scale up investment and innovations to create global success stories by taking home market as the stepping stone, (vi) attain redesign capability out of digital technologies so that material and energy need as well as

wastage decrease and yield increases in whatever Bangladesh produces, (vii) leverage digital economy for harnessing the potential of fourth industrial revolution and attaining SDGs, and (viii) cope up as well as take the advantage from the unfolding fourth industrial revolution. Here are some strategic areas in which interventions will be made during the 8FYP:

1. Leveraging Line Ministry Centric Digital Economy Opportunities
2. Adopting the Five Helix Approach
3. Establishing cooperation between Industry, Academia, and Government
4. Intellectual Asset and Local and Global Market Centric Start-up Success Creation and Youth Empowerment while leveraging on local opportunities
5. Leveraging of Redesign Capability for Creating Success in High-tech Devices and Innovation
6. Turning high-tech Parks into Nucleus of Digital, Knowledge and Innovation Economy
7. 4IR Productive Knowledge Acquisition
8. Digital Economy for Leveraging Fourth Industrial Revolution
9. ICT for Greater Transparency, Good Governance, and Service Delivery
10. Ensuring Equitable and Fair Share of Bangladesh in Global Digital Value Chain
11. Leveraging Digital Economy for Attaining Sustainable Development Goals
12. Intensifying Effectiveness and Efficiency, and Encouraging Private Investment
13. Developing the Culture and National Innovation System for Leveraging Knowledge Economy
14. Harnessing the power of ICT for revival from the effect of COVID 19 and for adaptability to shocks arising from health crisis, natural disaster, climate change, or global shift in competitive landscape

These strategic areas have been explained further along with suggested policies, program activities, and indicators in following sub-sections.

12.4.1 Leveraging Line Ministry Centric Digital Economy Opportunities

In achieving respective mission, every line ministry should strategically leverage digital innovations to ensure smart and personalized public service. Focus should be on taking advantage of emerging digital innovations supporting local R&D, innovations, start-ups and industry. For example, ministry of transportation should look into the opportunity of connectivity, on board and roadside sensors and AI for monitoring driving behaviours and road conditions for reducing accidents, and enhancing throughputs. Basically, every line ministry has the unfolding opportunity in the digital space. Moreover, leveraging of digital innovations for achieving mission objectives also supports the attainment of some critical SDGs relevant to energy, emission, and environment. ICT will also be a key driver for the line ministries for mitigating COVID 19 impact. Key interventions or action agendas relevant for the line ministries for COVID response is highlighted further in this document.

12.4.2 Five-Helix

In taking advantage of line ministry specific unfolding digital opportunities, the focus should be on five-helix approach: collaboration between (i) government, (ii) education and research organizations, (iii) industry, (iv) start-ups & entrepreneurs and (v) investors. Along the attainment of mission objectives, it will promote digital transformation of the local ecosystem. *But need to be mindful* of the challenges implied by "multiple helix" approaches to policy making. The organization and governance of such multi-

stakeholder processes is complex and often challenges the possibility of ensuring that decisions follow an agreed roadmap, respect defined roles and responsibilities, and are binding. Line ministry centric digital economy strategy outline is shown in Table 12.1.

Table 12.1: Line Ministry Centric Digital Economy Strategy Outline

Policies and Programme Activities	Indicators/Targets	Complementary activities
To keep monitoring global progress and envisioning line ministry specific unfolding digital possibilities	Number of technologies and innovations tracked, and number of possibilities identified. Local value addition through R&D and innovation. Collaboration between the Government, Industry and Academia.	Vendor driven procurement of imported ready to use approach should be supplemented with envisioning the future possibilities and supporting local R&D for increasing local value addition, strengthening academia, and fostering innovation, start-ups and industry.
Develop line ministry specific digital programmes for addressing key mission objectives.		
Establish synergy line ministry specific digital programmes and establish nationwide programmes		
Identify R&D issues for exploiting digital opportunities, and support industry-academia collaboration to carry out them		
Take a series of demonstration projects, in partnership with industry and academia, for increasing the scope of local value addition, and reducing risks in implementation		
Redesigning engineering programmes to meet the technological requirements of the Government and supporting local digital innovation industry		

It should be noted that the adaptation and diffusion of advanced digital technologies implies trial-and-error processes. Scope should be created for gathering experiences from success and failure for meaningfully making contribution to the exploitation of unfolding digital technology opportunities. Informed choices about the desirable future of attaining line ministry specific mission objectives out of digital possibilities require academic R&D, firms and governments to build on their strengths, recognize capability gaps and take risks to experiment and learn about what works and in which context.

12.4.3 Establishing Cooperation between Industry, Academia, and Government

Establishing linkages between Industry, Academia and Government is a vital issue for leveraging digital and knowledge economy the predominant view among the of academic community in Bangladesh is that basic research done by academia will lead to industrial innovation. Government's role is perceived to be as fund provider for pursuing basic research. On the other hand, Industry expects the academia to deliver human resources who can readily start engaging into productive activities. As Bangladesh has been pursuing technology import driven economic development, industry has very negligible learning and innovation program. On the other hand, linear model of innovation for distilling industrial products from basic research of academia appears to be highly risky as well as lengthy process of establishing meaningful linkage between industry and academia.) Thus, the academia should be involved in undertaking R&D for predicting, adapting, and innovating next generation digital innovations, often by redesigning existing products and processes, for both the Government and the industry. Program activities for linking industry, academia, and government are shown in Table 12.2.

Table 12.2: Program Activities for Linking Industry, Academia, and Government

Policies and Programme Activities	Indicators/Targets	Complementary activities
Encourage industry to pursue redesign of products they are producing now by adding digital technology-based features to products as well as processes	Number of redesign products and processes by leveraging digital possibilities, and MVA as well as service value add increased due to it. New products with digital contents are being introduced. Patents and publications are being produced. Royalty on patents is being earned by the academic intuitions. MVA from the exploitations of patents.	Adequate research is needed to gather insights and focus on appropriate targets. Publications, and intellectual property issues to be managed well for ensuring meaningful collaboration
Encourage industry to start producing those products where MVA could be increased by leveraging digital technologies		
Encourage industry to pursue innovative solutions around digital technologies for marginalized groups		
For leveraging digital possibilities, encourage industry to adopt flexible and decentralized production; supply chain connectivity, delivery, performance and logistics; agile, adaptive organization		
Encourage the industry to pursue circular economy through recycling efficient use of resources; remanufacturing, refurbishment and reuse of products and components; product as service, sharing models, and shifting in consumption patterns		
Provide incentives in detecting R&D issues for implementing above policies and engage academia to pursue them.		

To get meaningful results from this partnership, the academia should be assigned the role to produce publishable as well as patentable knowledge, and the industry should be enabled to utilize the knowledge into profitable ventures. In absence of this coordinated focus, there is a risk that use of public funds may not create a model of private sector driven R&D capacity.

12.4.4 Intellectual Asset and Local and Global Market Centric Start-Up Success Creation and Youth Empowerment

Despite the promise of creating an endless opportunity of growth out of start-ups, as high as 90 per cent mortality rate of start-ups is a big concern. Irrespective of the greatness of ideas and strength of the underlying technology core, every start-up starts the journey in taking an innovative idea to market at loss. In order to turn this loss into profit continued R&D is needed to make the innovation better as well as cheaper. The success strategy should be to focus on continued R&D, creation of portfolio of intellectual assets and properties, and improving quality and lowering cost for creating digital innovation success stories. Program activities for increasing start-up success stories are shown in Table 12.3.

Table 12.3: Program Activities for Increasing Start-Up Success Stories

Policies and Programme Activities	Indicators/Targets	Complementary Activities
Provide incentive in undertaking R&D for producing patents and expanding intellectual asset base	Patents being filed and received by start-ups, and integrated into products and processes.	Focus on IA/AP in creating start-up success stories will address multiple issues, including industry academia gap
Discourage predatory pricing-based start-up race in the digital innovation space	Measures being taken to limit predatory pricing to monopolize digital start-up space.	
Foster academic R&D in supporting the generation of intellectual asset-based start-up formation and growth	IA/AP portfolio of start-ups spinning out from academic and R&D facilities.	
Create awareness and provide support to start-ups for managing Intellectual Asset (IA) portfolio, and leveraging it to the valuation and fund raising.	Role of IA and patents in start-up valuation and fund raising.	

It is being observed that digital start-ups scene has been drawing interest of youths. The formation of idea around smartphone apps and mobile connectivity has been very popular among the youths. But invariably these ideas do not start the journey in producing profitable revenue, inevitably creating the demand for fund. These youths should be empowered with IA/IP asset base to turn those ideas into profitable venture. Otherwise, there is a risk that upon losing money and time in pursuing those ideas through subsidy, they might end up in high-level failure and frustration.

12.4.5 Leveraging of Redesign Capability for Creating Success in High-tech Devices and Innovation

Labour content in manufacturing of high-tech products has been rapidly falling, weakening labour-based manufacturing value addition (MVA) strategy. On the other hand, advancement of digital technologies is offering the option of redesigning existing high-tech products for offering higher quality at lower cost. This opportunity should be exploited for increasing MVA through ideas of redesign. Moreover, such redesign should also focus on process redesign as well. Such redesign capability acquisition will also increase the supply of high-tech productive knowledge. This strategy will also start increasing the high-tech patent portfolio, and opening the opportunity of linking universities with industrial R&D for supporting innovation need of the industry.

Bangladesh must start building patent portfolio for increasing MVA in high-tech. It is being observed that global ten frontrunner economies account for 90 per cent of patents and 70 per cent of exports. Only 10 economies together, they account for 91 per cent of all global patent families in advanced digital technologies. Program activities for acquiring and leveraging redesign capability are shown in Table 12.4.

Table 12.4: Programme Activities for Acquiring and Leveraging Redesign Capability

Policies and Programme Activities	Indicators/Targets	Complementary Activities
Link tax and other incentives to MVA through ideas of redesign	MVA growth through redesign	Adequate background research should be done to set achievable as well as attractive value of relevant indicators.
Support R&D for redesign of products by leveraging digital technologies	Patents	
Support R&D for adapting and advancing digital technologies to support product redesign	Patents and publications	
Support infrastructure and provide incentives to start manufacturing those high-tech products which are amenable to redesign for increasing MVA through ideas.	Number of newly introduced high-tech products.	
Support R&D for innovating new products by leveraging the capacity of redesign of existing high-tech products	Number of innovations introduced in the market	

12.4.6 Turning High-tech Parks into Nucleus of Digital, Knowledge and Innovation Economy

The government of Bangladesh has been working on developing specialized industrial parks to support the growth of high-tech economy. So far 28 public high-tech and software technology parks and 12 private Software Technology Parks (STPs) are at different phases of development. Firms have already started operation in some of these parks. Moreover, the Government has been also developing a high-tech incubator at CUET. Particularly, in high- tech manufacturing, the journey has begun through labour-based value addition, primarily for assembling of imported components. But this value addition is extremely low, often less than 10 per cent of the cost of the finished product. Due to high tax differential reaching as high as 57%, producers are succeeding in selling these locally assembled high-tech products as a strong substitute to imported ones. But such low value addition is neither rewarding for the country, nor cost-competitive for export. Due to low value addition, even after enjoying 10% cash incentive, producers are failing to make these locally assembled high-tech products competitive in the export market. In order to increase the value addition, moving to component manufacturing often does not offer attractive value proposition. Due to scale, scope, and IP effects, often it is cheaper to import most of the high-tech components than to manufacture them locally. To address this issue, the strategy should be linking high-tech parks with universities, research establishments, intermediate goods and service providers, and start-up initiatives making high-tech parks as the nucleus of innovation economy of Bangladesh. For example, semiconductor design service providers can offer services to high-tech product firms to redesign their products for adding value through ideas, in addition to labour. Table 12.5 shows program activities for turning high-tech parks into nucleus of innovation.

Table 12.5: Programme Activities for Turning High-tech Parks into Nucleus of Innovation

Policies and Programme Activities	Indicators/Targets
Provide incentives to ecosystem to provide knowledge inputs to high-tech manufacture firms	Value add through collaboration
Encourage high-tech product assemblers to redesign their products through sourcing of ideas and design services locally	Number of products being redesigned and patents filed
Support start-ups to innovate high-tech products and locate into high-tech parks	Number of start-ups move to high-tech parks
Offer R&D supports to universities to undertake redesign assignments from high-tech firms	R&D projects, patents, publications
Support collaborative projects between firms operating in high-tech parks, and university-based incubators	Number of collaborations
Support the collaboration between firms operating in high-tech parks, ICT industry, universities, and line ministries so that local industry can succeed in innovating and manufacturing needed innovations to support mission need of respective line ministries	Number of line ministries involved and their implications on innovation, local production and procurement
Encourage local and foreign companies to manufacture digital devices and its backward linkage products in Bangladeshi High-Tech Parks. Relative policy support should ensure to develop investment environment to make Bangladesh as the Global Manufacturing Hub for Digital Devices.	Number of Companies in Hi-Tech Parks
Providing financial support with low interest to IT/ITES companies to allow them to purchase fixed assets and by allocating low-cost space for offices in the hi-tech parks.	Number of Companies get financial support and low-cost space in Hi-Tech Parks

Like other developing countries, Bangladesh faces the challenge of developing a productive knowledge base, primarily in the technology stack that is underpinning the Fourth Industrial Revolution (4IR) while leveraging innovation economy. While innovating and making complex products may be a far-fetched dream, Bangladesh needs to keep acquiring superior productive knowledge so that the country's youths can participate in the emerging global labour market. In the era of 4IR, skill demands will progressively centre on the development of Artificially Intelligent (AI) components.

It is widely acknowledged that increased investment in conventional educational activities will not lead to the acquisition of higher-level productive knowledge. Rather, learning by working in processes tied to developing complex products appears to be the best option for acquiring the essential skills. Such reality often poses a chicken & egg problem and finding an entry point to break the impasse is critical. Among other options, this is why the immense potential of acquiring productive AI knowledge by harnessing possibilities like remote sensing offered by Unmanned Aerial Vehicles (UAVs) or software intensive innovations for augmenting labour in farming and healthcare can be considered. Program activities for creating productive knowledge are shown in Table 12.6.

Table 12.6: Programme Activities for Creating Productive Knowledge

Policies and Programme Activities	Outcomes
Establish labs focusing on 4IR technologies and collaborative platforms, especially Public-Private Partnerships (PPP), to create awareness and understanding, foster the adoption of new technologies, support adaptation and further advancement, developing intellectual assets, and facilitate the transfer of knowledge.	1. Real-life awareness of 4IR possibilities in different sectors 2. R&D supports will facilitate start-ups in taking their ideas to market 3. Supply of 4IR productive knowledge will increase 4. IT firms will make good use of the facility to undertake 4IR R&D
To create the demand and supply capacities of 4IR innovations, focus should be on developing sector specific 4IR Use Cases and documenting global best practices, and promoting as well as supporting their development, adoption, and diffusion.	Clarity of business benefits out of 4IR use cases and global best practices will lead to strengthening both supply and demand of local 4IR innovation market.

12.4.7 ICT for Greater Transparency, Good Governance, and Service Delivery

Bangladesh has already made progress in ICT usages in public service delivery (Table 12 7). This progress should be accelerated by capitalizing new technology opportunities, including data analytics. Box 12.1 shows areas where further progress needs to be made.

Table 12.7: Evolution of Bangladesh's e-Government Development Stages

Focused Area	***e-Government Development Stages Over Three Major Periods***					
	Till 2018		***2020-2025***		***2031-2041***	
Position in E-Government Development Index (EGDI) prepared by Department of Economic and Social Affairs of United Nations						
Indicator	*Score (0-1)*	*Rank /193*	*Score (0-1)*	*Rank /93*	*Score (0-1)*	*Rank /93*
E-Government Development Index (EGDI)	0.4862	115	0.65	80	0.74	40
Online Service Component	0.7847	NA	0.86	NA	0.90	NA
Telecomm: Infrastructure Component	0.1976	NA	0.54	NA	0.7	NA
Human Capital Component	0.4763	NA	0.73	NA	0.85	NA

Box 12.1: Areas for Further Improvement for ICT
• Inadequate skilled resources: this has been observed time and time again as the single largest barrier. Skill gaps exist at multiple levels in agencies and among citizens, including: – Basic ICT and smartphone literacy of citizens, particularly at senior level – Digital service design and implementation – Business process transformation – Management of data centres and ICT systems in a secured manner – Integration, interoperability and information exchange between internal and external systems – Strategic ICT management and foresight.
• Inadequate impact for citizens: few digital services have yet achieved high levels of take-up, and typically run alongside the existing paper-based systems (adding cost and complexity to service delivery while benefiting only some users of the services).
• ICT duplication: most of the information systems across government agencies are running on disparate data centres, ICT architectures and software development platforms, with duplicated requirements and investments.
• Lack of interoperability: systems have largely been developed in isolation from each other, so are difficult to integrate. Awareness of the National Enterprise Architecture and the E-Government Interoperability Framework is low, and people who are aware of them are unsure about the practical implementations for their Ministries.
• Insufficient capacity with existing shared services: where BCC already offers shared ICT services (e.g hosting in the national data centre, computer emergency incident response), these services are welcomed but we lack capacity to meet it in full.
• Data Protection, Privacy and Cyber security: following the recently experienced cyber security challenges at Bangladesh Bank, agencies increasingly appreciate the important need to improve the security of their digital government systems to protect the public administration from continual and evolving cyber threats, but lack skills, processes and resources to do so.

12.4.8 Ensuring Equitable and Fair Share of Bangladesh in Global Digital Value Chain

Given the regulatory weaknesses of Bangladesh and lack of international collaboration in dealing with antitrust and data privacy issues, the progression of digitization has been leading to gradual taking over of local businesses by global ones. Moreover, breach of data privacy is making citizens vulnerable to manipulation, discrimination, and harassment, consequently leading to increasing inequality among countries and fellow human beings.

For example, Bangladesh's total advertisement market size is worth US$ 150 million. It's being reported that companies in Bangladesh are spending nearly US$ 100 million every year for digital marketing on the platforms of Facebook and Google to reach their target audience. The rapid proliferation of smartphones, frequent visits of potential customers to web sites containing targeted contents, and increasing sophistication of algorithms have made online advertising far more effective than conventional platforms like TVs or billboards. Unlike the past, the online advertising market is virtually monopolized by two global players: Google and Facebook. Such monopolization raises important questions. How did they succeed? With high market shares, are these companies abusing market power throttling competition and unfairly treating users? How are different countries responding to concerns pertaining to market power, antitrust, and other competition issues?

On the other hand, Bangladesh's recent progress in ICT and digital Bangladesh is primarily driven by public expenditure, reaching above BDT 15,000 crore. The recent progress of smartphone assembling does not bring much change either, as local value addition is less than 10%. As labour based value addition in digital devices and software innovations is as low as 10%, firms and countries having strong portfolio of patented ideas are dominating value addition in international trade of digital products. According to recent study of UNIDO, "Ten frontrunner economies account for 91 per cent of patents, 70 per cent of exports and 46 per cent of imports of new technologies." With virtually no patent portfolio in digital technologies, Bangladesh's digital agenda is primarily import driven. Bangladesh must take steps to reverse this situation. Suggested programme activities are shown in Table 12.8.

Table 12.8: Programme Activities for Increasing Fair Share of Bangladesh

Policy and Programme Activities	Outcomes
To protect citizens in the digital space, update data protection regulation, along the line of EU's General Data Protection Regulation.	Measures are taken to safeguard data of citizens, corporates, and the Government. Legal steps are being taken against violations.
Address regulatory weaknesses and strengthen international collaboration in dealing with antitrust and data privacy issues .	Global players are prevented from anti-competitive behaviour, and local firms are given scope to grow in digital space.
Invest in R&D in developing patent portfolio in digital technology space.	Bangladeshi firms start upgrading their value addition capacity by leveraging patents ideas.
Promote local firms in the global market	Branding Bangladesh as an ICT destination for hardware, software and BPO

12.4.9 Harnessing ICT for Poverty Reduction

Digital financial services (DFS) have revolutionised the delivery of financial services by cutting down transaction costs while at the same time reaching out to various poor and marginalised groups who have long been excluded from the formal financial sector. Bangladesh has also made use of mobile financial services in reaching out to the poor and vulnerable groups with social security benefit payment. The rapid growth of mobile cellular phone usages in Bangladesh in conjunction with the regulatory changes allowing banks to establish subsidiaries offering financial services through mobile phones has made it possible for mobile financial services (MFS) to become an important means of promoting financial inclusion. Another big policy push for promoting financial inclusivity through DFS was the reform initiative undertaken to transfer the government to person (G2P) payments for social security schemes directly to beneficiaries using either their bank or MFS accounts.

However, there are important ways that the 8FYP will make the DFS/MFS system more effective in achieving financial inclusion of the poor and marginalized groups. These include: includes amongst others, strengthening the national identification database, improving the payments infrastructure including the establishment of the interoperability amongst digital financial service providers, promoting innovations to make DFS services more supportive of growth of small business holders, and dealing with growing gender disparity in financial inclusion. In particular, the 8FYP will strive to:

- *Reduce gender disparity in financial inclusion:* Despite the remarkable progress achieved over the past decade, the growing gender gap (from 11 percentage points in 2011 to 29 percentage points in 2017) in financial inclusion is a concern. Although there are efforts to improve the situation through the digitization of G2P in largest transfer schemes that target rural, poor, marginal, and vulnerable women, there exist significant room for making the overall DFS architecture more gender inclusive. This includes, amongst others, expanding the existing product space of female DFS users.

- *Strengthen national identification (NID) database:* The national identification (NID) database – originally initiated for issuing voters' ID – currently registering about 110 million adult citizens has been made available for establishing an electronic know your customer (e-KYC) ID verification system, boosting the expansion of DFS through fast customer on boarding and reduced cost in the process. This is already playing an important role for mobile financial inclusion. However, 8 per cent of the adult population is reported to be not in the NID database. When the non-adult population group is considered, 32 per cent of Bangladeshi citizens do not have a digital ID. Achieving a full ID coverage of the population can be particularly helpful for women, poor and vulnerable groups who are more likely to be outside of the formal financial system and are in need of various social security support. Upgrading of the NID database would also include amending or updating any personal information as it has been reported that wrong dates of birth have made many elderly citizens ineligible for such social security benefits as old age allowances.

- *Develop a single registry of beneficiaries:* One critical challenge confronting Bangladesh's social protection system is to develop a single social registry of beneficiaries drawing on from separate databases maintained by various ministries. The use of digital ID of individual beneficiaries and electronic database of beneficiaries can help establish a robust single registry of social security beneficiaries.

- *Full digitisation of G2P payments:* An important priority for the 8th plan would be to achieve the complete digitalisation of the G2P payment system, linking the beneficiary targeting of social security/enrolment to NID along with operationalizing the National Household Database for addressing exclusion and inclusion errors in beneficiary selection.

12.4.10 Leveraging Digital Economy for Attaining SDGs

It's well accepted that technology has a key role to play to make progress in attaining SDGs. Technology, particularly digital technology stack driving 4IR comprising of more than a dozen frontier technologies, starting from AI to block chain, has the potential to improve both effectiveness and efficiency of resource utilization, service delivery, monitoring progress, and establishing cooperative partnerships. It's obvious that the potential of digital technologies on each goal and also target will vary. How does the qualitative observation on likely relative potential (low, medium and high) of advanced digital technology stack up on attaining each of the 169 targets pertaining to 17 SGDs? Among them, 126 are targets for attaining SDGs and 43 are means of action, but each of them is amenable to get support from digital technology stack. Some example of digital opportunities is shown in Tables 12.9 and 12.10.

Table 12.9: Example of Digital Innovations for Attaining SDGs

Related SDG Targets	Digital Innovation Potentials
SDG 2.4 Ensure sustainable food production system SDG 12.3 Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	Reduce food wastage through (i) optimal harvesting, (ii) precision processing, storage, packaging and transportation, (iii) tracking the supply chain, (iv) optimal retailing. Supply and demand optimization at the retail level through improved prediction
SDG 2.3 Double the food productivity SDG 2.4 Ensure sustainable food production system	2.1 UAV based soil fertility and crop health mapping, and precisely distributing inputs like fertilizer, pesticide, and water; Wastage of farming inputs could be reduced and yield of farming outputs could be improved.

Table 12.10: Programme Activities for Leveraging Digital Technologies for SDGs

Polices and Programme Activities	Outcomes
For each target of SDGs, support is needed to conduct technology specific investigation, to locate realizable potential and designing intervention to turn it into results towards attaining SDGs.	Precise understanding leading to appropriate action, covering the whole value chain starting from idea generation to innovation, leading to diffusion.
Develop line ministry centric responsibility map and programmes for leveraging digital technologies in meeting SDGs.	Well-coordinated, synergistic interventions
Engage industry through associations, and provide R&D supports to link universities and R&D facilities to industry focus innovations	Products and processes are being redesigned to minimize material and energy need, and reduce waste

12.4.11 Digital Economy for Leveraging Fourth Industrial Revolution

In a recent report (A2i, 2019), it has been predicted that in five major sectors of Bangladesh, 5.5 million people will likely loss jobs by 2041. Such prediction is in parallel with the global scenario of job loss, as predicted by Frey, C. B., and Osborne, M. (2013). On the other hand, there are also counter arguments. There has been also strong belief that like in the past, technology led productivity growth will lead to both economic and labour demand growth. But there is no denying that technology creates job polarization effect. Along with the creation of new tasks, technology invariably delegates tasks from human to machines, creating non-uniform effect on individuals, firms, industries, and countries, which is commonly known as job polarization. In this globally connected economy, such reality of technology implications demands clear understanding about likely implications on labour demand and skill transformation, and required responses from education and training institutions to address them. Moreover, as scale, scope and speed of the effect of technology in the age of 4IR will be far deeper than other three revolutions, the importance of predicting and taking countervailing measures are far more important than ever before. Relevant observations and recommendations are provided in Table 12.11

Table 12.11: Leveraging Digital Possibilities for Coping up and Leveraging 4IR

Sl	Observations	Strategic Recommendations
1	Technology progression will lead to (i) automation of tasks, (ii) creation of new tasks, and (iii) redefinition of remaining tasks. As a result, *task content production* will keep experiencing transformation. Such dynamics creating polarizing effect has non-uniform effect on types of tasks as well as gender.	In target industries, task level analysis of occupations should be performed, and projection should be made about the task content transformation based on likely implications of each of the technologies underpinning 4IR.
2	The improvements of technology, the increasing use of the internet and the need for people to learn beyond any restriction have led to a proliferation of Digital Learning. A digital centre of excellence for teaching and learning through online media can be a centre of education in coming days.	Steps should be taken to establish a Virtual University.
3	Skill requirement in performing tasks will keep changing due to transformation of task content production. For example, once digital printing is introduced, task content in production in the printing department of RMG value chain changes.	Training need for up skilling should be assessed based on likely transformation of task content production. Moreover, special emphasis should be given to up skilling female workers, as they are worse sufferer to automation.
4	Sharpening of innate capabilities (including soft skills) will increase the performance of labour in executing low-level manual tasks. As a result, technology developer will find it harder to automate those tasks, leading to longer shelf life of low skilled labour.	At the school level, measures should be taken to enhance innate capabilities and soft skills of students. Moreover, existing labour force should also be given training to enhance innate capabilities, along with soft skills.
5	In both goods and services, new features will be added for leveraging technologies driving 4IR. As a result, new tasks will be required to perform in producing those additional features. For example, AR/VR based features could be introduced to expand tour guidance features in hospitality and tourism industry.	Both existing and new labour force should be given training in performing those tasks in producing 4IR technology-based features. Some of these likely features are embedded electronics in RMG products, or VR/AR based guidance to tourists, or serving customized food to guests using modern cooking tools and methods.
6	Depend on the progression of technologies underpinning the 4IR transformation of task content production will take place, demanding training need for up skilling.	Technology assessment and forecasting should be taken into consideration to predict task content production transformation for assessing the up-skilling training need.
7	Skill demand depends not only on the degree of automation, but also on the products, which firms, industries, and country as a whole produce. In adding to automating existing tasks, 4IR technology stack is also opening opportunity of introducing additional tasks, such as remote service delivery.	Measures should be taken to introduce production of additional products for the purpose of both export and import substitution, particularly by leveraging 4IR (e.g., remote supervision of It's and service delivery in collaboration with Robots) so that the volume of task supply increases.

Sl	Observations	Strategic Recommendations
8	It's estimated that almost 2 million job seekers are entering the labour market of Bangladesh. Among them as high as 50 per cent of them are leaving the country.	In determining skill development need, transformation of job content production should also take into consideration of nature of jobs in which Bangladeshi expatriates will be likely engaging.
9	IR4.0 technology stack supports innovation, in both products and process levels, creating new tasks. For example, UAV based fertility and crop health mapping, and discharging of inputs in a precise manner.	Innovation prediction should be made and facilitation should be provided, consequentially increasing the task supply. Skill development training should be provided for performing those newly introduced tasks.
10	Most of the studies, including the one conducted by a2i in partnership with ILO, appear to be at the occupation level, giving emphasis on job loss. Such studies do not focus on the likely transformation of task content production due to progression of 4IR. As a result, such studies do not provide adequate clarity on training need assessment for skill development.	Exiting studies should be complemented with follow up detailed tasks level investigation spelling out the automation of tasks, change of interface of remaining tasks, introduction of new tasks for adopting automation, and also introduction of new tasks due to addition of product features.
11	Due to rapid progression of IR4.0 technology stack, task content production will keep changing, consequentially demanding constant upgrading of skill level.	Lifelong learning attitude and skill should be developed in both existing labour force and future job seekers. Developing skill of learning from on-line resources is an example of building lifelong learning skill.

The Fourth Industrial Revolution has been a vital issue. The continued progression of the underlying technologies has been unfolding the 4IR. In order to cope up the threat and leverage opportunities, underlying technologies need to be monitored, implications should be assessed, HR development needs to be determined, innovation opportunities need to be identified, and appropriate interventions must be taken.

12.4.12 Intensifying Effectiveness and Efficiency, and Encouraging Private Investment

During the tenure of 7FYP, public investment has been dominating the investment scenario in the ICT sector and Digital Bangladesh program. It's worth noting that over a span of four years, public expenditure in the ICT sector jumped from around Taka 4,000 crores to over Taka 15,000 cores. It appears that private investment has not kept pace with this growth of public investment. Some of the observations in intensifying private investments in different segments of the ICT sector are as follows:

(a) International connectivity, Domestic Transmission, Access network and Internet service: There has been significant progress in international connectivity. Competition between private operators and state-owned submarine cable operators has reduced the wholesale price of international bandwidth. But such wholesale price fall is not reflected in proportionate price reduction of internet bandwidth at the user's end. One of the factors is domestic transmission network. There has been very weak or no competition in this segment. Government's aggressive investment to strengthen this segment by linking all unions is not being

complemented by private investment. Rather NTTN operators have become contactors to Government's projects. As a result, supply driven competition strategy has not been in action. On the other hand, due to virtual monopoly in the access network, there has been no aggressive investment for upgrading technology and increasing efficiency. Despite the progress in mobile centric Internet connectivity, and public investment, the cost and quality of Internet connection is still a major concern. To address it, measures should be taken to intensify competition of private investment as opposed to pumping more public fund.

(b) Cloud Infrastructure: Foreign providers are dominating Bangladesh's cloud service market. These providers neither have establishment in Bangladesh, nor do they offer legally defendable acceptable SLA to individuals and firms of Bangladesh. Measures should be taken to address data privacy and SLA pertaining to global cloud service. To complement Government's investment in Tier 4 data centre, there has not been proportionate private investment to develop local cloud platforms. Policy measures should be taken during the 8FYP to stimulate private investment in setting up cloud platforms.

(c) Software: Despite the expansion of computer science and engineering education, and public funded training programmes, there has been very limited private investment to expand the software segment of the ICT industry. To exploit the software segment further, strategic focus should be on blending of science with software to innovate solutions in addressing yield, quality and wastage in critical areas of the society.

(d) High-tech manufacturing: It's being reported that as high as 60% smartphone being sold in Bangladesh are now locally assembled. Basically, very low tax on components and high tax on finished products (as high as 57%) has created high tax differential in favour of local assembling. But labour based local value addition in this progress is very low. As a result, both job creation and private investment are extremely low. Conventional strategy of manufacturing components to progress along the value chain does not address this either. The focus should be on R&D for adding value through ideas of redesign. The 8FYP should take measures to make progress along this line. Tax and other benefits could be linked to the progress of acquiring patents and using them in redesigning products as well as processes for increasing the quality and reducing the cost. The focus should be on value addition and high-paying job creation as opposed to volume of assembling outputs.

(e) e-Commerce: Despite the recent growth of this segment, there has been ample scope of increasing the effectiveness and efficiency for encouraging private investment. During the 8FYP, development of interoperable smart logistics and warehouses could be supported to grow to scale up e-commerce, particularly in the rural areas. Literacy for smartphone-based service consumption and transaction, and digital payment should also be addressed. Incentives could be given for digital payment as opposed to making cash payment.

(f) Business process outsourcing: Despite high wage differential in favour of Bangladesh, export revenue in the BPO yet to show significant growth. The growth of mobile phone and Internet penetration has opened the opportunity of offering diverse services including customer care over the mobile phones. Policy and regulatory measure could be taken to encourage outsourcing customer care and back office services to develop local expertise and capacity for scaling up the export revenue.

(g) Freelancing: Despite the participation of large number of youths, as high as 500,000, the revenue from the segment is insignificant. It is learned that only a small fraction of these freelancers is generating attractive revenue from marketplace. As most of the freelancers are failing to earn adequate revenue, there has been declining trend in active freelancing population in Bangladesh. To increase per person revenue, the focus should be on delivering high-value professional services. For exploiting this potential, market-oriented skill development should get focus. Cross boarder payment appears to be a major obstacle for their growth. Research finds that top performing freelancers could be assisted to scale up their successes in creating firms. Some of the interventions could be in setting up accelerators and providing management support for product development.

(h) Start-ups and venture capital financing: Bangladesh's success of attracting less than $100 million venture capital finance is insignificant India's record of raising over $14 billion. A large number of international VCs poured such a huge risk capital to India's start-ups. The strategy of attracting increasing foreign VC funds in Bangladesh's start-ups should include packaging start-ups led innovation opportunities and promoting them, supporting R&D and encouraging start-ups to develop intellectual property strategy, and easing the operation of VCs in Bangladesh. It's worth of noting that international VC financing for exploiting digital innovation opportunities through start-ups could be a vital financing strategy for meeting SDGs and leveraging 4IR out of local innovation opportunities.

12.4.13 Developing National Innovation System for Leveraging Knowledge Economy

The leveraging of digital opportunities and creating knowledge economy is quite different than Bangladesh's track record of import substitution and RMG export. The culture of learning and pursuing the journey of perfection is quite different than labour-based manufacture value addition. It appears that Bangladesh needs to make significant progress to nurture conducive culture to leverage knowledge economy in the digital age. Lessons from other countries, particularly of Japan, are useful in this regard.

The culture of pursuing a relentless journey of chasing endless perfection out of scientific discoveries and technological inventions appears to be at the core of profiting from innovative ideas. Such cultural values grow among individuals through meticulous nurturing in families, schools, workplaces, and society as a whole. And the state plays a vital role in patronizing this precious capability underpinning the innovation economy. In addition to making progress in conventional indicators, it's time to have a serious focus on nurturing the culture of pursuing a persistent journey of endless perfection for offering better quality products at lower cost to succeed in profiting from ideas.

National innovation system: In building a knowledge economy as a key development priority for Bangladesh, sponsoring the importance of knowledge and technology diffusion for the promotion of knowledge networks and "national innovation system" should be given strategic focus. In developing the national innovation system driving economic growth of Bangladesh should draw lesson from other countries such as Korea, India, and Taiwan. Summary of the lesson from Korea is shown in Box 12.2.

Box 12.2: Lesson for building National Innovation System for Leveraging Knowledge Economy

Korea's process innovation leading to incremental improvement of products appears to be role model for Bangladesh. Korea's strategy of demonstrating the benefit of R&D in driving industrial competitiveness through Government funded research institution played a key role in encouraging private sector to set up corporate R&D labs. To leverage this progress, Korea carefully developed university centric research capacity and linked them with private sector R&D labs and Government's research institution. Such strategy appears to be very suitable for Bangladesh in developing the national innovation system. As a result, although Koreas R&D spending has reached over 4.3% of GDP by 2015, but Industry shares almost 90% of this R&D investment. Moreover, linking of university is addressing human resource issue.

ICT Division will play a crucial role in this regard. It will be that of an innovation intermediary and knowledge leader that will spearhead the country's ability to spot, understand and integrate new development approaches, work to strengthen institutional linkages across the whole-of-government and whole-of-society, and play a catalytic role in fostering inclusive, citizen-centric governance and societal innovation in Bangladesh. In doing so, the ICT Division will accelerate a national innovation ecosystem that empowers individual citizens and society as a whole to transform innovative ideas into practical solutions that reach the scale necessary to achieve the SDGs and realize Vision 2041 of emerging as a prosperous, developed and poverty-free nation.

12.4.14 Harnessing the power of ICT for revival from the effect of COVID 19 and for adaptability to shocks arising from health crisis, natural disaster, climate change, or global shift in competitive landscape

Addressing sector specific challenges and opportunities: While COVID-19 has revealed the fault lines in our systems, it has also provided an opportunity to define blind spots, identify systemic barriers and opportunities for growth. COVID-19 challenges have triggered actions which, if leveraged, can take Bangladesh to the next level of digitization with the agenda of Made in Bangladesh. The challenges posed by COVID-19 in key sectors and the relevant ICT led strategies are summarized below:

Financial Inclusion: The COVID-19 pandemic and subsequent lockdowns and social distancing requirements are exacerbating the long existing problem of lack of access to finance. Despite the strong efforts in the last few years to propel financial inclusion, inadequate interaction among banks, NBFIs, MFIs, MFS and DFS platforms, and mobile phone operators regarding data sharing has held back the inclusion of the bottom of the pyramid citizens into financial channels. This has prevented the most vulnerable populations from availing financial support during the current pandemic. Leveraging learning's from best practices globally, the ICT Division proposes the following short-term interventions: a) promote interoperability to speed up financial inclusion by 10 times by 2021; b) offer direct incentives for availing financial services till mid-2021; c) collaborate with MFIs and mobile operators to offer digital credit score for SMEs to promote 4 times growth; d) devise a master plan for a digital economy to secure to secure a resilient financial ecosystem; e) develop regulatory sandbox by the Bangladesh Bank to allow pilot testing before approval of a policy from the end of 2020.

Start-up Ecosystem: Start-ups have been a driving force behind innovation and economic progress, playing an instrumental role in the Vision 2021 and Digital Bangladesh Agenda, employing 1.5 million people, and attracting over $ 200 million in international venture capital funds. However, lack of access to

funding, improper knowledge of cash flow management, lack of comprehensive government support, and legal and regulatory challenges hinder this sector. COVID-19 crisis severely impacted the ecosystem – a survey of over 160 start-ups in April 2020 found a 50% drop in revenue generation. The ICT Division proposes the following immediate to short-term interventions: a) emergency allocation of BDT 150 crore start-up funds for 150 prominent start-ups in the form of equity/quasi-equity by 2020; b) launch fund of funds to attract domestic/foreign capital market investments by 2021; c) launch Start-up Assistance program to provide in-kind benefits to minimize operation costs till mid-2021; d) enact procurement law "Made in Bangladesh" to mandate corporations to source from start-ups and incentivizing angel investors to increase overall liquidity by 2021; and, e) set-up Invest Bangladesh as a holistic information platform for start-ups by 2025.

