

Nutrition Background Paper to inform the preparation of the 7th Five Year Plan

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* Note: Professor MQK Talukder insisted that the private sector be excluded from nutrition policy formulation and programmes.

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ACRONYMS

ADP	Annual Development Programme	ICN	International Conference on Nutrition
AHI	Assistant Health Inspector	IDD	Iodine Deficiency Disorder
APR	Annual Programme Review	IEC	Information Education and Communication
APIR	Annual Programme Implementation Report	IEDCR	Institute of Epidemiology Disease Control & Research
APSU	Agriculture Policy Support Unit	IFAD	Institute of Food and Agriculture Development
BADC	Bangladesh Agricultural Development Corporation	IFPRI	International Food Policy Research Institute
BANHRDB	Bangladesh Applied Nutrition & Human Resource Development Board	IPH	Institute of Public Health
BARC	Bangladesh Agricultural Research Council	IPHN	Institute of Public Health and Nutrition
BARI	Bangladesh Agriculture Research Institute	ILO	International Labour Organization
BBF	Bangladesh Breastfeeding Foundation	IMCI	Integrated Management of Childhood Infection
BBS	Bangladesh Bureau of Statistics	IMED	Implementation Monitoring and Evaluation Division
BCC	Behaviour Change Communication	IFNS	Institute of Food and Nutrition Science
BDHS	Bangladesh Demographic and Health Survey	INGO	International Non-Government Organization
MEAN	Building Equity in Agriculture and Markets	IT	Information Technology
BHE	Bureau of Health Education	IYCF	Infant and Young Child Feeding
BIDS	Bangladesh Institute of Development Studies	KAP	Knowledge Attitude and Practice
BINP	Bangladesh Integrated Nutrition Project	Kcal	Kilo Calorie
BIRDEM	Bangladesh Institute of Research on Diabetic & Endocrine Metabolism	LBW	Low Birth Weight
BIRTAN	Bangladesh Institute of Research and Training on Applied Nutrition	LD	Line Director
BNNC	Bangladesh National Nutrition Council	LGD	Local Government Division
BMI	Body Mass Index	LMIC	Low and Middle Income Country
BMS	Breast Milk Substitutes	MAD	Minimum Acceptable Diet
BRAC	Bangladesh Rural Advancement Committee	MAM	Moderate Acute Malnutrition
BRRRI	Bangladesh Rice Research Institute	MCH	Maternal and Child Health
CARE	Cooperative for American Relief Everywhere	MDG	Millennium Development Goal
CBHC	Community Based Health Care	MICS	Multiple Indicator Cluster Survey
CBO	Community Based Organization	MMT	Million metric tons
CC	Community Clinics	MMR	Maternal Mortality Rate
CDC	Centre for Disease Control and Prevention	MN	Micronutrient
CG	Community Support Group	MNP	Micro-nutrient Promotion
CIP	Country Investment Plan:	MNCAH	Maternal Neonatal Child and Adult Health
CMAM	Community Managed Acute Malnutrition	MoAg	Ministry of Agriculture
CNP	Community Nutrition Promoter	MoHFW	Ministry of Health and Family Welfare
CO2	Carbon-di-oxide	MoLGRD&C	Ministry of Local Government Rural Development & Cooperatives
CRF	Common Results Framework	MoWCA	Ministry of Women and Children Affairs
CS	Civil Surgeon	MoSocWel	Ministry of Social Welfare
CSG	Community Support Group	MTR	Mid-term Review
C-section	Caesarean Section	MUAC	Mid Upper Arm Circumference
CSO	Civil Society Organizations	NAEP	National Agricultural Extension Policy

DC	Disease Control	NCHS	National Centre for Health Statistics
DDT	Dichlorodiphenyltrichloroethane	NFP	National Food Policy
DfID	Department for International Development (UK)	NFP PoA	National Food Policy Plan of Action
DGFP	Directorate General of Family Planning	NGOs	Non-Governmental Organizations
DGHS	Directorate General of Health Services	NICC	Nutrition Implementation Coordination Committee
DP	Development Partners	NIPU	Nutrition Information and Planning Unit
DPE	Department of Primary Education	NPNL	Non Pregnant Non Lactating
DPM	Deputy Programme Manager	NNP	National Nutrition Programme
EBR	Exclusive Breastfeeding Rate	NNS	National Nutrition Services
EC	Executive Summary	NSSS	National Social Safety (Protection) Strategy
EPI	Expanded Programme on Immunization	NPAN	National Plan of Action for Nutrition
ERD	External Relations Division	OP	Operational Plan
ESD	Essential Service Delivery	PLW	Pregnant and Lactating Women
FAO	Food and Agriculture Organization	PMMU	Programme Management and Monitoring Unit
FCT	Food Composition Table	PoA	Plan of Action
FDS	Food Based Dietary Survey	PM	Programme Manager
FPI	Family Planning Inspector	PPM	Parts per million
FPMC	Food Planning and Monitoring Committee	PRSP	Poverty Reduction Strategy Paper
FPMIS	Food Planning and Monitoring Information System	PW	Planning Wing
FPMU	Food Planning and Monitoring Unit	R&D	Research and Development
FPWG	Food Policy Working Group	SAARC	South Asian Association of Regional Cooperation
FSNIS	Food Security Nutrition Information System	SACMO	Sub-assistant Community Medical Officer
FSNSP	Food Security Nutritional Surveillance Programme	SAM	Severe Acute Malnutrition
FWA	Family Welfare Assistant	SCNI	Steering Committee for Nutrition Implementation
FYP	Five Year Plan	SDG	Sustainable Development Goal
GDP	Gross Domestic Product	SUN	Scaling Up Nutrition
GED	General Economics Division	UFPO	Upazila Family Planning Officer
GMP	Growth Monitoring and Promotion	UHFPO	Upazila Health and Family Planning Officer
GNI	Gross National Income	UN	United Nations
GNP	Gross National Product	UNDP	United Nation Development Partner
GoB	Government of Bangladesh	UNICEF	United Nations Children's Fund
GRID	Groups and Inequality Data Base	UPHCSDP	Urban Primary Health Care Service Delivery Project
HA	Health Assistant	USAID	United states Agency for International Development
HFI	Household Food Insecurity	USDA	United States Dietary Advice
HFWC	Health and Family Welfare Centre	VGD	Vulnerable Group Development
HI	Health Inspector	WASH	Water Sanitation and Health
HIES	Household Income and Expenditure Survey	WFP	World Food Programme
HMIS	Health Management Information System	WHO	World Health Organization
HPNSDP	Health, Population and Nutrition Sector Development Programme	WHA	World Health Assembly
HPNSP	Health, Population and Nutrition Sector Programme	WHO	World Health Organization
ICDDRb	International Centre for Diarrhoeal Diseases Research, Bangladesh		

EXECUTIVE SUMMARY

Nutrition is the “best” buy for economic development

Sustained productivity, growth and prosperity for all people in Bangladesh will depend on concerted action to reduce malnutrition. The 2012 Copenhagen Consensus findings of Nobel Laureates and world-renowned economists and researchers concluded that undernutrition should be the top priority for policy makers because it is the best buy for development. The benefit-cost ratios from investing in nutrition are highly competitive with investments in roads, irrigation, and health. Every \$1 spent on improving nutrition can have a \$30 return on investment¹.

The high cost of the double burden of malnutrition:

Bangladesh is now experiencing a high burden of undernutrition, to which a rapidly increasing burden of non-communicable diseases driven by overweight and obesity (known as nutrition-related NCDs) is being added. Despite a significant reduction in undernutrition over the last 20 years, driven partly by sustained income growth and partly by greater coverage of health and education services, undernutrition levels still remain very high. Any further progress is also unlikely to be achieved without a significant change in the level and scope of current investment for nutrition, as well as the quality of nutrition governance and service delivery. Undernutrition already costs Bangladesh more than 7,000 crore taka (US\$1 billion) in lost productivity every year, and even more in health costs². Persisting high levels of undernutrition, combined with rising levels of nutrition-related NCDs, will only add to this economic cost, dampening potential growth and draining national resources. Concerted prioritised action on nutrition in the 7th Five Year Plan (FYP) period will ensure that Bangladesh reaches middle-income country status quickly, and built on solid foundations.

Nutrition status in the country and progress to date

During the 6th FYP period, there has been unprecedented growth in global attention to undernutrition, recognizing that nutrition indicators have failed to improve in many countries in line with other development indicators. While national progress in reducing childhood stunting rates (from 71% in 1986 to 41% in 2011³ and an estimated 37% in 2013⁴) stands out as a global success story⁵, there is no room for complacency: Bangladesh is still classified as having a high prevalence of chronic undernutrition, and over six million children (2014 Census projection) are stunted. Progress on many nutrition indicators, including infant and young child feeding practices (IYCF), has been slow or is stagnating. Early initiation of breastfeeding and exclusive breastfeeding rates under six months of age have remained at about 45% in the past 20 years, using surveillance data⁶, while BDHS 2011 reports the exclusive breastfeeding rate as 64%. Less than two-fifths of children under 2 years of age received a minimum acceptable diet and 59% of women nationally do not consume an adequately diverse diet⁷. Three quarters of the population do not practice recommended hygiene behaviours. The proportion of overweight women (37%) is now more than double that of underweight women (18%). NCDs account for about 60% of all deaths, with cardiovascular and circulatory disease at 17%, and cancers at 24%⁸.

Commitments to nutrition

Article 18 (1) in the **Constitution of Bangladesh** declares “the State shall regard the raising of the level of nutrition and improvement of public health as among its primary duties”. Four decades after liberation, this duty has yet to be fulfilled. The **6th FYP** (2011-2015) prioritized a number of significant actions on nutrition, notably the mainstreaming of nutrition services within the national health sector programme (HPNSDP, 2011-2016). However, this did not sufficiently acknowledge the multisectoral nature of the problem, nor recognise nutrition’s wider role in sustaining national productivity growth. Priority actions have recently been agreed in the **South Asia Regional Action Framework for Nutrition** (2014). In terms of international commitments, in 2012, Bangladesh signed up to six World Health Assembly Targets to reduce undernutrition by 2025. However, as noted in the recently launched Global Nutrition Report (2014)⁹, the country is currently off track to meet at least four of these targets. Other recent commitments to address malnutrition include those made at the **Nutrition for Growth**

Summit (2013) and at the **Second International Conference on Nutrition ICN2** (2014). In order to meet all these commitments, Bangladesh will need to give nutrition a top priority in the 7th FYP.

Challenges to progress: there is no single solution

Nutrition is not a sector or a Line Ministry. This means that tackling malnutrition should be everybody's business and everybody's responsibility. Undernutrition and nutrition-related NCDs are complex, multisectoral issues with many underlying determinants, particularly maternal education, the status of girls and women, access to food and health care, nutrition knowledge, and hygiene, infant and young child feeding and care practices. Tackling such complex causes requires coordinated and comprehensive multisectoral (*across government*) and **multistakeholder** (*government in partnership with others particularly civil society, private sector, academia and development partners*) solutions, with leadership at the highest level. Numerous challenges remain:

- Insufficiently clear understanding of the necessary conceptual framework for addressing nutrition, addressing the different dimensions of care, health and food as underlying determinants (Figure 1)
- significant fragmentation of national responses on nutrition, especially weakness in multisectoral coordination, despite strong national commitments and numerous policy frameworks
- insufficient attention to maternal nutrition and the nutrition of adolescent girls, and data and programmes on low birth weight (an important determinant of later nutrition outcomes)
- insufficient coverage and quality of programmes for the promotion, protection and support of breastfeeding and complementary feeding, and on early child development
- limited dietary diversity, particularly amongst the poorest wealth quintiles, due to the unavailability and/or unaffordability of nutritious food, and/or lack of awareness
- challenges in the detection and management of acute malnutrition at all levels
- insufficient attention to the nutrition situation and interventions in urban areas, particularly slums
- insufficient attention to water, sanitation and hygiene (WASH), education and social protection programmes, and their relationships with nutrition
- a gross mismatch between the scale and scope of activities under NNS and the capacity of the institutions mandated to oversee the mainstreaming of nutrition services in the health sector
- insufficient attention to, and resourcing of, community-based nutrition activities involving citizens
- the growing challenge of obesity and nutrition related NCDs
- avoidance of, or reluctance to, engage with private sector due to potential conflicts of interest in nutrition programmes and how to manage them within the relevant laws.

Vision for nutrition in the 7th FYP

Based on the important role nutrition will play in achieving and sustaining the overall aims of the 7th FYP (and the significant opportunity cost of not doing so), good nutrition must be recognised as a fundamental condition for Bangladesh to reap the full benefits of the demographic dividend over the coming decades. The vision of the 7th FYP should include ensuring that all the people of Bangladesh can enjoy optimum nutrition to lead healthy and productive lives by: prioritizing nutrition services and key target groups; scaling up nutrition-specific and nutrition-sensitive interventions; and strengthen the enabling environment for concerted, multisectoral action on nutrition. Government must ensure that **all nutrition-relevant sectors** (as well as health which is the designated lead Ministry) align around nutrition as a fundamental component of human and economic development.

Strategies and recommendations

The following 11 strategies and recommendations should be incorporated into the 7th FYP to ensure the full potential of economic growth can be realized and sustained into the next decade:

1. **Establish an effective multisectoral leadership and coordination mechanism** within government that has the mandate, and supra-sectoral independence, to overcome the current fragmentation and silo approach to nutrition and support the necessary linkages and coordination of efforts across line ministries. An advisable option would be to revitalise the Bangladesh National Nutrition Council chaired by the Prime Minister. This structure should have an active Secretariat, co-led by MoHFW together with either of the Ministries of Agriculture, Finance or Planning, and including other relevant ministries as members (*see Figure 6*). This will provide the high-level leadership, drive and focus to meet the 2025 WHA targets. This mechanism must also address the

development and review of joint plans for Ministerial with presence at **sub-national level** (district, upazila, union, wards), including personnel like teachers.

2. **Adopt a convergence and equity approach** to programmatic choices. The most affected areas and population groups of the country should be identified and prioritised, and receive concerted multi-sectoral (*different parts of government*) and multi-stakeholder (*government together with civil society, development partners, academia, private sector and other actors*) responses. However, private sectors will not be involved at high policy levels and conflict of interest from any party will not only **not be allowed** but will be controlled and prevented. The existing codes, such as the BMS and new laws and mechanisms will be enforced to prevent conflict of interest. *For this purpose, the term “conflict of interest” means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual’s objectivity or (2) could create an unfair competitive advantage for any person or organization”.* These should be designed, implemented and monitored collaboratively, recognising the complexity of the underlying causes, necessary solutions and delivery mechanisms at different levels (*Figure 8*).
3. **Strengthen capacity so that the National Nutrition Services (NNS) can deliver:** effective mainstreaming of nutrition specific services through the health sector programme requires strong and stable leadership, with the necessary mandate, and increased staff capacity. The current organisational structure should be reviewed to ensure effective leadership and delivery (*Figure 7*).
4. **Build a stronger focus** and investment in **Infant and Young Child Feeding (IYCF)** practices to value this as a core nutrition programme. Current delivery platforms for the promotion, protection and support of IYCF should be reviewed to identify how best to scale up service reach and quality, including through locally recruited volunteers at the time of birth, Community Clinics (CC) and EPI outreach sites. Focus attention to maternal nutrition, nutrition of adolescent girls, low birth weight and early childhood development as crucial nutrition programmes. A greater focus on preventative measures spanning the 1000 days from the start of a women’s pregnancy until her child reaches its second birthday is needed, recognising the importance of this period for stimulating strong cognitive and psychosocial development of the young child for better future outcomes. More resourcing is needed for programmes that promote girl’s education, prevent child marriage/early childbearing, and target interventions for adolescent girls, newly-weds and women-headed households.
5. **Prioritise gendered approaches to support nutrition** interventions in all sectors at all levels, through technical, financial and capital support for fishery, poultry, horticulture, homestead gardening, social forestry and food production sector that support women’s empowerment.
6. **Promote dietary diversity as a key priority and measure of success in food related interventions:** step up nutrition sensitive interventions that promote dietary diversity (through improved availability, access and demand, including of indigenous foods), and minimum acceptable diet across all relevant line ministries (Food, Agriculture, Livestock and Fisheries, Forestry), and building on existing work of the Food Planning and Monitoring Unit (FPMU).
7. **Develop and resource interventions that address overweight and nutrition related NCDs:** Develop a national action plan across line ministries to promote healthy diets through a food based dietary guidelines, physical activity and healthy lifestyle, leveraging the respective roles of the agriculture, food, education and health systems.
8. **Strengthen nutrition-sensitive interventions particularly in Water, Sanitation and Hygiene (WASH), Social Protection sectors and Education sectors.** For WASH, this will require training of frontline workers on the importance of hand washing and good hygiene practices. For Social Protection, this will require a review of targeting criteria to include pre-pregnancy malnourished girls and women and a focus on 1000 days; increasing cash transfers accompanied by quality Behaviour Change Communication (BCC), increasing funding, and pilot studies of programme delivery mechanisms. For Education, both formal and non-formal system should prioritise nutrition-related education.
9. **Increase attention on urban nutrition:** Continued high levels of child undernutrition in urban slums, alongside rising obesity across household wealth quintiles in urban areas, demands a more strategic response across government, bringing together the mandates and expertise of multiple ministries, including Local Government, Education, Food and Health.