Digital Commerce: Since 2013-14, the digital commerce landscape experienced remarkable growth. Over 102 million internet users are spearheading digital literacy and online spending. The sector is expected to equal at TK 70 billion ($ 826 million) by 2021. The COVID-19 outbreak severely disrupted this sector; companies outlined a loss of TK 666 core ($ 78.6 million), where f-commerce and non-essential businesses suffering the most. Lack of technological adoption and platform services for the SME sector, limited awareness and exposure to the utilities of e-commerce, knowledge gaps, and lack of conducive tax and VAT policies for digital commerce are refraining the growth of the sector and lowering the potential for further investments. The ICT Division proposes the following immediate short-term interventions: a) develop a COVID-19 code of conduct along with e-commerce policy to promote hyper local e-commerce for the last mile; b) reform taxation for online shopping and digital advertising by 2020; c) launch assisted e-commerce service for easier adoption of online shopping practices; d) ensure affordable mobile internet prices in collaboration with BRTC; and, e) promote existing digital platform start-ups and services, and introduce new ones for SMEs for digital transformation by end of 2021.

Education: Education institutions in Bangladesh are safe havens for learning, social protection and health, nutrition, and psychological support to young minds. COVID-19 pandemic put 16 million students at risk; session jams and high dropout rates are resulting in multitude of obstacles to students in the secondary, higher secondary, SSC examinees, HSC candidates and university students. The crisis can potentially increase child labour, underage marriage (especially of girls), increased anti-social/illegal activities, and impact future income generation. Lack of a national edu-tech agenda further impacts the sector –students are disconnected due to lack of connectivity/affordability. Only few urban and semi-urban institutions have moved to online classes, while majority of nationwide student remain excluded. The ICT Division proposes the following immediate and short-term interventions: a) policies to facilitate the growth of blended learning before 2021; b) development of multi-sectoral participation and infrastructure for virtual schooling before end of 2020; c) develop IT infrastructure and provide incentives to support tech-based learning through public-private partnerships by 2021; d) encourage group education methods in rural areas; and e) enable private sector investments to ensure improved access to education for all by 2030.

Supply-chain: The COVID-19 crisis and subsequent lockdown/restrictions on movement is leading to the supply-chain disruption like stockouts, stockpiling, and price inflation of essential goods. Smallholder farmers are failing to buy agro-inputs from intermediaries, while FMCG distributions are disrupted due to absence of digitized inventory management issues. A loss of $16 million is predicted due to China's slowdown through global value chains, where 94% of the loss is expected to be borne by the leather industry. Increasing mobile data costs are making it more difficult for people belonging to the lower income

groups to reap the benefits of using mobile applications to avail digital services such as - agro-based app, logistics app, and e-commerce platforms. The ICT Division proposes the following immediate to short-term interventions: a) empowering marginal farmers to strengthen agro supply-chain; b) fully digitizing inventory management to make FMCG supply more efficient and resilient; c) on boarding policymakers to lower the cost of mobile internet packages by 2020; d) popularize the use of smartphones in rural areas; and, e) policy reform to modify the law of lending fleets by corporates within 2020.

Employment and Skills: Bangladesh generated 1.15 million jobs per year over the past decade. However, the growth in the working-age population is argued to have outpaced job creation rate. Although official unemployment rate at 4.2%, youth unemployment rate is 10%, and for youths with a bachelor/ higher education, it is 34%. The quality of the labour force remains weak; 32% do workforce do not have education, 26% have primary level education, and less than 6% have tertiary education (LFS 2016-17). Low female labour force participation, youth unemployment and youth NEET, and erosion of real wage are key market challenges. COVID-19 aggravated job creation with economic activities staggering at a low pace, leading to loss in income and employment for millions of people, especially those engaged in small scale manufacturing, service and informal sectors. ICT Division proposes five immediate short-term interventions: a) establish a universal employability registry; b) develop national strategy to revamp all training and skill development curricula; c) introduce online platform for small-scale loans for the CMSMEs; d) establish employment generation schemes; and e) initiate short-term unemployment benefits.

Software: The software industry is propelling with a remarkably optimistic future in terms of growing potentials and job creation opportunities for millions. However, proper intervention of the government and adaptive policy reformulation will be required to continue the momentum of this sector's growth. COVID-19 resulted in significant loses for the sector; BASIS estimates around $800 million equivalent of international orders and $500 worth of domestic work orders have been cancelled the past few months. Despite the changing modes of businesses during the crisis, demand for only a few software categories increased. The sector already suffers from lack of local and global market intelligence, ineffective promotional branding strategy, inability to retain skilled employees, limited access to finance, and inability to reach the last mile clientele due to high transmission costs. The ICT Division proposed on the following immediate short term interventions: a) develop market intelligence through assessing local and global market demands and opportunities; b) remodel promotional strategies; c) support other line ministries and industries for successful operation shift; d) support strategies for retaining skilled employees and creating employment with FDI; and e) promote local software products and services, employment and self-sustainability.

Digital Device: Bangladesh has vast prospects in the digital device sector. Availability of workforce at competitive wages, domestic market demand, and favourable policy structure are some of the key factors that make Bangladesh an attractive market for digital device manufacturing. The shift in remote working during the COVID-19 crisis led to remarkable increase in the demand for computers, laptops, and networking devices. However, disruptions in imports led to increased prices in the market and the lockdown/holidays exacerbated the local market. The need for Bangladesh's own manufacturing hub of digital devices became more significant. Enabling policies are required to ensure investments and favourable environment for growth. Several factors like high capex, lack of skillsets, quality assurance and international certification requirements, and lack of financial stimulus halted this sector during the pandemic. The ICT Division proposes to conduct the following immediate short-term interventions: a)

encourage purchase of locally assembled products in government-funded projects; b) incentivize quality assurance certification of local digital device products; c) promote "Made in Bangladesh" products in local/global markets; d) attract foreign investment and foreign companies in the Hi-tech parks; e) provide policy support to incentivize local production/assembling; and, f) address the lack of skilled manpower or migration of skilled manpower.

Business Process Outsourcing: The growth of the business process outsourcing (BPO) has been impressive in the last decade. Robust IT infrastructure, skilled human resources and supportive government policies are supporting this. The industry employs over 50000 people and is exporting services to European and North American clients. However, absence of internationally recognized certification, lack of strong connections with foreign clients, poor market intelligence, limited country branding, and lack of financial stimulus have constrained the sector. 95% of BPO firms in Bangladesh have lost revenue due to COVID-19. The BPO firms are estimated to have suffered a loss of around 1730 crore BDT from domestic market, which includes revenue coupled with net operating loss. IT budgets have shrunk for most organizations, but it is expected that there will be a continual growth in demand for BPO services, with cost optimization being the primary driver for offshoring services. The ICT Division proposes the following immediate short-term interventions: a) create a universal grading system or professional certification for the workforce; b) remodel promotional strategies and branding; c) aggressive marketing; d) penetrate into post COVID-19 target markets; and e) invest in developing necessary skills for leveraging new opportunities.

ISP and Infrastructure. Accelerated growth of internet users (103 million as of June 2020) is contributing to establishing "Digital Bangladesh", an integral part of the government's Vision 2021. During COVID-19, people are relying more and more on the internet, which is becoming an essential part of the economy. The crisis, however, possesses new challenges for the ISP and infrastructure sector. Increased internet traffic reduced bandwidth per head, making working from home more difficult with slower speed. With the declaration of national holiday/shutdown, ISPs were unable to collect 2-3 months' bills. The sector faced issues with accessing working capital from banking sector under the government stimulus package. In addition, complex VAT structure in the ISP value chain, lack of cash, lack of National Data Protection and localization rule impacted their business environment. The ICT Division proses the following immediate short term interventions: a) withdrawal of VAT on ISPs; b) facilitate access to working capital under the stimulus package; c) facilitate faster port clearance and reduced duties; d) provide proper safety gears and necessary health support; e) incentivize to set-up and provide policy support for local data centres and cloud operators.

Agriculture and Food Security: Despite Bangladesh's noteworthy food production and stock, compared to other COVID-19 hit nations globally, food security (which involves proper distribution of food, availability of food, and people's purchasing capacity) remains uncertain. During the COVID-19 shutdown, farmers lost an estimated TK 565 billion ($6.7 billion), and people involved in agriculture experienced a net income loss of 80% (with 66% reporting zero income). Around 15.5 million (or 66%) of those employed in the country are in this sector. Nutrition of pregnant women and children marginalized, and low-income population have been severely impacted. Fragmented access to information, market disruptions, inefficient national coordination, disconnect with e-commerce, absence of commodity exchange system, and lack of market price monitoring hinder this sector. Despite investment in application of ICT in agriculture by the Government for over a decade, digital literacy among farmers remains low and there is no comprehensive real time data for effective decision-making. ICT Division proposes the following: a) kiosk-based mobile application through PPP; b) online marketplace for agro-machinery rental; c) connect farmers with e-

commerce and social media platforms; d) localized agro-advisory and e-training platform for enhancing farmers' digital literacy; and e) digital marketplace and commodity exchange through PPP and private sector led models.

Health Sector: Bangladesh faced challenges with a burdened public health sector and reckless private sector health service providers. Denial of treatment, false covid-19 reports, day long queue for Covid-19 tests and lack of treatment are some of the grieving complaints. The critical challenges identified are in governance, management and private sector management. In addition, the private sector lacks effective regulation. The ICT Division proposes the following short- and medium-term action agenda: a) establish a robust referral system with medical history management; b) connect all private facilities with the GoB system to get real-time data on patients, ICU, HDU and other facilities; c) establish inventory management system for all facilities and introduce decentralized procurement; d) develop a grievance mechanism policy, addressing system using ICT where sufferers can submit their complaints and receive solutions; and, e) introduce telemedicine in a coordinated and standardized manner, involving community clinics and pharmacies, and policy revisions ensuring service quality and mental health at the forefront.

Freelancing: Bangladesh supplies 16% of total global online workers (second highest in the world). Freelancing is becoming increasingly popular among the youth in Bangladesh and globally. The COVID-19 pandemic devastated the hard-earned outcomes gained by freelancers in past years. According to Bangladesh Freelancers Development Society (BFDS), around 80% freelancers are now out of work as orders fell by 60-70%, where freelancers involved in only domestic market are the most affected. During the pandemic, transactions in the bank were halted, to some extent, initially. However, the already-present complication in cashing out the payment for the freelancers has been ever-difficult during the pandemic. The sector already suffered from payment issues, absence of global/local market analysis, lack of skill training and mentorship, and inadequate access to last mile and affordable high-speed internet in rural areas. Lack of appropriate financial stimulus further impacted this sector. The ICT Division is proposing the following interventions in the immediate short-term: a) address cross border payment issues; b) promote global/local market analysis; c) launch profession development programmes; d) brand Bangladesh as an ICT skill destination; and, e) establish last mile affordable and high-speed connectivity.

Emerging Technologies: In Bangladesh, companies are incorporating emerging technologies (artificial intelligence, robotics, ai, big data, block chain, etc.) to fulfil the new market demand. The Government introduced policies and strategies to create an ecosystem and promote emerging technology. In response to the COVID-19 crisis, the Government jointly collaborated with private sector to accelerate the adoption of emerging technologies. Global supply chain disruptions will have an impact, but for some emerging technology led businesses, the pandemic has become a growth opportunity. Key drawbacks in the pursuing the emerging technologies include inadequate skill and capacity development, lack of promotion and funding, inadequate knowledge of such technologies in the education sector, and lack of policies. The ICT Division proposes the following immediate short-term interventions: a) create an ecosystem for encouraging emerging technology R&D; b) promote emerging technology start-ups; c) promote and fund emerging technology solutions; d) promote emerging technologies in the education sector; and e) ensure implementation of policies and strategies supporting emerging/frontier technology solutions.

Public Sector Transformation and Innovation: Since the launch of 'Digital Bangladesh' in 2009, Bangladesh has become a global example of digital transformation of public services. The Government has made all necessary information of the Ministries and other relevant notifications available for public through various websites. The National ICT Infra-Network for Bangladesh Government Phase II was established (which already implemented 800 video conferencing systems at different Ministries, Departments and Upazila offices with the aim to ensure 10Gbps capacity network at the Upazila levels and 100 Gbps capacity networks at the District levels). The government's e-governance initiative comprises 5 components – Service Process Simplification (SPS), 'less paper office,' government services portal, land information services, and government forms portal. The SPS aims to simplify processes involved in public service delivery and reduce the time required to deliver them. A total of 424 public services were included in this programme till early 2020, and more will be included. COVID-19 pandemic disrupted the transformative aspiration articulated in perspective plan 2041 (PP2041). The top five action agenda proposed are: a) effective and scaled up 2000+ citizen centred services; b) paperless government; c) institutionalization of innovation culture; d) citizen's participation of innovation culture; and, e) data-driven policy framework.

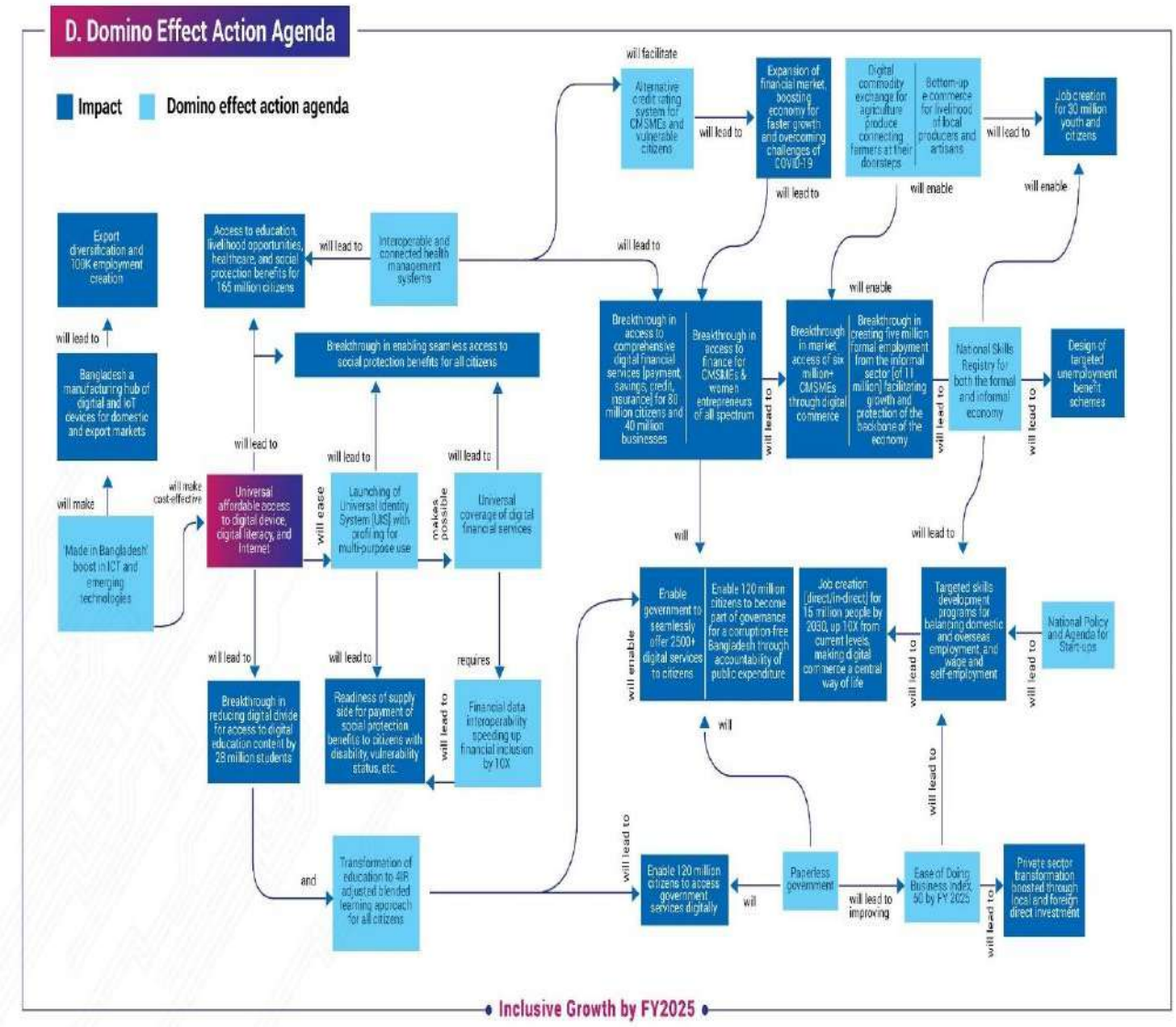
Private Sector Transformation. Private sector plays a pivotal role in Bangladesh and contributes in the economic growth through investment, production and export. Private investment to GDP ratio in Bangladesh was 23.40 % (Bangladesh Economic Survey 2019). COVID-19 impacted all sectors in Bangladesh and private sector is adversely affected as well. The private sector can be impacted by a big negative shock in terms of private sector growth, employment consumer spending, etc. The financial sector will also be adversely affected. Key constraints to the private sector due to COVID-19 include interruptions in production and manufacturing, shift to alternative sale channels, disruptions in distribution and supply-chain networks, accessibility and utilization of ICT and digital tools, accessing global market place due to strict regulatory mandates, and lack of comprehensive workforce database. The ICT Division proposes the following interventions: a) address the digital divide; b) launch digital online training program; c) link local manufacturers with global marketplaces; and, d) digitize workforce database.

Creating a domino effect: The proposed interventions or action agendas in the priority sectors are interconnected. As such, one intervention in one sector can have a ripple effect across several sectors. This can be defined as a domino effect. The ICT Division will undertake the following priority interventions in the different priority sectors:

Action Agenda	Policy Implication	Timeline for implementation
'Made in Bangladesh' boost in ICT and emerging technologies	● Development and enactment of 'Made in Bangladesh' Policy for digital devices for domestic and foreign market	FY 2021
National Policy and Agenda for Start-ups	● Introduction of National Policy for Start-ups to promote growth of the ecosystem, while also attracting foreign investment	FY 2021
Financial data interoperability speeding up financial inclusion by 10X	● Enactment of Data Interoperability Law ● Enactment of Data Protection and Privacy Law [e.g., GDPR] ● Revision of Digital Security Act, 2018 to connect with independent law on data protection and privacy	FY 2021

Action Agenda	Policy Implication	Timeline for implementation
Universal affordable access to digital device	● Development of guideline covering all citizens under 'universal access to digital device and Internet' program	FY 2021
Universal affordable access to Internet broadband connectivity	● Upgrading National Broadband Policy, 2009 for: - Inviting districts and upazila level investors and start-ups to offer broadband services - Revision of TAX, VAT, and Surcharge to decrease Internet price	FY 2022
Interoperable and connected health management systems	Health system is transformed from 'doctor-centric' to 'healthcare management centric' - Development of an accountability framework for both public and private facilities - Development and enforcement of a mandatory health data interoperability protocol - Launching of universal health insurance system for public and private facilities	FY 2022
Paperless government	Introduction of Paperless Government Act	FY 2022
Launching of Universal Identity System [UIS] with profiling for multi-purpose use	Inter-agency working group for appropriate design and roadmap for UIS Enactment of Data Interoperability Law Enactment of Data protection and Privacy Law [e.g., GDPR]	FY 2022
Alternative credit rating system for CMSMEs and vulnerable citizens	Enactment of a law for CMSME credit rating system with emphasis on credit bureau database under Bangladesh Bank Order, 1972	FY 2022
Facilitating bottom-up e-commerce for livelihood of local producers and artisans	Upgrading National Broadband Policy, 2009 for revision of TAX, VAT, and Surcharge to decrease Internet price Upgrading National Digital Commerce Policy, 2018 for exemption of taxes imposed on digital commerce and advertising	FY 2022
Digital commodity exchange for agriculture produce connecting farmers at their doorsteps	National policy for quality standards for different agro-commodities in Bangladesh National Agro-Commodity Exchange Policy	FY 2022
National Skills Registry for both the formal and informal economy	Introduction of National Skills Registry Policy	FY 2022
Universal coverage of digital financial services	Digital Financial Inclusion Policy to incentivise digital financial transactions across the population	FY 2023
Transformation of education to 4IR adjusted blended learning approach for all citizens	Digital Education Policy [in alignment with 8th Five-Year Plan] Up gradation of Intellectual Property Rights [IPR] Policy to ensure appropriate encryption and to protect the providers of online education	FY 2023
Universal affordable access to digital literacy	Development of digital literacy curriculum guideline for each segment of learners by public and private agencies Making curriculum and content for digital literacy open [creative commons licensing]	FY 2025
Ease of Doing Business Index, 50 by 2025	Introduction of Ease of Doing Business Policy catering to each of the 18 sectors	FY 2025

It is expected that the implementation of these interventions would lead to domino effect as illustrated in the following diagram:



12.5 OVERALL OBSERVATIONS, RISK FACTORS AND RECOMMENDATIONS

Digital Bangladesh agenda for improving public service delivery, connecting industry to global digital space, and creating new industries ultimately depends on technological upgrading; but import driven technology upgrading runs the risk of hurting Bangladesh's competitiveness. As a countervailing measure, Bangladesh should participate in the global value chain of technology development and innovation for adding value out of knowledge.

First with the steam, then was followed by electricity and computing-driven industrial revolutions. Recent technological breakthroughs in the broad area of digital technologies seem to be pushing yet another wave, which is commonly called the Fourth Industrial Revolution (4IR). In the age of 4IR, Bangladesh's

technology import driven, labour-based value addition strategy is under serious threat. Along with skill uplifting, Bangladesh must focus on knowledge economy building by leveraging 4IR technology stack.

Digital Bangladesh, ICT and Knowledge economy form the core competence to address inclusive sustainable industrial development for making Bangladesh an advanced economy by 2041. The 8FYP should focus on developing and leveraging this competence for creating jobs and income opportunities, forming new industries, addressing environmental issues, minimizing energy and material use, improving industrial competitiveness, enhancing capital utilization, and establishing effective linkages between actors of knowledge economy.

Despite the recent progress, Bangladesh suffers from serious deficiency in capacity for leveraging the opportunity of Digital Bangladesh, ICT and knowledge economy out of innovations. The 8FYP should address both market system and directional failures. Due to the presence of such failures, Bangladesh's relevant agenda is primarily technology import driven. It's time to focus on jobs creation, local value addition, and economy wide value-added effect, as opposed to public expenditure centric revenue of the ICT industry.

Advanced digital technologies allow for fully integrated, connected, and smart production processes, where information flows across operations and generates real-time feedback to support decision-making (such as use of smart sensors and machine-to-machine communication, robots, big data analytics, cloud computing, artificial intelligence and 3D printing). To graduate from analogue stage to this smart production stage, Bangladesh should focus on acquiring knowledge, and adopting craftsmanship culture of pursuing endless perfection through technology absorption and adaptation, scientific discoveries and technology invention as opposed to continuing technology import driven leapfrogging strategy.

Increasing digitization is posing threat to data privacy, taking over local market by global ones, unfair competition, non-productive usages of technologies like smartphone and social networking, social isolation of youths and addictive attachment with technology, and new form of digital divide. The8FYP should pay serious focus on these critical issues.

At the cusp of the fourth industrial revolution and the mission of attaining SDGs, Bangladesh has started the journey of graduating from low middle-income country status to be high middle-income country by 2031, and advanced country by 2041. Graduation from factor driven to knowledge economy by leveraging advanced digital technologies appears to be critical requirement for Bangladesh to cope up as well as leverage 4IR and SDGs, while progressing towards economic milestones. Existing mind-sets and institutional capacity appear need to be significantly uplifted to make expected success in this mission.

The 8FYP will also aim to address the issues of deteriorating e-participation (as tracked by the UN E-Gov Surveys) particularly with regard to e-service delivery. It will aim to reduce the skills gap at multiple levels in agencies and among citizens. This will include ethnography; know your customer insights research, data analytics, design thinking, sense making and futures thinking.

For COVID 19 response, the ICT Division will help educational institutions adapt to the rapidly changing technology landscape driven by the COVID19 pandemic. It will facilitate use of evidence to inform decision-making about education technology. Furthermore, ICT Division will develop a Digital Learning

Ecosystem by equipping each institution with all required digital infrastructure facilities through public-private-partnership. It will develop a centralized educational resource repository for curating all innovative solutions in preparation for future emergencies. The division will ensure teachers' professional development so that they can host online/distance learning facilities for students. It will design and initiate student-led assessments and personalized learning spaces using artificial intelligence and/or other means where it is feasible.

Indicators for Measuring Progress of Digital Bangladesh. Bangladesh's overall position in some key overarching indicators related to Digital Bangladesh is shown in Tables 12.12 and 12.13. Proposed targets for improvement during the 8FYP leading to reaching 2041 targets are also shown in these tables.

Table 12.12: Evolution of Bangladesh's Competence in Digital Space and Indexes

Focused Areas and Indicators	***Bangladesh's Development Stages Over Three Major Periods***					
	Till 2017		***2021-2025***		***2031-2041***	
Global Innovation Index, 2018						
	Score (0-100)	*Rank*	*Score (0-100)*	*Rank*	*Score (0-100)*	*Rank*
ICT Access*	30.5	111	50	50	85	20
Government's Online Service	62.3	60	75	45	90	15
e-Participation	52.5	82	70	40	85	20
ICT and Business Model Creation	48.9	108	65	50	75	20
ICT and Organizational Model Creation	42.4	104	55	60	65	30
World Economic Forum: Global Competitiveness Report, Ranking Among 127 Countries in 2018						
	Score (1-7)	*Rank*	*Score (1-7)*	*Rank*	*Score (1-7)*	*Rank*
Internet Access in Schools	3.3	115	5	60	6	30
Fixed-Broadband Internet Subscriptions/100 Pop+	3.8	92	25	50	40	20
Internet Bandwidth kbps/User+	9.2	111	40	60	55	40
Mobile-Cellular Telephone Subscriptions /100 Pop+	77.9	121	100	70	120	40

* Wireline broadband access plays an important role + not score in scale of 1-7

Table 12.13: Changing Production Priorities to Support Innovation

Focused Area	***Bangladesh's Development Stages Over Three Major Periods***					
	Till 2017		***2020-2025***		***2031-2041***	
Position in Competitiveness Index, Prepared by the World Economic Forum						
Indicator	***Score (1-7)***	***Rank /137***	***Score (1-7)***	***Rank /137***	***Score (1-7)***	***Rank /137***
Production Process Sophistication	3.7	79	4.5	50	6	30
Capacity for Innovation	3.8	97	4.5	60	5	35
Company Spending on R&D	2.8	113	3.8	65	4.5	30
University-Industry Collaboration in R&D	2.5	130	3.9	70	4.5	35
Contribution by TFP to GDP Growth	0.3 per cent		2.5 per cent		4.5 per cent	

12.6 DEVELOPMENT RESOURCE ALLOCATION IN THE 8FYP

The ICT service expansion funding will mainly come from the private sector. The highly positive response by foreign and foreign private investors over the past decade provides comfort that the ICT sector will not be starved of funds. The Government is mindful of the taxation issue and will take actions to resolve it satisfactorily and ensure that Bangladesh remains an attractive destination for ICT investments. Regarding public investment, the strong foundations laid in the Sixth and Seventh Plans provides a solid platform to build upon in the Eighth Plan. During the Eighth Plan the main investment priorities will be:

- Ensure rapid and satisfactory completion of all on-going ICT projects.
- Upgrade ICT infrastructure to provide space for projected growth of ICT services in adequate speed and reliability.
- Provide funding for R&D in ICT & Science and Technology
- Provide funding for ICT capacity building in public institutions
- Support ICT initiatives to expand services in the rural areas (cloud- based service, National helpline, BPO, Incubation Centre, ICT Research & Development centre, Broadband connectivity etc.)
- Develop and implement an e-government master plan
- Support product innovation & creation ecosystem
- Provide physical incentives & Institutional reform to create appropriate investment climate
- Establish Virtual University, Multimedia University
- Support in promotion of Bangladesh ICT Industry in the global market to brand Bangladesh as a destination for software, hardware, BPO, freelancing and ICT Innovation.

The ADP for ICT infrastructure development and Science and Technology are shown in Tables 12.14 and 12.15.

Table 12.14: ADP Allocations for Science & Technology and ICT Sectors during 8th Plan (Taka billion current prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Science and Technology	91.0	92.3	106.4	124.2	149.0
Information and Communication Technology Division	17.0	25.4	39.9	55.9	74.5
Sector Total	**108.0**	**117.7**	**146.3**	**180.1**	**223.5**

Source: Chapter 5, Part 1, Annex Table A5.1

Table 12.15: ADP Allocations for Science & Technology and ICT Sectors during 8th Plan (Taka billion FY2021 constant prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Science and Technology	91.0	87.6	96.1	106.9	122.4
Information and Communication Technology Division	17.0	24.1	36.0	48.1	61.2
Sector Total	**108.0**	**111.7**	**132.1**	**155.0**	**183.6**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 13:
RECREATION, CULTURE AND RELIGION

CHAPTER 13

CULTURE, INFORMATION, RELIGION, SPORTS AND YOUTH DEVELOPMENT

13.1 BACKGROUND AND OVERVIEW

The development of nations hinges on the social and cultural make up of its population since this predicts the response, capacity and efforts made my individuals in nation building and also affect the decisions that they take in their lives. Upholding the culture is upholding the characteristics and profile of a nation's population and this has a strong influence in the way the population engage with each other and for the welfare of the nation as well. Bangladesh has a rich cultural history and has significant archaeological assets dispersed across the country. In addition to that, in terms of literature, music and arts, the intellectuals of the country are continuing to make progress. In today's global village, it is the citizen's duty to showcase the cultural heritage and contribute to the progress of future generations and to the world. Intrinsic to a nation's identities is also the religious beliefs and practices, which is again an integral part of the cultural fabric of our nation.

Bangladesh has traditionally been a tolerant society with co-existence of people from different religions and practices. In the world that we live in at present, indiscriminate freedom to practice one's religious beliefs and respect of all religions is an essential part of development of nations and required for excelling actively in the global economy.

As Bangladesh embarks upon its 8th Five Year Plan, it is essential to also set concrete plans to ensure continued proliferation of the culture, heritage and religious practices of the country. These are the main focus of this Chapter of the Plan along with the focus on youth and sports development. Bangladesh is a nation with over one-third youth population and this segment of the population is our national demographic asset. It is imperative for Bangladesh to provide its youth population with the physical and intellectual skills to perform to their full capacity and drive the growth and prosperity of the nation. In addition to that, the challenges facing the nation related to climate change, militancy, an ageing population and continued poverty can only be addressed by investing in the future generations that are the youth of today. The government has been devoted to the development of youth and plans to continue investing in their future in the upcoming five years, so as to pave the way to for achieving the development goals and commitments at the national level and the international level such as Sustainable Development Goals (SDGs).

13.2 CULTURAL DEVELOPMENT OF BANGLADESH

The Ministry of Cultural Affairs (MoCA) is the arm of the government devoted to conservation of culture and heritage of the people. Through its different organizations/units, the ministry is primarily focused on enriching the intellectual status of the nation through preservation, research and development of culture, history, heritage, arts and literature. Under the 8FYP, various activities will be undertaken that will promote the healthy growth of cultural activities throughout the country. The main units in operation under the MoCA and who are actively engaged in various aspects of cultural development and conservation of the

country are as follows: Bangladesh Shilpakala Academy, Bangla Academy, Public Library, National Book Centre, National Archives and National Library, Department of Archaeology, National Museum, Folk Art and Crafts Foundation, The Copyright Office and seven (7) cultural centres for small ethnic groups, which is to be expanded by three (3) newly installed cultural centres.

13.2.1 Progress during the 7FYP and Emerging Challenges

Progress during the 7FYP

Programmes for development of Bengali language and literature and reference books for higher education were continued with greater emphasis. Within the framework of national unity, steps were taken to preserve and promote language, arts and culture of ethnic communities through cultural centres in tribal areas. To restore and preserve many of the intangible and tangible cultural heritages that are on the verge of extinction, digitization efforts were implemented. The Ministry also reiterated the importance of archaeological sites by conducting national surveys and conservation programmes for further development. Programmes were undertaken to develop museums and folk art. To enhance appreciation of fine arts, various fine art subjects were introduced in primary and secondary schools as per education policy.

The continued efforts of MoCA and its various units has had impacts on poverty reduction and gender issues in the past and is expected to continue to contribute to same in the future. Construction, renovation and development of infrastructure to facilitate the pursuit of art and culture have created employment opportunities for the poor. Efforts were made to reduce their poverty by providing financial support to the distressed cultural workers through a social safety net program that has been in operation for a significant number of years. The activities of the establishment, expansion and development of Shilpakala Academy and library at district and upazila level were continued under the Bangladesh Shilpakala Academy and the Department of Public Library respectively. Students and people from impoverished backgrounds were provided free education materials from both public and private libraries. Besides, for the purpose of conducting cultural activities in the secondary schools in district and upazila levels, the recruitment of various trainers has played an important role in reducing poverty through generating jobs. Additionally, from an archaeological tourism perspective, proper renovation, preservation and development of archaeological sites have also created employment opportunities for the poor people. Higher tourist visits to archaeological sites and museums have led to the expansion of business and commerce of local impoverished population and new employment opportunities were created.

Construction and development of infrastructure of libraries by Directorate of Public Libraries have continued at the district and upazila levels to provide and expand reading services for the population. In addition to promoting learning and knowledge transfers, these construction and development activities have created employment opportunities for the poor. Furthermore, students from the poor households and people from impoverished backgrounds were able to access academic and leisure reading materials from the public libraries.

The activities of bodies established under the MoCA in the form of establishment and expansion of Shilpakala Academies at the district and upazila levels, and the preservation, expansion and development of folk art and culture through Bangladesh Folk Arts and Crafts Foundation have widened the scope for a significant number of women to learn more on the art and culture. Moreover, opportunities for employment

of poor women population were created from women's participation in cultural infrastructure development. This has resulted in greater empowerment, awareness, mental development and social welfare of women, which had a significant impact on women's overall development. In the last three fiscal years, eight women were given Koshy Padauk, 3.95 million women were given readers services, and 360 women were trained in music. A large number of stalls were allocated for women in '*Amar Ekushey* Book Fair' organized by the Bangla Academy. In the initiative of Bangladesh People's and Crafts Foundation, 183 women were trained in folk-arts and crafts. These activities were aimed at enhancing the confidence, power and dignity of women in Bangladesh and enabling more economic and social empowerment

There was greater participation of women groups in public-private libraries. Besides, through the opportunity of reading in the library, women's skills, intellectual development and socio-economic conditions were enhanced.

Cultural development, awareness and practices have also helped in building the mind-set and spirit of the youth of the nation. The Government of Bangladesh is committed to fight terrorism, drug addiction and fundamentalism. This has played an important role in preventing the growth of a terrorist mentality, drug addiction or similar negative outcomes of the society especially among its youth. Appreciation and respect for culture and sports has also played an important role in shaping the values and mind-set of the youth towards competitiveness, respect for effort and the need to excel, and the development of harmonious relationship with the outside world.

Future Challenges

In order to preserve and develop tangible and intangible cultural heritage of Bangladesh involvement of people at the grassroots level is required to ensure participatory planning. Many of the intangible cultural heritages like language literatures, arts, performing arts, music and other areas are at the verge of extinction and require urgent efforts and intervention to document preserve and uphold them. Significant attention needs to be given to the restoration, preservation and digitization of these emblems of our cultural heritage. There is also a dearth of institutional establishment as well as human resources for such delicate works, and these resources needs to be developed urgently. Responding to the need to promote and preserve cultural values, the government has taken steps to support vulnerable artists that have been hit by COVID-19 through cash incentives. The government also intends to extend social protection benefits to them as well.

The Archaeological sites are invaluable assets and mark the rich history of Bangladesh. Unfortunately, owing to matters such as shortage of funds, skilled human resources and community involvement, most of these sites remain unexplored and are yet to be preserved or restored. Adequate and systematic planning is required to address this and like most other sectors, perspective, and medium-term and long-term plans needs to be carried out. According to the new education policy school curriculum subjects like art, music, dance theatre etc. has been designated as optional subjects. Bangladesh Shilpakala Academy needs to be equipped to produce a large number of subject oriented texts and train teachers for matching with national education policy requirements.

13.2.2 Objectives of the 8th Five Year Plan

Under the 8FYP, healthy growth of cultural activities will be promoted throughout the country. In addition to promotion of literature, fine and performing arts, attention will be given to create and promote a culture attuned work, towards perseverance, confidence and creativity. The 8FYP objectives and strategies of the Ministry of Cultural Affairs and Ministry of Liberation War Affairs have been developed incorporating the targets under Sustainable Development Goal 11.4 that postulates the need to '*Strengthen efforts to protect and safeguard the world's cultural and natural heritage'.*

The major objectives in this field are:

- Develop Bengali language and literature and create facilities to develop Bengali as the medium of instruction.
- Promote the spirit of liberation war; preserve, protect and development of historical and liberation war monuments, memorial plazas, mass graveyard etc.
- Creation of liberation war-based videos and films and running motivational programmes for future generation, particularly youths.
- Help and promote production and publication of quality books and make them available to the masses at reasonable prices.
- Undertake programmes for implementation of the national book policy.
- Carry out research on the lives and works of great men and women of our nation.
- Flourish the perception of 'Amar Ekushey'.
- Establish and develop a library network system from the national to the rural level and introduce modern technology through the entire network.
- Promote and foster cultural activities and citizen participation throughout the country reflecting values, hopes and aspirations of the people.
- Develop infrastructural facilities for fine and performing arts including drama and theatre and explore private and voluntary involvement in this area.
- Preserve national history, culture and heritage.
- Promote good citizenship through sensitization of rights, duties and responsibilities.
- Protect copy rights of intellectual property.
- Preserve and promote language arts and culture of small ethnic groups/communities within the framework of national unity and awareness.
- Collecting information and data regarding cultural elements or traits of the Ethnic Minority community which includes their unique language, literature, music, dance, heritage, crafts, rituals etc. Development interventions will be carried out to patronize and nourish indigenous intangible and tangible cultural traits and elements.
- Exchange of culture with the neighbouring countries.

Practicing traditional or local culture will be encouraged to fight terrorism, drug addiction and other negative impact of modernisation by giving more attention to younger generation.

13.2.3 Strategies under the 8th Five Year Plan

- Amend the Antiquities Act to strengthen the protection of archaeological sites and historical monuments.
- Amend the Copyright Act and other relevant acts to support smooth growth of cultural arena.
- Programmes will be undertaken to develop the library network, infrastructural facilities and services from national to the rural levels in order to meet the education, recreational, cultural and information need of people from all walks of life.
- National survey on archaeological sites will be carried out and physical facilities for the department of archaeology will be developed for enhancing archaeological tourism;
- Fine arts like music, painting, arts & crafts, recitation, acting; dancing, theatrical performances would be introduced at primary & secondary level as per education policy.
- Infrastructure facilities will be expanded to root level for ensuring better opportunities in practicing cultural field.
- Programmes for development of Bengali language and literature and reference books for higher education will be continued with greater emphasis;
- Programmes will be undertaken for book development and development of reading habits;
- Research programmes on lives and works of great people will be undertaken and memorial libraries and institutions will be established in respective areas;
- Regional and ethnic minority's cultures will be promoted and preserved through various programmes viz. erection of more tribal cultural and language centres within the tribal areas;
- Continue dissemination of the real history of liberation war among the young generations. This program will be strengthened through organising school based programmes throughout the country.
- Programmes for further development of archaeological sites, museums and ethnological museum will be undertaken and historical monuments will be identified and preserved;
- Private sector as well as the local government bodies will be encouraged to contribute their resources and efforts for cultural development;
- To expand the conservation of the heritages, implementation of conservation of major Archaeological sites, during the 8th Five Year Plan period.
- To extend the research, survey and documentation activities to incorporate more sites in UNESCO World Heritage list.
- To formulate and implement a New Cultural Policy in line with the vision 2041.