- 10. Ensure that private sector engagement in nutrition and food is responsibly managed and conflict of interest in nutrition programmes is completely controlled.** A multi-stakeholder Sub-Committee or Working Group should be established within the proposed mechanism (see 1) to define conflict of interest in nutrition along the lines of the definition used by the Institute of Medicine which defines it as “a set of circumstances that creates a risk that professional judgment or action regarding a primary interest will be unduly influenced by a secondary interest”, and develop and regularly monitor effective ways of managing them. All related laws must be strictly implemented. Civil society should be supported to play a proactive role in identifying breaches in laws relating to nutrition and food safety.
- 11. Develop effective monitoring, evaluation and accountability:** A national nutrition information system is required to regularly track key indicators, drawing on existing, and where, necessary new data sources. A Common Results Framework (CRF) with multisectoral indicators needs to be developed. Citizen involvement through participatory monitoring for accountability processes should be encouraged in the area of nutrition.

CHAPTER 1: INTRODUCTION

1.1 Why nutrition is important

In order to function at an optimum level (to grow and develop, work and be active and go through pregnancy and breastfeeding), the human body needs appropriate and adequate nutrition. Undernutrition is a leading cause of lifelong harm to productivity and earning potential¹⁰, and to lowered educational attainment through impaired physical and mental development. It also leads to poor health through reducing immunity and increasing susceptibility to disease. In contrast, well-nourished people are a key resource for national development.

Bangladesh suffers from two sets of nutrition problems. The first is **child and maternal undernutrition**. Child undernutrition results from sub-optimal breastfeeding and complementary feeding or infant and young child feeding (IYCF)¹¹, poor dietary diversity, and other aspects of food, health and care practices. Maternal undernutrition results from poor dietary diversity and gender and culture related care and practices. Other determinants are: food insecurity (30% of the population is food insecure according to recently released Poverty Maps¹²), low birth weight (LBW, current estimates vary between 25-35%; one-fifth of all stunting is attributed to LBW¹³), recurrent infections and environmental enteropathy^{14 15}. The second is a rapid increase in **overweight and obesity, and nutrition-related non-communicable disease**¹⁶¹⁷ (NCDs): hypertension, type 2 diabetes, ischaemic heart disease, cerebrovascular disease, cancer and osteoporosis. It is recognised that these problems are preventable¹⁸. Every extra 5 kg/m² of BMI increases esophageal cancer risk by 52%, colon cancer risk by 24%, endometrial cancer risk by 59%, and gall bladder cancer risk by 59%¹⁹.

Investment is necessary to address disease, disability and untimely death: 45% of under-five mortality is attributable to undernutrition including foetal growth restriction, stunting, wasting, deficiencies of vitamin A and zinc along with suboptimum breastfeeding²⁰. This translates to about 250 <5 deaths every day in the country. Nutritional deficiencies are responsible for over 50% of years lived with disability in children aged <4 years²¹. Underweight is the number one contributor to the burden of disease in Africa south of the Sahara and number four in South Asia²².

Investing in nutrition is essential for increasing and sustaining economic productivity: The median benefit-cost ratio for nutrition services is 16 dollars for every dollar invested. The benefit-cost ratios from investing in nutrition are highly competitive with investments in roads, irrigation, and health. Every \$1 spent on improving nutrition can have a \$30 return on investment²³. These were the 2012 Copenhagen Consensus findings of Nobel Laureates and world-renowned economists and researchers who concluded that undernutrition should be the top priority for policy makers because it is the best buy for development. Investing in nutrition can lead to enhanced economic growth through:

- job creation: children who are well-nourished do better in school, earn 20% more in the labour market and are 10% more likely to own their own businesses²⁴
- increased productivity: from a healthier workforce
- saving of resources: currently directed at malnutrition related health problems²⁵.

Good nutrition will drive productivity and fuel the economy²⁶. Undernutrition diminishes lifetime earnings by at least 10% and 2-3% in the worst affected countries²⁷. In Bangladesh, there is a huge economic cost of having high rates of childhood undernutrition: it costs the country more than Taka 7,000 crore (US\$1 billion) per year in lost productivity²⁸. Iron deficiency in adults decreases productivity by 5 to 17 percent²⁹. Investing now in nutrition will ensure productivity exceeding Taka 70,000 crore (US\$10 billion) by 2021. Accelerated declines in the current high rates of stunting will help to produce a stronger and more productive labour force and contribute to faster and more equitable national economic growth³⁰.

The cost of malnutrition: Prevention of *undernutrition* in early childhood has been calculated to lead to hourly earnings that are 20% higher, and wage rates that are 48% higher; individuals who are 33%

more likely to escape poverty; and women who are 10% more likely to own their own business, as seen in Guatemala³¹. One extra cm of adult height corresponds to a 4.5% increase in wage rates³². Undernutrition lowers GDP in Egypt by 1.9%; in Ethiopia, 16.5%; Swaziland, 3.1%; and Uganda, 5.6%³³. Asia and Africa lose 11% of GNP every year owing to poor nutrition³⁴. Childhood stunting is also increasingly being recognised to be a risk factor for overweight and obesity in later life, bringing economic costs associated with health care burden for nutrition-related NCDs.

The *nutrition-related NCD* burden in developing countries, where a sizable burden occurs in younger, working-age populations, reduces labour productivity and leads to negative economic impacts for households^{35,36}. It has been estimated that proper diabetes care alone would cost nearly USD150 million (US\$ 28 per person per year³⁷) every year³⁸. This figure will increase to US\$ 262 million soon, as one third of the people with pre-diabetes will go on to develop diabetes³⁹. Obesity in the USA leads to productivity losses from absenteeism and presenteeism (indirect costs) equivalent to US\$668–US\$4,299/person/year in the US⁴⁰. Obesity lowered China’s GNP by 3.58% in 2000 and will lower it by 8.73% in 2025⁴¹. Aligning national development policies and programmes with key nutrition outcomes can increase the national Gross Domestic Product (GDP) by at least 2-3% annually in Bangladesh and help to break the cycle of poverty⁴².

Good nutrition is a pre-requisite for early childhood development and education attainment: Nutritional needs change over the life course. Adequate nutrition early in life - particularly during the **1,000 days between a woman’s pregnancy and a child’s second birthday** - has enormous benefits throughout the life cycle and across generations. Most of the cognitive and physical damage or underdevelopment which happens during this sensitive 1000 day “window of opportunity” due to poor nutrition is irreversible. Childhood stunting (low height-for age) is strongly associated with cognitive functioning, poor attention span, physical growth and mortality⁴³. So investments in the first 1,000 days of a person’s life will yield benefits throughout that person’s life cycle and across the generations. Studies in 79 countries show that every 10% increase in stunting is matched by a 7.9% drop in the proportion of children completing primary school⁴⁴. Improving linear growth for children under age two by one standard deviation adds about half a grade to school attainment⁴⁵.

1.2. National and international commitments to scale up nutrition

Article 18 (1) in the **Constitution of Bangladesh**⁴⁶ declares “the State shall regard the raising of the level of nutrition and improvement of public health as among its primary duties”. Four decades after liberation, this nutrition promise has not yet been fulfilled. The right to being well-nourished, the right to adequate food and the right to health services are integral to the realisation of the human rights of every citizen. Persisting high levels of child and maternal undernutrition are signs that the progressive realization of these rights is making slow progress. Politics and social norms need to value justice, voice, participation and inclusion into cognizance for overall national development.

During the timeframe of the 6th FYP (2011-2015) there has been unprecedented growing global interest in, and momentum building for, nutrition, based on two main factors: first, the recognition of the relative lack of progress on nutrition in many countries compared to other development indicators and the challenges of addressing it multisectorally; and second, the growing realization and quantification of the lost economic potential due to undernourished. As part of this building momentum on nutrition, **in 2012, Bangladesh signed up to World Health Assembly (WHA) Targets, and pledged to align nutrition in the 7th FYP**. WHA targets strive - by 2025 - to:

1. Reduce by 40% the number of children under age 5 who are stunted
2. Achieve a 50% reduction in anemia in women of reproductive age
3. Achieve a 30% reduction of the number of infants born low birth weight
4. Ensure that there is no increase in the number of children who are overweight
5. Increase to at least 50% the rate of exclusive breastfeeding in the first six months
6. Reduce and maintain childhood wasting to less than 5%.

The **Nutrition for Growth Compact** (London: June 8, 2013) was endorsed by 90 stakeholders, with 24 Governments including Bangladesh. All signatories committed their political will and financial resources to end undernutrition within our lifetime, agreeing “undernutrition is the worst face of poverty and has no place in the 21st century”. Bangladesh specifically committed to⁴⁷:

- Reduce stunting from 41% (in 2011) to 38% (in 2016), and wasting from 16% (in 2011) to 12% (in 2016)
- Review the national nutrition policy to ensure that both nutrition specific and sensitive interventions are given due attention
- Strengthening the national coordination mechanism for improving nutrition
- Reviewing national safety net programmes to ensure, they are nutrition sensitive and deliver improved nutrition outcomes
- Mobilising domestic and international finance to support national efforts to improve nutrition.

At the **Second International Conference on Nutrition (ICN2)** in Rome in November 2014, Bangladesh made further commitments to tackle undernutrition as well as nutrition-related NCDs. The Government has also recently contributed to the development of a **South Asia Regional Action Framework for Nutrition** (2014), recognising that investing in nutrition is a developmental priority the Framework encourages South Asian Association of Regional Cooperation (SAARC) countries to prioritise the reduction in child undernutrition and, in particular, to emphasise links between undernutrition and sanitation. Article VII of the SAARC Social Charter indicates that State parties agree to extend all possible support to reduce low birth weight, undernutrition, anaemia, morbidity and mortality in children and women through the inter-generational life cycle approach, increased education, literacy, and skill development amongst adolescents and youth, especially girls, and the elimination of early marriage. The **SAARC Development Goal 3** targets to ‘Ensure adequate nutrition and dietary improvement for the poor’⁴⁸.

As the Millennium Development Goal (MDG) era ends, Bangladesh will soon move to reporting on the **Sustainable Development Goals** (SDGs). Of the proposed 17 SDGs, Goal 2 is to end hunger, achieve food security, improve nutrition and promote sustainable agriculture⁴⁹. Several other goals also refer to nutrition-sensitive interventions, making it clear that nutrition cannot be seen in isolation.

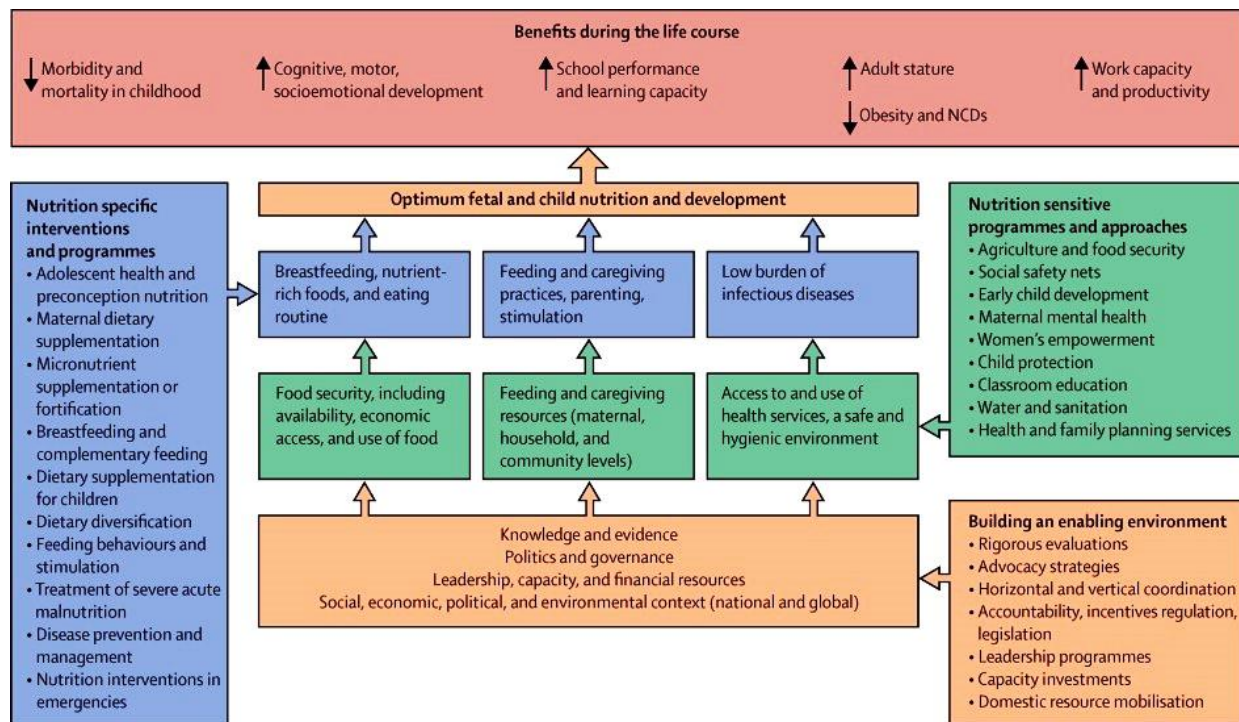
1.3. A conceptual framework for nutrition

Nutrition is not a sector or a Line Ministry. It is a complex, multisectoral issue with many underlying determinants, particularly maternal education, access to food and health care, behaviours related to hygiene and IYCF and the low status of girls and women. In Bangladesh - historically - nutrition has been seen either as a health issue or as a food issue, whereas in fact it is both these - **and** more. Nutrition is also a social, equity and rights issue. Hence it should be everybody’s business and everybody’s responsibility.

Figure 1 depicts a globally recognised Conceptual Framework for Nutrition which highlights the many underlying determinants and components, and the disciplines and sectors that need to be involved in tackling malnutrition through nutrition-specific and nutrition-sensitive interventions as well as an enabling environment of strong policies, advocacy, coordination, capacity, evaluation, accountability, incentives and resourcing⁵⁰.

Tackling these complex cause and effect pathways requires coordinated and comprehensive understanding right across government, across many sectors and Line Ministries and at multiple levels of programming (horizontal and vertical coordination). Sustainable and effective solutions to the persisting challenges of undernutrition, and the emerging challenges of nutrition-related NCDs need to come from multisectoral vision, commitment and resourcing of evidence-based interventions tailored to specific local contexts.

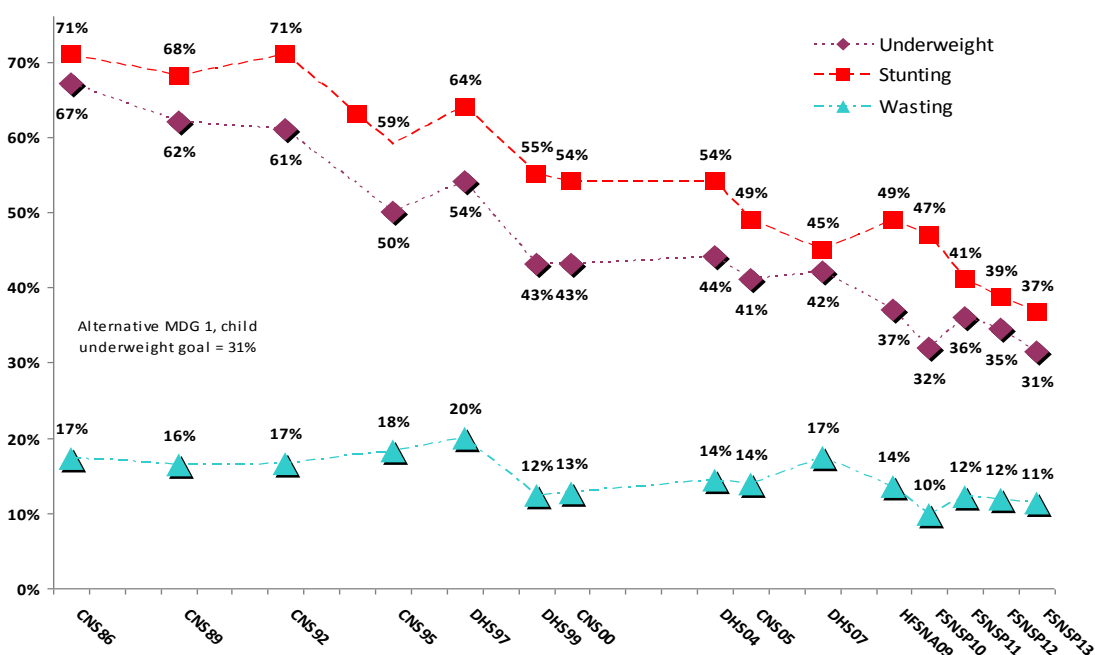
Figure 1: Conceptual framework for nutrition



Source: Gillespie et al 2014, based on the 1990 UNICEF Conceptual Framework

In order to meet its existing commitments to its own citizens, as well the international community, and to ensure that middle-income country status is achieved as envisioned, Bangladesh will need to **give nutrition a much higher priority under the 7th FYP**. Nutrition must be positioned as a fundamental component of human existence, and as an ultimate human development avenue and outcome. Full advantage should be taken of the unprecedented level of resources available globally to help countries scale up nutrition, particularly through the Scaling Up Nutrition SUN, Movement.