Socially negative issues like social abuse, terrorism, gender biasness and other socially negative elements will be addressed minutely in all forms of cultural practice. Involvement of young generation in cultural activities will be increased in a manner to fight against all forms of negative social elements.

13.3 INFORMATION

The Ministry of Information plays a major development role by providing timely information to the nation on the government's development policies and programmes and by creating a facilitating environment for broader sharing of information among the people at large.

Progress during the 7FYP

The world has been transformed into a global village due to unprecedented growth of advertisement and information technology. In this light Establishment, broadcasting and operation of Community Radio Policy 2017 has been formulated with a view to implement "Digital Bangladesh-Vision 2021". At the same time, Roadmap from the Transition from Analogue to Digital Terrestrial Television in Bangladesh 2014 has been prepared with the assistance of Bangladesh National Roadmap Team (NRT) and International Telecommunication Union (ITU). Initiatives have been taken to establish monitoring cell for combating rumours and militancy. In order to translate these policies into reality, Ministry of Information has implemented total 13 development projects during last five years, amounting to an approximate amount of BDT 766 cores. The main objectives of these initiatives are to march Bangladesh ahead with the pace of astonishing development of mass communication networking that took place across the globe due to technological advancement and excellence due to globalization. The following activities have been already completed in this regard:

1. Digitization and modernization of mid-wave transmitter of Bangladesh Radio.
2. Construction of Head Quarter of Bangladesh Television
3. Modernization and extension of Bangladesh Television Chittagong Centre
4. Construction of Bangladesh Film Archive Building
5. Introduction of digital technology in BFDC and modernization and extension of BFDC
6. Establishment of Bangabandhu Sheikh Mujib Film City (Phase I)
7. Communication activities for improvement of children and women
8. Establishment of two complete 10-kilowatt radio station at Maymansingh and Gopalgan
9. Capacity development of human resources for programme preparation in Bangladesh television
10. Construction of information building and establishment of machineries in directorate of film and publication
11. Publicities of different social and development activities

Best Practices and Limitations

Ministry of Information is persistently active in conveying all sorts of news and the development activities of the government to the mass people of the country along with supervision of overall advancement of mass media and officials concerned with mass media. Numerous initiatives have been taken time to time for accelerating the development activities. They are as follows: Budget of development activities are formulated in digital system. As a result, transparency and accountability has been ensured.

1. Project directors are being appointed immediate after the approval of development project.
2. Project directors have been ordered for staying at the project areas.
3. All procurement of the projects is being conducted in E-GP system.
4. Monitoring team at ministry level has been formed for supervising the project activities.

However, due to lack of efficient officials at attached departments in project development, increase in project cost and time overrun has occurred in many cases.

Development Targets and Initiatives of MoI in Implementation of 8th Five Year Plan (2021-2025)

Due to numerous promises in national and international level, along with constitutional obligation, election manifesto, vision-2041, Delta Plan-2100, Ministry of Information has taken numerous initiatives. Among them, following mentionable activities are discussed in details:

Bangladesh Television

- The establishment of a full news network of BTV across the country and forming the news team of BTV in every district between 2021.
- Between 2021, BTV will broadcast 100 per cent of the programmes (YouTube, Facebook, Twitter) in social Media
- Between 2022, BTV World will be established as a separate satellite channel with distinct features
- By 2023, the establishment of a virtual studio and the latest animation unit will be created.
- Between 2024, 100% digitalization of BTV's terrestrial broadcasting system will be made across the country
- A full-fledged TV centre will be set up in every division of the country by 2024 for the preservation and promotion of local culture
- By 2024, the complete digital archive of BTV itself will be established.
- By 2030, the broadcast network of BTV will be established in the whole world.

Bangladesh Betar

- By 2021, 12 new FM Broadcasting Centre will be established of Bangladesh Betar and by 2030; the entire country including coastal areas will be brought under the network.
- By 2024, modernization and digital equipment will be set up in different centres of Bangladesh Betar
- The central archive of Bangladesh Betar will be established by 2025.
- Government quarter will be established at Bangladesh Betar's own place for officials and employees of the Bangladesh Betar by the year 2025.
- By 2021, information regarding sustainable development targets will be increased in the journalism of journalists of Bangladesh Betar.
- Between 2030, there are plans to launch online newsletters of Bangladesh Betar, establishment of self-archiving cell, launch of spot reporting, separate news studio, mobile journalism, and complete correspondence structure.

Mass Communications

- In order to reach the marginalized population of the government, 26 district information offices of the Department of Mass Communication and District Information Complex will be built between 2025 and the remaining 42 will be established within 2030.
- Special campaigning will be undertaken to increase nutrition awareness across the country by 2022.
- The Digital Communication and Documentation Center of the Department of Mass Communication will be established by 2025.

- Between 2030, adequate film exhibition, song, workshop, meeting rally will be organized for the work of rural population for the purpose of good health, poverty alleviation, education, gender equality, supplementary drinking and sanitation.

Bangladesh Film Development Corporation (BFDC)

- By 2025, Bangabandhu Film City will be set up with modern facilities for overall development of the film industry.
- BFDC Complex will be constructed by 2022.
- By 2023, BFDC Infrastructure Development and Digital Technology will be expanded.
- Digital film display system will be introduced throughout the country by 2030.

Bangladesh Film Archive

- The capacity of Bangladesh Film Archive will be increased for organizing the Federation of International Film Archives (FIAF) conference in 2021at Dhaka.
- Audio visual documents of the Liberation War will be collected and archived in archive from domestic and foreign sources by 2025.

Department of Films and Publications

- Digital technology will be set up by 2020 to modernize the activities of the Department of Film and Publications.
- In order to increase awareness among rural people, in the year 2030, 596 TV filers, 83 docudramas, 192 documentaries based on various issues will be distributed to the field of publicity in the field of publicity for publicity, BTV and various private TV channels.

Bangladesh Shongbad Shongstha (BSS)

- By 2022, necessary measures will be taken to increase the capacity of BSS journalists to launch audio visual news of BSS and create audio visual news.

Press Information Department (PID)

- Digital Media Management Cell and archive will be established by 2022.

Press Institute Bangladesh (PIB)

- By 2022, necessary action will be taken to increase the awareness and efficiency of the safe workplace and security of the journalists.

National Institute of Mass Communications

- Between 2025, infrastructure will be established for the National Institute of Mass Media to provide various facilities.

- By 2025, various training programmes will be taken to improve the competence and professional skills of the National Institute of Mass Communications.

Bangladesh Institute of Films and Television

- By the year 2025, the new Bangla Film and Television Institute will create their own campus facilities.

Capacity Development of the Ministry

Access to information and free flow of information is imperative for development of human resources. In this regard, MoI has already taken various initiatives. In order to complete these initiatives successfully following measures could be taken:

- Preparation of panel of potential project directors from all attached departments under Ministry of Information and provides necessary training to selected officials. Also, they can be provided with training manual regarding the work distribution and responsibilities of project directors.
- Efficient human resources should be created in department level for formulation and implementation of development projects.
- Appropriate training should be provided for development of efficient human resources.
- Digitalization process of publicity activities should be continued and state of the art technologies should be adopted for keeping pace with the rest of world.

13.4 RELIGIOUS AFFAIRS

The Ministry of Religious Affairs (MoRA) has been in operation as an independent ministry since 1980 and has been conducting and overseeing a wide range of religious affairs activities of the government encompassing all four major prevalent religions in the country- Islam, Hinduism, Christianity and Buddhism. The main operational units under the ministry are: Islamic Foundation, Office of the Waqf Administrator, Hajj Office Dhaka and Jeddah/ Makkah, Hindu Religious Welfare Trust, Buddhist Religious Welfare Trust, Christian Religious Welfare Trust and some administrative branches of the Ministry. The main objective of the MoRA is to improve and enhance religious affairs and activities in the country and contribute to the national development through continued initiatives for human resource development and working to foster brotherhood (unity), values, harmony and uphold religious beliefs in the national and international arena.

The strategic objectives of the Ministry of Religious Affairs include:

1) Enhancing moral and ethical values;
2) Improving Hajj Management;
3) Institutional Development of Religious Institutions and Organizations;
4) Strengthening Zakat Management;
5) Public Awareness Activities for preventing religious militancy and terrorism.

13.4.1 Progress during the 7FYP

The operational units under the MoRA have been conducting various development activities over the years which have had significant contributions to the socio-economic development of the country through social safety net programmes, education programmes and other empowerment initiatives. The operational units under the Ministry have been involved in various programmes which have contributed to generating employment, poverty alleviation, economic and social empowerment of women as well as for youth development. Some of the major development achievements of the Ministry over the 7FYP are as follows:

Mosque Based Child & Mass Literacy Program (Phase 6) project: Some 73, 768 education centres were established under this project which facilitated providing training on basic literacy, Islamic values and ideals to 9.86 million children and illiterate adults.

a) *Expansion and Strengthening of Mosque Library Project (Phase 2):* Under this project, 4500 new libraries were established in mosques in rural areas which provided reading facilities and aided in developing reading habit among the rural population and contributed to knowledge expansion.

b) *Establishing 560 Model Mosques & Islamic Cultural Centres in Districts & Upazilas of Bangladesh:* Under this initiative, 560 model mosques and Islamic Cultural Centres are under construction to create prayer facilities and generate employment for the daily labours and also other socio-religious facilities.

c) *Shirta, Mymensingh & Kalkini, Madaripur Islamic Mission Hospital Complex Construction and Baitul Mukarram Diagnostic Center Strengthening Projects:* The Shirta, Mymensingh & Kalkini, Madaripur Islamic Mission Hospital Complex is under construction and upon completion will provide free medical services to the poor and disadvantaged people.

d) *Gopalganj Islamic Foundation Complex Establishment Project:* The Gopalganj Islamic Foundation complex, which is currently under construction, is aimed at training of religious leaders to enable them to play a more meaningful role in social development as well as be more self-dependent and also knowledge to provide basic/primary medical services to the poor and disadvantaged people of society. *Collection of Books and Expansion of Reader's Service at National Level and District Libraries of Islamic Foundation Project:* The Central District libraries and Imam Training Academy Libraries were enriched by collecting books under this project on various Islamic topics and socio-development issues as well. This has expanded the resource base of the libraries, therefore increasing the knowledge tools accessible to the local populations of the areas these are based in.

e) *Islamic Books Publication Project (Phase 2):* Under this project, about 8098 format books on various topics about Islam has been published and were distributed to the Islamic Foundation district offices to make them available for purchase by the local population.

In addition to the employment generated through the various construction projects, 96,000 jobs were created through, pre-primary education, Holy Quran learning, adult education centres and resource centres all over the country.

These projects implemented during the 7FYP and other interventions implemented over the years, have contributed to the development of religious education and appreciation of the need for better moral and

responsible conduct. Emphasis has also been placed on the importance of religious freedom, tolerance and respect for all religions. Bangladesh takes pride in promotion religious harmony and freedom to practice religion.

Nevertheless, there is scope for further progress. There is still a need for appropriate institutional framework, adequate skilled human resource and capacity for proper implementation and impact on development. The overall sub sector also faces constraints to smooth implementation of projects in the form of delays in release of allocated Annual Development Project budget, lack in skilled human resources due to inadequate training facilities, timely recruitment of manpower for project implementation and delays in procurement of goods, services or land for construction projects. These matters need to be streamlined and the authorization process needs to be regulated in order to expedite and ensure proper and timely implementation of development projects and also to maximize their efficiency and impact.

13.4.2 Objectives of the 8th Five Year Plan

The development objectives and targets of the Ministry of Religious Affairs for the 8FYP has been formulated in accordance to the Constitutional Obligations of the country, the Election Manifesto of the government, Vision 2041, and Sustainable Development Goals 2030. The objectives are as follows:

- Increasing the enrolment of children aged 6 and above to primary school, increase the literacy rate of illiterate adolescent and adults and increase opportunity for learning of the Holy Scriptures with the aim of uplifting morality and upholding religious values.
- Renovation, repair and construction of historical mosques, temples, pagodas, churches etc. of Bangladesh.
- Publication of religious books on various subjects and their nationwide distribution to ensure access for all.
- Strengthening the institutional capacity of Islamic Foundation expanding the organization, human resource training and construction works.
- Creation of employment and self-employment opportunities of Imams and other religious leaders by providing vocational and technical training.
- Ensuring effective representation of Imams and religious leaders in policy formulation, planning and decision- making process in various levels.
- Awareness-raising activities through the Imams and other religious leaders to preserve bio-diversity and improve the quality of life of the people of the Haors and wetlands and in hard to reach area.

13.4.3 Strategies and Targets under the 8FYP

The operational units of the Ministry of Religious Affairs have set various strategies/targets for the 8FYP. These strategies/targets are listed below, by each operational unit:

Islamic Foundation

- Continue pre-primary and adult education. Increase the capacity and equip Darul Akram Madrasahs in order to provide opportunities for basic primary education, Islamic education, values and culture.
- Facilitate and enable access to learn the Holy Quran to 8.76 million school-going students, drop out students and children working in slums.
- Construct 560 model Mosques and Islamic Cultural Centres to create prayer facilities for an average of 4 million people.
- Renovation, repair and construction of 1000 historical mosques of Bangladesh.
- Establish 10,000 mosque libraries across the country to enable lifelong learning facilities on various Islamic subjects and other socio-economic issues.
- Expanding Islamic Mission activities throughout the country to aid in promoting health care, health education and good lifestyle practices for preventing and managing communicable and non-communicable diseases.
- Publish religious books on fundamental issues of Islamic research and Islamic encyclopaedia.
- Provide training to Imam/ Religious leaders on various social issues such as bio-diversity conservation, primary health care, early marriage hazards, agriculture practices, forestation, dowry, repression of women and terrorism.
- The Imam Muazin Welfare Trust will provide interest-free loans and financial aids to Imams and Muazins across the country to enhance their livelihood through business activities support.
- Improve Zakat Collection and Distribution mechanism.

Hindu Religious Welfare Trust Targets and Strategies

- Provide financial support to temples and Durga Mandaps.
- Provide pre-primary and religious education to children.
- Provide financial support to pilgrimages.
- Organize discussion programmes on National Days and Spiritual Occasions.
- Publication of religious books.
- Enable enlistment of Hindu Temples and religious institutes.
- Train Purohi and Sebat.
- Establish Temple based libraries.
- Renovation and development of Hindu Temples and Hindu Religious Institutes.

Buddhist Religious Welfare Trust Targets and Strategies

- Provide pre-primary education and religious education with a view to increase the enrolment of students at primary level which is also one of the objectives of the new proposed education policy.
- Provide adult education with a view to increasing the literacy of adult which is also one of the aims of the proposed education policy.
- Provide religious education to increase the proper learning and understanding on holy facts and faith of Buddhism through Tripitakan Education Centre by using religious places like Monastery/Pagoda premises.

- Repair and renovate the Buddhist Religious Institutions to improve and expand the facilities for practicing religious rituals of the Buddhist Community.
- Increase awareness and knowledge on Buddhism through pagoda-based library for Buddhist Community.
- Increase awareness and knowledge in the Buddhist Community on Buddhist Family Law.
- Training program for expanding and improving the skills and knowledge of Buddhist Monks and Sramanas.
- Construct own office building and achieve self-sufficiency of the Buddhist Religious Welfare Trust.
- Ensure and continue the development work of Buddhist Religious Institutions to create opportunities to practice religious culture and rituals of the Buddhist Community.

Christian Religious Welfare Trust Targets and Strategies

- Provide financial support to churches.
- Provide religious education to children.
- Organize discussion programmes on National Days and Spiritual Occasions.
- Publication of religious books.
- Establish Church based libraries.
- Renovation and development of Churches and Religious Institutes.

13.5 SPORTS DEVELOPMENT

13.5.1 Progress during the 7FYP and Future Challenges

During the 7th Five Year Plan period, efforts have been made to strengthen sports and physical education programme at the school stage, right from the primary level and gradually develop and systematize them up to the College and University levels. Significant progress has been made in development of sporting facilities such as building and developing open stadiums and indoor stadiums from the national to upazila levels, also building swimming pools across the country to encourage swimming sports and fitness. The game of football has been developed through various tournaments and organized management of the Football Academy in Sylhet. The standard of cricket has also been raised through a number of different initiatives, including building and upgrading facilities to meet the international standard. Infrastructure and related facilities for football and cricket, and other sports, were established at the rural level across the country.

13.5.2 Objectives for Sports Development under the 8FYP

The Ministry of Youth and Sports is dedicated to raise the standard and achievements of promising athletes and sportsmen through providing latest training programmes and modern facilities through its operational units such as Bangladesh Krira Shikkha Protishthan (BKSP) and the National Sports Council (NSC). It is expected that the talented promising athletes will participate and achieve success at the regional and international level competitions and bring glory to the country. This is the main goal of the institution along with other objectives which as listed below:

- Increase the standard of national sports and games to the international standard.
- Proper talent identification through arranging talent hunting and training programmes for all kinds of sports.
- To improve the standard of games and sports at the Division and District levels.
- Develop and expand playgrounds and sports facilities at the Upazilla and Union levels.
- Develop sports infrastructural facilities for both men and women, as well as facilities for indoor games.
- Develop and provide sports infrastructural facilities for football and cricket games at the upazila level.

13.5.3 Targets for Sports Development under the 8FYP

- Development of regional sports institutions with proper facilities.
- Continued development and renovations of national cricket and football stadiums to maintain and uphold international standards.
- Develop tennis sports infrastructure at the district level.
- Construction of Division level National Sports Complex.
- Establish sports related infrastructures at the Upazila and Zila levels.
- Develop indoor stadiums, swimming pools at District levels.
- Develop over 1000 play fields in the country at the union level.
- Construct Women's Sports Complex in all Divisions and further develop existing Women's Sports Complex.
- Construction of Sports Complex for Youth at District levels.
- Construction of sports complex for the persons with Disability (PWD) in Dhaka and other divisional cities.
- Construction of international standard cricket and football stadiums

13.6 DEVELOPMENT OF THE YOUTH

13.6.1 Challenges for Youth Development

As against the backdrop of a growing youth population, the summary picture that emerges from a review of experience in dealing with the youth challenge is as follows.

- The youth population grew from 10 million in 1974 to 44 million in 2017 and is projected to grow to 48 million in 2026 and then starting to decline. This suggests that the on-going demographic dividend potential is still available to Bangladesh for several more years but will not last long.
- As compared to this potential, actual use is modest. According to LFS 2016-17, only 20 million youth (44%) were in the labour market, of which 17.9 million were employed (89.5%).
- The employment profile suggests a strong outward migration of the youth workforce away from agriculture into industrial sector, services and international migration. Yet, the average earnings of the youth labour force are substantially lower than the adult workforce (30-64 years) and an overwhelming proportion of the youth work in informal employment.

- Some 2.1 million of the youth labour force was unemployed in 2016-17, suggesting a youth unemployment rate of 10.6%, which is substantially higher than the national unemployment rate of 4.2%.
- An estimated 12.3 million youth (29.8% of the youth population) were not in employment, education or training (NEET).
- The highest unemployment rate is for the youth in age group 15-19 (12.7%), while 23% of the NEET population belongs to the 15-19 age groups. This raises a policy question about the effectiveness and outreach of the education system to this potential school-age group of youth.
- The profile of unemployed youth shows that the education level is much higher than the education profile of the national labour force. Some 64% of the unemployed youth had secondary level or higher education. An estimated 36% had higher secondary or tertiary education.
- For 60% of the unemployed youth, the unemployment duration is 6 months or less, which is a positive factor. Yet, 21% were unemployed up to a year and 19% were unemployed for a long time, exceeding 1 year. This large duration of unemployment can create substantial disincentive for motivating the youth to go through the formal education system and is another reflection of the low quality of the education system and weak relevance to the job market.
- Looking at the gender dimension, the unemployment rate for the female youth is systematically higher at all age group relative to male youth. They also have on average a longer wait period to get a job than male youth. Importantly, the female youth is dominant part of the NEET with an overwhelmingly large majority (87%).

13.6.2 Progress during the 7FYP and Future Challenges for Youth Development

Progress during the 7FYP

There is now a growing awareness in the government that the emerging youth employment challenge is becoming a major development concern. The government understands that the on-going demographic dividend will not last forever and there is a substantial gap between the availability of this dividend and its actual use. All the government national planning documents including the Perspective Plan 2021, the 6thFYP, the 7thFYP and the Perspective Plan 2041 recognize the importance of properly harnessing the demographic dividend and the associated youth population for achieving the related development goals and targets. The government has also endorsed the Sustainable Development Goals (SDGs) and the associated targets for developing the youth population, especially related to the education and employment goals.

The government's strong emphasis on converting the youth into a central development force is reflected in the adoption of the National Youth Policy during the 7FYP. The National Youth Policy 2017 (NYP2017) has become the centrepiece of the government's youth strategy and policy framework. This is a comprehensive set of goals and policies that seek to develop the youth to its full potential. The key themes and objectives of the NYP2017 are illustrated in Table 13.1.

As can be seen, the NYP2017 identifies 5 key themes and 13 objectives where youth involvement is necessary for full national development including self- growth, education and training, employment, social protection, sustainable development and nation building. NYP2017 emphasizes inclusiveness for all youths

irrespective of gender, religion, ethnicity and location. NYP2017 emphasizes the development of youth policy consistent with the SDGs, the Perspective Plan 2021 and Vision 2041 (and by implication the forthcoming Perspective Plan 2041). The responsibility for coordinating the policy is vested to the Ministry of Youth and Sports. The NYP will be updated on a 5-year cycle.

Table 13.1: Key Themes and Objectives of the National Youth Policy 2017

Theme	Objectives
Self-Growth	a. To develop youth into righteous, progressive, self-respecting and positive human beings.
	b. To create congenial conditions for youth to achieve their inherent potential;
Education	c. To develop youth into human resource;
	d. To ensure quality education, health and all security for youth;
Employment	e. To provide youth with employment and choice of profession according to their ability
	f. To promote economic and innovative enterprise by youth;
Social Protection	g. To ensure rights of youth with special needs;
Sustainable Development	h. To encourage youth to volunteer in protecting the environment, combating climate change, calamities and nation building
Nation Building	i. To involve youth in the decision-making process at local, national and international levels
	j. To encourage youth to volunteer in protecting the environment, combating climate change, calamities and nation building
	k. To imbue the young community with sensibility and a sense of responsibility towards those in society who are backward and physically, mentally or otherwise challenged
	l. To motivate youth to shun ideological radicalism and aggressiveness in conducting their lives.
	m. To inspire liberal, non-communal, humane and global spirit within youth.

Source: National Youth Policy 2017, Ministry of Youth and Sports, Government of Bangladesh.

During the 7FYP, many commendable initiatives were taken for youth development including establishment of youth training centres in 11 districts, strengthening training facilities at the upazila levels for creation of employment and self-employment opportunities, enhancing capacity of the Department of Youth Development for training in information technology in 64 districts. Efforts were made to create employment and self-employment opportunities for unemployed youths in 7 districts of North Bengal in two phases of the project. Technological advancement initiatives for the youth were undertaken such as the Technology Empowerment Centre on Wheels for Underprivileged Rural Young People of Bangladesh project and Innovative Management of Resources for Poverty Alleviation through Comprehensive Technology (IMPACT) project. Support was also provided to develop the National Plan of Action for Implementing National Youth Policy and Youth Development Index.

Some of the major achievements through these projects and the continued efforts of the institution are as follows:

- 1.61 million Youth have been trained on different trades and off them, 3,33,521 are self-employed.
- A total of 2,29,737 youth has been trained for creation of temporary employment for two years of which 2,27,402 were engaged in temporary employment in the different nation building organizations.
- BDT 6.213 billion was disbursed to 1,25,335 trained youth as loan from principal amount and revolving fund to establish and expand self-employment projects. The average loan realization rate was a remarkable 95.53% and the income of the youth from these investments ranges from BDT 6000- 50,000 and in some exceptional cases over BDT 100,000 per month.

Despite progress, the growing size of the youth unemployment problem as well as the expanding share of the NEET youth population suggests that much stronger efforts are needed in the 8FYP to address the growing challenge of the youth population with a comprehensive approach. The articulation of a comprehensive national youth policy is an important step. This now needs to be converted into 5-years Action Plan with monitorable targets, strategies and resources. Since implementation spreads across various line ministries, a proper coordination mechanism needs to be identified. An M&E system needs to be developed to measure implementation and progress. Substantial resources will be needed.

13.6.3 Objectives for Youth Development under the 8FYP

Sustainable Development Goals (SDGs) for Youth Employment

The 8FYP objectives and targets for the development of the youth will be guided by the he UN goals for youth employment are most recently articulated in the Sustainable Development Goals (SDGs), which is further elaborated in the UN's World Youth Report 2018 (UN 2018). The World Youth Report considers the development of youth in totality, of which youth employment is a subset. The relevant SDGs that directly bear on the youth employment challenge are summarized in Box 13.1. The UN Report also highlights the importance of developing performance indicators to measure progress. Bangladesh as a signatory to the SDGs can use this broad-based global youth employment target as an important reference point to develop the policy framework for youth employment moving forward.

Box 13.1: Youth Employment and Sustainable Development Goals

Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

Target 4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium- sized enterprises, including through access to financial services

Targety 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

Target 8.6: By 2020, substantially reduce the proportion of youth not in employment, education or training.

Source: UN 2018

13.6.4 Objectives/Targets for Youth Development under the 8FYP

Objectives: All the SDG targets for youth relate to education, training and employment opportunities for youth in order to youth. This is not surprising, given that at the global level these are the most critical aspects of youth development challenge. The Bangladesh situation summarized above confirms that Bangladesh faces a similar situation. So, the objectives and targets for youth development under the 8FYP are focused on education, training and employment issues faxing the youth population. The main objectives Contribute in accelerating economic growth and creating decent employment opportunities through transforming youth into skilled human resources.

- Enable and empower the youth for achieving the youth-related SDGs, and Vision 2041. .
- Contribute to ensure national sustainable development, progressive and inclusive economic growth.
- Undertake measures for empowering the youth by providing life skills and employment skills.
- Provide development training and ensure participation of youth in decision making process at all levels of society and the nation.
- Strengthen education quality and quantity at all levels as discussed in Chapter 10.
- Eliminate gender gap in tertiary education as discussed in Chapter 10.
- Implement the government's women empowerment strategy and policies as articulated in chapter 14 to eliminate all bias against female youth and enable her to fully participate in all relevant human activities.

Targets: The SDGs provide a relevant reference point to set the time-based and monitorable goals for youth employment. Taking advantage of this, the Ministry of Youth and Sports has recently adopted a quantitative target of reducing NEET population to a mere 2% by FY2031. This is a laudable target and all effort should be made by the government to achieve this. More broadly, based on the SDGs, the suggested youth employment targets for the periods FY2021-FY2031encompassing the Eighth and the Ninth Five Plans are shown in Table 13.2. These targets are broadly consistent with the SDGs and the targets set in the PP2041.

Table 13.2: Youth Employment Targets FY2021-FY2031

Indicator	Base year values (2016-17 LFS)	FY2025 (End of 8FYP	FY2031 (End of 9FYP)
Percentage of unemployed youth	10.6	5.0	2.0
Percentage of NEET youth	29.8	15.0	5.0
Percentage of 15-19 years in school	75	85	100

Source: Ministry of Youth and Sports for NEET target; GED projections for other targets.

13.6.5 Strategies and Policies for Youth Development under the 8FYP

The 8FYP strategies and policies for youth development could be organized under three themes: the labour market demand side policy interventions; the labour market supply side interventions; and interventions to promote self-employment and other related youth employment policies.

A. Supply Side Policies

Strengthen the skill base of the existing youth labour force: The above supply side policies seek to address the skill deficiencies of the potential youth labour force. The skill gap is very serious for the existing youth labour force already in employment. These youth cannot be retrained by bringing them back to the education system. There are two types of unskilled youth employed labour force: those with little or no education (zero- primary level); and those with reasonable exposure to the schooling system (secondary and above).

The first category is recognized under SDG target 4.6 that seek to ensure that by 2030 all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy. The basic challenge is to impart basic literacy and numeracy skills to this labour force through publicly funded programmes. The governments Non-Formal Education (NFE) program seeks to address this skills gap. The major concern is that the NFE looks at the task only as raising the adult literacy rate with a conventionally narrow definition of literacy. This is not relevant in relation to developing skills for growth because it is now well-recognised that it makes little difference in the quality of life of people or the contribution they can make to society and economy. This is why the concept of lifelong learning has been included in the SDG education goal and targets. It is necessary now to connect literacy, basic skills development and lifelong learning opportunities and envisage learning provisions, facilities, and resources complementing and supplementing the formal education system. Widespread use of ICT resources for organised lifelong learning, e.g., through a nationwide network of community learning centres, and expanding self-learning opportunities, have to be key features of non-formal education and lifelong learning. Literacy level of the population, non-formal and informal livelihood and life skills development, and ICT-based access to information and self-learning tools and resources must be supported and promoted in a coordinated way through a lifelong learning strategy. Adequate funding and organization based on partnership between NGOs, local community, Ministry of Education and local government officials is necessary.

For the second category, the main challenge is to impart them with relevant on-the-job training in strong partnership with the business sector. Bangladesh has a good experience with this type of training in the case of the RMG sector. The female youth employed by the RMG sector in the early years of its evolution were all provided with in-house training to adequately perform the job for which they were recruited. Unfortunately, there are not many examples of this type of enterprise-funded on- the- job training owing to market failure reason. A private enterprise is not willing to spend own resources for substantial training because of the risk that the trained worker may leave for another enterprise. This is a classic case for public policy intervention.

A strategy for public-private partnership for on- the- job-training scheme can be developed, where the public sector provides the funding while the private sector imparts the training. There are two strands of this strategy. The first element concerns partnership with enterprises in the formal sector. The SEIP project has some elements of this. Based on the lessons of SEIP experience, a broader public-private partnership training scheme for on-the-job training could be developed. The second element should be geared to addressing the training needs of youth who are employed in informal sector, who are self-employed, who belong to the NEET group, and who are looking for international migration opportunities. The large bulk of the youth is in this category. The government does not have the resources or the capacity to service the

training needs of these youths. The most promising option to reach these youths and bring them in the fold of training for employment is to enter into partnerships with the donor community and the NGOS.

There are several good examples of innovative and cost-effective pilot projects related to training of youth sponsored by the donor community in partnership with the NGOSs. The largest NGO-led youth training programme is managed by BRAC under its Skill Development Programme (SDP). The SDP is multi-donor funded and according to BRAC over the past 8 years some 400 thousand youths, a large part of which is women, have received training in various employable skills in non-agriculture sector. Other good examples include: the Bangladesh Youth Employment Pilot (BYEP) sponsored by the USAID (EDU, 2009); the Bangladesh Empower Youth for Work (BEYP) sponsored by the Oxfam (Oxfam 2019); and the Youth Employment through Skills (YES) initiative supported by the UNDP (UNDP 2019). The BYEP program focuses on developing employable skills for the youth linked to the fresh water prawn farming activity. The BYEP pilot seeks to promote decent job and climate-friendly entrepreneurship for rural youth in the climate vulnerable poverty-stricken areas. The YES initiative seeks to mobilize crowd funding to finance ICT skills development of youths through a 6-month training program. Each of these pilots are innovative in their approaches and yet follow the common principle of providing training that will lead to employable skills related to market demand. These types of training are much more cost-effective and sustainable compared to the low-return National Service Program. The government should review these pilots carefully and scale up training efforts through grant assistance in partnership with the donor community and the NGOs.

Considering the Covid-19 pandemic and its adverse impacts, there is a demand for transforming the class-based training into an online virtual training. Such virtual platform will provide training and life-skill opportunities to people regardless their age, gender and geographic location within the country.

Ensuring education and training for all: The SDG Goal 4.5 seeks to eliminate by 2030 gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations. The government gets solid mark on this for creating a favourable policy environment for eliminating all forms of social discrimination in the society including in the matter of access to education and training. The relevant policy initiatives are articulated in the 7th Five Year Plan (Government of Bangladesh 2015). To pro-actively promote the cause of women, the government has also adopted the NWDP 2011. The main challenge moving ahead is to implement these policies more strongly and monitor progress. The government may want to assign monitoring responsibilities to concerned line ministries with a requirement to prepare annual progress reports on implementation that should be submitted to the cabinet for review.

Addressing the challenge of the NEET: The NEET stock presents a complex challenge. This is not simply a matter of providing better training. An expert task force led by the Ministry of Youth and Sports should be tasked with the responsibility of doing a solid diagnostic study of this complex multi-dimensional problem and come up with a long-term solution. Several measures can be taken to prevent a worsening of the situation.

First, some 83% of the NEET are women. The tougher implementation of the child marriage law and laws to prevent violence against women, and the elimination of gender gap in access to tertiary and vocational education will be a major step to reduce the female entry to the NEET group. Second, the implementation of the 12 years compulsory education will help reduce the NEET population substantively. Third, quality

enhancements in education and training discussed above will help reduce the incidence of both the unemployed youth and the NEET population. Fourth, the government can develop an outreach scheme in partnership with NGOs / CBOs that provides incentives to the existing NEET population to actively participate in employment-based training schemes. Finally, a major missing element in the government's current youth employment policy is the promotion of self -employment schemes (discussed below). This can play a catalytic role on lowering the incidence of youth unemployment as well as the incidence of NEET.

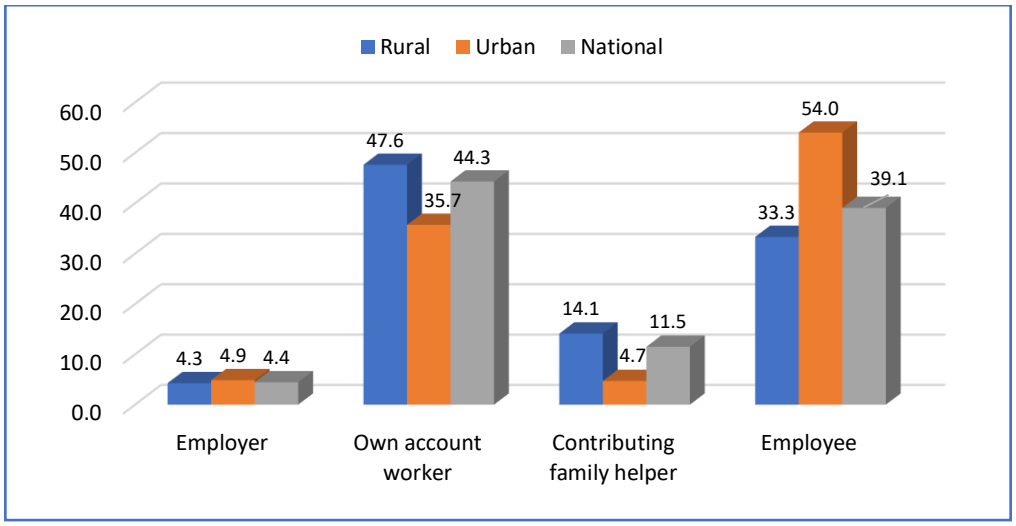
B. Demand Side Policies

The demand side policies for youth employment are focused on creating jobs that are most suitable for the youth, especially the educated youth. While both the adult and youth work force will benefit for higher economic growth and economic transformation, there are some specific areas where strategic youth-focused policies will help.

Promotion of Youth Self- Employment through Entrepreneurship

A striking feature of the Bangladesh employment structure is the dominance of the self-employed worker groups (Figure 13.1). According to LFS 2016-17, an estimated 55.6% of the employed population were self-employed, either as own account worker (44.3%) or as contributing family helper (11.5%). Not surprisingly, self-employed working population was much larger in the rural economy (61.7%) as compared with the urban economy (40.4%), owing to the dominant role of the family-based agriculture sector.

Figure 13.1: Distribution of employed population by employment status (%)



Source: Labour Force Survey 2016-17

The high percentage of own account worker is an important indicator of market response to weak wage employment opportunities. The percentage of youth involvement in own account worker (30.6%) is substantially lower than for adult (30-64) workforce (49.1%). This is explained by two factors: first the youth own account worker is typically a kind of apprenticeship working under family or friend supervision in family / friend owned business without full compensation for the effort. As such, there is a reluctance of youth, especially educated youth, to work under family ownership; and second, youths typically do not

have access to start-up capital to set up own business. This is a major policy area where promotion of youth entrepreneurship through training and access to start-up capital can provide a major boost to youth employment and wellbeing.

Non-ICT based self-employment: This characteristic of the labour market suggests that there is a strong potential role for creating jobs for the youth through self-employment schemes. In a broad sense, the CMSEs are a part of the self-employment scheme. As noted, the CMSEs are dominant in Bangladesh and the second largest source of employment. The range of activities covered is huge and can easily accommodate all the unemployed and NEET youth who are willing to participate in this market. So, policies to promote CMSEs noted above can also facilitate the growth of self-employed youth.

However, special efforts will be needed to jump start the self-employment prospects of the existing cohort of unemployed and NEET youths. Two specific actions will be needed. First, action will be needed to impart the training for entrepreneurship. The government can enter into partnership with the donor and NGO communities to impart these types of training. Second, access to credit will have to be ensured. This later policy of enhancing access to institutional credit for individual entrepreneurs and small business is a fundamental development challenge facing Bangladesh and is among the most pressing policy reform for job creation.

ICT-based self- employment: Perhaps the best prospects for self-employment for the educated youth is through the promotion of ICT based self-employment. The demand for ICT skills is huge in the labour market. Additionally, a thriving ICT-based self-employment in a range of services including web design, mobile financial services, e-commerce, and transport has emerged. The rapid growth of mobile financial service (MFS) has created a large market for qualified MFS agents, who essentially are self-employed and serve as service agents for a number of MFS providers. There is also a thriving group of self-employed web designers who are providing online services both nationally and abroad. Self-employment in e-commerce and transport services based on use of ICT is changing the urban landscape of Dhaka city.

The potential of self-employment for youth based on ICT is best illustrated by looking at the progress with the global online labour market, also known as "freelancing and gig working via internet platforms". The online labour market based on internet websites has grown rapidly across the globe. The online labour platforms match buyers and sellers to deliver a range of services that can be done remotely using internet. Examples of these services include: software development; data entry, translation, multi-media, sales and marketing support and professional services. A unique characteristic of the online labour market is that the work is transnational and many transactions cross national boundaries. This essentially means, the online worker need not be constrained by domestic demand and can actively bid for online demand globally.

To track the growth of online labour market, the Oxford Internet Institute has initiated a labour Project. As a part of this project, researchers Otto Kassi and Vili Lehdonvirta have developed "The Online Labour Index" (Kassi and Lehdonvirta 2018). The index seeks to measure the growth in demand and supply of internet based labour by type of product and country of origin. According to the latest available Online Labour data, much of the demand for global online services comes from the USA and Europe. The United States is the largest user of these services (44%), followed by the United Kingdom (8%) and Australia (6%). On the supply side, the largest supplier of online labour is India (26%), followed by Bangladesh (21%) and Pakistan (14%). This is a remarkable finding for Bangladesh and illustrates the future prospects for growth with better and more enabling ICT policies.

Some further insights on future prospects for access to global online labor market can be obtained from looking at the product demand for online services. The largest demand is for software and technology services (36%), followed by creative and multimedia (25%). Data entry and routine clerical work is at the lower end of the online market (13% market share). Bangladesh's supply of software development and technology online services is still very low and substantially lower than in India. The global demand for this service is large and growing and the Bangladesh youth employment can benefit a lot with focused policy effort to the development of these skills and associated infrastructure.

Clearly, the potential for creating self-employment opportunities for the educated youth is huge, especially for ICT-intensive services where the female youth can have an especially strong presence, working from the secured environment of their homes. To enable the full potential of the self-employment option, a number of policy reforms are needed. The most important is the access to institutional credit. The implementation of reforms advocated in the MSME financing study is of critical importance. In particular, the study advocates policies and use of ICT solutions to sharply bring down the transaction costs for delivering institutional credit to small business and individual enterprises.

The second policy measure is to accelerate the growth of ICT infrastructure and ICT-based services. Despite the rapidly growing adoption of ICT business solutions, the expansion prospect is sub-optimal and constrained by the availability of quality network (Table 6). The use of internet and smart phones is still lagging behind other countries. A major reason for this is the heavy taxation of ICT services (Ahmed 2017). On the demand side this has constrained the use of smart phones and internet services, while on the supply side this has limited the private-sector led supply of ICT infrastructure and lowered service quality. So, the reform of ICT taxation is an essential policy reform that will provide a substantial boost to GDP growth and employment in Bangladesh, including youth employment.

Third, the regulatory framework for self-employed ICT specialists and other ICT-based services must be made conducive to their growth. For example, the registration and licensing requirements for web-designers, e-commerce and ICT-based transport service providers must be simple and low-cost. Foreign currency regulations need to be simplified to enable retention and accounting for earnings from international i-labour services. These should be treated at par with remittance income from migrant labour. Furthermore, the tax filing requirements should also be simple. The taxation of CMSEs and self-employed enterprises is a big challenge that needs careful study and enabling solutions.

International Migration

Bangladesh has benefitted tremendously from its large pool of legally migrant labour, especially to the Middle East, both in terms of job creation and huge inflow of remittance income that now accounts for over 5% of GDP. In addition to supporting the balance of payments and poverty reduction through direct income transfers, these remittances have been an important contributor to GDP growth and job creation within Bangladesh through the derived demand effects of expenditures from remittance income. While international migration is a part of the national employment strategy that is being covered in a separate strategy document, all policies relevant to developing the migrant labour force participation, such as training, cost-reduction of migrant labour supply, availability of loans to pay for the migration process, and availability of information, as well as policies to ensure labour safety and protection from exploitation will also benefit the youth population. Indeed, the youth population is the highest beneficiary of the international labour migration.

Labour market information

When jobs exist, youth can be helped by providing information and employment exchange services through educational institutions, or by offering these in youth centres. The use of new technologies, particularly mobile phone based, could help in expanding job search networks for youth, linking formal and informal networks, and increasing the effectiveness of these networks. This is clearly an area where further government attention is needed.

Monitoring and Evaluation

The National Youth Policy 2017 sets laudable goals for youth employment and youth empowerment but it does not have an operational strategy to implement the goals and targets that have been set. It does not also define time-bound targets to measure progress with the implementation policy. One important policy reform would be to make this policy more operational. In that connection, it will be helpful to design a results-based monitoring framework with specific quantitative targets to measure progress with implementation. As a part of this monitoring and evaluation framework, the NYP2017 must target progress with reduction in the incidence of unemployed youth and the share of NEET youth as suggested in Table 13.2 above.

13.7 8FYP DEVELOPMENT RESOURCES ALLOCATIONS FOR CULTURE, RELIGION, SPORTS AND YOUTH

The 8FYP would support the implementation of all priority programmes for recreation, culture and religious affairs as inputs to the fuller development of the moral and human qualities of the population. The planned development resource allocations in current prices and FY2021 constant prices are shown in Tables 13.3 and 13.4.

Table 13.3: ADP Allocations for Information, Recreation, Culture and Religious Affairs in 8th Plan

(Taka billion current prices)

Ministry/Sector	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Information	2.4	2.9	3.4	3.9	4.7
Ministry of Cultural Affairs	2.7	3.3	3.8	4.4	5.3
Ministry of Religious Affairs	10.9	13.5	15.5	18.1	21.7
Ministry of Youth and Sports	3.6	4.4	5.1	5.9	7.1
Total Recreation, Culture & Religious Affairs	**19.5**	**24.0**	**27.7**	**32.4**	**38.8**

Source: Chapter 5, Part 1, Annex Table A5.2

Table 13.4: ADP Allocations for Information, Recreation, Culture and Religious Affairs in the 8th Plan

(Taka billion FY2021 constant prices))

Ministry/Sector	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Information	2.4	2.8	3.0	3.4	3.9
Ministry of Cultural Affairs	2.7	3.1	3.4	3.8	4.3
Ministry of Religious Affairs	10.9	12.8	14.0	15.6	17.9
Ministry of Youth and Sports	3.6	4.2	4.6	5.1	5.8
Total Recreation, Culture & Religious Affairs	**19.5**	**22.8**	**25.0**	**27.9**	**31.9**

Source: Chapter 5, Part 1, Annex Table A5.2

SECTOR 14:
SOCIAL PROTECTION

CHAPTER 14

SOCIAL SECURITY SOCIAL WELFARE AND SOCIAL INCLUSION

14.1 INTRODUCTION

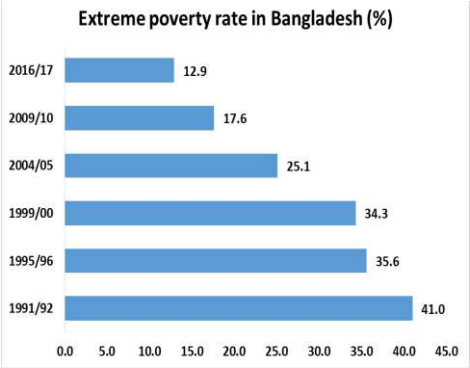
Bangladesh takes great pride in its achievements on the social front. Led by a caring and humane Prime Minister Sheikh Hasina, Bangladesh has made a commendable stride to accomplish the dream of the father of nation Bangabandhu Sheikh Mujibur Rahman to become a prosperous and just country that treats all citizens equally irrespective of caste, creed, religion or gender, where all citizens have equal opportunities to participate in the development process and the fruits of development are shared equitably. So, along with rapid income growth, a focus on human well -being is a major priority of her government. This priority is reflected in PP2021, PP2041, the 6FYP and the 7FYP in an integrated manner based on several dimensions. These include a commitment to poverty reduction and human development, provision of financial support to the poor and the vulnerable, reduction of all forms of risks that threaten human welfare, and the promotion of social inclusion to enable participation of all citizens in development.

Progress with poverty reduction and human development during the 7FYP and strategy for further advancement in these areas during the 8FYP were discussed earlier. This Chapter reviews the progress in other determinants of human welfare relating to social protection, social welfare and social inclusion during the 7FYP. Against the background of past progress, the Chapter develops the targets and strategies in each of these areas for the 8FYP. In each case, the targets and strategies are linked to the concerned SDGs and implementation of the related targets and strategies of PP2041.

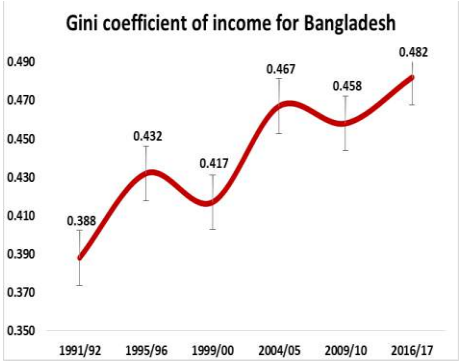
14.2 SOCIAL SECURITY

Bangladesh made impressive progress in the areas of economic growth and poverty reduction. Economic growth has had a strong impact on poverty with head count poverty rate halved from 50 per cent in 2000 to 24.3 per cent in 2016. Bangladesh is also committed to eradicate extreme poverty by FY2031. However, rising inequality (measured by various inequality indices – Gini; and Palma ratio) tend to suggest that 'economic growth' may not be fully inclusive (Figure 14.1). Accordingly, the 7FYP of Bangladesh emphasized on the need to reduce poverty and inequality to promote inclusive growth. Poverty projections using existing poverty elasticity of GDP growth show that unless this elasticity is increased substantially by reducing income /consumption inequality, even economic growth in the range of 8 to 9 per cent may not be sufficient to eradicate extreme poverty by FY2031. A combination of progressive income taxes and generous income transfers to the poor and the vulnerable through the social protection system - can play an effective role to increase the poverty elasticity of GDP and help eliminate extreme poverty in Bangladesh by FY2031.

Figure 14.1: Extreme Poverty and Inequality Trends in Bangladesh (%)



Source: Based on HIES 2016



A key component of the fiscal policy is social protection. The prime objective of the social protection system is to protect and promote the welfare of individual beneficiaries as well as society as a whole. Bangladesh has been spending about 2.2 per cent of GDP on social protection. However, a large share of this (1% of GDP) finances civil service pensions. Furthermore, available M&E indicators of the social protection system in Bangladesh reveal that the system is not apparently efficient; and cost-effective as well. As a result, the value for money of the Bangladesh social protection system is not very high. Based on the National Social Security Strategy (NSSS), some progresses have been made in SP system by embracing the life cycle approach. However, there are various impediments to implementation that remain as challenges. As a result, progress was not fully achieved compared to the reform targets set in 7FYP. Thus, there is an urgency to accelerate the SP reform agenda as set out in NSSS in the 8FYP. Moreover, the importance of wider and inclusive social protection system is now of paramount importance to fend off the social and economic perils imposed by COVID 19 that faces a large segment of Bangladesh population.

14.2.1 Key Features and Challenges of the Social Security System in Bangladesh

Social Security Programmes

Large Number of Small Schemes: The number of schemes implemented under the social security system is still very large. During the last five fiscal years, the number of schemes under the social protection schemes varied between 115 and 130 between FY 2017 and FY 2019. The number of schemes is around 55 when only the schemes under the non-development budget are considered. However, closer review of the social security budget suggests that more than 75 per cent of the non-development social security budget is accounted for by the 30 large schemes covering a major part of the beneficiaries. When the development budget is considered along with the non-development budget, allocation to the 30 large programmes is reduced to about 50 per cent. When considering the smaller schemes, some of the small programmes are too small to have any major impact whether they are consolidated or are left to exist as they are. GED completed research on small programme harmonization recommended that there is potentially room to explore harmonization of similar smaller schemes to increase some administrative efficiency without much impact on budgetary efficiency.[14]

[14] Social Security Policy Support (SPPS) Programme (2019) 'Harmonisation of Small Social Security Programmes: Issues and Policy Options' in General Economics Division (GED), Bangladesh Planning Commission, Ministry of Planning, Government of the People's Republic of Bangladesh. A Compendium of Social Protection Researches.

Low-Effort Management: Available data suggests that in Bangladesh administrative cost of cash and CCT is around 4 per cent, while administrative cost of food schemes has been found at around 10 per cent. These are significantly lower than the global average of 8.2 per cent for CCT/Cash programmes and 25 per cent for the food assisted programmes. These low administrative costs do not reflect efficiency of programme delivery; rather they are the result of low-effort management that is reflected in high exclusion and inclusion errors and leakage of resources.

Coverage

Beneficiary Coverage: Number of beneficiary coverage as percentage of total population has hovered between 32 and 34 per cent during FY2015 and FY2018. One important observation is the beneficiary coverage that is higher than the prevailing poverty rate (i.e. around 20 per cent), implying all poor and vulnerable populations are covered the system also has large exclusion errors and inclusion errors. When these are taken into consideration, the coverage of the poor becomes low.

Low Coverage for Children: A UNICEF study (2019) using MoF Social protection budget data found that in FY 2010, 3.5 per cent of the total social protection budget was spent for 5.6 per cent child beneficiaries. While in FY 2016, 2.4 per cent of the total social protection budget was spent for 2.3 per cent child beneficiaries. There is no programme to support families and caregivers in their child-care roles other than a few child-care centres in urban areas for female government employees. UNICEF's ending child marriage scoping analysis of budget allocation (2018) identified 64 government programmes and projects (with an average allocation of 1.15 per cent of total government budget over FY 2011 to FY 2016) that directly/indirectly contributed to ending child marriage in Bangladesh. However, the high prevalence of child marriage may question adequacy as well as efficacy of these programmes in ending child marriage in Bangladesh. The programmes for orphans and other vulnerable children are also inadequate.

Low Beneficiary Coverage in Urban Areas: Currently the beneficiary coverage to urban locations is disproportionally low. Bangladesh has been witnessing a rapid rate of urbanization with a rate of 35 per cent recorded in FY 2015 likely to increase to 50 per cent by 2035. Migration of rural poor has slowed poverty reduction rate in urban areas. Poverty reduction is only 10 percentage in urban areas compared to 25 percentage in rural areas. On average, during FY14-FY18 social security system allocation reveals three patterns with respect to locational allocation: (i) 49% of social security schemes serve both rural and urban areas (including government pensions); (ii) 47% of the social security schemes go exclusively to rural areas; and (iii) Only 4% of the social security schemes exclusively to urban areas. Outcomes of this allocation mismatches are: (i) coverage is lower than poverty in urban areas (i.e. 10.6% covered against poverty rate of 18.9%); (ii) coverage is greater than poverty in rural areas with 34.5 per cent coverage for 26.4 per cent (2016) poor population. Addressing SP gaps in urban areas will be critical moving forward especially considering the concentrated economic impact of the COVID-19 pandemic on urban areas. Findings from the GED completed research on the urban needs of the poor in relation to social protection point out that a renewed and dedicated emphasis on urban social protection planning is required, especially considering the continuing urban migration trend in the country. A major recommendation coming out of that work is for adopting an inclusive urban sector policy in line with the NSSS provisions[15].

[15] Social Security Policy Support (SPPS) Programme (2019) 'Diagnostics for Urban Poverty and the Social Security Needs of the Urban Poor in Bangladesh' in General Economics Division (GED), Bangladesh Planning Commission, Ministry of Planning, Government of the People's Republic of Bangladesh. A Compendium of Social Protection Researches.

Resource Allocation

Social Protection Budget Stable but Low: Bangladesh has been spending about 2.2 per cent of her GDP in the social safety net system (including social empowerment). The allocation is less than 2.2 per cent of GDP when the government employee pension scheme component is excluded. Key government plans (i.e. NSSS, Sixth Five Year Plan, Seventh Five Year Plan and SDG financing strategy) called for scaling up of the social protection budget to around 2.5 per cent and 3 per cent of GDP.

Inadequate Generosity: Average transfer amount to beneficiary (also known as generosity) has been low in Bangladesh. Estimated average transfer amount which was less than BDT 332 per month in FY 2015 increased to about BDT 595 per month in FY 2019 in nominal term. When compared with the national poverty lines, these transfer amounts appear inadequate to have more meaningful impact on the poverty situation of the beneficiaries. For instance, estimated upper poverty line for 2018 is TK 2,025 per person per month. Thus, the transfer amount of TK 595 constitutes only 29 cents of the need of a poor or vulnerable person.

14.2.2 Social Protection Strategy of Seventh Plan

The Seventh Plan emphasizes on the successful implementation of the National Social Security Strategy (NSSS) adopted in June 2015 since the successful implementation of it would provide a strong basis for Bangladesh to extend proper social protection to its poor and vulnerable population. The Seventh plan opined that 'the Proposed reforms will be instrumental in eliminating leakages, improving targeting, increasing the average value of the transfers, lowering the risks faced by the poor and vulnerable population, reducing poverty, helping to reduce income inequality and build social capital'. In addition, the changing demography of the country will have to be considered to ensure that supply and demands needs along particular services, such as health, are being matched.

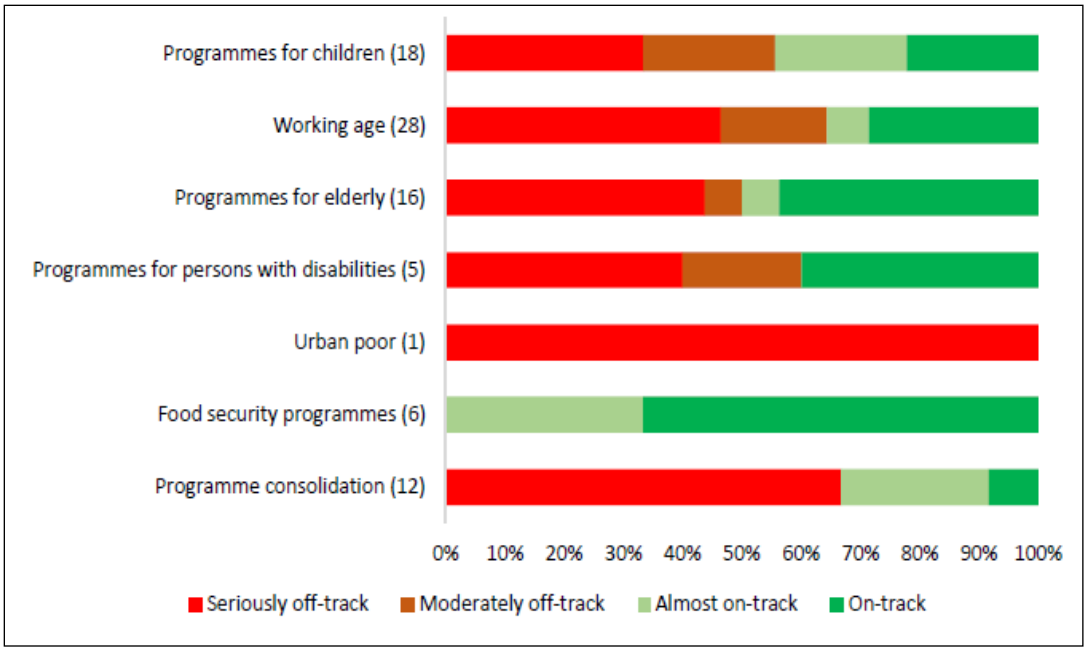
Box 14.1: Brief Overview of NSSS

NSSS provides a sound strategy that defines the various life-cycle risks faced by poor and vulnerable population and seeks to mitigate those risks by instituting a well-designed income transfer system that reaches the poorest and most vulnerable segment of the population (the young children, school going children, vulnerable women, the elderly and the physically challenged). The NSSS is inclusive of all population irrespective of race, religion, profession, location or ethnicity. It seeks to modernize the Bangladesh social security by combining tax-funded safety net programmes with contributory social insurance and employment regulations to protect the workers. It also seeks to considerably improve the administrative arrangements for social protection programmes by consolidating complementary programmes, by strengthening staffing and institutions, by instituting a modern MIS system, by replacing food-based transfer payments with cash-based payments using the financial sector based G2P (government to people) system, by introducing a grievance redressaling mechanism and by installing proper results-based M&E system. These reforms will be instrumental in eliminating leakages, improving targeting, increasing the average value of the transfers, lower the risks faced by the poor and vulnerable population, reduce poverty, help reduce income inequality and build social capital (Source: 7FYP).

Progress in Social Protection System under the Seventh Plan

In order to assess the progress of NSSS implementation, GED commissioned a comprehensive review in 2019. The review considered 86 indicators for the progress assessment. The performances have been assessed against four criteria. More specifically, scores assigned to different indicators were used to consider if they are **on-track** (i.e. when the performance indicators are fully achieved/operational as specified in the NSSS and Action Plan); **almost on-track** (when significant progress has been made on the pre-specified performance indicators but there are some gaps); **moderately off-track** (when some progress has been made but implementation is far behind the envisaged performance indicators); and finally, **severely off-track** (when very little or no progress has been made). Being consistent with the analysis above, indicators that are assigned a full-score of five are considered as 'on-track'; indicators with a score of four as 'almost on-track'; indicators with a score of three as 'moderately off-track'; and indicators with a score of either one or two as 'seriously off-track'. Summary outcome of the performances are re-produced by life cycle based programmes (as proposed in NSSS, 2015).

Figure 14.2: Implementation Status of Individual Indicators



Source: MTIR of NSSS

According to the NSSS MTIR, of the 86 performance indicators, 26 indicators (about 30 per cent) are on-track. A total of 37 indicators (43 per cent) are seriously off-track – i.e. very little progress has been made. Most of the timely implementation has been observed in the reforms related to food security, programmes for elderly, and the persons with disabilities. The reforms related to urban poor saw the least progress. This is because the only indicator envisaged in the NSSS (commissioning a study) was not undertaken during the period of review. Amongst others, the programme consolidation also lacks behind its objectives. Out of 12 indicators, it only achieved timely implementation of one indicator. There are 8 indicators in which this reform is seriously off-track.

The highest number of reform indicators are concentrated across the programmes for working age poor. Out of 28 indicators, satisfactory progress (on-track/almost on-track) has been marked on 10 indicators. There are still 13 indicators where this implementation seriously lags behind NSSS visions.

The relatively high proportion of on-track indicators is observed in the reforms related to the G2P and GRS. However, these two broad areas also have relatively fewer indicators to be assessed. The highest number of indicators is concentrated in the thematic cluster component. Of the 21 indicators, five are on-track while another 14 are either seriously or moderately off-track. Among others, all indicators for single registry MIS are either moderately or seriously off-track. While six out of four indicators for strengthening the beneficiary selection process is seriously off-track. A Single Registry Situation Assessment completed by the GED reviewed various databases considered for usage in a single registry platform looking at operational readiness. The assessment suggests that prior to initiating development of a single registry; several supporting databases require improvements first, including both operational functionality and enabling policies. Therefore, it's important to consider the development of the national household databases that would comprise a single registry, which will be a priority area in the next developmental period[16]

14.2.3 Social Protection Strategy for the Eighth Plan

The main challenge for the Eighth Plan in the area of social protection is the successful implementation of the NSSS since progress in the 7FYP was not satisfactory. The successful implementation of the NSSS will provide a strong basis for Bangladesh to extend proper social protection to its poor and vulnerable population. The proposed reforms will be instrumental in eliminating leakages, improving targeting, increasing the average value of the transfers, lower the risks faced by the poor and vulnerable population, reduce poverty, help reduce income inequality and build social capital. The core elements of the NSSS and associated implementation challenges are discussed below.

The Vision for Social Security System

In the long-term the objective should be to move towards building a Social Security system that is available to all Bangladeshis who are in need of support, providing them with a guaranteed minimum income but also a comprehensive safety net for those who suffer shocks and crises that may push them into poverty. Therefore, the long-term vision for Social Security is to:

- Build an inclusive SSS for all deserving Bangladeshis that effectively tackle and prevent poverty and inequality and contributes to broader human development, employment and economic growth.

Over the next five years the aim should be to build the foundations of a progressive and inclusive system:

- Reform the SSS by ensuring more efficient and effective use of resources, strengthened delivery systems and progress towards a more inclusive form of Social Security that effectively tackles lifecycle risks, prioritizing the poorest and most vulnerable members of society. A basic objective for the next five years should be to seek to eliminate as much as possible the incidence of hard-core/extreme poverty.

[16] Social Security Policy Support (SSPS) Programme (2019) Assessment and Road Map Report: Situation Assessment for Establishing a National Social Protection Management Information System in Bangladesh

Proposed Interventions for the 8FYP

Interventions proposed for SP during the 8FYP are categorized in three clusters: (i) Social Assistance; (ii) Social Insurance; and (iii) System improvements

Expansion of Social Assistance

Enhanced SP System Allocation in View of COVID-19

Poverty and vulnerability are projected to jump in Bangladesh due to economic slowdown and rise in unemployment in the aftermath of severe onslaught of COVID-19. Poor and vulnerable groups in Bangladesh lack savings and resources to fend off crisis like the COVID 19 impact. Addressing the health risks; and the social and economic perils of the vulnerable population should be the main focus of the government stimulus measures (Figure 14.3). Accordingly, the first priority is to provide relief to the COVID-19 affected families. Thus, the 8FYP will plan to transfer an additional 2-3 per cent of GDP as income transfer to the poor and vulnerable families in FY2021. This extra funding will be temporary to help out the poor and vulnerable families who lost income and employment due to COVID-19. For the medium term, the 8FYP will increase current social protection allocation of 1.2 per cent of GDP (excluding the civil service pension) to about 2.0 per cent of GDP by FY2025.

Mother and Child Benefit Programme (MCBP):

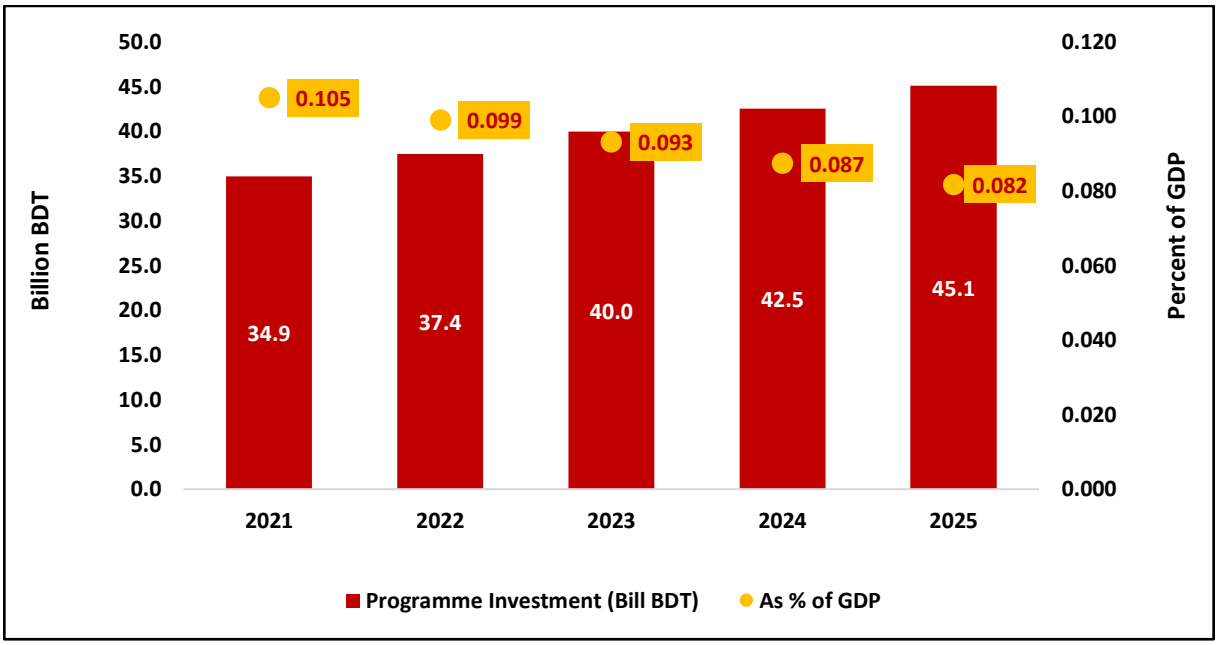
Bangladesh has made significant progress in reducing malnutrition during the 7FYP, however, poor maternal and child nutrition continues to threat healthy child growth, development and economic prospects in adult as well as the nation. The National Social Security Strategy 2015, has a provision to design and implement Child Benefit Programme based on experiences from existing Maternity Allowance and Lactating Mother Allowance Programme. Following the direction of NSSS and its action plan, MoWCA has already piloted an improved version of both programme in 2018-19 and based on experiences has inaugurated a vision with brand named Mother and Child Benefit Programme on 24th July 2019. The MCBP implemented by MoWCA targeting poor households with pregnant and lactating women for maximum of two children (First and second Children) aged 0-4 years based on their increased nutritional vulnerability. The objective of the programme is to ensure adequate access to nutritious diets through the provision of monthly cash- based transfer (BDT 800) and social behaviour change communication (SBCC) to support healthy birth outcomes, optimal infant and young child feeding practices and cognitive development to ultimately contributing to reduce all forms of malnutrition. To ensure maximum coverage for eligible households the MCBP has been further improved through the use of a digital self-enrolment process. MoWCA is scaling up the MCBP to 66 Upazilas in 2020-21 and aims to continue the scale up to reach 7.5 million households with pregnant women and children aged 0-4 years throughout Bangladesh by 2025. Based on successful implementation the ministry will further scale up the program.

Implementation of NSSS Recommendation on School Stipend

The primary school pupils and their families throughout rural Bangladesh are the main targeted beneficiaries of the primary education stipend schemes. It is a conditional cash transfer programme. This programme is designed to provide cash assistance through a stipend programme to all the eligible primary school students. The main purpose of this programme is to increase the enrolment rate among primary and

school aged children, increase the attendance rate completion cycle, survival rates and reduce the dropout rate. The Primary Education Stipend Project (PESP) is being implemented by the Ministry of Primary and Mass Education. The number of beneficiaries of PESP programme was 52.0 lakh (or 5.2 million) in FY 2010 and increased to 130.0 (or 13 million) lakh in FY 2018. The budget allocations were BDT 574.84 crore (or BDT 5,748.4 million) and BDT 1,450 crore (or BDT 14,500 million) respectively in FY2010 and FY 2018. Existing process of implementing this project needs positive intervention for improving efficiency and effectiveness.

Figure 14.3: Additional Investment Need (Billion BDT and per cent of GDP)



One of the recommendations of the NSSS (2015) was to enhance school stipend amount to BDT 300 per student per month. This has not been implemented yet. The real value of school stipend amount has fallen significantly. Thus, it is proposed to implement the NSSS recommendation during the 8FYP. Considering that the number of beneficiaries would remain more or less close to 13 million over the 8FYP plan and that they would be paid BDT 300 per month (which is inflation indexed), the estimated additional cost of the primary school stipend programmes may range between 0.105 per cent of GDP in FY 2021 to 0.082 per cent of GDP in FY 2025.

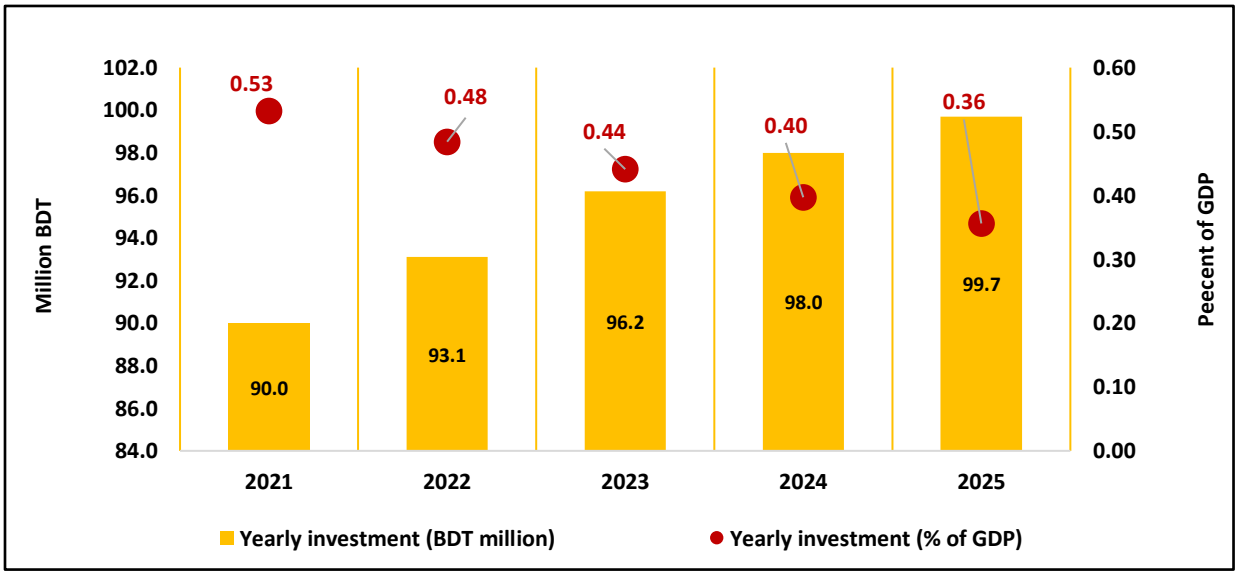
Interventions for Adolescent Girls

School drop-out and child marriages are very high among adolescent girls in Bangladesh. Poverty and security have been cited as two major factors for school drop-out and child marriages. Interventions aimed at reducing school dropout and as well as delaying early marriages argued to have long term positive impacts on mortality, nutrition status and productivity. Accordingly, large number of pilot projects has been tried in various countries in Africa and Asia. The outcomes of these interventions have been found positive in terms of delaying child marriages and reducing school drop-out. It has also been argued that the positive outcomes may be results of high cost intervention – which later on was found to be difficult to scale up. In the case of Bangladesh, according to the available data the following aspects are important in designing interventions for adolescents' girls aimed at reducing the drop-out and delaying child marriages:

- Around 33 per cent of the adolescent girls (aged 15 to 19 years) are married, and 18.5 per cent have had a live birth or are pregnant with their first child. Thus, targeted groups for this intervention are girls between age 10 and 18 or 19.
- Around 45 per cent of the adolescent girls do not attend school. Therefore, at least two types of interventions are considered–one for girls attending school but susceptible to drop-out and early marriage; and the other for girls who have already dropped-out of schools and are very much subject to early marriage.
- Transfer size and types of interventions should be designed in way that does not create 'perverse' incentive. One possible approach is to set the transfer (or enhanced stipend) amount equal to the child benefit amount (BDT 900 per month) but separated into three components – BDT 300 as stipend; BDT 300 for purchasing of hygiene products; and BDT 300 for health-related expenses. Moreover, merit type interventions such as improved security at the schools, local and community levels as well as access to safe space groups are of public good types with equal access to all girls aged 10 to 19.
- Adequate resources must be allocated for beneficiary selection and subsequent strong monitoring of the programmes.

Considering the above aspects, the programme investment for adolescent girls has been estimated. Two types of interventions have been attempted – one for adolescents' girls who are attending schools and other for adolescents' girls who are not attending schools.

Figure 14.4: Estimated Investment for Adolescents' Girls Intervention



Source: GED Projections

Investment for education intervention should be provided by the Ministry of Primary and Mass Education (as part of the proposed increased allocation of 3.0 per cent of GDP in 8FYP in place of current 2 per cent of allocation), while investment for other interventions should be covered from the social protection budget as well as from MoWCA budget. However, government should first undertake a pilot project before scaling it up for the entire nation.

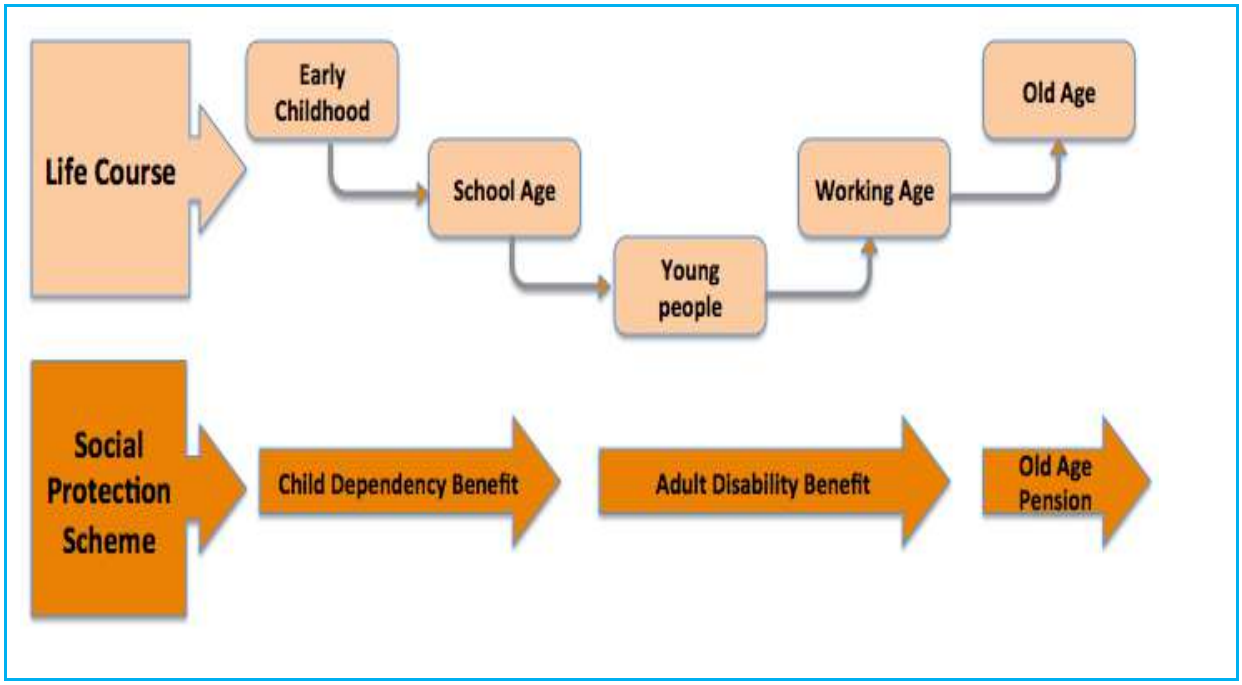
The Vulnerable Group Development (VGD) programme

The Vulnerable Group Development (VGD) programme is the largest social safety net programme under the Ministry of Women and Children Affairs (MoWCA). The long-term objective of the VGD Programme is to improve socio economic conditions of the poverty prone and distressed rural women of Bangladesh, so that they can overcome food insecurity, malnutrition and financial crisis as well as the lack of social dignity. About 10,40,000 direct ultra-poor participants across the country receive monthly food ration (30 Kg, Rice) for the household and a development support services (inclusive of life skills and income generating skills training, savings and access to credit) for a cycle (Two Years) across the country. The ministry would further increase the coverage of the program

Expanding Programmes for Disabled Citizen

Almost 8 to 9 per cent of the population in Bangladesh has been suffering some sort of disability. Disability prevalence has also been found for different stages of life cycle. However, prevalence rate increases with age. Moreover, almost 1.5 per cent of the population has been diagnosed with a sever disability. A universal scheme invoking higher than average transfer amount should be designed for the sever disables persons. Moreover, the social protection system that could be expanded in Bangladesh for disabled persons is set out in the below chart, focusing on the life cycle schemes.

Figure 14.5: An Expanded Social Protection System for the Disabled Persons



Each of these pillars of a comprehensive strategy is addressed in turn below.