Figure 2: Trends in prevalence of child (0-59 months) undernutrition: 1986-2013 (FSNSP 2013)



CHAPTER 2: CURRENT NUTRITION SCENARIO

Full details (graphics, tables, Indicator Dashboard) of the national nutrition situation, covering all the causal dimensions of food, health and environment, and care practices according to the Conceptual Framework can be found in Annex 1.

Achievements in child nutrition have been mixed in Bangladesh. Some outcome indicators are declining (Figure 2), but the priority indicator stunting (low height for age) still remains near the WHO emergency level. Exclusive breastfeeding (no liquids or foods other than breast milk to be fed up to six months of age) rates have remained static for the last two decades (Figure 3). Complementary feeding practices beginning at six months of age are far from satisfactory leading to high level of undernutrition in early childhood. Food diversity, as reflected in calories derived from cereals in adults, is poor, although the total energy intake has shown an upswing. Some social risk factors of nutrition are discomfiting (such as age at marriage, age at first birth, school dropout rate among girl students)⁵¹. The anaemia and night blindness rates have decreased, but “hidden hunger” due to the deficiency of micronutrients is still common. People do not possess enough knowledge about nutrition and the best sources of micronutrients. While undernutrition shows some decline, overweight school-aged children⁵² and women are becoming more prevalent. Nutrition-related NCDs are becoming more common. These diseases are associated with maternal undernutrition and nutritional deficiency in infants during the intrauterine period and LBW^{53 54}.

Generally, economic condition is associated with the nutritional status of young children in a family. However, this association is not so clear in Bangladesh. In the poorest household wealth quintile, more than one in every two children is stunted, but a surprisingly high one in four children under 5 years old in the highest wealth quintiles are also stunted⁵⁵. Poverty has decreased significantly since 1992, accompanied by an overall improvement of people’s purchasing power, which strengthened their ability to access basic foods. Employment generation has increased. However, overall, poor and borderline household food consumption score level is widespread across the country⁵⁶.

In terms of food availability and access, cereal production has shown noticeable improvement, through the hard work of Government mechanisms including Bangladesh Agriculture Research Institute and Bangladesh Rice Research Institute. Achievement in the fishery sector has been more remarkable. Poultry production has shown encouraging output. The integrated culture of fish and poultry, and fish and crops, opens up encouraging avenues. A Bangladesh Institute of Development Studies (BIDS) predicts a deficit of 3.31 million tonnes of meat, 2.66 billion eggs and 3.37 million litres of milk in 2015⁵⁷, demonstrating the need for more efforts to ensure dietary diversity.

2.1. Under-five children’s nutritional status and early childhood development

Bangladesh is one of the few countries in the world where reductions in undernutrition have kept pace with reductions in poverty.⁵⁸ **Figure 2** tracks the three most common measures of child undernutrition from 1986 to 2013^{59, 60, 61, 62}. Underweight (weight-for-age Z score < -2.00), stunting (height-for-age Z score < -2.00) and wasting (weight-for-height Z score < -2.00) fell over the last 27 years⁶³.

Childhood stunting has fallen from 71% to 37% between 1986 and 2013, in line with a decrease of childhood stunting from 40% to 27% globally and from 49% to 28% in Asia between 1990 and 2010 (GNR). Surveillance data (FSNSP 2013) shows the national level of stunting to be below the WHO cut-off for very high prevalence⁶⁴ (*a decline of 1.8 percentage points a year, which is three times the worldwide annual rate of reduction of 0.6 percentage points from 1990 to 2000*⁶⁵). However, recent national analysis shows that 39 out of 63 Districts still have stunting rates above WHO critical threshold level for stunting (40%)⁶⁶. Bangladesh has achieved lower stunting rates (37%, 2013) than Pakistan (45%, 2012) and India (48%, 2006), which have higher average incomes⁶⁷. However, Nepal and Uganda have achieved much better than Bangladesh, with lower GDPs per capita. Bangladesh still has a high prevalence of chronic malnutrition: in absolute numbers this relates to **approximately 6 million**

children stunted. Further declines in the current high rates of stunting would help to produce a stronger and more productive labour force and contribute to faster and more equitable national economic growth⁶⁸. There are about 2.4 million children less than 5 years of age who are suffering from wasting. Another 600,000 children suffer from severe acute malnutrition – a condition that has a 12 times higher risk of death compared to healthier children^{69 70}.

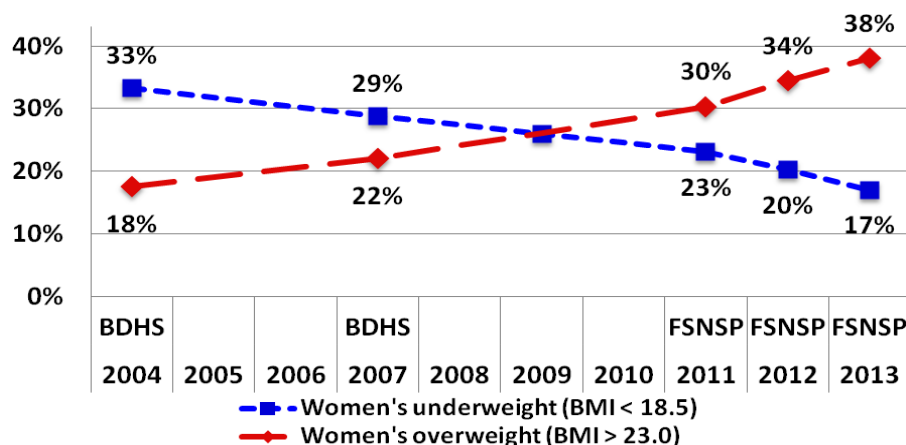
About 2.4 million children under 5 years old suffer from **wasting**. Another 600,000 children suffer from **severe acute malnutrition**, with 12 times higher risk of death compared with healthy children.

2.2. Nutritional status of girls and women and links with gender inequality

There is no observed gender bias in nutritional status indicators between young boys and girls under 5 years old⁷¹. However, gender inequality and the low status of females compared with males through the life cycle has a negative indirect impact on nutritional outcomes of many girls and women. Nationally, 29 % of adolescent girls are short for their age, while 12% of all adult women are at risk of difficulties during delivery or giving birth to low birth weight babies due to small stature (<145 cm). Global evidence shows that young girls who are not well nourished are at high risk of delivering **low birth weight (LBW) babies** who then fail to thrive and become stunted, and themselves become young and undernourished mothers - and so the intergenerational cycle of undernutrition continues. There is very little recent data on LBW in Bangladesh, but the relationship is likely to be similar here. Research^{72,73,74} has shown that adolescent pregnancy and lactation leads to poor linear growth and fat depletion. Using Body Mass Index (BMI) for age cut-offs for anthropometry, nearly a quarter, 24% of ever-married women (19-49 years of age) and 12% of adolescent girls, are underweight (BMI < 18.5)⁷⁵. Nearly 60% of women nationally consume an inadequately diverse diet⁷⁶.

Figure 3 below shows that the rate of rise in women’s overweight is alarming as this will most likely add to the already big burden of NCDs. Using BMI>23 cut off for overweight in Asian populations, 37% of ever-married women are overweight..

Figure 3: Trends in women’s overweight and underweight (FSNSP 2013)



Gender discrimination is widely recognised as a primary underlying cause of undernutrition across South Asia, including Bangladesh⁷⁷, resulting in high rates of women’s undernutrition and poor child feeding practices across social classes⁷⁸. Child undernutrition is inextricably linked to persisting gendered discrimination and social norms, particularly child marriage and the level of girl’s education. Regardless of economic condition, literacy has been found to be positively related to nutrition and dietary diversity⁷⁹. Global studies show that every 10 percent increase in stunting is matched with about 8% drop in the primary school dropout rate⁸⁰. In Bangladesh, there are significant gender disparities in the rates of drop-outs in secondary school attendance, with a much steeper drop for girls, than for boys. BDHS 2011 shows that barely half of the nations’ girls were enrolled in secondary school⁸¹. **Marriage**

in childhood is strongly related to education attainment in women and levels of child undernutrition fall with increasing education level of mothers, as well as maternal height⁸². Child marriage leads to early pregnancy and child bearing and this is related to nutrition, particularly with LBW and nutritional status of the newborn^{83,84}. Although there has been some reduction in child marriage in the last two decades, the prevalence remains high. Two thirds of girls are married by 18 years of age, and one third are already married by 15 year old. Other deep-rooted socio-cultural norms lead to females living a disadvantaged life through **unequal power relations** in the household. In many communities, gender-biased household food distribution patterns persist, with allocation of higher value animal protein foods to male household members. Married young girls and women have less power over household resources than men, including decisions on what food to buy and how it gets distributed to household members. Recent data⁸⁵ shows that, in times of food scarcity, it is the women who are first to deliberately sacrifice their own food intake in order for other household members to be able to eat. A pregnant woman also often deliberately eats less (as older household members instruct her) in order to keep the foetus small and so minimise the risk of an obstetric complications and expense of an institutional procedure such as C-section.