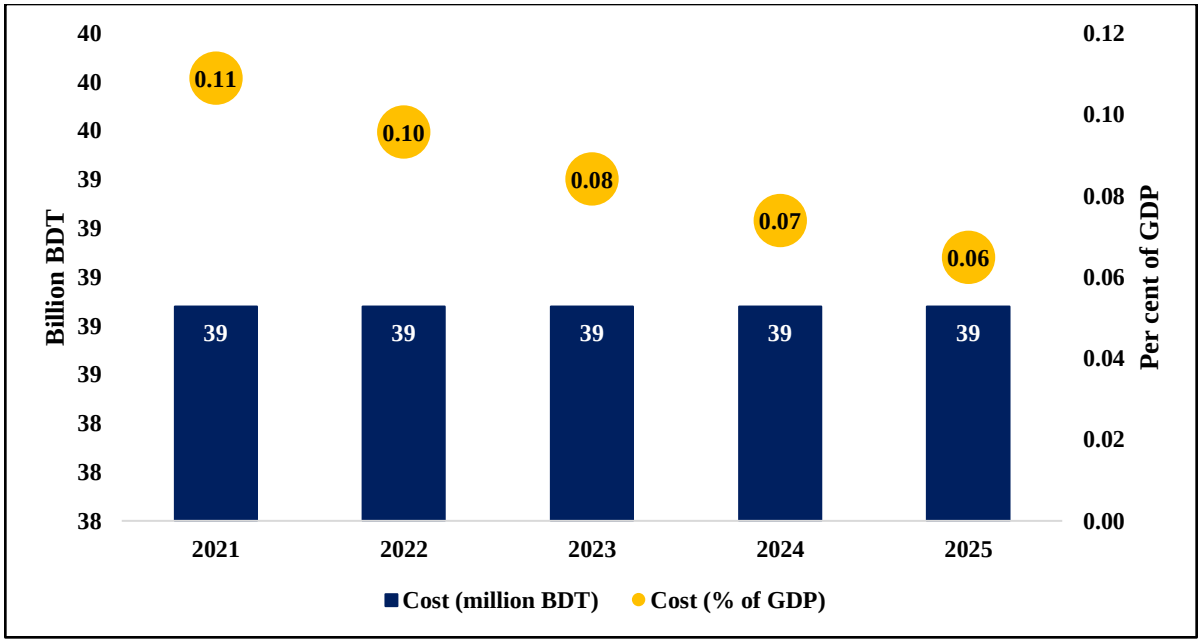
Care dependency benefit: A Care Dependency Benefit could be established/ expanded for families caring for children with disabilities. The programme could focus on children with severe disabilities irrespective of whether or not they are attending school. Once children are on the scheme, it would not be necessary to

recertify them on a regular basis. Children would automatically leave the programme when they reach 19 years of age and would be transferred to the adult disability benefit, if their disability were assessed to be sufficiently severe. The absence of recertification would reduce administrative costs and make the programme simpler to administer.

Adult disability benefit: An adult disability benefit should be established or expanded for all those aged 19-60 with a severe disability. However, once they become eligible to get social pension or other pension, the adult disability benefit should cease and beneficiaries would be covered by the pension schemes.

Using the severity rate of 1.5 per cent of total population and considering the cost of living index rise in the last 6 years, a reasonable transfer amount of BDT 3,000 per month has been proposed at 2020 prices. The BDT 3,000 will roughly equal the per person poverty line in FY 2020 and an administrative cost of 10 per cent has also been included to estimate the total programme cost under the 8FYP. The programme cost is around BDT 39 billion. The per cent of GDP cost is small – falling from 0.11 per cent in FY 2021 to 0.06 per cent in FY 2025.

Figure 14.6: Child Disability Investment (Billion BDT and per cent of GDP)



Source: GED Projections

Allowance for Freedom Fighters

The Ministry of Liberation War Affairs will continue to implement safety net programmes for the freedom fighters through allocation of monthly allowances for the freedom fighters. This ministry has been implementing special programmes for addressing the health issues of general and wounded freedom fighters. The government will provide credit facilities to freedom fighters and their families for income generation.

Reaching Out to the Socially Excluded Population

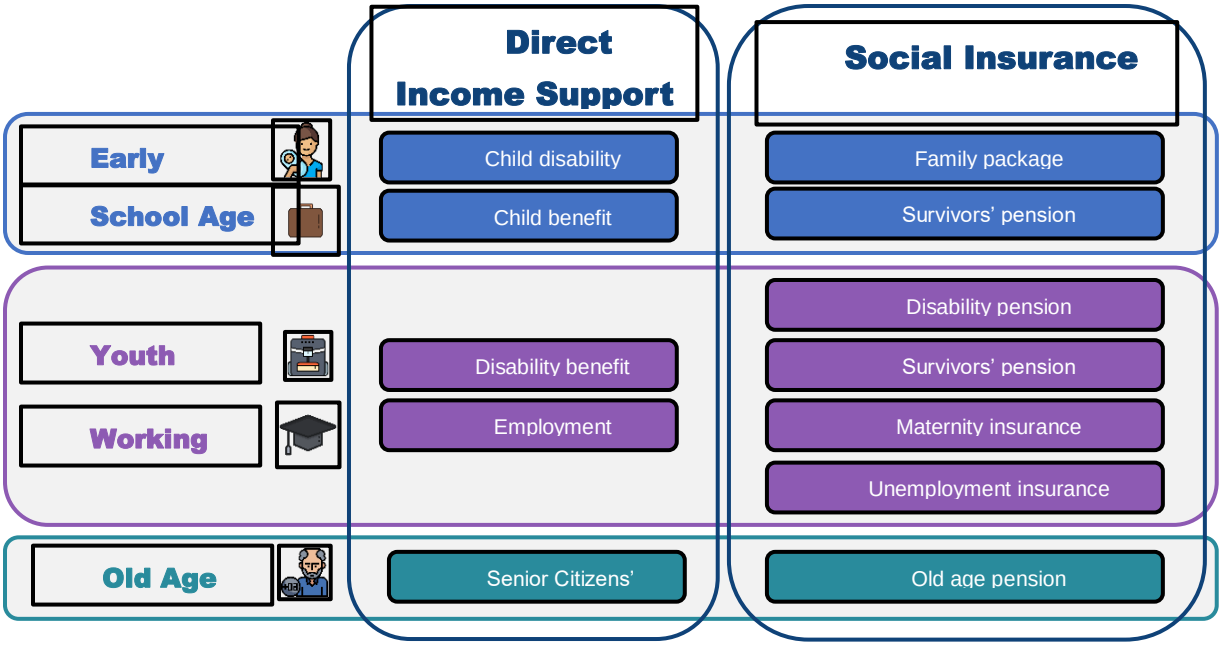
A range of socially excluded population exist that faces various social discriminations based on religion, ethnicity, profession or illness. The Government is highly sensitive to ensuring the elimination of all kinds of socio-economic discrimination against these groups through legislative and other affirmative actions. This is a major agenda item for the Government's broader Social Development Framework. The Government will also ensure that these groups have similar access as the rest of the population to all Social Security programmes and to all publicly provided basic services in education, health, nutrition, population planning, water supply and sanitation. The Government believes that these two strands of public policy are the best way to support the development of these groups.

The Government is aware that special efforts will be needed to reach many of the members of this group. This will involve sensitizing staff of Social Security agencies as well as relying on local government and NGOs for identifying potential beneficiaries. An effective grievance redressing mechanism will also be helpful to bring members of these excluded populations into the Social Security network.

Social Insurance

Along with improving the social assistance system, it is now time to focus on the other pillar of the social protection system. The 8FYP may focus on developing products which may attract a burgeoning affordable middle-income class in Bangladesh to buy various types of social insurance aiming at smoothing their consumption in times of need.

Figure 14.7: A schematic diagram of social insurance



Insurance for Working Age

Lack of decent jobs, and inability to encourage young female workforce to the labour market are some of the key challenges facing the working age group in Bangladesh. Moreover, insurance schemes for the working age groups are virtually non-existent in Bangladesh. Next generation social protection schemes must be tailored to address some of these concerns. This may include access of affordable unemployment insurance schemes for both formal and informal workers; and care services (i.e. for both child and adult care) to ensure higher participation of female workforce in the labour market.

Some of the recommendations made by the ILO may also be considered for the working age groups. They include: (i) establish systemic linkages between social insurance and employment promotion programmes, e.g. by entailing social insurance registration as a condition to access the employment promotion programmes. Increase linkages of unemployment insurance benefits with active labour market policies, by designing for instance training responding to the needs of beneficiaries; (ii) develop employment promotion programmes linking with vocational training and registration to social insurance, targeting specifically young unemployed. Reinforce public employment services, in particular career/employment/training counselling, vocational training and entrepreneurship counselling, rather than focusing only on loan programmes, notably services adapted to urban and rural youth; and (iii) develop a comprehensive programme (that combines training and retraining, counselling for entrepreneurship, career counselling) for reinsertion of differently challenged people due to working injury and occupational diseases.

Contributory Pension

Bangladesh is still a young country according to the age structure. But it is ageing fast and poised to enter the official stage of an ageing nation by 2030. The number of people aged 60 and above may reach over 40 million in 2050 from only 10 million in 2020. Thus, each of the next three decades may be associated with 10 million additional elderly citizens. The Government of Bangladesh has been completing an introduced to universal pension for her elderly citizens. The social pension has experienced impressive expansion in coverage. However, the coverage is still low compared to the need and the transfer payment seems inadequate. Due to constraints in fiscal space, it may not be feasible to expand the tax-financed social pension to cover every single elderly citizens of the country. Contributory pension schemes need to be introduced to complement the social pension schemes. Ensuring participation of the large pool of informal workers in the contributory pension schemes may turn out to be a major challenge. The experience of Kenya (Box 14.2) suggests that it may be possible to introduce contributory pension involving the informal sector or informal workers.

Following the example of Kenya, Bangladesh universal pension may be composed of the following four schemes (Table 14.1).

Table 14.1: Financing Plan for Universal Social Pension

Pension Schemes	Coverage and eligible	Regulator
Tax Financed Social pension	30% of most vulnerable elderly citizen	Public Sector
Contributory Public Sector Pension	0.5%; public sector employees	Public Sector
Contributory National Social Security Fund (NSSF)	15%; formal private sector employees (mandatory)	Retirement Beneficiary Authority (RBA)
Mbao type contributory Pension Fund	50%; formal private sector employees (Voluntary)	RBA

Box 14.2: Pension Scheme in Kenya

Pension schemes in Kenya are both Government-run and private. It composed of tax-financed schemes (such as the Inua Jamii Senior Citizens' Grant), contributory schemes such as the National Social Security Fund – NSSF, and the Mbao Pension Plan. The Mbao Pension Plan is an innovative programme, targeted at informal-sector workers, provides workers with a voluntary mechanism for pooling and investing their savings – established in 2009. Officially known as the Blue MSMEs Jua Kali Individual Retirement Benefits Scheme, the Mbao Pension Plan is a private, voluntary savings plan. Although it better suited for the informal sector, it was opened to all Kenyans from 2011. It is a flagship initiative of the Retirement Benefits Authority (RBA). As of 2018, the Mbao Pension has 100,000 members and a fund value of US$ 1,342,000. The requirements for taking part in the Mbao Pension Plan are as follows:

1. *Applicants must be citizens of Kenya and over the age of 18 years with an ID card;*
2. *Applicants must register for the scheme by paying a KES 100 ($1) registration fee;*
3. *Applicants must fill out a registration form when they present their national ID card;*
4. *Applicants must have a mobile phone to enable contributions into their account.*

Financial services infrastructure of the Mbao Pension Plan

Administrative Reforms of the Social Protection System

Programme Consolidation

Consolidating Small Schemes: The NSSS recommended the consolidation of many small schemes, many led by donors that do not fit in within the NSSS Life-Cycle and are no longer useful. Very little progress has happened so far both in terms of consolidation of programmes into core Life Cycle programmes and the phasing away of small schemes. This should be an important priority for the 8FYP to conserve resources and strengthen administrative capacity

Consolidation of Food Transfer Programmes: There is still a large number of food transfer programmes that need further review and consolidation along the lines recommended in the NSSS. The NSSS also recommended the conversion of food transfers into cash-based programmes including for rural works programmes. Since COVID-19 may increase rural and urban unemployment, conversion of all food- based work programmes into cash for work programmes would be a key reform.

Expansion of G2P Coverage

Currently multiple payment methods are used to transfer funds to the beneficiaries. A study on Payment System for Social Protection in 2017 revealed several disadvantages of the current payment systems. Some of them include: (i) delay in receiving funds; (ii) inconvenient for beneficiaries – time, opportunity, and money wise; (iii) added difficulties for old, disabled, sick, mothers with child, pregnant mothers; (iv) high transaction costs (0 – 2.5%); (vi) vulnerable to duplication and fraudulent payments; and (vii) risk in cash management. Considering these demerits, Finance Division (FD) has been implementing pilot fund transfers through G2P. According to FD, the expected benefits of G2P include: (i) direct payment from the treasury to beneficiaries' accounts; (ii) timely and regular hassle free delivery of allowances at the doorsteps of beneficiaries at zero cost to them; (iii) provides choice for beneficiaries to select according to their convenience the mode of receiving the allowances – Bank, Mobile Financial Services (MFS), Post offices etc.; (iv) prevents leakages in terms of double dipping, duplicates and eliminates ghost beneficiaries; and (v) improves Cash Flow Management for the Government. However, G2P is still very limited in scale as only a few programmes are included in the G2P pilot. For instance, cash allowances for 11 SSPs are partially disbursed through G2P. Given its merits as well as ability to enhance financial inclusion, special attention should be given to scale it to 60 to 70 per cent of the total SP fund transfer via G2P within the 8FYP. The benefits of utilizing digital payment mechanism is enhancing efficiency in Time, Cost, and Number of Visits which has also been evidenced by a SSPS Programme of GED randomized controlled trial study completed in 2019.[17]. The Study found significant efficiency benefits for beneficiaries using two digital payment mechanisms compared to the control method of manual bank collection, and opportunities for expanding financial inclusion

Benchmarking Administrative Reforms and Associated Administrative Costs

International and national evidences clearly envisaged that allocating adequate resources for administrative costs are important for programme success. Administrative resource cost will depend upon proper

[17] Social Security Policy Support (SSPS) Programme (2019) Social Security Digital Cash Transfers: Strengthening G2P in Bangladesh

administrative reforms to improve the delivery of the social protection schemes. The 8FYP will implement the following reforms: (i) properly consolidate the multitude of programmes into the core Life Cycle schemes; (ii); develop a proper list of beneficiaries to minimize exclusion and inclusion errors;(iii) develop an adequate MIS system; (iv) develop a proper M&E system; and (v) Further strengthen the Grievance Redressal System (GRS) with online filing of complaints and a time-based follow-up and resolution of complaints. These reforms will entail considerable staff and technology resources and staff training. The associated costs will have to be properly estimated and these resources provided to strengthen the implementation of the NSSS.

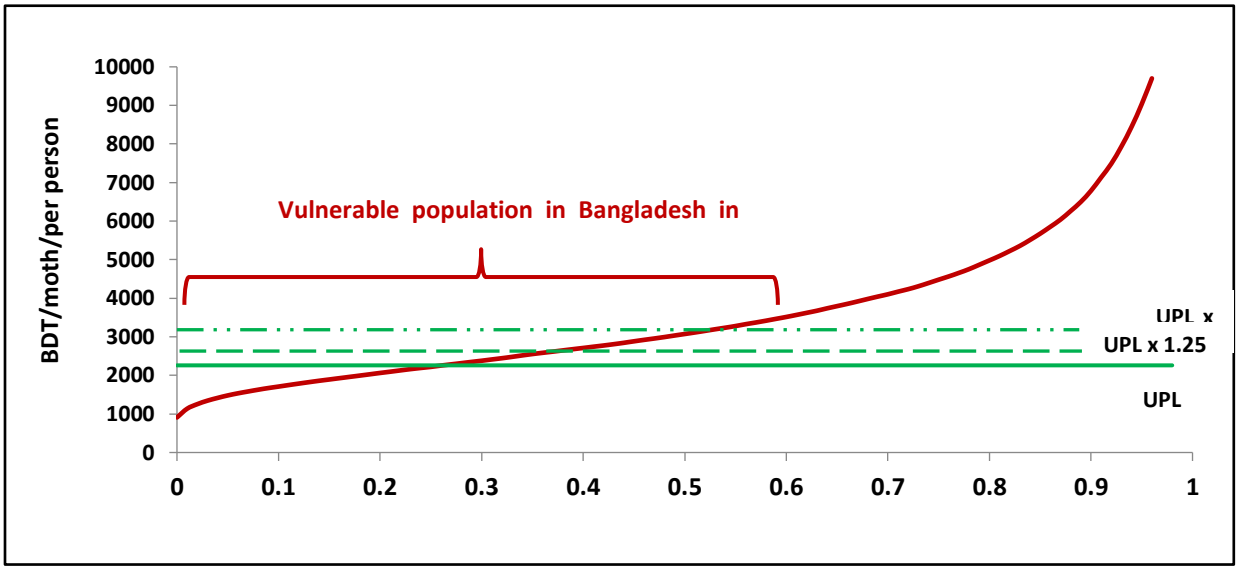
Strengthening Processes for Selecting Recipients of Social Security Schemes

A key administrative reform is to ensure that transfers go to the right people. Yet, identifying the right people is a common challenge faced by developing countries, in particular when using poverty-based selection processes. Poor targeting results in high exclusion (exclusion error denotes sum of actual poor wrongly classified as non-poor as a proportion of the total poor) and inclusion errors (leakage which is also known as 'inclusion error' is the sum of actual non-poor incorrectly classified as poor as a proportion of the total poor). Existence of high exclusion and inclusion errors demonstrate an inefficient social protection system. Moreover, due to the high levels of under coverage and leakage, social protection spending unable to attain the desired impacts on poverty and inequality.

To address the inefficiency problem, the government has undertaken a project to develop a comprehensive database of all households (known as the National Household Database – NHD) and use a selection method based on 'Proxy Means Test (PMT)' model to improve the selection of poor and thereby reduce the high level of exclusion and inclusion errors. The prime objectives of the PMT model as stated in the NHD project (2019) are to: (i) maximize coverage of the poor and vulnerable population given limited budget; (ii) make the system fully consistent with the goal of universal coverage of the poor; and (iii) address the key challenge to build a cost effective system to identify the poor.

Given the inability of the PMT model to improve the beneficiary selection at lower level of coverage, it has been advocated by social protection practitioners to adopt universal coverage of the beneficiary. However, in the context of Bangladesh, where fiscal space is low and shrinking, it may be argued that universal coverage may not be tenable. But universal coverage may be possible for some programmes (such as child benefit, and social pension etc.) involving public provision (i.e. tax financed benefit) and private contribution (i.e. social insurances such as family package, unemployment insurance and contributory pension etc.). There is also a fiscal and administrative case for potentially pursuing such a strategy. Furthermore, universal coverage may be considered for some specific regions. Against these backdrops, the cumulative consumption function of all households using HIES 2016 has been compared against the various poverty lines to determine who should be covered under the child focused social protection programmes in Bangladesh. The comparison of the cumulative consumption function derived using HIES 2016 data against various poverty lines suggests that using the NSSS definition of poor and vulnerable population (UPL x 1.25), some 50% of the population was poor and vulnerable in 2016. If the definition is widened to include vulnerable people who consume at UPLx1.5, then the proportion of vulnerable population rises to 60%, suggesting that only around 40 per cent of the households are in a position to withstand shocks of various types (Figure 14.7).

Figure 14.7: Distribution of Consumption across Households by Poverty Lines in 2016



Source: based on HIES 2016

Establishing a Results-Based Monitoring and Evaluation System for the Social Security Programmes

Continuous result based monitoring will be needed to improve delivery processes, document results, inform policymakers about the effectiveness of alternative approaches, and mobilise political support for sustainability and expansion of the programmes that comprise the strategy.

Coordinating Role of Agencies/Ministries for M&E: M&E activities will be divided into three components. Implementing Ministries/Divisions will monitor progress of their respective programmes; IMED will be responsible for overall monitoring and evaluation of implementation of projects/programmes. Lastly, the role of GED would be to prepare and update a results framework using a matrix of specific indicators and evaluate performance of NSSS implementation in a holistic approach. The GED will also be responsible for overall coordination of the M&E framework and dissemination of the evaluation results. The Central Monitoring Committee (CMC) headed by the Cabinet Secretary will play a critical supervisory role. In particular, the role of the CMC will be performance review of social security programmes, inter-ministerial coordination, trouble shooting and crisis mitigation.

Dissemination and Use of M&E Results: Emphasis on M&E is placed in order to ensure that best results are obtained from the resources spent on Social Security. It is therefore important that there are well-specified mechanisms for disseminating the findings of the M&E. All information needs to be readily available to stakeholders, in this case the beneficiaries, ministries and NGOs involved. The beneficiaries should be aware of the programme outcomes and the eligibility criteria for each programme. This could be best achieved by putting all monitoring data and evaluation results on the websites of the implementing ministries as well as the website of the Planning Commission. All evaluation reports would be shared with the Cabinet and responsible Parliamentary Standing Committee. GED will be responsible for reporting to the Cabinet and subsequently GED and Cabinet Division will report to the Parliamentary Standing Committee the types of actions taken to respond to the findings of the evaluation reports.

A Dedicated Survey on Social Protection System in Bangladesh

HIES has incorporated a section on social protection system covering 30 large programmes since 2005 with an aim to generate data to assess the performance of the social protection system. HIES has been a good source of information for assessing the social protection system. However, the extent of exclusion and inclusion errors are quite large according to the HIES social protection data base. Moreover, a deeper analysis of HIES social protection data base reveals existence of large numbers of outliers – perhaps influencing high exclusion and inclusion errors and related other deficiencies of the social protection system. Discussion with DSS officials also transpired that they are skeptical on the extent of high exclusion and inclusion errors emerged out of HIES data and pointed to unsatisfactory data collection methods adopted by the HIES field enumerators. Considering the importance of a comprehensive data base for the social protection system, a dedicated survey of social protection system may be carried out under the aegis of the General Economics Division. Moreover, this should be supplemented by a comprehensive review of the administrative arrangements of the major 15 to 20 social protection schemes covering cash, CCT, food and livelihood programmes.

14.3 FOOD SECURITY

The Government of Bangladesh, through policies and plans, has consistently kept a high level of commitment to the goal of achieving food security and nutrition for its people. The SDGs call upon to end hunger, achieve food security and improved nutrition and promote sustainable agriculture by 2030. To this end, the government has prepared the National Agricultural Policy 2018. The major objective of the policy is to ensure food security and socio-economic development through productivity of crops, boosting production and raising farmers' income, diversifying crops, producing safe foods and developing a marketing system profitable for agriculture. National Food and Nutrition Security Policy 2020 has already been published to cover the period until 2030 in consistence with the SDGs. This Plan should also be an important way forward to tackle the COVID-19 -induced challenges while keeping Bangladesh on track to maintain its food security target

The outbreak of the COVID-19 pandemic is causing unprecedented disruptions in economic activities including those associated with agricultural supply chains and production, adversely affecting livelihoods and income of poor and low-income households, most of who are in the informal sector, potentially raising the concern about food insecurity. Generally, after a major global crisis, food security becomes a prominent issue for low and middle-income countries as many agricultural exporting countries impose indiscriminate restrictions on trade in farm products with the objective of maintaining domestic supplies. The World Food Programme (WFP) predicts that the COVID-19 pandemic could see more than a quarter of a billion people suffering worldwide from acute hunger by the end of the year. In this backdrop, ensuring food security should prominently feature in the strategies for the agriculture sector development under the 8th Five Year Plan.

14.3.1 Challenges of Food Security and Nutrition

Maintaining agricultural growth: Bangladesh emerged as one of the fastest growing economies in Asia. Agriculture works as the driving force in the socio-economic development in the country. Overall, agricultural growth is subject to a lot of fluctuations. It needs to be stabilized at around 4% to maintain a yearly GDP growth of greater than 8 per cent. The composition of agricultural GDP is changing from crop-

based to non-crop sectors with the process being slow. The slow and fluctuating growth of agricultural GDP remains a matter of concern. To feed the increasing population, the growth needs to be stabilized at a higher rate. The challenges of agricultural growth and diversification for crop and non-crop sectors have been discussed in detail in Chapter 5, Part 2 of the Plan Document.

Ensuring social access to food: Access to food has three dimensions: economic, physical and social. Economic access largely depends on income, price and the resultant purchasing power. Lack of purchasing power inhibits access to food by the poor people. Peoples' access to food may also be physically constrained due to the breakdown of transport infrastructures (as a result of, for instance) severe natural disasters. Other factors can also disrupt the smooth supply of food to some specific locations.

The steady growth of per capita income and moderate decline in poverty over the past years has not been associated with any appreciable changes in income distribution situation in the country. The overall Gini coefficient rose from 0.451 in 2000 to 0.483 in 2016 indicating that income distribution worsened over the past years. According to HIES data, between 2010 and 2016, income accruing to the bottom 5 per cent of the households declined from 0.78 per cent to 0.23 per cent, while the corresponding share by top 5 per cent households increased from 24.6 per cent to 27.9 per cent. The overall income inequality is a matter of concern for ensuring food security and needs serious policy attention. The spending on social safety net programmes (SSNPs) to improve food security of the poor and vulnerable has increased although there are issues of high targeting errors in beneficiary selection, and many poor and vulnerable households, particularly in urban areas remain outside the safety net. The importance of social security coverage for ensuring social access to food for the vulnerable population has become more prominent in the aftermath of the COVID-19 crisis.

Public food distribution has historically played an important role in improving food security of the poor. Public food distribution through Open Market Sale (OMS) and Fair Price Card (FPC) increased significantly over the years. However, the government faced problem in its food operations due to inadequate storage facilities. The government has therefore taken initiatives to expand and improve food grain storage facilities by building additional high-quality modern storage facilities.

Challenges of ensuring dietary diversity: Dietary diversity is important for improving the nutrient adequacy of diets for better health. Rice is the main cereal consumed. While its consumption, as mentioned above, has fallen, it is still closer to the desirable norm of intake. Data from the HIES reports show that the national consumption of cereals was 64 per cent of daily energy intake per capita in 2016 – down from 70 per cent in 2010. The target consumption of cereals in the per capita energy intake is 60 per cent. The consumption of nutrient-dense foods such as meat, eggs, fruits and vegetables increased over the past years. Nutrient density helps in closing the nutrient gap in the diet. Consumption of fruits and vegetables, according to the HIES 2016, is 203 grams which is about half of the WHO/FAO recommendation of 400 grams/person/day.

Dietary diversity among women of reproductive age is very critical. The minimum dietary diversity score – a proxy for micronutrient adequacy in their diet - shows that just 46 per cent of women had the minimum dietary score in 2015. From 2016, a new indicator called the Minimum Dietary Diversity for Women (MDD-W) is in use. A target has been set for achieving 75 per cent of MDD-W by 2030. The monitoring of progress suggests that Bangladesh is not on track to achieve the dietary diversity target. From 2011 to

2014, the proportion of women achieving minimum dietary diversity has remained unchanged at around 29%, and from 2014 to 2015 it increased to 31 per cent (FPMU, 2019). Comparison of the actual consumption data with the data on Desirable Dietary Pattern indicates significant gap for major food items. The supply and consumption of nutrient dense foods need to be increased for bridging the nutrient gap. To this end, policies need to address and enhance nutrient density and diet quality for augmenting dietary diversity of people.

Rapid urbanization: Bangladesh has seen urbanization taking place at a rapid pace. In 1974, only 9 per cent of the total population was living in urban areas, while in 2018 the corresponding figure reached about 37 per cent. One salient feature of urbanization in Bangladesh is that it took place in an unplanned manner and consequently a large number of the growing urban population became slum dwellers. Urbanization is also associated with lifestyle change of people involving lesser degree of heavy work and changes in food habit. Thus, while the battle against under nutrition continued to prevail, the problem of obesity and lifestyle-related illness have become a serious challenge.

Food safety, food adulteration and quality of processed food: Unhygienic practices in food handling are a commonplace in Bangladesh. Countless restaurants, roadside small food vendors, fast-food outlets, etc. are cooking, baking and processing food stuffs in unhealthy environments. Along with this, adulterated food now acts as a serious health hazard threat. Contamination of food with chemicals in most cases starts with residual effect of inputs used for crop production. Farmers intentionally or unintentionally use overdose of insecticide, pesticide and fertilizers due to lack of knowledge and awareness. This practice is especially harmful for fresh fruits and vegetables. For livestock and fisheries products, chemical residues from other industrial wastes are alarming as they affect feed, fodder, water, medicine and many others. Besides, excessive and illegal use of preservatives, artificial ripeness, growth hormones, colours, etc. make the food stuffs dangerous for public health safety affecting millions of consumers.

Food chain contamination by heavy metals is also an alarming concern for food safety because of their potential accumulation in bio systems through contaminated water, soil and irrigation water. The major sources of heavy metal contamination in soil are industrial discharge, fertilizers, contaminated irrigation water, fossil fuels, sewage sludge and municipality wastes, etc. (Islam, 2013). Heavy metals are subsequently taken up by crops from soil. Different types of chemicals, raw materials/ingredients, packing material, animals and birds, insects, rodents, garbage and sewage, soil, air/dust, water, virus and bacteria and industrial effluents are the major sources of food contamination in Bangladesh. Along with deficiencies in legal provisions and their enforcements in ensuring food safety, there is also a lack of effective coordination among several bodies in the regulatory regime. The government has enacted the Food Safety Act 2013 and a Food Safety Authority has been formed. However, a lack of resources and technical capabilities of the testing authorities are major problems.

14.3.2 Objectives and Strategies for Food Security and Nutrition in the 8th Plan

Food and nutrition security exists when "all people at all times have physical, social and economic access to healthy and nutritious food, which is consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life" (CFS 2012). The development vision of the 8th plan for the food security and nutrition section is aligned with the National Food Policy 2006, Food Safety Act 2013,

Second Country Investment Plan (Nutrition-sensitive Food Systems) [2016-2020], Food and Nutrition Security Policy 2020, and the SDGs. The goal of 8th Five-Year Plan is to improve the food and nutrition security status to the level needed to achieve the FNS-relevant SDG targets and fulfil other related national and international commitments by 2030, improving public food procurement, increasing food storage capacity and modernization. The specific objectives of the 8FYP are to:

- Ensure availability of safe and nutritious food for healthy diets; ensure access to safe and nutritious food at an affordable price.
- Enhance the demand for and consumption of healthy and diversified diets for achieving nutrition improvements; promote interventions to improve dietary diversification to ensure nutrient adequacy among women in reproductive age, especially among adolescent girls, and young children using existing entry-points and multiple community and sectoral platforms.
- Increase access to nutrition-sensitive social protection and safety nets across life cycle with a focus on vulnerable groups and regions and strengthen promotion of nutrition through social protection and safety net programmes as well as establishing referral systems between programmes and services.
- Develop and support innovative approaches to support programmes (e-vouchers for diverse foods, tele messaging, e-training, etc.)
- Accelerate nutrition-focused agricultural diversification while continuing to improve the productivity of cereals enhancement and conservation of nutrients in post-harvest storage, transformation and distribution.
- Develop and improve modern facilities for food storage along with increasing capacity.
- Strengthen multi-sectoral food and nutrition security governance, coordination and partnership for effective policy implementation.
- Develop and improve ICT-based public food procurement, storage and distribution system
- Strengthen the coordination mechanism for a comprehensive national level food safety system including the establishment and operation of national codex committee.
- Strengthen the capacity of food testing situation by establishing BFSA reference lab and improving other public laboratories.
- Explore Public-Private Partnership in case of large-scale investment to introduce modern food management system.
- Formulate and implement a comprehensive National Strategy/Policy for reduction of food loss and waste.

Sustaining agricultural growth and developing nutrition sensitive agriculture: In line with the Perspective Plan 2041, the 8FYP intends to enhance agricultural production and ensure food and nutrition security for all. In order to feed the growing population sustaining agricultural growth and diversification from the mono-crop production activities are important. The strategies for crop and non-crop sectors for sustaining and improving agricultural growth and promoting diversification are discussed in the crop and non-crop sections later in this chapter.

Nutrition sensitive agriculture and food-based approaches are sustainable strategies for eradicating hunger and malnutrition including micronutrient deficiencies. Such strategies including food production, dietary diversification and food fortification ensure sustainable food and nutrition security, dietary improvements

and dealing with micronutrient deficiency (FAO 2014). Food based strategies promote production of micronutrient-rich foods such as vegetables, fruits, fish and meat. Vegetable production and consumption is the most direct and low-cost method for most of the rural and urban poor to increase micronutrients in their diets. Leafy vegetables and tomatoes are important sources of vitamins, particularly vitamin A. Bangladesh adopted advanced technologies for bio-fortified agriculture. The first bio-fortified rice variety called BRRI Dhan 62 (enriched with zinc) has been released. This rice is capable of fighting diarrhoea and pneumonia-induced childhood death and stunting. Presently almost 60 per cent of the marketed edible oils are fortified with vitamin A (FPMU, 2014). Agricultural research will be enhanced further to promote nutrition sensitive food production.

Enhancing purchasing power of people and improving employment and income: Increasing purchasing power and enhancing employment and income involve three broad strategies namely transitory shock management, employment generating income growth and targeted food assistance programmes. The measures to accomplish the objectives would include special measures for disaster mitigation in agriculture, increased supply of food through market and public distribution and investment in employment generation activities. An important way of increasing purchasing power of people is to expand rural non-farm employment opportunities. The Bangladesh economy has undergone remarkable structural changes over the past decades. Expansion of rural transport infrastructure, electricity and telecommunication facilities is the prerequisites for rapid expansion of non-farm activities in rural areas. In designing policies for rural non-farm employment, female workers need to be given priority in the participation of non-farm activities. To achieve this desired objective, opportunities for women will have to be created through both public and private initiatives.

Developing more inclusive and nutrition sensitive social protection: Under this initiative, the effectiveness, targeting and content of social safety net programmes are improved including by strengthening nutrition education and promotion to provide better protection of different vulnerable groups. This is done through the following sub-programmes: (i) expand and strengthen safety net programmes for poor and vulnerable groups across the lifecycle, (ii) expand and strengthen programmes for people living in vulnerable and disadvantaged geographical areas, and (iii) introduce nutrition sensitive social safety net programmes including food fortification and nutrition promotion. Social safety net spending has two components: social protection and social empowerment. The importance of social safety nets and strategies for strengthening the coverage of social protection are discussed in the relevant chapter of this document. For example, the Ministry of Primary and Mass Education provide fortified biscuits with vitamins and minerals to pre-primary and primary school children in high poverty prone areas. The programme also includes learning package for children, and other neighbouring people for vegetable gardening, health care, nutrition and hygiene. The school meal programme has been initiated in few upazilas for ensuring nutrient food for the children which will be rolled out nationally. In order to make public food distribution system more nutrient sensitive, efforts will be made to offer micronutrient-fortified food grains in the open market operations and through the safety net channels. The Government in collaboration with development partners and the private sector is introducing fortified rice (called pushti chal) for reducing micronutrient deficiency.

Ensuring food safety through food chain: This will be a priority issues for Bangladesh in the coming years. For adulteration, apart from an economic motive, lack of awareness can also act as a major driver. On the production side, therefore, awareness building Good Agricultural Practices (GAPs) among the farming households will be crucial so that production practices can improve the quantity, diversity, and

nutritional quality of the produce. The related policies would not be focused on just the rate of growth, but also the quality of growth. Well-developed agricultural value chains through institutional innovations like contract farming can reduce the risk of contamination or adulteration through agreements on quality standards. Contract farming can be institutionalized with necessary stipulation of provisions in the contracts to protect the interests of the contracting parties including the smallholder farmers. Appropriate policy support will be provided by the public authority in this regard. Agribusiness firms often also agree to support farmers through a variety of services, such as input supply, extension advice, and transportation of produce to their premises. It is essential to increase surveillance on different market actors to promote food safety attributes.

Enacting of appropriate laws and introduction of proper monitoring systems require coordination among the authorities responsible for ensuring food safety. An integrated view and related operational procedures are necessary for ensuring food safety so that a framework combining laws and regulations including standards, food safety management, inspection and enforcement services can be made effective. Implementation of regulations also requires quality food testing facilities. Mobile laboratories could be helpful with adequate supply of technicians and testing kits to run those laboratories. The BSTI laboratories alone may not be enough. There should also be central food testing facilities at least in every divisional city. Institutions particularly those with various mandates on food safety should be allocated adequate budgetary provisions for their activities.

The Parliament of Bangladesh passed the Food Safety Act 2013 under which the Bangladesh Food Safety Authority (BFSA) was constituted to strengthen collaboration among inter-ministerial and inter-agencies for ensuring food safety and food control. The government also constituted 64 District Pure Food Courts and 6 Metropolitan Pure Food Courts in 2015. Considering risk-based inspections and determining safety standards, the BFSA has drafted the following regulations: (1) Food Safety (Sample Collection, Test and Analysis) Regulation 2015, (2) Food Safety (Contaminants, Toxins, and Harmful Residues) Regulation 2015, (3) Food Safety (Food Additives) Regulation 2015, (4) Hygiene Preservation and Preparation of Food Regulation 2016, (5) Labelling of Packet Food Regulation 2016, Bangladesh Food Safety Authority Service Regulations 2016 and (7) Bangladesh Food Safety Authority Service Rules 2016 (FPMU 2017). Effective implementation of the Bangladesh Food Safety Act will be accelerated after finalization of these regulations and rules.

Increasing storage capacity and modernization: To ensure quick response and delivery mechanism, food storage capacity needs to be strengthened. Modernization, mechanization, vertical and bulk storage with modern weighing and handling etc. are inevitable for the development of nutrient-sensitive food storage. During the 8th Plan, the Ministry of Food has set the target to increase the storage capacity up to 3.7 million MT by 2025. The following activities will be undertaken for to strengthen public food distribution systems:

- Increase shelf life and maintain quality: need modernization, mechanization, vertical and bulk storage.
- Reduce use of land: promote vertical storage in place of flat go downs
- Reduce cost of handling and storage: bulk and vertical storage with modern bagging, weighing and handling equipment.
- Increased storage capacity with drying system in the intensive production zone for the farmers
- Increase storage capacity in disaster-prone areas to boost response capacity.
- Develop storage to cater for the need for nutrition interventions for the storage of fortified food.

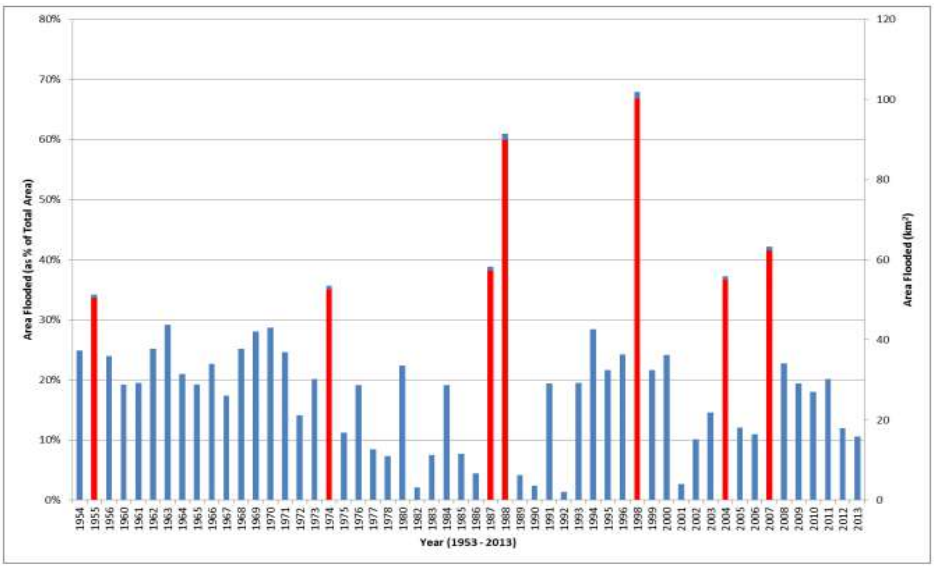
- Develop food storage equipped with ICT to update and quick sharing of data and information on transactions and be equipped with supply/production management applications.
- Maintain Buffer stock and ensure access to food and nutrition security to the poor and vulnerable groups.

The Directorate General of food (DG Food) currently owns seven silos and 3,081 flat conventional go downs of which some are unusable. About 75 per cent of unusable go downs have already been rehabilitated and the rest are in the process of rehabilitation. With a view to constructing eight modern steel silos having capacity of 5.35 Lac MT, the government is implementing the Modern Food Storage Facilities Project, financed by the World Bank.

14.4 DISASTER MANANGEMENT

Bangladesh remains one of the most disaster-prone countries in the world, experiencing storm surges, floods, tropical cyclones, and droughts. As indicated earlier, it has also been rated 7th most vulnerable on the Climate Risk Index in 2019. Moreover, Bangladesh's hydro-geological features substantially enhance its vulnerability to disasters and climate change, as 88 per cent of the country's landmass consists of a floodplain. Also, due to the Ganges-Brahmaputra-Meghna (GBM) river basin, this region must drain over 92 per cent of the monsoon rainfall runoff generated in the combined catchment, within only 4 and a half months (June to mid-October). During the peak of the monsoon, neap tides are high enough to penetrate coastal plains, and owing to an inverted funnel-shaped shoreline, and in the path of storms and surges from the Indian Ocean, the country remains vulnerable to cyclonic disasters. Flood modelling has also indicated that the total flood-affected area will increase between 2020 and 2050, while the inundation area due to climate change will increase by 6 per cent in the decade following 2030, and 14 per cent in the decade following 2050, compared to a base year of 2005. Figure 14.8 offers a graphical depiction of all extreme flooding events between 1954 and 2013. Advanced modelling of cyclone storm surge impacts under different climate scenario on potential future inundation zones by 2050 is also provided in Table 14.2.

Figure 14.8: Inundation Area (in Percentage) by Major Historical Floods Since 1950s



Source: Flood Forecasting and Warning Centre, Bangladesh Water Development Board (BWDB)

Table 14.2: Estimates of Vulnerable Areas (km^2)

Inundation Depth	2050 Without Climate Change (km^2)	2050 with Climate Change (km^2)	% Change
More than 1m	20,876	23,764	+ 14%
More than 3m	10,163	17,193	+ 69%

Dasgupta et al. (2014)

The Government recognizes this proneness to disasters and has (over the years) formulated various laws and plans to develop an effective response capacity to the threat of natural disasters. The Disaster Management vision of the Government is to reduce the risk of people – especially the poor and the disadvantaged – to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level and to have in place an efficient emergency response management system capable of handling large scale disaster. Some of the notable are mentioned in Table 14.3. In particular, the two central laws and action plans that guide policies and activities under disaster management are the "National Plan for Disaster Management 2008 – 2015" and "Standing Orders on Disasters 2010". The overall objective of disaster management is to reduce the underlying risks and to promote the adaption to the effects of climate change. This will result in a substantial reduction in the losses, of lives and in the social, economic and environmental assets of persons, communities and the country from disasters.

Table 14.3: National Legislations and Policies related to Disaster Management

Policy Document	Description
Disaster Management Act, 2012	Aims to make disaster management activities coordinated, object-oriented, and strong in formulating rules to build infrastructure for resilience.
Coastal Zone Policy, 2005	Acknowledges the importance of ecosystems and biodiversity conservation on the coasts and supports coastal people in developing sustainable livelihoods.
National Plan for Disaster Management, 2008-2015	Calls for comprehensively addressing DRR and CAA in all development plans, programmes, and policies through assessing climate change risk, emphasizing community-based programmes, building public awareness, improving early
National Adaptation Programme of Action, 2005	Identifies 15 priority activities for adaptation action, including general awareness raising, capacity building, and project implementation in vulnerable regions, with a focus on agriculture and water resources.
National Disaster Management Policy 2015	Defines the national perspective on disaster risk reduction and emergency management, and to describe the strategic framework, and national principles of disaster management in Bangladesh.
National Plan for Disaster Management 2016-2020	Updates NPDM 2008-2015
Standing Order on Disasters, 2019	Works to make relevant persons understand and perform their duties and responsibilities regarding disaster management at all levels.

14.4.1 Progress during the 7FYP

The main goal for disaster management in the 7FYP was to improve the disaster management response and capabilities building on past successes and the various strategies adopted by the government. The 'Vision 2021' identified 'Effective Disaster Management' as one of the key sub-goals and puts emphasis on seasonal flood and drought mitigation, establishing of an effective early warning and evacuation mechanism, and development of a natural disaster insurance scheme to compensate the physical and property damage. The Second Perspective Plan 2021-2041, Bangladesh Delta Plan 2100 and the National Sustainable Development Strategy (NSDS) have provisions and put emphasis to implement NPDM. The local level (Upazila) development planning proforma is being revised by the Local Government Division where inputs provided by the Ministry of Disaster Management and Relief will make it more effective for disaster risk reduction

Some specific activities that were under taken by the MoDMR include:

- Nearly 8 million rural labours were provided employment under the "Employment Generation Programme for the Poorest (EGPP)", which helps to address rural poverty.
- The Government distributed food grains to more than 2.1 million beneficiaries under the Humanitarian Assistance Programme, while thousands received CI Sheets to develop homes lost in natural disasters like storms.
- Under the Vulnerable Group Feeding (VGF) Programme, food grains have been distributed to more than 8 million beneficiaries.
- Winter clothes (blankets) have been distributed among large group of beneficiaries.
- Under the FFW/ MFW Programmes, a wide array of projects has been implemented by more than 8 million rural labourers.
- Under the Test Relief (TR) Programme, a wide array of projects was implemented by more than 10 million rural labourers.
- In 6 Haor districts affected by flash floods, both food and income support were given to affected families.
- Among people affected by the hill slides, rice and CI sheets were distributed to rebuild their homes.
- More than 200,000 solar panels were installed across rural households and more than thirty thousand solar street lights in rural streets and hat-bazars have been installed.

14.4.2 Objective and Strategies for Disaster Management under the 8FYP

The 8FYP will build on the progress made during the 7FYP, while also internalizing the lessons of past experiences. These lessons are as follows:

- The Standing Orders on Disaster (SOD) is only an Order not an Act, and there is no legal obligation for the implementers of the SOD. The development of a forward-looking legal framework will facilitate effective implementation of the actions defined in the SOD. As a result, under the 8FYP, the Government is committed to develop an effective legal framework that offers the SOD a legal footing.
- The bodies for coordinating the SOD are not sufficiently functional. More training will be offered to enhance the knowledge and skills of the stakeholders. Advanced training, refresher training, on

the job training etc. will also be arranged. No work can be done effectively unless the stakeholders are motivated and committed. The Government will also offer greater motivation for better performance by reshaping the incentives, such as: rewarding the best Union Disaster Management Committee (UDMC), rewarding the best UDMC member, rewarding the best volunteer etc.

- Natural disasters cannot be stopped. But the loss of lives, assets and properties can be reduced significantly through effective and timely activities for preparedness. The Union Disaster Management Committees (UDMCs) are instrumental for reducing disaster risks of the vulnerable people. The Standing Orders on Disaster (SOD) can guide the UDMCs for understanding and performing their roles and responsibilities. Hence, the Government will mitigate existing challenge for better operationalization of SODs through joint collaboration and adopting multi-sectoral approach.
- Monitoring is very important to track progress, recognizing the challenges and making the necessary adjustments. To that end, the Government will ensure that the Upazila Disaster Management Committees (UDMC) remains committed to monitor the activities of Union Disaster Management Committee (UDMC) regularly and provide proactive support as and when required.
- The identification, mobilization and utilization of resources remain a critical challenge. The Government will pay due attention to this concern so that the UDMCs have the adequate resources for better implementation of the SOD and the Disaster Contingency Plan. Bangladesh has achieved significant progress in ensuring 100% sanitation in many of the Unions. One of the underlying factors for this success is allocating resources at the Union Parishad (UP) budgets for this purpose. Similarly, the Government will ensure provisions for the Disaster Contingency Fund at the Union level. This fund will be utilized for awareness activities and developing mechanisms for early warning, search & rescue, shelter management etc. during disaster period. The Union Disaster Management Committees (UDMCs) will also take collective initiatives to generate the Disaster Contingency Fund through the mobilization of local resources.
- Reducing the risks of disaster is a multi-sector endeavour. It is not possible for the Government to tackle disasters alone unless strong collaboration among all the relevant stakeholders, such as the Government, the NGOs, researchers, scientists, the civil society, the private sector, the media etc. are established and maintained. Collaborative efforts will be undertaken to strengthen the activities for preparedness at all levels and reduce the impact of disasters.
- Preparedness at the community level works very well where it is part of poverty alleviation programme. People living under the poverty line or on very limited income cannot undertake measures for their safety simply because they cannot afford those measures. This is reflected in how people with limited incomes are forced to opt for risky housing options – built through muds or light materials in the Chittagong Hill Tracts that are very vulnerable to cyclones and storms. Hence, the Government will undertake more investments to increase the safety of such vulnerable communities by building/installing infrastructures that are resilient to the impacts of climate change.
- Having access to early warnings remains a challenge and thus, effective institutional measures will be undertaken to overcome this problem. In particular, the service providers will be supported with resources so that they can perform their duties during disasters effectively.
- Outreach is another challenge as greater number of vulnerable people has not yet been reached. The Government will develop and implement effective measures to scale up measures to mitigate disasters so that more people are covered.

- The Government recognizes that cooperation of the citizens and advocacy of the media matter in the reduction of vulnerability, and timely allocation and distribution of resources. Hence, they will be increasingly integrated in the work on preparedness for disasters.
- Development of better societal resilience to disasters requires that we ensure the delivery of basic services like health, education and water, even during disasters. To this end, the Government will draw lessons from the international community to develop a more effective Disaster Response Framework (DRF). During the Covid-19 pandemic, some innovation has already been used to ensure services like schooling is maintained during the lockdown through televised schooling which can reduce the loss of school days.
- The Government will invest in Management Information Systems (MIS) to strengthen the monitoring of climate change and vulnerability to earthquakes, etc.
- Assessments of the risks of disaster and climate change are still at the normative level, often suffering from ambiguous quantification. This is making it impossible to estimate the social and economic value of the disaster and the risks of climate change, the required investments, the losses from adverse events. Hence, the Government will form a technical team led by Ministry of Planning, to undertake a rigorous risk accounting, and determine the baseline, benchmarks and targets – that will improve Bangladesh's resilience against natural disasters and various manifestations of climate change.
- In order to promote private sector resilience in the country, government will develop disaster and climate change risk profile of industry sector for risk-informed private investment, developing strategies for supply chain resilience to avoid extreme disaster events and Business Continuity Planning as a part of disaster recovery in the private sector.

Furthermore, in order to address the losses and damages from natural disasters and climate change more effectively, the following steps will be undertaken:

- The Government will develop a comprehensive policy on the integration of Disaster Risk Reduction (DDR) and Climate Change Adaption (CCA) to address the losses and damages from the impacts of both extreme events and slow onset processes.
- The Government will establish a policy body under the Ministry of Planning (MoP) and technical bodies at both the Ministry of Environment, Forest and Climate Change (MoEFCC) and the Ministry of Disaster Management and Relief (MoDMR), to serve as a knowledge hub and to provide expertise in DRR and CCA respectively to the Loss and Damage Policy Wing of the MoP. This will establish a link between Disaster Risk Reduction and Climate Change Adaptation, and will help mitigate the losses and damages from natural disasters.
- The Government will integrate the DRR and CCA in a multi-level institutional framework to address the losses and damages from both extreme events and slow onset processes under a common mechanism.
- Obtain accreditation for the existing National Funding Entities (NFE) to become National Implementing Entities (NIE) in order to access support from the international funding mechanisms – both within and outside the United Nations Framework Convention on Climate Change (UNFCCC) – to address losses and damages, including through adaptation, mitigation, technology and capacity building.

- Information is especially important in the case of trans-boundary water management. Moreover, in trans-boundary basins, the exchange of information and the sharing of data between the riparian countries are regarded as a first and essential step towards fostering cooperation and trust. Unfortunately, restrictions in the availability of data and information beyond borders in the riparian countries of the Ganges basin continue to prevail, and countries are often hesitant and cautious to share any kind of hydrological information. Against that context, the Government will develop more bilateral and multilateral engagements to ensure that the South Asian countries develop a more coherent strategy to address both short, medium- and long-term environmental challenges faced by this region.

Finally, the Government will undertake specific activities to ensure that the management of the environment is sufficiently improved under the 8FYP. These measures are summarized in Table 14.4.

Table 14.4: Specific Activities for Better Disaster Management under the 8FYP

1.	Institutionalization of DRR and CCA.
2.	Promote private sector resilience to disasters and climate change risks through improved public private partnerships.
3.	Develop adaptive research on disaster and climatic issues
4.	Adopt proven technologies
5.	Develop a vulnerability index which will help channelize equitable resources to the targeted districts.
6.	Develop a focused and specific DRR-CCA indicator in the overall performance tracking for the plans, programmes and projects.
7.	Increase the number of recipients of social welfare/safety net allocations after any disaster.
8.	Improve business processes and initiate financial management reform in MoDMR and DDM and relevant GoB agencies.
9.	Develop a better coordination mechanism within the ministry and across the government.
10.	Increased investments in gender sensitive DRR and climate risk reduction to reduce the cost for response and recovery.
11.	Support skill development by giving training to GOs, NGO officials and volunteers concerned in Disaster Management and develop greater partnership with NGOs to improve "cyclone preparedness" capacity.
12.	Incorporate best practices and technology in Disaster Management of Bangladesh from around the world.
13.	Improve guidelines for Road and Water Safety.
14.	Improve guidelines for Industrial Safety.
15.	Improve guidelines for Disaster Shelter Management.
16.	Strengthen Disaster Impact and Risk Assessment Guidelines.
17.	Improve Emergency Fund Management Guidelines.
18.	Improve early warning systems through relevant technology adoption.
19.	Increase investments in training emergency responders to cope with extreme events.
20.	Increase afforestation through a major programme along all coastal areas of the country.
21.	Strengthen Indigenous Coping Mechanism Guidebook.
22.	Enhance Community Risk Assessment Guidelines.
23.	Improve Emergency Response and Information Management Guidelines.

14.5 GENDER EQUALITY AND WOMEN EMPOWERMENT

Bangladesh has achieved remarkable progress towards women's empowerment and gender equality over the last 15-20 years. Being one of the top-ranking countries in political empowerment and doing better than many countries in terms of social indicators, Bangladesh has shown promising performance in reducing gender gap. Successful achievement of most of the goals and targets of Millennium Development Goals

(MDGs) during the period 2001-2015 have taken Bangladesh miles ahead in this regard. However, it is time for Bangladesh to turn its attention towards more ambitious targets regarding gender parity, especially the ones specified in the new set of global goals- i.e. the Sustainable Development Goals (SDGs). The 7FYP was well-aligned with the SDGs which reflects the Government's strong commitment in attaining gender parity. The gender strategy of the 7FYP was centred on strategies and action plans aimed at increasing the access to resources and opportunities for women along with enhancing their capabilities, and reducing structural and institutional barriers in order to establish equal rights for women. The aim was to "ensure women's advancement as self-reliant human beings and reduce discriminatory barriers by taking both developmental and institutional measures". The core targets set in the 7FYP in this regard were:

- Female to male ratio in tertiary education to be raised from current 70 per cent to 100 per cent.
- The ratio of literate female to male for age group 20-24 to be raised to 100 per cent from the current 86 per cent.
- Encourage female enrolment in technical and vocational education.
- Reduce or maintain the current income inequality of 0.45.
- Spending on Social Protection as a share of GDP to be increased to 2.3% of GDP.

14.5.1 Progress in the Seventh Plan

To achieve these targets, the 7FYP outlined an implementation plan consisting of 4 strategic objectives: (i) Improve women's human capabilities; (ii) Increase women's economic benefits; (iii) Enhance women's voice and agency; and (iv) Create an enabling environment for women's advancement. These were backed by providing policy and legal framework and implementing by using gender responsive budgeting (GRB). Actions for women's development were directed towards seven key areas in 7FYP.

1. Increase access to human development opportunities.
2. Enhance access to and control over productive resources.
3. Increase participation and decision making.
4. Establish conducive legal and regulatory environment.
5. Improve institutional capacity, accountability and oversight.
6. Increase protection and resilience from crisis and shocks.
7. Promote positive social norms.

14.5.2 Implementation

The Development Results Framework (DRF) for monitoring the progress of 7FYP identifies 6 key performance indicators to track the progress in gender and inequality. Table 14.5 shows the progress in these indicators against the targets for each year in the period 2016-2020.

Table 14.5: Progress in Gender and Inequality Indicators

Performance Indicators	Baseline (Year)	Target by 2020	Current Status	Source
Percentage of seats held by women at National Parliament	20 (2014)	33	20.63 (2019)	http://www.ipu.org/
Percentage of women aged 20-24 who were married before age 18	65 (2011)	30	51.4 (2019)	MICS, BBS
Ratio of girls to boys in tertiary education	0.7 (2015)	1	0.72 (2018)	BANBEIS
Gender budget as percentage of total budget	27.7 (2014)	30	30.82 (2019*)	MoF
Percentage of female teachers at (a) primary (b) secondary (c) tertiary education	a)57 b)24 c)20	a)70 b)35 c)25	a) 62.25 b) 25.26 c) 26.69 (2018**)	BANBEIS
Percentage of female officers (class-1) employed in public sector	21 (2014)	25	New data not available	

*Allocation for women compared to total Budget (per cent)
** University education (26.46); Professional Education (26.92)

Some progress has been made in reducing the percentage of women aged 20-24 who were married before age 18, as observed by the decline from 65 per cent in 2011 to 51.4 per cent in 2019, but significantly off-track from the target and thus remains a huge challenge. The Government has undertaken some programmes through the Ministry of Women and Children Affairs (MoWCA) which are aimed at preventing child marriage and promoting adolescent health, creating awareness among not only children but also their parents and community leaders regarding the harmful effects of child marriage, dowry and eve teasing. The Government has also formulated 'Child Marriage Prevention Act, 2017' in this regard.

Bangladesh successfully achieved gender parity in primary and secondary education during the MDG period. The completion rate at the secondary level was 63.99 per cent for boys, and 59.81 per cent for girls. The survival age group rose up from 72.53 per cent in 2017 to 62.38 per cent in 2018.[18] There was significant improvement in girls' secondary education during the past decade. Girls were 47.38 per cent of enrolled 4.278 million college students in 2018 and 24.23 per cent of 123,518 college teachers were females. Girls' participation in graduation level has increased. Girls' education in Science, Technology, Engineering and Mathematics (STEM) is being promoted. The contents of education are being reviewed to reduce gender bias and to incorporate sexual and reproductive health issues. Safe drinking water facilities (97.41 per cent) and separate toilets for girls (95.59 per cent) were created in educational institutions. Teachers' training contents now include gender issues.

Also, the percentage of female teachers in primary, secondary and tertiary level of education has increased from base year level (Source: BANBEIS). The main challenge for Bangladesh now is to demonstrate the same zeal towards reducing the gender disparity in tertiary level education. The ratio of girls to boys in tertiary education was 0.72 in 2019 against showing marginal improvement but far less than the target. The lack of improvement in the ratio indicates the need to introduce innovative and new initiatives on the part of Government to encourage more girls to enrol into tertiary education. Some of the most noteworthy cause behind this low participation of women in higher education includes poverty, early marriage, violence against women, and restriction in mobility, lack of adequate accommodation facilities/hostels for female students etc.

[18] Bureau of Educational Information and Statistics, Education Statistics, 2017

Adequate financing and human resources are crucial to implement the 7FYP gender strategy and targets. Bangladesh has adopted Gender Responsive Budget in 2009, where gender issues are embedded in the MTBF process and emphasis is given on the linkages between a ministry's stated objectives and activities and advancement of women's rights. The gender budget report aims to ensure accountability and transparency of government's initiatives for women's advancement. All ministries provide accounts of their achievements and challenges in implementing gender-responsive programmes for the fiscal year that show trends and patterns on national level changes in gender equality and women's rights. The 7FYP target for gender budget as percentage of total budget is 30 per cent by 2020. In 2019 the gender budget as percentage of total budget was 30.8 – surpassing the target before 2020.

Some other policies have been undertaken by the Government in reflection of its commitment to ensure a safe and enabling environment for women. The Government has formulated the 'Domestic Violence (Protection and Preservation) Rules, 2013' under 'Domestic Violence (Protection and Preservation) Act, 2010' to ensure equal rights and to eliminate all forms of discrimination in all spheres of public life and the State. For the development of women and children, the Government has also formulated National Children Policy, 2011; Children Act, 2013, Prevention and Suppression of Human Trafficking Act, 2012, Hindu Marriage Registration Act, 2012, Early Childhood Care and Development Policy, 2013, House-maid Protection Policy, 2015, and Child Marriage Prevention Act, 2017. Furthermore, the National Action Plan to Prevent Violence against Women and Children (2018-2030) and the National Action Plan to Prevent Child Marriage are being implemented by the Government and civil society organizations. The government is working to curtail sexual harassment in public places, educational institutions and in social media.

The Government's strong commitment towards reducing gender has been reflected in the recent performances of Bangladesh in gender equality indicators. The Global Gender Gap Report (GGGR) prepared by the World Economic Forum (WEF) ranks countries based on their progress towards closing the gender gap across four thematic dimensions: (i) Economic participation and opportunity, (ii) Educational attainment, (iii) Health and survival, and (iv) Political empowerment. According to the GGGR, Bangladesh has been able to close the gender gap significantly over the last year, ranking top among the South Asian countries in gender parity for the fourth consecutive year. Bangladesh has successfully eliminated gender disparity in primary and secondary education, as well as reduced the gender gap in tertiary education. The Human Development Report 2016 (UNDP, 2016) recorded that Bangladesh is encouraging female participation in the workforce, with the ambition of bringing the share of women in the workforce up from 34 per cent to 82 per cent by 2026. Also, Bangladesh is among the top ten performers under the political empowerment sub-index of Global Gender Gap Report 2020 (global rank 7th out of 152 countries in the world). Despite the apparent progress in some indicators, there is massive scope for improvement in economic and social sectors. Table 14.6 shows the comparative position and score of Bangladesh and other South Asian countries in overall gender gap index as well as the sub-indices.

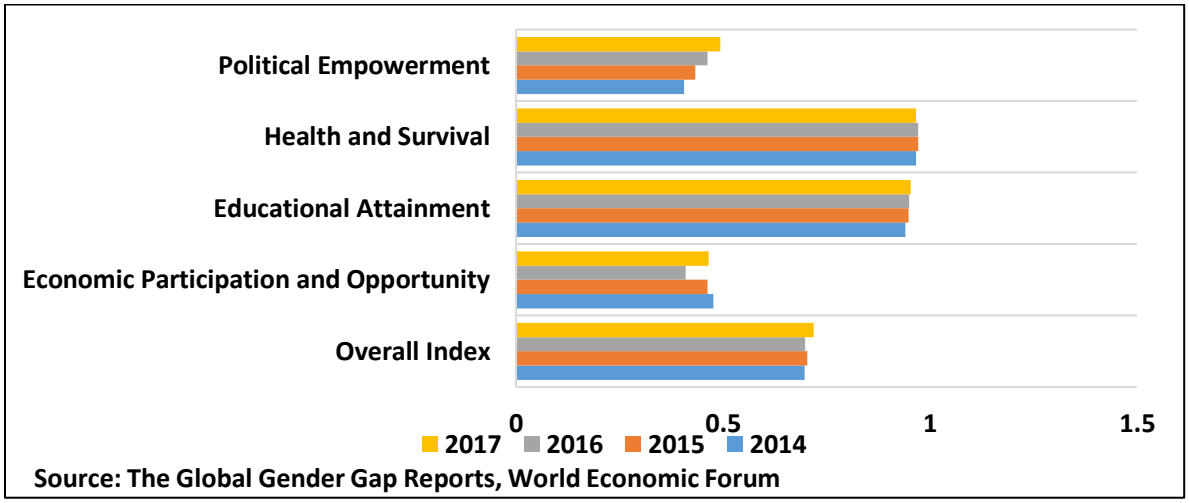
Table 14.6: Comparative performance of South Asian Countries in the GGGR sub-indices

Country	Overall		Economic Participation and Opportunity		Educational Attainment		Health and Survival		Political Empowerment	
	Ranking	Score	Ranking	Score	Ranking	Score	Ranking	Score	Ranking	Score
Bangladesh	50	0.726	141	0.438	120	0.951	119	0.969	7	0.545
Maldives	123	0.646	131	0.518	1	1	147	0.953	115	0.111
India	112	0.668	149	0.354	112	0.962	150	0.944	18	0.411
Sri Lanka	102	0.680	126	0.558	88	0.988	1	0.98	73	0.193
Nepal	101	0.680	101	0.632	133	0.895	131	0.966	59	0.227
Bhutan	131	0.635	130	0.544	116	0.954	144	0.960	132	0.082
Pakistan	151	0.564	150	0.327	143	0.823	149	0.946	93	0.159

Source: The Global Gender Gap Report 2020, World Economic Forum

Figure 14.9 captures Bangladesh's performance in these four indices over the recent years. Bangladesh has been consistently doing well in political empowerment, with women occupying 20.86 per cent seats in the parliament. Women's participation in the National Parliament and local governments has been supported through constitutional and legal provisions. In the 14th Amendment of the Constitution, the provision of women's reserved seats was increased to 50.

Figure 14.9: Performance of Bangladesh in GGGR Sub-indices in Recent Years



Overall, the analyses of the progress of implementation of 7FYP targets regarding gender equality reveal that Bangladesh is on track in achieving greater gender parity with a need for increased effort in ensuring safety of women and children. In Bangladesh, harmful and discriminatory practices like child marriage, abandonment, dowry, and gender based violence persist largely due to practices rooted in the traditional social norms that favour boys over girls. Violence takes place at home, workplace and public places. The first law banning acid violence was passed in Bangladesh in 2002, and the death penalty was introduced later as punishment for the crime. As a result, acid attacks in Bangladesh fell from 494 incidents in 2002 to 59 in 2015. Changing social norms through awareness building and other initiatives has been identified as one of the key strategies in the 7FYP to reduce harmful practices boosting gender disparity and ensure enhanced capabilities and enabling environment for women.

Nevertheless, despite progress, there is a substantial unfinished agenda. The main challenges are:

- The implementation of social laws remains a major challenge. The Government's implementation capacity is a serious constraint to affected women obtaining relief from domestic abuse.
- Despite government's efforts, violence prevails with negative consequences on women's physical and mental wellbeing, their self-esteem and the children's wellbeing. Dowry demand, wife beating is often accepted by the society due to ignorance. Motivation, awareness and the implementation of laws to address them are great challenges.
- In spite of all the actions in legal, social, economic and educational measures, child marriage is prevalent. Child marriages happen on the grounds of poverty, insecurity, not having guardians to look after and such reasons.[19] Implementation of the Action Plan for Prevention of Child Marriage is a challenge. There are some villages where child marriage and marriage without registration are practiced. Early marriage has to be eliminated to eradicate early pregnancy and for the development of girls.
- Universal and affordable health care for all, full vaccination coverage, universal access to family planning and reproductive health care services, maternity and neo natal care, reduction of maternal mortality, reduction of adolescent pregnancy is some of the key areas to address. Ensuring all child birth under trained personnel and at institutions, reduction of maternal mortality ratio are also priorities high. In addition, SRHR services for adolescents, reduction of healthcare expenditure, and awareness against taking services from unqualified persons need to be ensured. Reaching health and family planning services to the remote areas are critical.
- Nationally, 16 per cent of women are underweight, of whom 2 per cent were severely underweight and among adolescent girls 7 per cent were underweight, of whom 1 per cent was severely underweight. Obesity has also emerged as a new challenge. Micronutrient deficiencies, anaemia, Vitamin A deficiency, low rate of breastfeeding are common nutritional requirements that need to be addressed.
- Progress in the area of economic equality is lagging behind. Despite progress during the Seventh Plan, the women's labour force participation rate still remains low by international norms. When included in the labour market, women still face different forms of discrimination. They are more prone to under-employment and wage and occupational gender gaps remain significant. According to GGR 2014, women receive only 57% of the male wages for equal work, and less than a third of professional and technical workers are women. More recent data also suggest wage differential between male and female workers. According to LFS (2016-17) the average monthly incomes from employment (wage/salary) for females are 95.7%, 77.9% and 90.2% of their male counterparts at rural, urban and national levels respectively.
- An inclusive financial system is necessary to enhance women's access and benefits from secure, saving, credit, insurance and payment services. A large number of women lack access to basic financial services and formal finance. According to MoWCA (2020) about 25% of the adults are financially excluded. Easier access to finance at a low interest is critical for women's economic emancipation. Due to fees, collateral, guarantee, cumbersome rules, and lack of financial literacy, formal financial market is not easily accessible by the poor and women.

[19] Ministry of Women and Children Affairs Annual Performance Assessment Report, 2019-2020

- Lack of gender responsive working environment including inadequate facilities of child care, transport, occupational health and safety discourage women from accessing the job market. Women workers in the informal sector have no legal protection against abuse, discrimination, irregular employment, low wages, and long work hours. Although policy measures are in place and the Government has granted women 6 months maternity leave, often this is not followed by the private sector or the NGOs.

14.5.3 Gender Strategy for the 8FYP

In line with the declaration of the Prime Minister, Gender Equality (GE) has been identified as key to ensure equity and overcoming barrier to economic growth, poverty reduction and social development. The 8FYP emphasizes on elimination of women and girls' extreme poverty, ensuring social security, social equity by developing them as resources and harnessing their full potential. The gender vision of the 8^{FYP} is that of establishing "a country where men and women will have equal opportunities and rights and women will be recognized as equal contributors in economic, social and political development". The mission is to ensure women's advancement as self-reliant human beings and reduce discriminatory barriers by taking both developmental and institutional measures. Gender equality and women's empowerment agenda for the 8FYP is based on pursuing strategies and actions that not only enhance women's capabilities and access to resources and opportunities but also address the barriers in structures and institutions and aim at changing social norms and protecting their rights are critical to integrate within the plan. Establishing monitoring, oversight and accountability mechanisms is equally important.

The framework for women's empowerment and gender equality comprises of 5 areas of strategic objectives:

1. Improve women's human capabilities
2. Increase women's economic participation and benefits
3. Enhance women's voice and remove constraints on women's agency
4. Enhance/strengthen enabling environment for achieving gender equality
5. Enhance Mother and child benefit programme

- **Improve women's human capabilities:** This deals with women's and girls' access to health care, life expectancy, nutrition, reproductive health, education, information, training, and other services that enable women to achieve better health and educational outcomes. This also includes family planning services, water supply and sanitation services. These facilitate women to access labour market and in decision making as well as overcome morbidity, illness, malnutrition and maternal mortality. This also includes women's freedom from violence and coercion.

- **Increase women's economic benefits:** This related to women's ability to access to income, job market and economic resources. Women's access to or control over productive assets, resources, services, skills, property, employment, income, information, technology, financial services, work environment, entrepreneurship, community resources (land, water, forest etc.) ensures economic benefits. Removal of barriers to women's economic participation and ensuring support services are also critical. Women's economic benefits enhance status and helps for better living of the family.

- **Enhance women's voice and agency:** This pertains to women's role as decision makers in public and private spheres including politics and promotion of their leadership is considered here. Changed attitudes on women's and girls' rights, women's enhanced knowledge of their rights and increasing their bargaining power are reflected on.

- **Create an enabling environment for women's advancement:** The socio-political environment, legal and policy support, and congenial social norms are the key in this area. Oversight, enforcement of laws, regular collection of sex-disaggregated data, gender and social analysis skills including the capacity to develop, implement, and monitor gender strategies, understanding of gender issues in the sector are the key areas.

- **Enhancing Mother and child benefit programme:** This relates to enhancing facilities for mother and children though provisions of cash and in-kind transfers. This also includes establishing and operating social clubs and recreation centres for the development of the participating adolescents and for ending child marriages. Extensive programmes and projects are also required to be launched for the early childhood development, protection of the children from violence and repression and for overall development of the children.

To implement these strategic objectives, following eight action areas have been identified that will contribute in achieving results in these four areas.

1. Increase access to human development opportunities
2. Enhance access to and control over diversified economic opportunities and resources
3. Increase participation and decision making at all levels
4. Establish conducive legal and regulatory environment for gender equality
5. Provide Infrastructure and communication services for women
6. Improve institutional capacity, accountability and oversight
7. Increase protection and resilience from crisis and shocks
8. Promote positive social norms

1. Increase access to human development opportunities

Building the human capital of women to foster equality of opportunity is essential. Early and continuous investments in human development for girls are necessary for equitable economic growth. Education, health, nutrition, freedom from violence and such others are considered enabling human development opportunities. To implement this strategic objective, the Seventh Plan will focus on the following areas.

Life cycle-based disease prevention and curative healthcare services: Considering the current realities of women in Bangladesh, a lifecycle-based healthcare system including tertiary care should be accessible to women within affordable cost. It should include ante and post-natal, adolescent health, maternal, reproductive, geriatric and tertiary care. The health care system should address the differential needs of women and men at all ages at a low cost in all areas including remote geographical areas. Investment on information and motivational campaigns for the need and availability of immunization, preventive care and screening services for all children, adolescents and women should be enhanced. The primary health care, immunization, maternal and ante-natal care for pregnant women and post-natal care services should be expanded in all areas and ensure equal immunization for men and women, boys and girls in the rural and

remote areas. Information and motivation campaigns should be enhanced for reproductive healthcare, and protection from harmful diseases like Dengue, Chikungunya, HIV/AIDS and diseases associated with childbirth. Laboratory testing for these diseases should be available at a low cost all over the country. Women and child friendly hospitals should be expanded to all districts and upazilas. Tertiary care for major diseases including surgery and geriatric care should be ensured at the district levels. Registration and tracking of services and universal health insurance for the senior citizens should be introduced. HIV testing and counselling should be scaled up for high risk groups, migrant labourers and their spouses

Equal access to nutrition: The high rate of malnutrition among children and women calls for a multidimensional approach including Information and awareness on child/women nutrition, the intergenerational health impact, food value, food diversity, low cost nutritional options to address nutritional deficiencies. The on-going iron acid (IFA) supplementation, postpartum and child vitamin A supplementation, treating intestinal parasites, distribution of albendazole tablets, and the deworming programmes should be strengthened and expanded. Awareness to control obesity and overweight, the importance of physical work and healthy food, safe water and sanitation should be undertaken. Universal salt iodization, compulsory physical exercise in schools and target specific food fortification for micronutrients should be promoted. Food security and safety net programmes especially those for maternal support should address women's/children's nutritional deficiencies by distributing fortified food items particularly in the calamity/poverty prone areas. Adolescent nutrition should be given additional care. Promotion and expansion of homestead gardening and poultry in the rural and remote areas introducing climate tolerant varieties is essential in order to ensure protein and vitamin consumption.

Modern reproductive health and family planning services: Counselling services on population control, reproductive health and behaviour and family planning services should continue and expand at community levels in both rural and urban areas. Motivation in urban slums and remote areas on modern contraceptives and availability of modern contraceptives at a low cost should be ensured. Teaching of the reproductive health education for adolescents in the school curriculum should be ensured. In the lowest performing districts additional support is needed for awareness raising, and education on reproductive health among young boys and girls to prepare them as future adults.

Quality formal education: Universal access to quality education at all levels with enhanced completion for girls and boys has to be ensured. Formal education is a precondition for decisions making positions, therefore gradual transition of all non-formal education to formal education should be planned and acted upon. Quality education for teachers, curriculum improvement (promote equality and inclusiveness), introduction of extra-curricular activities to build confidence and to overcome the limitations in learning outcomes should be ensured. Support for transition from primary and completion of secondary education for both boys and girls should be ensured through poverty focused stipends, free education, books, campaigns and so on. Scholarships, special quota provisions, proximity of colleges, infrastructure including accommodation, transport, water/sanitation for girls and such support for continuation at the college and tertiary levels need to be ensured. Increased proportion of trained women teachers, teachers trained on inclusive education and making the education environment safe for girls are essential. The registration and licensing process for private universities and colleges should have criteria on facilities and quota for girls. Learning language should be emphasized and curriculum and teaching staff should be prepared.

STEM and ICT education for girls: Science, technology, engineering and mathematics (STEM) education streams with qualified faculty should be promoted in schools, colleges and universities through regulatory measures and increase girls' participation by establishing targets. Community awareness and motivation should be strengthened to send girls to STEM at the school and at the tertiary level and technical education. Additional stipends and support for girls, science fair, special training for teachers and science education facility at upazila levels should be expanded for increasing girl students in STEM. Girls should be introduced to ICT and encouraged to undertake higher education in ICT.

Marketable technical and vocational education including ICT: The key requirement to access job market is to have marketable education and skills. The educational curriculum should be reviewed and updated to cater to the needs of the country and the changing global requirements based on labour market analysis and future projections. The selection of stream for girls should be backed by career counselling on market needs. The technical stream should be strengthened to attract more girls. Other areas to focus are standardization and equivalency of technical education and vocational skills with international market, focusing on demand-driven skill development system should be prioritized. Measures for proficiency in ICT for all, modernization of trade skills education like driving; learning international languages; hands on training; globally acceptable certification system; and improving teachers' qualification are needed. Domestic and international market need assessment and adjustment of curriculum should be undertaken regularly. Support for girls like hostel, stipend, sanitation facilities, market information, internship in technical fields and incentives should be ensured.

Safe water and sanitation services: Easy access to safe water for drinking and household use facilitates women's empowerment by reducing time spent on searching for safe water and thereby allowing them to be engaged in productive endeavours. Access to water and sanitation services is also essential for household health care. It can save the family from additional expenses and women from care services. These services, both at home and in public places would be expanded to facilitate women's participation in economic and political activities. Arsenic and saline screening would be ensured and traditional filtering methods would be disseminated widely. Also, water conservation programme for the Northern region and coastal belt is important to ease water stress and protect from salinity.

Ending child marriage: Child marriage is prevalent and is a barrier to girls' ability to reach their potential, fulfil their aspirations and contribute to their communities. In Bangladesh 33% girls are already mothers by age 19, posing significant risks to their health as well as the increased probability of children becoming stunted. This will require action in multiple areas. The existing age at marriage for girls and boys would be strictly enforced. Compulsory registration after birth of a child will be ensured. The revised Child Marriage Restraint Act 2013 would include penal provisions for both guardians and registers. Civil society movements against child marriage would be strengthened, community orientation improved and support for continuation of education at secondary levels will be ensured to eliminate child marriage.

Participation in sports and culture: Women's participation in sports and cultural activities would be ensured from school to build self-confidence amongst girls. Extra-curricular activities would be encouraged and supported in educational institutions and outside.

Protection and development of physically and mentally challenged women: As almost 10% population is physically or mentally challenged, the upcoming disability survey would identify extent and types of disability disaggregated by sex. Based on the new National Social Security Strategy (NSSS), appropriate social protection measures would be further extended and expanded to cover more such persons, especially women. The needs of this group would also be addressed within human development and economic development agenda as well.