2.3. Micronutrient deficiencies

All 32 micronutrients are essential and must be supplied in food for normal metabolism, growth and physical well-being. Annex 1 (Nutrition Situation Analysis) Indicator Dashboard highlights that indicator trends for anaemia in children and women, and for school-aged children with iodine deficiency disorders are worsening. The extent of micronutrient deficiencies has also been described in the 2011-12 National Micronutrient Survey⁸⁶ and are summarised below in Table 1:

Table 1: Prevalence of micronutrient deficiencies (National Micronutrient Survey 2011-1012)

Deficiency	Population group	Prevalence (%)
Subclinical vitamin A deficiency (serum retinol<0.7 mmol/L)	Preschool age	20.5
	School age	20.9
	NPNL women	5.4
Anaemia	Preschool age	33.1
	School age	17.1 – 19.1
	NPNL women	26.0
Iron deficiency (serum ferritin)	Preschool age (<12 ng/mL)	10.7
	School age	3.9 – 9.5
	NPNL women (<15 ng/mL)	7.1
Iodine deficiency (urine iodine<100µg/L)	School age	40.0
	NPNL women	42.1
Zinc deficiency	Preschool age	44.6
	NPNL women	57.3
Folate deficiency	NPNL women	9.1
B₁₂ deficiency	NPNL women	23.0

There are high levels of anaemia among pre-school children (33%) and non-pregnant non-lactating (NPNL) women (25%). However, only 11% of these pre-school children, and 7% of those NPNL women, are iron deficient. Sub-clinical vitamin A deficiency has fallen to only 20% in preschool children, despite 6-monthly national campaigns. Most gaps in key micronutrient deficiencies can best be addressed in the long term through food-based approaches⁸⁷.

2.4. Overweight, obesity and nutrition-related non-communicable disease (NCD)

Bangladesh now faces a fast increasing nutrition double burden: high levels of undernourished and overweight children in the general population. The proportion of overweight (BMI>23) women (37%) is now more than double that of underweight (BMI<18.5) women (24%). Overweight in adult males measured by BMI>25 is 7% and childhood overweight/obesity in 6-15 year olds is 16% in urban areas

and 9.8% in rural areas⁸⁸. Recent analysis⁸⁹ has shown that when a country's gross national income (GNI) per capita exceeds US\$ 1,000, it is the poor who are most burdened with overweight and obesity. Bangladesh GNI is above US\$ 1000 in 2014. Breakthrough longitudinal research work on the **foetal origin of adult disease**^{90, 91} has given us new understanding on the relationship of nutrition and NCDs. The leading global NCDs, such as obesity, hypertension, diabetes mellitus, coronary heart disease, cancers and osteoporosis, are related to excess food intake, low physical activity and other factors. NCDs now account for about 60% of all deaths with cardiovascular and circulatory disease at 16% and cancers at 14%⁹². Almost a quarter of all women deaths are due to NCDs⁹³. Bangladesh is increasingly affected by NCDs. The population has become increasingly hypertensive (females 36%, males 19%) and diabetic (females 36%, males 37%)⁹⁴. Diets high in energy-dense, highly-processed foods and refined starches and/or sugary beverages contribute to overweight and obesity, and a variety of NCDs. Consuming predominantly plant-based diets, high in vegetables and fruits, fibre, whole grains, pulses, nuts and seeds, reduces the risk of developing obesity, diabetes, cardiovascular diseases, and some forms of cancer.

2.5. Food diversity and dietary habits as determinants of undernutrition

Food and nutrition security includes achieving sufficient dietary diversity and quality as well as sufficient caloric quantity. Food and agricultural policies and programmes have a major role to play in improving the country's nutritional outcomes⁹⁵. Adult energy intake has increased from 2266 kcal in 1991-92, to 2318 kcal in 2010 per day⁹⁶. While the estimated national requirements⁹⁷, based on physical activity level and desired body weights, is 2,200 kcal. Globally, it is recommended that the breakdown of energy intake should be 45-65% of calories eaten should come from carbohydrates, 20-35% from fat, and 10-35% from protein (WHO protein-energy requirements reference/USDA). In Bangladesh, 74-76% of total energy is from carbohydrates, although food consumption has changed substantially since 1992, as shown in Table 2. Overall a gradual fall in consumption of cereal based food and a higher consumption of fruits and vegetables has been noted.

Table 2: Trends in food consumption 1991-2010

Food item (g)	1991-2	1995-6	2000	2005	2010	Desirable Dietary Pattern (g) (BIRDEM, 2013)
Rice	472.8	463.3	458.5	439.6	416.0	350
Wheat	36.3	33.7	17.24	12.1	26.1	50*
Potato	???	49.5	55.5	63.3	70.5	100
Pulses	17.9	13.9	15.8	14.2	14.30	50
Vegetables	137.4	152.5	140.5	157.0	166.1	300
Meat	8.1	11.6	13.3	15.2	19.07	40**
Eggs	4.7	3.2	5.27	5.2	7.25	30
Fish	34.5	43.8	38.5	42.1	49.4	60
Milk	19.1	32.6	29.7	32.4	33.7	130
Fruits	16.9	27.6	28.4	32.5	44.8	100

Source: (BBS- HIES, various years)

* wheat and other cereal ** meat and poultry

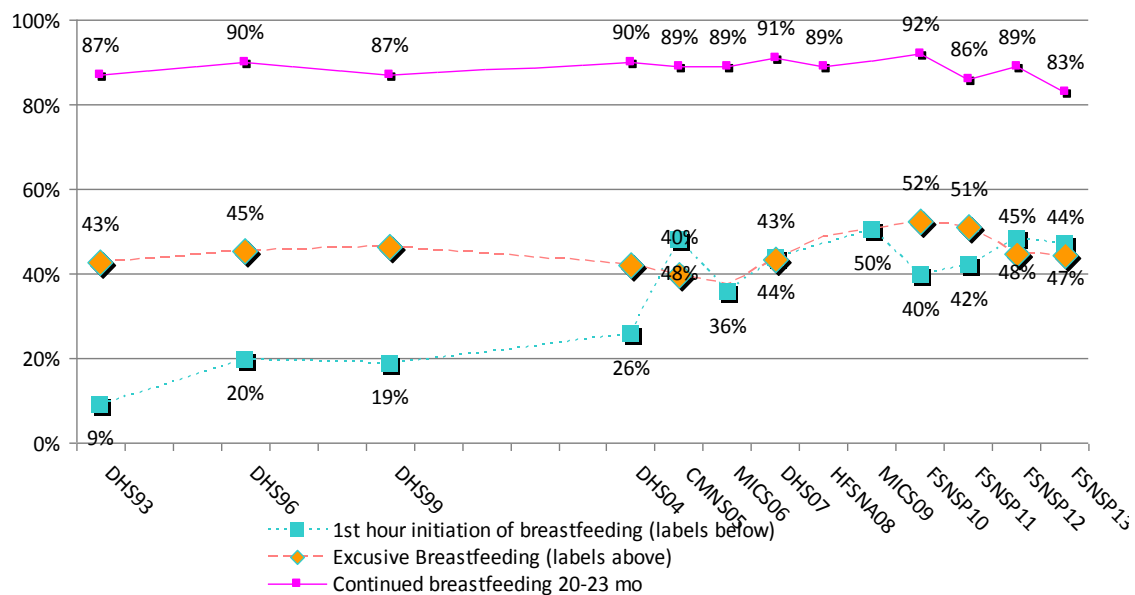
Low dietary diversity increases the risk of both stunting and underweight⁹⁸. Less than two-fifths of children under 2 years of age received a minimum acceptable diet (MAD) and over 95% of the population's diet lacks at least five portions of fruit and vegetable a day. Food habits are changing fast for many people in the richer quintile households, but in a nutritionally negative direction (soft energy drinks, junk foods). Culturally, people in Bangladesh have a food habit that depends heavily on cereals and legumes (e.g., lentil). Legumes are now beyond the reach of the poor due to import costs, and rapid decrease in indigenous varieties available anymore. A high intake and dependency on rice has contributed to carbohydrate, protein and fat imbalance and micronutrient deficiencies.

2.6. IYCF and care as determinants of nutrition and early childhood development

The first two years of life (from conception to a child's second birthday, or the 1000 days Window of Opportunity) involve rapid physical, cognitive and social development that require optimum nutrition.