2. Enhance access to and control over productive resources

Increased access to productive resources enhances women's self-reliance and income. It is important to enhance women's capacity to enter the labour market for income. Three important areas facilitating income are, job creation; connecting with productive jobs being created or get help to create own jobs in self-employment; and increasing women's productivity of the existing jobs.

Creating short- and long-term opportunities for decent employment: To increase women's labour force participation, short and long-term employment for women is essential. The private sector should be encouraged and incentivized to support women's employment in non-traditional areas. Monitoring to enforce equal wage and benefits for women and men as per Labour laws should be strengthened. Safety net programmes designed to create employment for women and men should support transition to sustainable employment. Target for short-term employment opportunities under construction and development projects for women should be set for women equal wage.

Generating employment in public and private sectors at home and abroad: The public sector should fulfil the quota of women in staff positions. Filling up of the existing vacant positions can absorb a large number of women with right qualifications. The quota of 15% for women staff in public service should be enhanced and for outsourced employment, the supplier should be directed to ensure women's employment. The working conditions should be improved with recruitment, promotions especially at senior levels; addressing safety and security concerns at field levels; decent work environment, and gender sensitivity among management. Transparent recruitment, promotion and annual evaluation should be ensured. The private sector should be regulated to increase women's employment and the situation of women in the workforce should be monitored.

Undertaking labour market analysis for expanding opportunities at home and abroad: Women's skills for access and mobility within the local and international job market through regular labour market analysis should be ensured. Updating of information; support for Balancing, Modernization, Rehabilitation and Expansion (BMRE); modernization of trade skills; product diversification, upgrading of employable education and skills should continue based on market need assessment. Labour market needs should be informed to education sector for updating education system and curriculum.

Ensuring safe migration in an expanded range of professions: Market research for exploring the possibilities of external market should be undertaken and new avenues explored. Safe migration should be ensured through skills enhancement, compulsory pre departure training, language skills, skills on self-defence, proper screening, and registration for women and men. The majority of Bangladeshi women migrants work as housemaids in the Middle Eastern countries. Aspirant women should be given self-defence training and be selected based on screening. Screening on the bases of their capacity to cope, language skills, ability of self -defence, and the skills of the job should be ensured. Attention should be

given to their safety and work-related issues, e.g. low paid and exploitative job conditions, sexual abuse, lack of information on migration opportunities and risks; and insufficient services to protect their rights as workers should be addressed. Legal and shelter support for migrant workers need expansion in countries where number of women workers is high. The returnee migrant workers need compulsory health screening and quarantine services upon return. The overall management of labour migration, protection and decent employment conditions to the Bangladeshi migrant workers should be ensured. The recruiting agencies should be made accountable to ensure proper job condition and should be penalized if failed. Women's employment in professional category should be promoted through education, training, linkage, information and support.

Creating opportunities for higher-value self-employment: In context of the limited employment opportunities in public and private sectors, self-employment is a critical avenue for women. This is also an option for women who lack marketable skills, education, cannot go out for employment due to household responsibilities. Information about opportunities, markets, skills, finance, time saving and green technology, and training can support women to participate in farm and non-farm activities. Support to facilitate women's access to high value crop production, higher level of the value chain and services should be ensured. The private sector, NGOs, business associations and media should also play important role.

Promoting business development services for entrepreneurs: For economic empowerment, women need support for entrepreneurship development and business. Entrepreneurs should be assisted for business planning and marketing. They need skills to provide required papers, business plan, financial management, and marketing at home and abroad. Chambers of commerce and business associations should support women entrepreneurs in developing business plan and linking with the banks and PFIs. SME Foundation, Bangladesh Small and Cottage Industries Corporation (BSCIC) and JMS should expand one stop support provisions for women entrepreneurs at the district levels. Business incubator services should be expanded by the chambers and associations. Comprehensive information with details of financial support from different banks and financial institutions for women with criteria, procedure, required papers and guarantee, ceiling and interest rate etc. should be developed by SME foundation and updated annually for the women entrepreneurs. Marketing support should be provided to women by DWA, JMS, Joyeeta and others. The Joyeeta model should be expanded in the country. BSCIC Associations and the Export Promotion Bureau (EPB) should facilitate women's participation in trade fairs at home and abroad and promote ICT and social media-based information dissemination. Women entrepreneurs should be informed of all changes in industrial, tax, tariff, financing policies. All relevant policies should ensure growth and expansion of women entrepreneurship. The National Board of Revenue (NBR) should establish criteria and support women entrepreneurs by providing tax-holiday, special incentives, tax-rebate, for newly established enterprises of women.

Improving Financial Inclusion: Women need easy access to savings instruments, productive investment and consumption opportunities. Inclusive financial system to ensure access of women in simple terms at a low and no interest should be established. The Investment Component of Vulnerable Group Development (ICVGD) model should be expanded for provision of capital and skills for the poor. The banks and financial institutions should simplify the procedures, delegate authorities at the division/district levels up to a certain limit for lending to support women entrepreneurs avail the opportunities provided by Bangladesh Bank for institutional finance. All transfer of social allowance and finance should be through G2P using ICT.

Improving work environment: Improvement of work environment through safety, occupational health and safety and maternity, unemployment benefits. The directives of the High Court on prevention of workplace violence should be followed. Medical, child care and other facilities should be improved to encourage women to join and continue in the labour market. Infrastructure and logistics support should be ensured for women including breast feeding facilities at workplace. In addition, fair wage for informal employment should be ensured and equality of wage for men and women should be enforced. Provisions of maternity and child care support should be ensured. Elimination hazardous work and child labour and creating decent work, occupational health and safety, unemployment benefits and human development opportunities for working persons should be ensured.

Addressing violence and sexual harassment in public spheres: Creating public opinion against VAW in public places through community orientation and motivation by using communication methods and media will be emphasized. The High Court directives on prevention of workplace violence by establishing Committee and complain box should be followed by all ministries, agencies, offices and private sector corporate offices. The Ministry of Public Administration should issue a guideline for all ministries, agencies and private sector to comply with the directives. Legislation to address sexual harassment as per Supreme Court order will be a priority. Fast action on violence committed at public/work places and orientation on the laws for the members of law enforcing agencies in implementation and enforcement of the legal provisions should be ensured.

Ensuring access to local, national and international markets and productive assets: All the government agencies (livestock, fisheries, agriculture etc.) should take specific measures in reaching women with support for training on technology, market information, production techniques, sources of raw materials, etc. Extension services should reach women to open new employment opportunities for women. The distribution of seeds, fertilizer, and other inputs through women farmer groups should be arranged. Market information and market linkages should be established for women with different chain shops, international buyers and online platforms. The Export Promotion Bureau and the embassies should explore and help in identifying new markets for new and diversified products and help exploitation of regional trading opportunities.

Promoting higher value activities in agro and industrial value chains: Women should be supported to receive technical and technological knowledge about different levels of value chain of agricultural and non-agricultural products. Agribusiness development opportunities, access to backward linkages for industrial products should be incorporated in women's business development programmes and in one stop service facilities. Women should be supported with information on markets of different products, scope of participation in trade and export fairs. Value chain of different products should be identified, disseminated and supported with technology and inputs for women. Ethnic crafts of different areas should be supported for high value generation and diversification.

Ownership of land and productive resources (land, seed, inputs and extension services): Women's access to productive resources should be increased. Community orientation and legal enactment on the Prime Minister's directive to give women due share of their inherited property should be initiated and enforced. The current practice of distribution of khas land in the name of both spouses of poor families and women's access to forestry resources through co-management groups should continue and expand. In case of disaster induced migration, women should be considered as a special group for housing or land support. The spirit of CEDAW and its application in case of inheritance in other countries with Muslim majority should be assessed and considered for a uniform family code.

Access to and decision-making over use and protection of community resources: Women's participation in accessing and taking decisions regarding community resources should be ensured by provisions of women's participation under the Social Forestry Rules, Water Management Policy, Forestry Sector Policy, WATSAN Policy and such others. All sectors should consider access of women to community resources such as shop distribution in markets, or agriculture in khas lands. Women's participation in water, forestry or such other associations and groups should be ensured to reach a critical mass and monitored to benefit them. Provision of imparting training and providing information should be incorporated to prepare women to participate effectively in these groups.

Access to technology and information on upcoming opportunities in ICT and technology: Access to modern technology related to business and jobs should be expanded at a low cost. Women's access to information related to markets, employment, or business opportunities should be increased through using media and ICT. Information dissemination through mobile phones, internet, radio and social media etc. should be increased and women should be trained to access the information. The A2I should reach young girls and the less educated persons. Opportunities in outsourcing, ICT and other technological work should be identified, disseminated and women should be supported to access them.

3. Increase participation and decision making

Participation in national politics and local government: In the last decades, women's participation in national Parliament and local government has increased mainly due to the quota provisions. To enhance women's voices on behalf of women rights in the Parliament or LGIs-, apprenticeship, training, campaigns, and support programmes should be extended. Women's participation to contest in the regular seats should be increased through capacity building and ensuring implementation of the RPO provisions. Training women public representatives and should be expanded. Monitoring to strengthen women's role in different committees is also important. Community should be oriented to support women's political participation and women in reserved seats should be oriented to play their effective role, taking leadership and gradually compete in the regular seats.

RPO provisions and targets, and benchmarks and responsibilities: The provisions of RPO 2013 related to women's participation and representation in political parties should be ensured by enforcing it within the registration criteria. Provision for direct election of women Parliamentarians in reserved seat will give them opportunity to contribute to a community and be accountable to their constituency. Change in the constitutional provision for assigning them specific constituency and direct election has been a demand for long time from civil society. The extension of the provision of 50 female Parliamentarians in the reserved seats for 25 years should be combined with provision of direct election through an amendment of the Constitution.

Confidence, knowledge, capability and opportunity to participate in public sphere: Training, orientation and knowledge enhancement opportunities should be provided to all women employed in the public sector. The capacity of the existing training institutions should be enhanced with faculty experienced and trained on gender. Women government employees should be trained to be gender responsive, confident in leadership and decision making. Women's confidence should be enhanced through orientation, support and participation in extra curriculum activities.

Representation/ leadership of women in public institutions, business and trade: Women's representation should be ensured in public institutions through instructions and directives. Training and capacity building support should be institutionalized in public institutions for women. Private sector institutions and trade bodies should be instructed to develop their own gender strategies and ensure women's representation at different levels. Women's role in decision making forums of private sector should be included as criteria to qualify for different incentives. The private sector should be encouraged to bring women on the Boards. Women's participation in delegations and committees for trade and other important negotiations should be made mandatory though policy provisions. Rules and regulations on different sectors and businesses should be easily accessible by women.

Targets for women's representation at all levels: Representation of women in different services and organizations should be enhanced by taking specific measures. It is important to include women in national and international representation and in areas previously considered as men's domain. Women's presence in various sectors should be assessed and the sectors with women's low presence should be guided to include more women. This can only be done when the capability of women in different groups is enhanced and no discriminatory practices are in place.

Local government citizens' committees for stronger voices and role of women: The ward committees at the union level, the Town and Ward level Coordination Committees under the municipalities, the Upazila Women's Forum and the Standing Committees under the unions should be strengthened ensuring women's leadership and participation as per the laws. The open budget formulation, development planning and project implementation with participation of women and addressing their needs should be enforced and monitored. Proper communication to bring in women in these forums, support for their capacity building and utilization of the gender budget for local government institutions should be ensured as per the guidelines and monitored.

Informed and independent decision-making over reproductive health: Information and education should be available to enhance women's control over their own reproductive health. The education for employment and economic gain for women's self-reliance and confidence should include information on elements of reproductive health care, and availability of such care. Counselling services should be made available in all health care centres for men, women and couples. Reproductive health care should also be available to the single women whose needs go unrecognized.

Membership and leadership in associations and decision-making forums: Memberships in different sectoral committees and associations including business associations should enforce measures to include more women. The water management associations, sanitation committees, water supply committees, disaster management committee, forest management committees and such others formed as per the policies/rules of the sectoral ministries should include women with clear TORs. Women should be oriented on their roles and responsibilities and their male counterparts should be oriented on equal participation and roles in decision making.

Youth forums and clubs for leadership development: Youth forums and the adolescent clubs formed under different ministries including MoWCA should be expanded and strengthened. They should include provision of leadership orientation for young women, on development context, and roles of the youth in attaining targets of the SDGs. The role of youth in reducing harmful practices, enhancing growth, and human development should be prioritized.

4. Establish Conducive Legal and Regulatory Environment

Remove all discriminatory provisions in laws and policies in consistency with CEDAW: Despite formulation of good laws, some laws and policies are not yet in full conformity with CEDAW. These need review and revision to make the laws/policies uniform and equal for all. The law of inheritance and personal laws should be reviewed to make them consistent with CEDAW. All sectoral policies should be reviewed from gender lens to make them more conducive to women's participation and empowerment. MoWCA's capacity should be strengthened to provide technical support to line ministries in reviewing and revising such laws and policies. Partnership with women groups can be helpful. Reservations on CEDAW, particularly on Article 2 should be withdrawn as per the recommendation of the Law Commission.

Enforcement of all laws to uphold rights of women and girls: Though the legal and policy provisions include many positive aspects, the hindrances to their enforcement should be removed through establishing effective mechanisms, accountability and training for law enforcing agencies. All laws related to the rights of disadvantaged groups like the persons with disabilities (PWDs)' Rights and the Protection Act 2013 should be implemented with care for assisting female PWD's development in all areas. The constitutional provisions to protect ethnic minority groups and women should be enforced strictly. The Legal Aid Fund should be increased and the legal system should be simplified and faster in case of rape and sexual harassment. Practice of gender sensitive procedures, retention of legal practitioners to support women, more tribunals to deal with repression of women and girls and human trafficking, security of justice seekers should be ensured.

Enactment of laws and formulate policies on the High Court directives on sexual harassment: Law needs to be formulated as per the directives from the High Court in 2010 on sexual harassment in public places like educational institutions and work place. The High Court's directive of 2019 on monitoring the compliance should be followed. Educational institutions and all private sector agencies should be directed to follow the procedure to address sexual harassment as per the High Court's order. Compliance by public and private sector should be monitored.

National laws in consistency with ILO convention on sexual harassment: The Violence and Harassment Convention, 2019 (No. 190) and Recommendation (No. 206) has been recently adopted due to the recent global outcry against violence and harassment. The Convention aims to shape work environment based on dignity and respect, and free from violence and harassment. Work-related communications, including those enabled by ICT, domestic violence, gender-based violence and harassment including the account of third parties (e.g. clients, customers, service providers and patients) are included. The domestic laws and policies on labour, migration, occupational health and safety and other relevant laws of Bangladesh should be reviewed and made consistent with the Convention.

Recognize and uphold the rights of the girl child in laws and policies: Girl children as a distinct group should be recognized as girls are also vulnerable to violence and exploitation. Their rights and advancement should be upheld in all relevant policies and laws. All new laws and policies should be reviewed by MoWCA before their approval and enactment to ensure this. Partnership with child rights groups should be promoted for the purpose.

Women's rights in sectoral laws and policies: Some new laws and policies formulated in different sectors address gender aspects and the others do not. All sectoral laws and policies should ensure addressing gender-based needs in the sector. They should increase women's/girls' participation and benefit within the legal and policy provisions. All laws and policies should be reviewed before their approval and enactment by MoWCA and gender experts.

Accountability of law enforcers: The incumbent government is firmly committed to eliminate all sorts of violence against women. To achieve this objective, the law enforcing agencies are to be more effective and activated. The instantaneous response of the law enforcers can save the most vulnerable women and children. The present 999 apps in really a good initiative to receive the most urgent cry for help but it depends upon the sincerity of them. The law enforcers might be given training and motivation and their accountability might be ensured.

Proper motivation and upbringing of the adolescent boys and girls: The government wants to make the adolescent boys and girls aware on multifarious issues like demerits of child marriage, violence against women and girls, discrimination against the women by organizing clubs all over the country. Initiatives will also be taken to facilitate them for different sports and different cultural activities.

Regulatory measures in public and private institutions: Government should direct all public and private institutions to ensure women's participation and benefits through incorporating provisions in human resource policies (recruitment, training, promotion) and removing all provisions that hinder women's advancement. Each agency should be motivated to have specific target or measures for women's development. A mandatory reporting from large institutions above a minimum turn over should be brought under reporting on progress.

5. Provide Infrastructure and Communication Services for Women

Climate resilient infrastructure: In the natural calamity prone areas, all infrastructure (transport, energy, water, sanitation, market, service centres) design and construction should consider the climate change affects and be resilient to climatic shocks. In order to facilitate continued mobility, services and livelihood of the people, men and women the infrastructures should address gender-based needs. Hygienic water and sanitation services, communication infrastructure for early warning about calamities, all weather transportation should be established and maintained. Shelters should include water, sanitation, privacy, to address women's needs and support child care, disability, child birth and address women's safety and security concerns.

Infrastructure design considering women's needs and priorities: All infrastructure including building, transport (bus, train and water ways) should be convenient for women, children and PWDs. Public building code should include provision of separate water, sanitation, breast feeding facilities (as per High Court directives in 2019) for office, station, bus terminal, water ways terminal, clubs, movie house, shopping mall, stadium, local government institutions, courthouse, museum, theatre, tourist spots, university and such other places. Approval of building design by relevant authorities should ensure all the facilities. Existing buildings should gradually include the facilities.

Gender responsive transportation (land, water, air) services and infrastructure: Infrastructure and transport services are keys to increase women's participation in public spheres. Safe and affordable transport system should be ensured to increase women's and children's mobility. The frequency of affordable public transport should be increased with reserved seats for women, elderly and the pregnant women. Women only buses during peak period should be increased. Transport providers should be motivated and legal provisions should be established and enforced for this. Factories/employers employing more women should be guided to operate transport services for staff/workers and they can be provided loan facilities to operate transport services for staff. A policy to increase bus services at least for girls' schools and colleges in all cities of the country is important. Safety and security (lighting, police patrols, safe toilets, waiting rooms) measures in public transport stations should be compulsory for transport management. Cleaning of foot paths, compulsory use of over bridges for road crossing, increased public transports are some measures to support women's mobility. Road safety should be ensured through enforcement of traffic rules and laws. Training/orientation on the importance of traffic safety should be provided to both public and private service providers using media and also in schools. The upcoming metro rail and the mass rapid transit system should include safe ticketing, waiting, commuting, toilet and breast-feeding facilities at the stations. Railway and water ways stations should also ensure safety and security measures with water, sanitation, waiting and breast-feeding facilities and ensure safety and mobility for women. Commuter train services between Dhaka and nearby cities, like Narayanganj, Gazipur, and Tongi should be introduced/ increased with ladies' compartments at peak hours. Trains should gradually introduce low locomotives to facilitate mobility of women, children and elderly.

Geographical equity in access to infrastructure: Infrastructure development should be aim at connectivity with remote areas. The backward and remote areas should be given priority in order to attain infrastructural equity. All persons of all class, ethnicity, religion, physical ability and geographic location should have access to basic infrastructure for mobility, education, health, energy and services. Road infrastructure, railway and water transportation, water supply, sanitation should be improved in the lagging rural and suburban areas. Smooth transportation, ICT communication and access to services should be ensured in the hilly and remote riverine regions. Access to water and sanitation for the hill districts, coastal salinity and cyclone prone areas, and some of the northern districts having low access should be prioritized for services.

Access to supportive infrastructures (e.g. safe, secured workplace and housing): Infrastructure for workplace safety and security concerns, child care, housing and toilet facilities, etc. should be ensured by the private sector as well. Motivation and regulatory provisions for private sectors should be established to develop low cost housing, child care facilities and transportation services with water and sanitation facilities for employees. High court directives on breast feeding facilities in public places should be strictly monitored. Dispersal of industries to improve the living conditions of workers of with adequate infrastructure is essential. Women's access to rural market corners and such infrastructure should be expanded in collaboration with the local government institutions (e.g. municipalities, city corporations) in both urban and rural areas.

Access to energy services: Women's access to energy (power, fuel and green) should be increased for reducing their drudgery and saving time for productive employment and increase their access to information. Women's expanded access to renewable energy should be ensured in both grid and off-grid areas to facilitate their economic participation. The energy policy should enhance women's access to solar power, bio-gas, improve cook-stoves etc.

6. Improve Institutional Capacity, Accountability and Oversight

Effective /strong institutional mechanism at parliament, ministry and LGI levels: The existing institutional mechanism for women's advancement needs to be more effective with accountability, capacity and authority. Regular guidance from NCWCD, functioning of the committees and the Gender Focal Point mechanism should be ensured. Other institutions should also be assigned specific roles in promoting gender equality to achieve SDG targets. Bangladesh Bureau of Statistics (BBS) should regularly provide sex disaggregated data synchronized with the national, sectoral and SDG indicators and the reporting needs for CEDAW, SDG, ICPD, CRC and such others. IMED should be responsible to monitor gender equality results of projects/programmes including for programmes under revenue budget. The Office of the Auditor General (OAG) should be given responsibility of auditing gender budget expenditure to assess the outcome. Similarly, Bangladesh Institute of Development Studies (BIDS) can be assigned for necessary gender research and BMET strengthened for analysis of labour markets. Other statistics generating organizations like Bangladesh Bureau of Educational Information and Statistics (BANBEIS), National Institute of Preventive and Social Medicine (NIPSOM) should also be strengthened to provide gender analysis of data generated. The Annual Performance Agreements should integrate actions that are consistent with the National Action Plans and SDG targets.

Strong key institutions: BBS, IMED, Planning commission, MOWCA, MoF: Capacity of the key institutions like the agencies under MoWCA including DWA and PLAU, IMED, BBS, OAG and Planning Commission should be strengthened in performing their roles as per mandate in design, review, implementation, and monitoring of gender equality and women's advancement related actions and results. MoWCA's capacity should be strengthened for a robust oversight role and to uphold its position to monitor gender equality with allocation of adequate resources. BBS has to be assigned to ensure regular collection, collation and analysis of sex disaggregated data on different sectors as per agreed gender and SDG indicators. Based on requirement, these institutions should be given additional staff, resources and capacity building support for their staff to be able to perform their responsibilities. Capacity of LGIs and implementing agencies should be strengthened for gender mainstreaming.

Financial and human resources for GE: Allocation for financial and human resources to implement the several action plans and their targets is to be ensured. Additional resources for implementing and monitoring activities should be allocated. Gender capacity building should also be prioritized. Resources should be allocated for enhancing capacity of the staff in undertaking management and reporting functions. The National Action Plans and Annual Performance Agreements should be used as reference points while allocating resources for women's empowerment and gender mainstreaming.

Gender responsive budgeting for GE results: The GRB report currently covers 43 ministries and divisions focusing on allocation. Analysis and assessment of gender budget for result has to be institutionalized with a comprehensive assessment of utilization. In addition, the allocation in LGIs for Women Development Forum for promoting gender equality should also be monitored for results. The guidelines for utilization of local government fund should be reviewed, particularly to ensure specific allocation and their proper utilization for women and girls. It is necessary to ensure availability of sufficient technical support and training for effective implementation of GRB. Monitoring and review of the completed projects from gender perspectives should be introduced. Capacity of gender focal points on gender budget analysis should be ensured. Introduction of gender auditing of big projects will also strengthen the GRB initiative.

Capacity to develop, implement, and monitor gender strategies across government: Technical competence of the officials in carrying out gender analysis, assessment, planning, implementation and monitoring is essential. Orientation of the policy makers, training and capacity building of staff in different institutions should continue and expand. All training programmes of different institutions should integrate gender issues relevant to the sectors' or departments' operation and monitoring of the same. The capacity of Policy Leadership and Advocacy Unit (PLAU) and DWA should be enriched to ensure that the staff are able to monitor performance and can guide other agencies and ministries, if needed. Gender analysis should be part of all foundation training courses. Private sectors should be encouraged to incorporate gender perspectives in their operation and employ gender specialists, if needed. The education institutions should be encouraged to initiate additional courses to develop technical knowledge on how to address gender in different sectoral operations.

Transparent and effective monitoring mechanisms to track gender impact: The review of the 8th FYP and the SDGs should effectively incorporate monitoring of gender equality results. The IMED monitoring system should integrate monitoring of progress of women's empowerment and gender based on project/ programme targets. Rigorous monitoring of GRB should be institutionalized with capacity enhancement across agencies, sectors and field level. The Office of the Auditor General (OAG) should monitor expenditure and results in gender through the audit. Transparent procedures at different levels should include open meetings, publicly available financial disclosure, and budget review.

National GE related SDG indicators into monitoring systems: At the national level all progress indicators of the government's performance should integrate gender indicators besides measuring growth, investment, deficit etc. Most of the SDG indicators should provide gender perspectives and the identified gender indicators for the 8FYP should be rigorously used. A compilation of defined gender results indicators in consistency with the SDGs and sectoral performance should be integrated in the plan document for all sectors. The poverty assessment and income data should be sex disaggregated in all wealth groups so that women's poverty reduction can be effectively measured. The APA should also integrate actions to achieve results as per these indicators.

Responsibility of persons to be accountable for GE results: A system of accountability for the achievement of gender equality targets and results must be established. The Project/programme management should ensure utilization of resources for gender as per the project documents and be accountable for any failure. Performance assessment criteria of projects/programmes should ensure assessment of gender targets and results. The Annual Performance criteria of staff/officials should include measuring criteria on their integrity to promote gender quality and reducing VAW and discrimination.

Inclusive and gender-sensitive citizen accountability mechanisms: Partnership, inclusion and mutual accountability is important to promote gender equality. Inclusiveness is as much about increasing citizen involvement in processes as it is about involvement in formal institutions. The Government, private sector, parliaments, local development actors, civil society including women's organizations, private sector and national women's machineries should make transparent and binding commitments to work for GE in their own area. The Government should ensure oversight and establish partnership for ensuring accountability. Mechanism to ensure voice of civil society and women groups in monitoring progress of women/girls' participation and empowerment should be strengthened.

7. Increased Protection and Resilience from Crisis and Shocks

Social protection addressing gender inequalities and gender dimensions of poverty and shocks: The NSSS is designed to addressing the specific concerns and vulnerabilities of women at different stages of the life cycle. So, its sound implementation will be an essential complement to addressing gender-specific life cycle risks. The introduction of the proposed social insurance is particularly important mitigation measure for risks faced working women.

Protection from effects of environmental and bio-diversity degradation: Awareness raising, capacity building and livelihood support activities in environmental protection and bio-diversity conservation should be undertaken and expanded involving women. Children and youth should also be engaged in these activities to protect environment. Pollution control, improvement of hygienic practice, economic use of natural resources would facilitate protection of environment and depletion of resources. Women and men should be oriented on forest conservation, renewable energy, land use planning, environmental protection to minimize exposure to hazards.

Climate change adaptation, mitigation, resilience, coping, food security, and livelihood: Adaptation capacity against climate change impacts should be enhanced amongst community including women. Investment in disaster preparedness, adaptation capacity building, and climate resilient livelihood for women and men should be enhanced. Women and girl's capacity should be strengthened to act as whistle blowers before calamities, protect assets, diversify livelihood for more resilient and empowering occupations disaster warning, relief and rehabilitation activities. Full implementation of the Climate Change Gender Action Plan should be ensured. Provision of adaptive and diversified livelihood services (e.g. low gestation and less water intensive crops, food storage and preservation technology, nutrition, and food preservation during calamities) should be expanded to ensure food security amongst vulnerable groups, including climate induced migrants of urban areas. Providing women with greater access to employment guarantee schemes, public work programmes, skills development, technology, entrepreneurship support and training should also be extended. Women's capacity and engagement in climate change mitigation like technology with low carbon emission, forest and bio-diversity conservation, water management, renewable energy, and scientific waste management, should be enhanced.

Information services to strengthen resilience to climate change, calamities and shocks: Information services before, during and after calamities should be ensured for preparation and safety measures during and after calamities (fire, earthquake, disease). First hand contact including police and fire brigade point and available support should be included in all awareness raising programmes. In the natural calamity prone areas continued mobility and services of the people should be supported by providing information ensuring climate resilient information services. Provision of services, shelters, livelihood support etc. should be disseminated to women and men through community radio, campaign and strengthening community networks.

Mitigation measures during involuntary resettlement: During construction of large infrastructure projects, involuntary resettlements take place. Women are displaced, their livelihoods are disrupted and their assets are lost. Therefore, women's loss should be estimated and they should be given due compensation for the loss of livelihoods and assets for involuntary resettlement during land acquisition and construction of infrastructure through resettlement plans.

National insurance and universal pension coverage for low income vulnerable women: Access to low cost health and maternity care insurance, provision of pension, unemployment insurance, under the social insurance programmes should be explored for women. A national social insurance system (NSIS) enabling people to invest in their own social security, providing protection against the risks of old age, disability, unemployment and maternity will be initiated on a pilot basis under the National Social Security Strategy. A low-cost contributory insurance model should be initiated in collaboration with private sector by providing subsidy, if necessary, so that women can access the support at a low contribution.

8. Influencing Social Norms and Changing How Women and Girls are Valued

Portrayal of positive image of girls / women as equal human beings in all media: Portrayal of women's positive image will be promoted. The news/feature contents would advocate against VAW, dowry, child marriage and such evils. Negative projection of women as well as portrayal as commodity would be prevented, and positive portrayal promoted through mass awareness among the media personnel, including for the media owners. Regulatory measures will also be enforced for positive portrayal in promotional for consumer products and establishing ethical values.

Programme for men to change norms about men and women's roles: More programmes would include active engagement of men in all spheres to promote women's advancement and curb men's participation or support of harmful practices. Men would be informed and involved in promoting gender equality as they often control or influence social behaviour, women's mobility outside home and access to reproductive health care. It is also important to develop groups of men as advocate to change social behaviour, prevent VAW, share household responsibility, promote gender equality and hold other men accountable for discriminatory behaviour.

Working with children and adolescents to develop norms of more egalitarian relationships: Because gender socialization of both boys and girls begins early at home and community, it is important to initiate change processes at a young age to shape attitudes and transform behaviours. Early initiation and continued investment in children and adolescents is critical through education curriculum, sports and culture, social behaviour, media and all other means to promote the culture of equality between girls and boys and their equal human rights is necessary, so that men do not grow up with a discriminatory view towards women. A young population of age group 15 to 24 years comprises nearly nine per cent of the country's population, who can be useful strength. Girl-centred programmes equipping adolescent girls with knowledge and skills can build their confidence and contribute to the efforts to end inter-generational poverty, illiteracy, ill health, and gender inequality.

Freedom from gender -based violence and harassment: The most prevalent human rights abuse of women is gender-based violence, which not only undermines her dignity but curtails her self-esteem and scope for development. This impact on women's lives, society and the economy. Multipronged actions are essential to combat VAW including enforcement of the legal provisions, motivation of family, enhancing community support, orientation of youth group, improving women's human capabilities, access to low cost prosecution services and economic self-reliance of women. The on-going initiatives under the multi-sectoral programme and institutional mechanisms should be expanded. Prevention should be emphasized and women's and community awareness of the economic, social and health impact of VAW should be enhanced. Information and support services for women in accessing legal support, shelter, counselling should be expanded and

support for women's economic self-reliance should continue. The new dimensions of VAW against the elderly women, children and through ICT need addressing though legal and programmatic provisions. Protection from IT based crime and cyber safety awareness should be developed all over the country. General guidelines should be issued for all private and public institutions to formulate and enforce policies to protect women from sexual abuse at work places/ educational institutions and other public places. Marital rape should be brought within legal provisions. Accountability mechanism has to be strengthened for the members of law enforcing agencies in addressing VAW. Development and institutionalizing a professional social work mechanism should be explored for support in cases of VAW. Social research should be conducted to identify the root causes of violence against women and girls and actions to be taken for remedies.

14.5.4 Implementation of Eighth Plan Gender Strategy

The gender agenda for the Eighth Plan is large and priorities for the next five years will have to be set. Priority areas would be chosen on the basis of contribution towards both economic growth and women's empowerment and actions that can facilitate results in more than one area. The key areas would be to ensure equal benefit from quality formal education; marketable skills to maximize productivity and potential of women; narrowing of wage gap between similarly qualified male and female workers; elimination of all types of biases against female staff at the work place; nutrition and lifelong health care; infrastructure that facilitates women's human development, mobility and economic gains; and actions that enhances positive social norms and reduces VAW and other harmful practices. An assessment of geographic areas that lag behind national average as measured by different gender equality indicators would be prioritized for resource allocation and closing the gender gap in the identified areas. Enforcement of laws and policies and effective monitoring should be ensured for good administration and governance. The available resource envelop for 8FYP would be reviewed, resource requirements to address gender equality objectives and targets should be estimated and additional resources should be sought, as needed.

Mainstreaming of gender would continue and all macro-economic and sectoral policies would integrate gender as a crosscutting theme. Action plans should be drawn with a view to reduce inequality and promote an equal relationship between sexes. To ensure results from actions related to gender equality all reporting of national progress including those related to SDG agenda would be based on sex disaggregated data to allow a better understanding the progress in the area of gender equality and women's empowerment. Partnership and cooperation with Civil Society Organizations (CSO) including development and advocacy groups and private sector would be strengthened to promote their role and support in implementation and monitoring of actions and to achieve good results. Development and advocacy initiatives on gender equality issues and to form public opinion against harmful practices would be pursued jointly and they should be partners in better delivery of services, especially in rural and remote areas.

More specifically, the gender implementation arrangements will be strengthened through the following actions:

Effective and strong institutional mechanism: The existing institutional mechanism for women's advancement will be made more effective with accountability, capacity and authority. Regular guidance from NCWCD, functioning of the committees and the WID Focal Point mechanism would be ensured. Capacity of the key institutions like MOWCA including DWA and PLAU, IMED, BBS, OAG and Planning

Commission would be strengthened in performing their roles as per mandate in design, review, implementation, and monitoring of gender equality and women's advancement related actions and their results. MoWCA would be geared more towards an oversight role like other regulatory ministries with review of its mandate to promote its roles to monitor gender equality with allocation of adequate resources. The BBS will be tasked with generating gender disaggregated data synchronized with the national and sectoral indicators and the reporting needs for CEDAW, SDG and such others. IMED would have accountability to monitor gender equality results and the Office of the Auditor General (OAG) should be given responsibility of auditing gender budget expenditure.

Sufficient financial and human resources for gender mainstreaming: Generally, there is a lack of resources for agencies in implementing and monitoring activities for advancing women's rights and gender equality. Similarly, there is a general lack of capacity and allocation of human resources to work in this area. Projects/programmes generally lack resources for the identified gender related actions. Often functions in this area are consultant dependent. It is therefore important to allocate both financial resources as per targets of each agency and projects and human resources in the institution with capacity development support. The National Action Plan would be used as a reference point while allocating resources for women's empowerment and gender equality.

Adequate technical knowledge and support services: It is important to increase the number of technically competent persons who can carry out gender analysis, assessment, planning, implementation and monitoring. Though Dhaka University and some institutions have initiated courses, the education institutions should be encouraged to initiate additional courses to develop technical knowledge on how to address gender in different sectoral operations. The capacity of PLAU and DWA should be enriched so that their staff are able to monitor performance and can guide other agencies and ministries, if needed. Gender analysis training should be part of all staff training.

Transparent monitoring mechanisms established and implemented to measure impact of public policies and programmes: The review of 8FYP programmes should incorporate monitoring of gender equality results. IMED monitoring should integrate monitoring of progress of women's empowerment and gender equality based on project/ programme targets. More rigorous monitoring of the gender budget is essential across agencies, sectors and field level. The OAG should be assigned to monitor expenditure and results in the area of gender equality. Transparent procedures at different levels would include holding open meetings, issuing publicly available financial disclosure statements, and conducting budget review.

Capacity to develop, implement, and monitor gender strategies across government and sectors: Building the capacity of women and men in institutions to understand gender issues and developing their motivation to bring about changes within their own domain and act accordingly. Orientation of the policy makers and training and capacity building of existing staff contingent in different institutions has to be continued and expanded. All training programmes of different institutions should integrate gender issues that are relevant to the sectors' or departments' operation with specific actions identified and monitoring of the same. Private sectors should be encouraged to incorporate gender perspectives in their operation and employ gender specialists, if needed.

Defined national and sectoral gender equality results: The indicator of the government's performance on gender will be defined besides measuring growth, investment, deficit etc. A compilation of defined gender equality results with indicators would be integrated in the plan document for all sectors for monitoring purpose. At the national level, a list of gender equality indicators would be identified, agreed and monitored. The poverty assessment and income data would be gender disaggregated in all wealth groups so that women's poverty reduction is effectively measured.

Accountability for gender equality results: Accountability for the achievement of gender equality targets and results must be ensured. The Project/programme management should ensure utilization of resources for gender equality as stated in the project documents, and be accountable for any failure. Reallocation of resources from gender equality objectives to other action areas should be restricted. Performance assessment criteria of projects/programmes should ensure assessment of gender equality targets and results. At country level accountability means that the Government, private sector, parliaments, local development actors, civil society including women's organizations, private sector and national women's machineries make transparent and binding commitments and that they all should work for gender equality in their own area and be accountable. The Government would provide guidelines, ensure oversight and establish partnership for ensuring accountability.

Monitoring and evaluation: For establishing good monitoring and evaluation (M&E) mechanism, it is critical to have a list of agreed gender equality indicators at the national level for measuring the progress of gender equality. These may include employment in formal sector, tertiary education, reduction of VAW and child marriage, reduction of maternal mortality and malnutrition, reduction of poverty of female headed households and such other key areas. These should be consistent with the indicators of the NAP and the SD goals. At the sectoral level, a few key performance indicators (KPI) in each sector would be identified and monitored. The GED of the Planning Commission would finalize the indicators with support from sectoral ministries. All relevant stakeholders working in the sector should be informed of the expected results and indicators so that they are also active in implementing actions and monitoring for those results.

14.6 SOCIAL INCLUSION

In addition to women, vulnerable populations in Bangladesh encompasses different social groups such as children, elderly, ethnic and religious minorities, people with disabilities or physical impairments and low caste groups. All these heterogeneous groups are generally vulnerable to extreme poverty, natural disasters, and other external shocks that may impact their well-being. Likewise, their access to health and nutrition services is often restricted and their education participation and achievement tends to be low. Thus, the different needs and priorities of these social groups must be taken into account when planning to eradicate poverty and improve Human Resource Development. Empowerment through increased participation in the various spheres of a society is the most efficient and inclusive way to do so. This positively reinforces the development of a nation and strengthens economic growth both directly and indirectly, in addition to increasing social stability and the well-being of its citizens.

14.6.1 Seventh Plan Progress with Inclusion

Through the Constitution, the Government is committed to eliminating all kind of social exclusion. This is a long-term agenda and continuous efforts are needed. For the Seventh Plan, goals and strategic approaches were identified for each of these groups, exploring the most efficient ways to include and empower them within the society. The progress in addressing the exclusion challenges in each group is reviewed below.