Breast milk is the gold standard of infant food⁹⁹. Breastfeeding provides survival, optimal growth, nutrition and development for infants and young children^{100,101,102}. It provides life cycle health benefits including the prevention of non-communicable disease (NCD). Incredible advances have taken place in our understanding of the physiology, benefits, protection, promotion and support of breastfeeding¹⁰³. The recognised indicators of successful breastfeeding are: breastfeeding within 1 hour of birth, exclusive breastfeeding for 6 months, continued breastfeeding for 2 years and start home based complementary feeding from 6 months^{104, 105}. In Bangladesh, breastfeeding practices have not improved overall in the past two decades. Breastfeeding within the 1st hour after birth, and exclusive breastfeeding rates (EBR) less than six months of age, have both stagnated (Figure 4) at about 45%¹⁰⁶ (reported 64% in BDHS 2011. See Annex 1, slide X). Two major studies in Ghana^{107,108} and Nepal¹⁰⁹ showed that universal breastfeeding within the 1st hour of life reduces newborn deaths by almost a third. It has been estimated that 80% of under 1-year old child deaths (recorded as caused by neonatal infections, diarrhoea and acute respiratory infections) are primarily caused by suboptimal breastfeeding¹¹⁰. Of the 182,936 under 5s who died in 2008 in Bangladesh,¹¹¹ 75,600 were undernutrition related deaths (more than 200 a day)¹¹². Not all these dead children had poor anthropometry indices, but they will have been deprived of recommended IYCF practices.

Figure 4: Trends in breastfeeding indicators: 1993-2013 (FSNSP 2013)



About 50% of mothers have problems with positioning and attachment at day three of life. While 45% of neonatal deaths are due to suboptimal breastfeeding, universal coverage with first hour breastfeeding could cut it down by 30%. At the village or urban slum level, a young mother who falls into difficulty with breastfeeding has absolutely no one to turn to for sound advice and IYCF counselling. Research¹¹³ on early postnatal home visits in 3,495 mother-newborn pairs in Sylhet has shown that inappropriate breastfeeding position and attachment were predominant problems (12 to 15%) in the 1st three days of life. Only 6% of newborns who received home visits by community health workers within 3 days had feeding difficulties, compared to 34% of those who did not. The latter group was 11.4 times more likely to have feeding problems as late as days 6 to 7. In NNP, one community nutrition promoter (CNP) was working per 250 households. Since the NNP's discontinuation, this cadre of workers was abandoned

and such nutrition related interventions stopped. It is not possible for present cadre of health and family planning workers to scale up these activities.

For good nutrition and optimum growth and childhood development, **complementary food** is critical. Timing is important: but 18% of children receive complementary food too early and nearly 40% too late. Improving the diversity and quality of complementary foods is one of the most cost-effective strategies for improving health and survival in young children^{114, 115}. Incidence of undernutrition rises sharply around weaning. This is very difficult to compensate for, or reverse, later in childhood¹¹⁶. While the proportion of infants six to eight months old who eat a solid or semi-solid food remains high at 89%, the majority of children's diets are not diverse enough to provide proper nutrition. According to WHO, a diverse diet this should consist of at least four out of seven food groups every day¹¹⁷. Generally there is late introduction of meat, fish, poultry and eggs¹¹⁸. Only 10% of infants have been given animal foods at 6 to 7 months of age whereas this figure is as high as 71% at 20-23 months. This is related to a cultural preference in avoiding giving animal foods to small children, rather than affordability. A measure of good complementary feeding is Minimum Acceptable Diet (MAD), which reduces the risk of both stunting and underweight¹¹⁹. In Bangladesh, MAD in 2008 was 20%, in 2011 33%, in 2012 36% and in 2013 38%.¹²⁰ At 23 months of age, only 28% of young children take eggs, 41% vitamin A rich fruit and vegetable, 44% legumes, 53% other fruit and vegetables, 65% flesh foods and 99% starches. Many local complementary feeding recipes have been compiled by the Bangladesh Breastfeeding Foundation (BBF)¹²¹ but they are not yet widely available. Hygiene practices at the time of weaning are thought to be particularly critical (see 2.8 below).

2.7. Access to health services as determinant of nutrition

A strong health system is necessary for community-based nutrition awareness programmes, supplementation interventions and providing points of contact with mothers and infants during antenatal and postnatal periods, as well as managing cases of malnutrition. The Ministry of Planning has identified **MoHFW as the lead for nutrition**. Other ministries have also endorsed this triangulation. In MoHFW, mainstreaming of nutrition was enunciated in the 6th FYP and in the current sector programme HPNSDP (2011-2016), under the Operational Plan (OP) for the National Nutrition Services (NNS). Service delivery under the National Nutrition Services (NNS) occurs through diverse delivery platforms: Integrated Management of Childhood Illnesses (IMCI), Nutrition Corners, ANC, inpatient care, sick child visits at Community Clinics, and EPI outreach sites through health assistants (HAs) and family welfare assistants (FWAs). Staff of DGHS and DGFP implement the following nutrition interventions countrywide:

- 1) Training on basic nutrition, IYCF, SAM, CMAM
- 2) Service delivery at primary health care facilities (counselling on IYCF, Vitamin A, Iodine Deficiency Disorders IDD, hand washing, anaemia and Iron Folic Acid tablets; nutrition interventions during ANC/PNC; distribution of Zinc, Albendazole; GMP; screening and referral of SAM/MAM in some facilities - but there is no national programme for community based management for acute malnutrition). These are all carried out through NNS logistics: IMCI-nutrition corners, establishment and strengthening of nutrition unit)
- 3) Incorporation of nutrition indicators in DGHS and DGFP MIS; training of field staff of MIS; review progress and follow-up
- 4) Behaviour change communication (BCC): IEC materials, mass media, folk songs, billboards
- 5) Campaigns: Vitamin A, breastfeeding week, deworming
- 6) Food fortification
- 7) School Nutritional Education Program
- 8) Monitoring, evaluation, research and surveillance institutionalisation.

2.8. Access to a clean environment as determinant of nutrition

Water, sanitation and hygiene (WASH) are inextricably linked with health and nutrition, and ultimately the physical and cognitive development of children¹²². A clean public and household environment reduces undernutrition related to diarrhoeal diseases^{123 124}. Environmental enteropathy is suggested to

be responsible for about 40% of stunting in Africa¹²⁵. Hand washing is related to the prevalence of stunting, due to the probable combined effects of repeated diarrhoea, infection, reduced immunity, nutrient loss and decreased nutrient absorption¹²⁶. Overall, half of the health burden of undernutrition is attributable to WASH¹²⁷. A key intervention at household and community level is hand washing with soap, which can reduce the amount of diarrhoeal episodes by 42 to 47%¹²⁸.

In Bangladesh, access to improved water and sanitation is gradually improving in rural areas. In urban areas, proliferation of slums characterised with high population density, accompanied by poor drainage, limited formal garbage disposal and minimal access to safe water and sanitation services, pose major threats to the spread of disease and other vulnerabilities including undernutrition. Three quarters of the population still do not practice recommended hygienic behaviours, with little variation by division, but marked urban-rural differences. Hand washing behaviour improves significantly with household wealth and is related to stunting¹²⁹. Only 3% of caregivers reported washing their hands with soap before feeding a child¹³⁰. Because of lack of hygiene practices, even complementary food prepared at home is heavily contaminated with deadly bacteria. A recent study done in Mirpur slum and in Mirzapur villages revealed that 3% samples of complementary food were contaminated soon after preparation, but that level rose to 40% after 2 hours¹³¹.

2.9. Poverty, and other inequities, related to nutrition

Poverty and food insecurity: Development is not equitable unless people get what they need at a basic minimum level: education, freedom from frequent illness and malnutrition, water, shelter, and a decent job. Out of 160 million people in the country, 50 million are poor, 25-30 million of them extreme poor. Sixty million are food insecure, while 30 million severely food insecure¹³². A nationally representative DHS data shows that a child in the bottom 40% by wealth is 2.4 times more likely to be stunted than a child in the top 10% - a ratio that has increased from 1.8 in 2007. So things are getting worse nutritionally for poor children in Bangladesh. The relationship between poverty and nutrition is complex, with an interplay of many contributing factors. The national declines in poverty and stunting are not as marked as the rapid increase in economic growth. Levels of food insecurity are related to undernutrition in adult women, but the relationship is not as marked for adolescent girls.