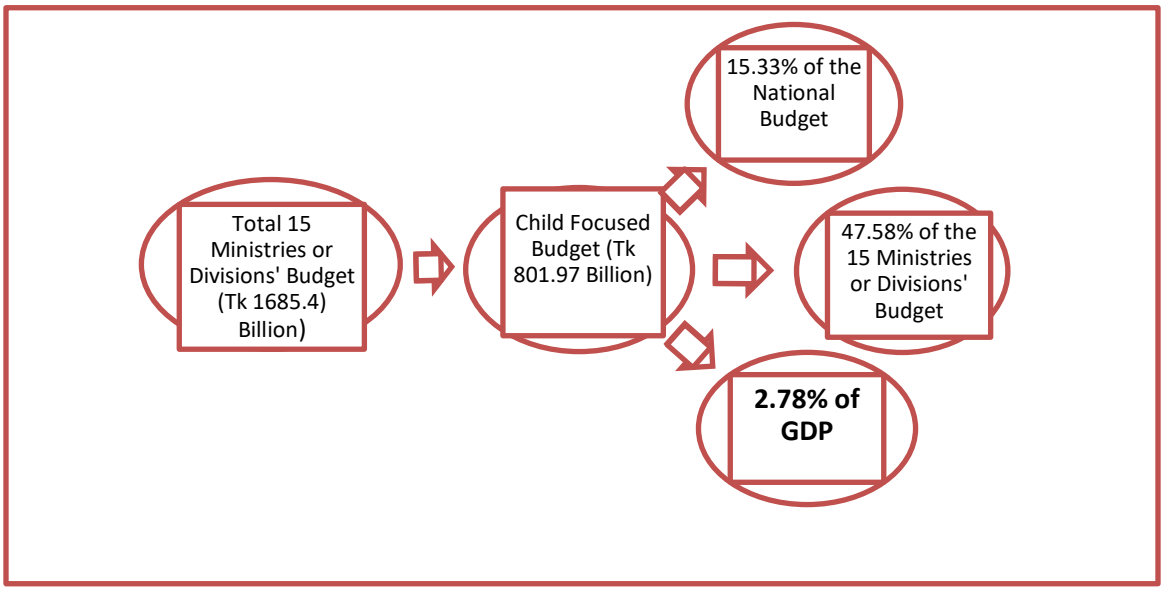
Children: Major progress has been made in promoting children's status, their survival and welfare. For instance, Bangladesh has made good progress in child focused SDGs focusing on primary and secondary education as well as child mortality. Nonetheless, poverty among households with in 2016 was around 30 per cent, significantly higher than the national poverty rate of 24.3 per cent. In addition, children are more susceptible to abuse, exploitation and natural disaster. Many additional issues linger in terms of malnutrition, poverty, and low or lack of education.

Seventh Plan strategy: The Seventh Plan strategy for inclusion is based on implementation of the Constitution that provides equal rights and opportunities to all citizens irrespective of race, religion, caste, creed or profession. The Seventh Plan's focuses mainly on their welfare as well as their legal protection and their rights. Improved health was expected to be achieved through 1) controlling communicable and non-communicable diseases as well as increasing behavioral change communications in schools about health and healthy practices; 2) increasing food and nutrition intakes of children; and 3) ensuring access to safe water and sanitation to reduce environmental health hazards for children. The children's access to good quality education was expected to be strengthened through early childhood development strategies and access to formal and non-formal education. Legal protection of Children was expected to be achieved by 1) creating a national platform for allowing children to express opinions on their needs; 2) enforcing and harmonizing laws against children abuse, trafficking, exploitation; 3) mobilizing municipal corporations to register all births; 4) eliminating child labour by instigating the National Plan of Action for Implementing the National Child Labour Elimination Policy 2010; 5) elimination of child marriages through enforcement of Child Marriage Act 2017 and 6) ensuring children are removed from abusive and exploitative circumstances.

Implementation: Some important legislation was implemented during Seventh Plan period. One of most important ACT was passing of the Child Marriage Restraint Act, 2017. The Act clearly sets the minimum age for women to marry at 18 and for men at 21 years. However, it also allows for younger brides and grooms under "special circumstances". Digital Security Act was enacted in 2018 where it covers any defamation and instigation against any person, including children, via the publication or dissemination of any material on a website or in electronic form.

In addition to these laws, an important development was the consolidation of the Child budget under aegis of Ministry of Finance. Participations of various in the Child Budget have increased during the Seventh Plan. As of FY 2019-20, as many as 15 ministries are involved in the implementation of the Child budget.

Figure 14.10: Characteristics of the Child-focused Budget in 2019–20



Source: Ministry of Finance, Child Budget, 2019–20.

Ethnic Communities: According to the Population Census 2011, more than 1.6 million people of ethnic communities live in Bangladesh. About a third of them live in three districts of Chittagong Hill Tracts, where peoples from different ethno-linguistic backgrounds form the majority. CHT is the home to 11 different ethnic communities. Other ethnic communities are found in the plain lands, particularly in Northern Bangladesh. The ethnic communities in Bangladesh are deprived of economic, social, cultural and political rights. Enforcement of the notion of 'national unity', which is not nuanced and sensitive to minority groups, has brought about an elimination of the particular cultural and political values of ethnic minorities. The result is that ethnic people are socially isolated, with little access to mainstream economic and political spheres. A complex interplay of ethnic inequality, enduring discrimination, lack of education, little access to land and lack of employment has resulted in increased poverty amongst these groups. One of the major problems for all minority communities is land grabbing by influential people from the mainstream population. Policies to protect the land of ethnic people have not been adequate.

CHT is one of the most disadvantaged and vulnerable regions in the country in terms of almost all major development indicators, such as income, employment, poverty, health, water, sanitation, education, women employment, access to infrastructure and national building institutions, inter-community confidence, etc. Both primary school and secondary school completion rates in CHT (i.e. 62.9 % and 15.4% respectively) are significantly lower than the national completion rates (i.e. 98.5 % and 62.2% respectively). Food poverty is widespread in CHT. The prevalence of absolute poverty and extreme poverty in ethnic communities in 2016 is 45.7 per cent and 28.4 per cent respectively – almost double of the national poverty rate (24.3%) and extreme poverty rate (12.9%). Extreme poor ethnic minority people are less able to find jobs, making their situation even more perilous. The development challenges facing CHT and government strategies and responses were discussed in detail in Chapter 7, Part 2 of the Plan Document.

Dalit's and Extreme Poor Groups: Dalit status is historically associated with occupations regarded as ritually impure. In Bangladesh, the Dalit's are categorized with respect to their work, religion and ethnicity. There are over 30 different Dalit groups in Bangladesh, representing 4.5-5.5 million of the country's

population. These groups of people, being identified as untouchables, have limited social, economic and employment opportunities to blend with the mainstream. They are victims of social antagonism due to their low socio-economic status. Historically, the Dalit's have been confined to specific jobs and segregated from full participation with the mainstream society. Dalit communities are some of the most economically marginalized and socially excluded groups in Bangladesh.

Despite their long presence in the traditional Bangladesh society, Dalit communities are not focused in development interventions, and are hence are often referred to as the 'missing poor'. Economic disparity is not the only problem faced by these marginalized groups, but also non-economic problems, some of which are (1) untouchability and the hatred associated with social exclusion, (2) lack of self-esteem and dignity, (3) estrangement from most livelihood activities, (4) forced eviction from land, (5) insecurity within family and society, (6) ignorance and lack of information, (7) environmental disasters, (8) lack of access to legal aid services, (9) lack of access to government services. Social boycott and forced labour are often imposed on Dalit's as a means to control and exploit their labour.

Seventh Plan strategies: The vision of the Seventh was to erase the discrimination and exploitation faced by Dalit communities in Bangladesh, so that they can take their place as full citizens of the country. The aims of the Seventh are to include these disadvantaged individuals in the socio-economic realm and protect their rights through different strategies. A key strategy will to cooperate with local bodies and NGOs to identify the disadvantaged people and enable them to participate in development activities. The Government will uphold the right to education for children from Dalit communities with the expectation to ensure schools becomes non-discriminatory and inclusive spaces for all children. In this regard, a special quota for Dalit and other excluded students will be created in government schools and colleges, and access of Dalit adolescents and youth to all government owned skill training institutions will be ensured. Then priority will be given to the disadvantaged communities in khas land allocation. Tea Garden owners will also be encouraged to assign some land within the estate to their extreme poor workers as a mean for them to build their own garden. Finally, all government functionaries will need to coordinate their activities at all levels to ensure the effective governance of this issue.

Implementation: The Government remains committed and highly sensitive to the needs of these marginalized groups. Legal provisions are in place to protect them against social and political discrimination. Yet the weakness in public administrative capacity and the absence of strong local governments has limited the implementation of government policies. The new National Social Security (NSSS) puts considerable emphasis to bring these marginalized groups under the umbrella of social protection. The adoption and eventual implementation of the NSSS would be a considerable step forward.

Marginalized Groups: These groups include people living with HIV/AIDS, female and male sex workers and transgender. All the sexual minority groups face different types of social exclusion which restrict their blending into the mainstream society. Stigma and discrimination against people living with HIV/AIDS is prevalent in Bangladesh and inhibits both the physical and mental well-being of those carrying the human immunodeficiency virus. Stigma also deters the strategies intended to prevent the AIDS epidemic from Bangladesh; it may lead to delayed testing, unwillingness to reveal HIV status to sexual partners and restricted uptake of prevention programmes.

Of all the types of social exclusion faced by the female sex workers, exclusion regarding their children is the most threatening one. Children, especially daughters, of sex workers are more prone to becoming sex workers as well. In a broader perspective, a much bigger problem that is not only faced by the sex workers'

children but by other groups as well is that they are discriminated in terms of opportunity to enter the mainstream society. The situation is even worse for transgender people. They face discrimination at every stage of their lives. Up until November 2013 they were not allowed to have voter ID cards, meaning they were not even considered eligible to have the most basic right as a citizen. However, hijra/transgender has been recognized as a third gender in 2013. Many of the sexual minority issues are in conflict with existing laws, e.g. sodomy is a punishable act under criminal penal code.

There are additional problems in case of availing social services. Transgender and sex workers are not considered for health insurance, while they probably need it more than others. Problems also prevail in case of attaining security and legal services from law enforcement authorities. Another big barrier for transgender people is that they are not considered for either formal or informal sector employment. All these factors contribute to pushing sexual minority groups away from the mainstream and into deeply entrenched marginalization and lack of societal identity.

The combination of a lack of knowledge, misinterpretation, incorrect information, religious condemnation, punitive laws and practices leads many sexual and gender minority people to experience confusion, a sense of worthlessness riddled with guilt. This in turn leads to negative health outcomes such as poor mental health, suicide inclination and greater vulnerability owing to lower self-esteem and higher risk taking behaviour.

Persons with Disabilities: It is estimated that approximately 9 per cent of the total population, including 3 million children, are disabled in Bangladesh, of which half a million are multi-handicapped. Around one-third of all households have a disabled member. Disability on this scale represents not only a major health issue, but is also a prime cause of poverty and underdevelopment. The children of Bangladesh are the future of the country and children with disabilities are the most vulnerable children. Disability can occur at any stage of life, varying over the lifecycle and with a significant increase from around age 50. It is alarming that the total level of disability is increasing with an ageing population.

Persons with disabilities are excluded from microfinance schemes, own less land and are less likely to be involved in any economic activity. The vast majority of them have to leave employment. More than 80 per cent of children with disabilities are not in education. Although persons with disabilities are identified as a particularly vulnerable category of people, their own knowledge and perspectives are conspicuously absent from policy formulation and implementation.

Bangladesh has come a long way in terms of promoting and protecting the rights of persons with disabilities (PWD). Both the UN Convention on Rights of Persons with Disabilities and the Beijing Proclamation on the Full Participation and Equality with Disability in Asia and the Pacific Region have been ratified. A 5-year National Disability Action Plan in 2006 was also implemented, making all relevant ministries responsible for undertaking various initiatives to include and protect PWD.

However, challenges remain in terms of equal opportunities starting from education access to employment possibilities. Poverty is high among persons with disabilities (PWD) (Table 14.7).

Table 14.7: Vulnerability and Poverty in Persons with Disabilities (PWD)

Categories	Vulnerability	Poverty	Extreme Poverty
A. Dimension of Disability			
Household with some difficulty	47.4	26.6	12.7
Household with severe difficulty	48.7	26.5	14.7
Household with complete difficulty (cannot see/hear/walk/concentrate/self-care/ communicate)	56.5	27.4	12.8
B. Age Category of Household with Disability			
Age 0-5	57.2	33.2	17.0
Age 6-9	57.5	33.1	17.6
Age 10-18	40.7	20.2	8.0
Age 19-64	30.5	13.9	5.6
Age 65+	39.2	21.9	10.9

Source: HIES 2016

Seventh Plan Strategies: Persons with disabilities will be brought into the mainstream of the development process. The Government will promote and protecting rights of persons with disabilities to facilitate their full participation in mainstream social, political and cultural lives. They will be enabled to lead productive and meaningful lives through access to education, health care, food and nutrition, employment and protection and security in society. The Government is strongly committed to the advancement and rights of persons with disabilities by virtue of the Constitution, which enshrines equal rights and status for every citizen, and by signing the UN Convention on Rights of Persons with Disabilities and the Beijing Proclamation on the Full Participation and Equality with Disability in Asia and the Pacific Region. In order to overcome these issues, a series of strategic actions have been formulated by the 7FYP. These fall under 4 broad categories: education, health, inclusion and governance.

14.6.2 Implementation

Some good progress was made in implementing the 7FYP strategy for the disable (Table 14.8). Nevertheless, there is a substantial unfinished agenda that will require further efforts in the 8FYP.

Table 14.8: 7FYP Progress with Social Security Benefits for Persons with Disabilities

Activities	Performance Indicators	Timeframe	Progress
Prepare guidelines for the identification of PWDs	Issue of Circular	July 2017	The guideline is in place. However, it is not clear whether the guideline incorporates the NSSS envisaged identification criterion for detecting the severity of the disability. The Circular has not been issued.
Set the criteria for income on individual basis	Revision of the Circular	July 2017	The revised circular has not been issued. The previous household income-based selection criterion is still in place.
Increase coverage by 10 per cent	Increase of Coverage	Annually for the next five years	The number of beneficiaries has increased by more than 10 per cent per year. Since 2015, the number of beneficiaries has more than doubled (from 400 thousand to nearly 1 million).
Strengthen monitoring of schemes for PWDs	Development of a monitoring framework	-	No monitoring framework has been developed.

Source: MTIR of NSSS

14.6.3 Inclusion Strategy for the Eighth Plan

The Eighth Plan strategy for inclusion is based on implementation of the Constitution that provides equal rights and opportunities to all citizens irrespective of race, religion, caste, creed or profession. It will build on the positive lessons of experience of the Seventh Plan while focusing special attention to those areas where progress has been more limited.

Strategy for the Children: The vision regarding children's advancement and rights is that all children in Bangladesh, irrespective of gender and socio-economic background, should be ensured access to essential services, including social security, health care, nutrition and education, and enjoy protection from all forms of violence, abuse and exploitation, to be able to reach their full potential and realize their rights.

The goals to be achieved are: (i) ensuring children's rights and advancement through the implementation of government policies and legislations; (ii) providing health services the children need; (iii) ensuring access to food and nutrition they need; (iv) providing access to girls to education, training and development opportunities; (v) ensuring access to urban poor children to early childhood development, education, sports and cultural activities providing knowledge and life skill; (vi) protecting children from all forms of abuse, exploitation and violence; (vii) providing access to children particularly in urban and remote settings to clean water and sanitation, and a healthy environment; (viii) ensuring participation of children in defining their needs, developing programmes, implementing interventions, and evaluating their success; (ix) ensuring support of duty bearer, parents and other care givers on whom children have to depend; and (x) ensuring widespread public support for survival and development of children.

Intervention and actions as indicated below will be taken during the Eighth Plan are continuation some of the strategies of the Seventh plan, and also in line with provisions of the National Children Policy 2011.

- **Child health**: Caring practices for women and children emerges as a most critical pathway in Bangladesh. The programme areas include arrangements for safe child birth, eradication of polio, elimination of measles and neonatal tetanus, improvement of nutrition and strengthening the school health programme. The actions will include maximizing the efficiency and cost-effectiveness of health expenditure and improving governance. The specific activities will include sensitizing primary and secondary students about critical child health and reproductive health issues, healthy practices and worm infestation, and supplying iron and folic acid tablets for schoolgirls. Necessary measures will be taken to include such issues in school syllabus. Activities will be undertaken to develop an adolescent health strategy including counselling, building awareness for adolescents on hygienic practices, nutrition, puberty, RTI/STD and HIV/AIDS. Regional variations will be taken into consideration for awareness building in using ORT for treating diarrhoea. Minimizing regional disparities in immunization coverage will be addressed to reduce disparities in vaccination coverage through effective programmatic interventions.

- **Food and nutrition:** Nutrition related programme coverage will be expanded, including a nutrition-sensitive approach of the social security system and priority inclusion of poor households with children in social security programmes. Special attention will be given to improve the nutritional status of children aged 24 months and below. Provision of nutritional supplement for pregnant and lactating mother will be uncompromisingly implemented. To control vitamin A deficiency and contain the

prevalence of night blindness, vitamin A supplements will be distributed to children with vitamin A deficiency, measles, persistent diarrhoea or severe malnutrition and to postpartum women within 6 weeks of delivery. On-going efforts to control iodine deficiency disorders through universal salt iodization will continue. Strategies to control anaemia will include iron-foliate supplementation, anathematic treatment, fortification and BCC to increase the consumption of iron-rich foods and promoters of iron absorption. A strategy will be developed to address the health care needs of children with physical and mental disabilities.

- **Child education:** The intervention for early childhood development will include an awareness raising programme for parents to make them aware of early childhood development benefits, promote community-based childcare centres for clusters of families where literate mothers are trained to become caregivers and design facilities for early learners. Pre-primary education (for children 3-5 years) will be expanded to make formal education more effective. Highest level priority will be given to increase enrolment rate and decrease dropout rate, train primary teachers, increase the attendance rate, increase contact hours, and maintain gender parity in access and achievement. Vocational and technical education will be accorded high importance, to create better conditions for future gainful employment. Special efforts will be made to reach out street children and the orphans and bring them in the fold of child education network. Non-formal education will be provided to diverse types of children deprived of education, like un-enrolled or drop-out children and hard-to-reach children to enhance their employability and productivity through skill training.

- **Access to water and sanitation:** The specific objectives are to mitigate arsenic problem in drinking water by providing alternative systems, increase rural and urban slum access to sanitary latrines, expand water and sanitation services to cover currently underserved Pourashava areas, provide improved water supply to underserved, un-served and difficult to reach areas. Primary schools will be ensured access to sanitation and safe drinking water.

- **Child empowerment:** Children will be empowered to have a voice in the socio- economic decision-making process at family, society and national levels. In this respect, it would be necessary to create a national platform for allowing children to express opinions on their needs and expectations and means of addressing them.

- **Child protection:** Measures will be taken to ensure right to protection from all forms of abuse, exploitation and violence for all children, particularly those who are vulnerable such as street children and orphans. The policies of existing NPA will be used against sexual abuse and exploitation of children and trafficking. Laws affecting children will be harmonized and enforced. Awareness amongst law enforcing officials and judicial officers and the development of a diversion scheme involving the courts, social workers and probation officers as an alternative to custodial sentences will be undertaken. A widespread social awareness campaign and community mobilization on protection issues will be undertaken to foster positive attitudes towards children, particularly girls, and bolster the positive attitude of parents and decision-makers on the need to protect children regardless of the socio-economic environment.

- **Birth registration and child marriage:** The Municipal Corporations and Pourashavas will be mobilized to register all births. Awareness raising programmes through union Parishad members, and leaders of social opinion including Imams will be conducted to eliminate the practice of early marriage.

- **Child labour:** Effective measures will be taken to reduce child labour, and eliminate worst forms of child labour with a particular focus on child domestic workers, migrants, refugees and other vulnerable groups. In this context, a policy for children in the formal sector focusing on those caught up in the worst forms of child labour will be formulated. Street children will be assisted in accessing their rights and protecting them from all forms of abuse and exploitation. Coordination between government agencies, NGOs working on child issues, parents and community people will be required for an effective rehabilitation and development of street children. Working children such as waste collectors, leather workers, brick breakers, auto-workshop workers and tempo helpers will have access to learning opportunities in formal and non-formal facilities. Extreme poor households, where the occurrence of child labour is highest, will be covered by livelihoods interventions for adult earners.

- **Child abuse:** To recover and remove children from abusive and exploitative circumstances, interventions will include developing community support for these children, providing livelihood alternatives, basic services and adoption, and implementing policies and legislation necessary for the prevention of abuse, discrimination, exploitation and violence. Steps will be taken to increase efficiency to combat sexual abuse, exploitation and trafficking of children through enhanced coordination and cooperation.

- **Management and coordination:** The Ministry of Women and Children Affairs will conduct public advocacy and coordinate interventions for children's well-being and rights. An inter-ministerial coordination committee consisting of government ministries with children's portfolios and organizations representing children's mandate will be chaired by the Secretary of the Ministry of Women and Children Affairs and will coordinate implementation of the Children Act 2013, CRC, CEDAW, and the World Fit for Children Plan of Action.

***Strategy for Ethnic Population**:* The government is committed to ensuring socio-economic and political rights, fundamental human rights, and social security, while enabling ethnic people to retain their social, cultural, and traditional identities. The ethnic communities of the CHT will be ensured access to education, health care, food and nutrition, employment, and overseas employment, and protection of rights to land and other resources. Alternative farm and non-farm-based livelihoods will be ensured for them. They will be protected from hazards caused by climate change and other natural calamities. Additional finance will be allocated as a priority for the implementation of projects that contribute to the development of the people of the CHT and to bridging the development gap between the hills and the plains. A Perspective Plan will be formulated for the development of the CHT through a consultation process with key stakeholders. Special measures will be taken to preserve the characteristics of the CHT and the cultural identity of the ethnic groups. Like CHT Land Dispute Resolution Commission, the government will take measures to establish a separate land commission for ethnic minorities in the plain land.

Strategic Goal and Policy Direction: Recognizing the special socio-cultural and geographic situation of the CHT, the following strategic goals and policy direction will be pursued:

The government is committed to ensuring socio-economic and political rights, fundamental human rights, and social security, while enabling tribal people to retain their social, cultural and traditional identities. The ethnic communities of the CHT will be insured access to education, health care, food and nutrition, employment, and overseas employment, and protection of rights to land and other resources. They will be ensured alternative farm and non-farm-based livelihoods. They will be protected from hazards caused by climate change and other natural calamities. Additional finance will be allocated as a priority for the implementation of projects that contribute to the development of the people of the CHT and to bridging the development gap between the hills and the plains.

Areas of Future Action: The CHT has specific needs, requirements, and capabilities, and thus requires differentiated measures and approaches, and delivery mechanisms that are appropriate to the local cultural and social context.

- **UN Declaration**: The Government will consider implementing the UN Declaration on the Rights of Indigenous Peoples 2007 and ratifying the ILO Convention 169.
- **CHT Peace Accord**: The government will ensure full implementation of the CHT treaty signed in 1997. The CHT Accord Implementation and Monitoring Committee and the Task Force on Tribal Refugee Returnees and the Internally Displaced Persons will be strengthened and activated for implementation of the related issues of the CHT Peace Accord. The Ministry of CHT Affairs, CHT Regional Council, and three Hill District Councils in will be strengthened as per the concerned legislations to support the development of the CHT. As per the provisions of the CHT Peace Accord, the remaining offices and institutions of concerned functions will be transferred to HDCs in terms of administration, finance, and development fund in letter and spirit and with allocation of finance.
- **Land rights**: The Land Commission will resolve the land disputes in CHT following the amended Land Commission Dispute Resolution Act 2001 to ensure the rights to land. Rules of the CHT Land Disputes Resolutions will be enacted soon so that CHT Land Disputes Resolution Commission can function Community ownership of land in the CHT will be honoured. A land survey will be carried out in consultation with the key stakeholders as per the provisions of the CHT Peace Accord. An appropriate land policy will be formulated which can deal with land disputes involving ethnic groups. A secure land tenure system will be introduced.
- **Empowering ethnic communities**: The Government will ensure participation of local people in development activities and management of natural resources and will recognize the traditional customs and knowledge of the various ethnic peoples. The Government will ensure community involvement in the adoption of technologies in line with the traditional food production system. The Government will provide appropriate training and support to people for development of their vocational skills and knowledge.
- **Access to education, language, and culture**: A national language policy will be formulated to safeguard the languages of ethnic peoples. Effective initiatives must be taken to incorporate children from small groups into mainstream education programmes. Besides the allocation from the Prime Minister's Office for sector-based education and scholarships will have to be increased. Moreover, a national language policy needs to formulate to safeguard the languages of ethnic peoples. Regular supervision and monitoring, especially for quality primary education, will be

strengthened. The government needs to ensure establishment of residential primary and secondary schools for children of extremely poor parents in remote and inaccessible area of the CHT. The Government will take action to expand multilingual education for tribal students at primary school level. The Government will take measures to preserve and promote the culture and heritage of ethnic communities.

- **Creating Income Generating Activities:** Income generating activities through small and cottage industries, trading, poultry and livestock rearing, beekeeping, mushroom cultivation, and others will be expanded. The income of poor people will be enhanced through social forestry in hill areas, cultivation of fruits and medicinal plants, and expanding non-farm employment opportunities. Equal emphasis will be given to the farm and non-farm sectors including internal and external labour mobility to expand employment opportunities for the youth.
- **Promoting Marketing Infrastructure:** Proper market infrastructure and rural road and market facilities will be developed so that farmers/producers can achieve a better price from selling their products. Measures will be taken to eliminate barriers so that agricultural and other local products have easy access to national and international markets. A special programme will be developed to strengthen postharvest management, value chain development, processing, packaging, and market access, and to engage private sector market linkages. Private investment in processing, packaging, and marketing CHT products and services will be encouraged.
- **Enhancing Human Development:** Existing human resource development programmes will be augmented to address the special needs of ethnic people and strengthen their vocational and social skills. Necessary training and support will be provided to the youth. Monitoring and supervision will be strengthened so that education, health and maternal child health services, social safety nets, and nutrition and housing facilities reach the ethnic people. Special arrangements targeting ethnic communities to prepare them to take up the opportunities provided by national and global labour markets, including overseas employment, and thus enable them to increase their income. Appropriate skill development training and support will be delivered to the youth of CHT, to provide vocational and social skills.
- **Promoting Eco-Tourism:** Following the Peace Accord and the subsequent legislations, Tourism, especially ecotourism and community-based tourism will be encouraged as a means of income generation for the local people. Private local investment will be encouraged to develop sustainable tourist spots and facilities in Rangamati, Bandarban and Khagrachari by engaging tribal people. Care and caution will be taken so that tourism does not adversely affect the local culture and environment.
- **Ensuring Energy:** Supply of electricity through the national grid in different upazilas of the Chittagong Hill Tracts should be increased. In the remote areas of the Chittagong Hill Tracts, where electricity is not possible to be accessed through the national grid, it will be necessary to cover the electricity through installation of solar panels in all areas. Necessary steps must be taken to ensure a modern standard of living by expanding the network of mobile phones and reducing the cost of internet.
- **Expanding Credit Facilities:** Measures should be taken for the expansion of micro credit distribution activities and technical training among the poor. Necessary steps should be taken to develop rural roads and establish market linkage for locally produced agricultural products. Besides, uninterrupted power supply must be ensured for the development of small and medium industries.

- **Promoting Sustainable Development:** Village/mouza community forest will be created and expanded in the CHT to conserve biodiversity and the watersheds and ensure that people have access to water. Efforts will be undertaken involving the local communities for afforestation over the region. Measures will be taken to protect wildlife and biodiversity. Special initiatives will be undertaken to ensure the flow of water in creeks, water bodies and waterfalls by preserving the natural sources and integrated watershed management.
- **Mitigating Climate Related Challenges:** Consideration the effect of climate change and landslides in CHT and necessary measures to adapt and mitigate climate change related hazards. Innovative and sustainable adaptation strategies and methods will be ensured to protect people and the environment from hazards caused by climate change.
- **Strengthening Implementation Capacity:** Election and management of the Hill Districts Councils following the Hill District Council Act, 1989 will be ensured. Capacity development of the Ministry, CHTRC, CHTDB and HDCs will be enhanced by increasing manpower and other facilities. Technology will be used to construct roads, dams, bridges, culverts, infrastructure for mitigating earthquakes, landslides related hazards.
- **Developing a Perspective Plan for CHT**: The Government will formulate a Perspective Plan for the development of CHT through a consultation process with key stakeholders. The basis of development planning and programmes in the CHT will be the CHT Peace Accord and the subsequent legislations i.e. HDCs Acts, CHTRC Act and allocation of Business of MoCHTA.
- **Accelerated development of CHT**: Additional finance will be allocated on priority basis for implementation of programmes/projects to reduce poverty and to attain middle income status by 2021. All funds of line Ministries for CHT development will be channelled through the Ministry of CHT Affairs. Representatives of the ethnic groups will be included in development projects undertaken in their areas.

Strategy for Dalits and Extreme Poor Groups: The vision of the Government is to erase the discrimination and exploitation faced by Dalit communities in Bangladesh, so that they can take their place as full citizens of the country.

- The Government will uphold the right to education for children from Dalit communities with the expectation to ensure schools becomes non-discriminatory and inclusive spaces for all children. This recognizes the increased interest and conviction among the marginalized that education holds the key for socioeconomic mobility. In this regard, a special quota for Dalit and other excluded students will be created in government schools and colleges, and access of Dalit adolescents and youth to all government owned skill training institutions will be ensured.
- Local Government Institutions, i.e. Upazila and Union Parishads, along with NGOs will be involved to locate disadvantaged Dalit people and help enable them to participate in development activities. Dalit representation in all committees of political parties at national and local level will be ensured.
- The Ministry of Land will give priority to allotting khas land to people of Dalit communities for settlement under the Asrayan type housing project. For tea garden workers, planters/owners will be encouraged to earmark land within the estates so that they can build their own dwelling. Special programmes like construction of sweeper colonies will be implemented.

- Massive awareness raising to stop all kinds of discrimination and untouchability against Dalits and excluded communities will be undertaken.
- The Government will form a special commission on Dalits to evaluate current environment and level of discrimination and provide key recommendations on improving the socio-economic conditions of Dalit communities in Bangladesh.
- The Government will review the allotment policy of colonies under every City Corporation and municipality and ensure that marginalized groups of Dalits are allotted harassment free access to electricity, gas and water supply services.
- Dalits will be given preferential access to cleaning jobs in municipalities, including lease of public toilets of City Corporations to Dalit sweepers.
- Proper resettlement will be provided for evicted Dalit families.
- Dalit households will be given preferential access to social security programmes. Such affirmative action will be combined with capability enhancement and confidence building, to empower these groups to have a voice and make claims, and an effective grievance mechanism.
- Massive public education against discrimination and towards equity-inclusion will be promoted, building greater transparency through social audits and public hearings.

Strategy for Marginalized Groups: The vision is a society where sexual minority groups can live with respect and dignity and enjoy tolerance and social justice. This includes an HIV/AIDS free society with zero new infections, zero discrimination and zero deaths.

- People infected and affected by HIV/AIDS will be given universal access to treatment, care and support services. This will include increased coverage of HIV testing and counselling. There will be increased coverage on interventions (basic educational, counselling, referral and legal supportive services) for key populations including people living with HIV, along with implementation of services to prevent new HIV infections. This will include opiate substitution therapy for people who inject drugs. The Government will inform about the availability of effective treatment for adequate and timely antiretroviral treatment, since unawareness may discourage people from getting tested.
- Ignorance fuels stigma and discrimination and raising awareness and knowledge of the general public will be given the highest priority, to address stigma and discrimination of people living with HIV, sex workers and transgender people in Bangladesh. To promote the rights of the sexual and discriminated groups and also to provide access to healthcare and HIV services, the Government will, in partnership with civil society organisations, undertake mass awareness campaigns and population specific awareness and education campaigns on HIV and AIDS.
- The Government will work together with NGOs as they are often in a better position than the public sector to expand the outreach of the service to reach more close to the clients, particularly to reach high-risk groups, such as sex workers and injecting drug users. The Government will build the capacity of NGOs, especially the small ones, and combine their reach with the resources and strategic programmes of the Government as an effective way to change behaviour in high-risk groups and prevent the spread of HIV virus to the general public.

- The Government will, in conjecture with NGOs and the private sector, introduce provisions for skill building of sex workers and transgender who prefer to opt out of sex work and build their lives around safer occupations in the form of either small entrepreneurship or small cooperative societies.
- Sexual minority groups will be integrated in the national social protection mechanisms including access to social health insurance or other transfers to ensure realization of human rights and fundamental freedom of those socially excluded that are most vulnerable.
- Coordination mechanisms and management capacity at different levels will be strengthened to ensure an effective multi-sector HIV/AIDS response. Also, strategic information systems and research for an evidence-based response will be strengthened.
- The Government will make laws and policies that facilitate the HIV response and work with uniformed services and health care workers to increase knowledge and tolerance.

Strategy for the PWDs: Persons with disabilities will be brought into the mainstream of the development process. The Government will promote and protecting rights of persons with disabilities to facilitate their full participation in mainstream social, political and cultural lives. They will be enabled to lead productive and meaningful lives through access to education, health care, food and nutrition, employment and protection and security in society. The Government is strongly committed to the advancement and rights of persons with disabilities by virtue of the Constitution, which enshrines equal rights and status for every citizen, and by signing the UN Convention on Rights of Persons with Disabilities and the Beijing Proclamation on the Full Participation and Equality with Disability in Asia and the Pacific Region.

The proposed actions for the Eighth Plan include:

The Rights and Protection of the Persons with Disabilities Act, 2013 (RPPD) will be implemented to ensure international standards on disability rights as set out in the Act. The National Coordination Committee for Persons with Disabilities will be strengthened to monitor and coordinate activities of different ministries/divisions in implementation of the Act. Requirements of the poor and vulnerable, including women and children, will be prioritized in all activities and implemented.

The Government will ensure full implementation of the Disability Benefit schemes proposed in NSSS during the Eighth Plan. The Government will ensure that every child certified as having a severe disability will be provided with a regular transfer, known as the Child Disability Benefit. This will extend the current Child Disability Grant that is managed by the Ministry of Social Welfare. The Government will develop a mechanism to identify severe disability among children, which will not only include children with physical disability but also other disabilities like autism, cognitive, mental, sensory impairment, etc. It is estimated that there will be around 350,000 children eligible for the scheme. Mechanisms will also be established to remove children with disabilities from the street, making the Child Disability Benefit conditional on children not involved in begging. A system of penalties will be introduced for those who employ children as beggars.

The current disability grant managed by the Ministry of Social Welfare will be reformed into a scheme that provides a regular transfer to all poor and vulnerable citizens of Bangladesh with a severe disability. The scheme will be accessible by all poor and vulnerable people aged 19-59 years with a severe disability and, at 60 years, they will transition to the Citizens' Pension. The Government will design robust measures for

identifying severe disability and will establish an appeals mechanism for those who feel that they have been unfairly excluded.

The introduction of a reformed Disability Benefit will mark a significant change in the lives of the disabled citizens who are poor. They will be better able to enter the labour market and access credit so that they can invest in small businesses. The Ministry of Social Welfare will complement the Disability Benefit by providing additional support to recipients by ensuring access to vocational education and small business schemes and eliminating discrimination in the labour market.

Along with an expansion of integrated education programme for visually impaired children, existing institutions for hearing impaired and mentally retarded children will be expanded. New institutions will be established to provide access to more children with disabilities at primary, secondary and tertiary levels. A collaborative effort involving the government, NGOs and the private sector will be encouraged to expedite an expansion of existing institutions, establish new institutions and undertake teachers' training on disability.

Action will be taken in the health sector to: (i) strengthen early detection of symptoms of disability and provide primary medical rehabilitation; (ii) undertake a nutrition programme for pregnant women; (iii) appoint trainee doctors, nurses and other caregivers to deal with disability issues; and (iv) introduce support services of assistive devices and equipment at health centres.

Measures will be taken so that persons with disabilities can have access to all physical facilities and information and communication. Inclusion of persons with disabilities in various national and community level decision making processes that affect their lives will be ensured. Services like early detection and timely medical intervention, fitment of artificial aids and appliances, educational services in special and integrated schools, vocational rehabilitation including micro-credit will be provided to persons with disabilities through community based rehabilitation programmes.

As persons with disabilities are predominantly poor and marginalised in society, it is necessary to support the organising of people with disabilities in order to make them 'visible' and to empower them to make their voices heard. Some persons with disabilities require specialised support services, assistive devices and job modifications but, more importantly, the right to decent work needs to be recognised. Such approach can ensure meaningful participation of persons with disabilities in the development process.

14.7 8FYP DEVELOPMENT RESOURCES FOR SOCIAL PROTECTION SOCIAL WELFARE AND SOCIAL INCLUSION

Poverty reduction, income inequality, women empowerment, social inclusion and social protection are all cross-cutting themes and involve a range of Ministries in delivering related activities. Total resources required for implementing the underlying strategies are also not easy to identify due to the cross-cutting and over-arching nature of these themes. For example, poverty reduction entails the successful implementation of the government's growth strategy as well as the entire public investment programme. Similarly, since much of the job creation is one by the private sector, private investment is a critical determinant of poverty reduction as well.

In the case of social protection, the Government provides a separate allocation, mostly from the current budget, that has amounted to about 1.2% of GDP during the Seventh Plan excluding civil service pensions that is not poverty focused. For the Eighth Plan, the top most priority is to implement the NSSS. Thus, the Eighth Plan also projects to increase the average poverty-focused spending on social protection from 1.2% of GDP to 2.0 % during the Eighth Plan.

Against the backdrop of the above, there are some specialized line Ministries that oversee and provide specific services to support women empowerment, social inclusion and social protection. These are: The Ministry of Social welfare; the Ministry of Women and Children Affairs; the Ministry of Food, the Ministry of Disaster Management and relief, and the Ministry of Liberation Affairs. The proposed ADP allocations for these are shown in Tables 14.9 and 14.10. It should be noted that for most of the programmes they administer involving income transfers to the poor and vulnerable are financed from the current budget. So, the total funding they have at their disposal is much larger than indicated by ADP allocations.

Table 14.9: Eighth Plan ADP Allocations for Social Protection

(Taka billion current prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Social Welfare	2.7	3.4	3.9	4.5	5.4
Ministry of Women and Children Affairs	4.1	5.1	5.9	6.8	8.2
Ministry of Food	6.1	7.5	8.7	10.1	12.2
Ministry of Disaster Management and Relief	56.2	64.6	69.1	80.7	89.4
Ministry of Liberation Affairs	3.3	4.0	4.6	5.4	6.5
Sector Total	**89.2**	**84.6**	**92.2**	**107.6**	**121.7**

Source: Chapter 5, Annex Table A5.1

Table 14.10: Eighth Plan ADP Allocations for Social Protection

(Taka billion FY2021 constant prices)

Ministry	FY2021	FY2022	FY2023	FY2024	FY2025
Ministry of Social Welfare	2.7	3.2	3.5	3.9	4.5
Ministry of Women and Children Affairs	4.1	4.8	5.3	5.9	6.7
Ministry of Food	6.1	7.2	7.8	8.7	10.0
Ministry of Disaster Management and Relief	56.2	61.3	62.5	69.5	73.5
Ministry of Liberation Affairs	3.3	3.8	4.2	4.7	5.3
Sector Total	**89.2**	**80.3**	**83.3**	**92.6**	**100.0**

Source: Chapter 5, Annex Table A5.2s

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