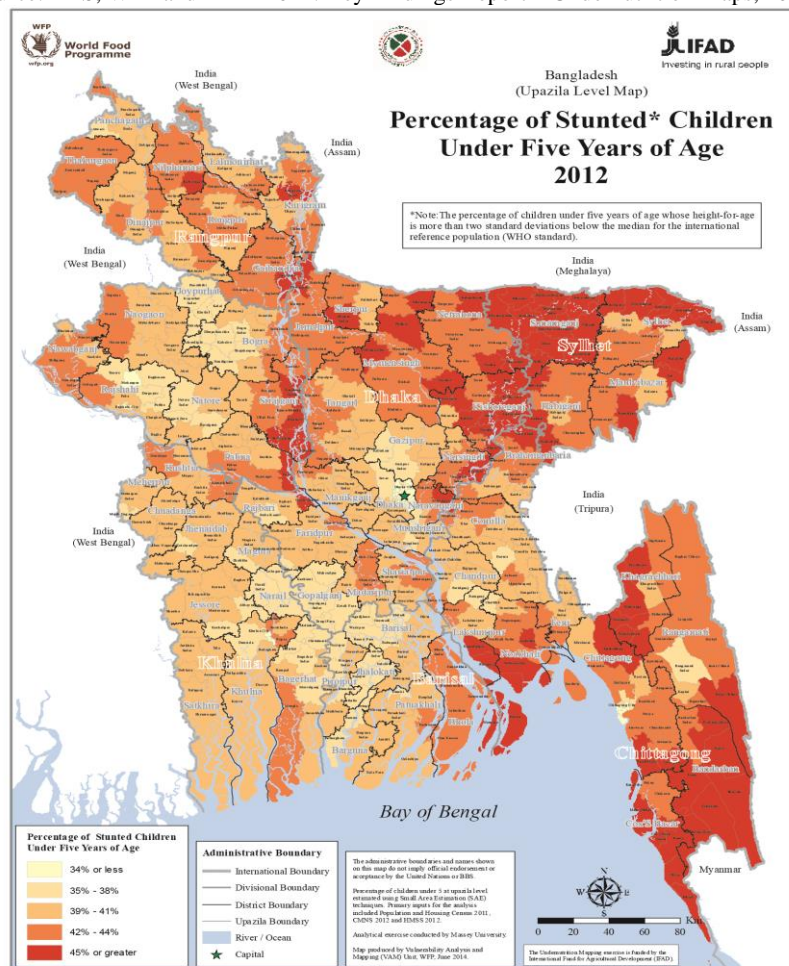
It is important to acknowledge that **national reductions in poverty and hunger alone are not sufficient to solve the problem of undernutrition**. This is because, with one in every four children (26%) <5 years old are stunted even in the highest household wealth quintile¹³³. In fact, poor and borderline household Food Consumption Score are widespread across the country, with a weak relationship with undernutrition. While money buys food, it does not guarantee nutrition if the buyer is not aware of the value of nutrients in foods and utility of those nutrients, and/or the family member has no control over how those foods and their nutrients are distributed at household level. This has been shown in a safety net RCT in northern and southern Bangladesh, where the addition of BCC to either cash or food improved nutrition and related Knowledge Attitude and Practice (KAP)¹³⁴. A review of GDPs in 121 countries through a modelling exercise has shown that increasing the GDP improves child malnutrition only minimally (~8%). They have recommended that resources be spent rather on improving health care¹³⁵. Using raw data from Bangladesh Demographic and Health Surveys (BDHS), Save the Children UK's Groups and Inequality Database (GRID)¹³⁶ analysis forecasts that the national stunting rate in 2030 will be 25%, 4% points short of the 21% target. Only the top 10% richest quintile will meet the target of halving stunting by 2030. The top two quintiles by wealth and Khulna region are also likely to get close. However, the poorest quintile by wealth, in Sylhet region, and urban areas of Bangladesh, would remain some distance from the target.

Gender inequality in livelihoods, and impact on nutrition: Gender disparities in income generating and livelihoods are related to nutritional outcomes. Women typically have limited access to land, education information, credit, income earning opportunities, essential resources (such as transport like bicycles and motorbikes, improved seeds, fertilizers, equipment, technology) as well as decision making forums relative to men¹³⁷. This lack of access contributes to yields from women farmers being about 2-30% lower than for men. Women act as informal safety nets for the family in times of crisis. In the

agriculture sector, women generally experience a lack of participation in groups, a lack of control over income, and discomfort in speaking in public relative to men¹³⁸. Evidence shows that women’s income is more likely to be spent on their children, than the men’s income¹³⁹. Infants and young children of women who earn an income are: 27% more likely to have a minimum acceptable diet; 20% more likely to have minimum dietary diversity and 18% less likely to be wasted than children of women who do not earn an income¹⁴⁰.

Regional variation: BDHS 2011 and GRID’s 2014 analysis show there are marked regional variations in undernutrition among children under 5 and among adult women. For children, Sylhet is the worst affected division by stunting, while the north west of the country is most affected by wasting. Levels of child undernutrition are strongly associated with IYCF practices, with a strong geographical association. The worst affected areas are north-eastern haors and south-eastern hills for both social deprivation and stunting. Barisal and Sylhet emerge as the two worst for childhood stunting rates and Khulna is the best, with inequality between the best and worst regions increasing. This has been recently confirmed in the small-area estimation based upazila and district level undernutrition and poverty maps for children under 5 year of age produced by BBS, WFP and IFAD (2014): **Figure 5**. These maps show clearly that factors contributing to undernutrition lie beyond household income levels. Although Khulna Division has one of the highest poverty rates, it has one of the lowest rates for stunting.

Figure 5: National map of stunting rates by upazila (2012):
Source: BBS, WFP and IFAD 2014. Key Findings Report – Undernutrition Maps, 2012



Urban-rural divide: There are marked disparities in rates of malnutrition, and its underlying determinants, between urban and rural areas, as revealed in BDHS 2011. Less than a quarter of children under 2 years old received a minimum acceptable diet, with a serious situation for rural areas. Urban-

rural disparities in age of first marriage, and in hand-washing behaviours, continue to exist. Undernutrition is more prevalent among pregnant women in rural areas, with Rangpur and Sylhet the worst affected Divisions. Nearly 60% of rural households are food insecure (household availability and access). Overweight in adult women is rising, especially in urban areas. It may be noted that the Gini co-efficient increased from 0.393 in 2000 to 0.430 in 2010 in rural areas, whereas it decreased from 0.497 to 0.452 during the same time period in urban areas.

Nutrition in urban slums: Bangladesh is rapidly urbanising. Dhaka City is projected to become the 4th largest city in the world by 2025, with 22 million people, many of them the poorest of the poor, underserved by basic amenities and state services. The relationship between sanitation, wealth, mother's education and child undernutrition is particularly clear in urban slums. Half of the under-five children in slums were stunted, which is around one-third for non-slums and other urban areas. Underweight among under-five children in slums (43%) is considerably higher than in non-slums (26%) and rest urban areas (30%). In all urban domains, overall wasting rate surpassed the WHO specified emergency level (15%). In slums, stunting is as high as 50 percent. The teenage pregnancy rate is also higher among slum women. Only one in four children of age 6-23 months in slums are fed with proper IYCF practices, compared with 40% for non-slum children¹⁴¹. Considerable time is lost in fetching water at the cost of time for taking care of children at home. Only 13% of slum households had access to improved sanitation compared to over 50 percent in the non-slum and other urban areas.

Poverty, resilience and nutrition

Better nutritional health can improve the resilience of a population to climate-related shocks and stresses. Poorest households, including women-headed households, are most vulnerable to shocks and unable to invest in the future because most of their income is spent on meeting basic needs. Evidence in Bangladesh has shown that very poor households are less able to protect themselves from adversity, often resorting to distress coping strategies such as further reducing expenditure on nutritious food (e.g. meat and fish) or discontinuing education for children¹⁴². CARE's SHOUHARDO project is nutrition-orientated and takes a livelihoods and resilience approach¹⁴³, as is the project "One House – One Farm" popularly known as "*Ekti Bari – Ekti Khamar*" (see more details on page XX).

Disasters create a cycle of undernutrition as the scarcity of food pushes prices high, beyond the reach of the most vulnerable. Households with only one income, especially from agricultural labour or fishing, are more vulnerable to seasonal or climatic change than households with several sources of income. The experience of relief after the cyclones in recent years (cyclones Sidr 2007, Aila 2009, Mahasen 2013) show that relief given in the form of rice, seeds, saplings or housing materials in kind and in cash for buying nets for fishing, or seed or saplings for agriculture were not enough and efforts were uncoordinated. The Ministry of Disaster Management has the responsibility of dealing with the aftermath of any disaster. The MoHFW gives priority attention to strengthen the health resilience of the people in the coastal areas through vaccination, and child, pregnancy and lactation targeted services. The Ministries of Agriculture, Food, and Livestock and Fisheries will address the issue of food security and availability during disasters and the effect of climate change. Policies are in place to shape appropriate interventions (e.g. Food Policy and Agriculture Policy).

2.10. Stewardship for nutrition – policies, plans and governance

The most nutrition related sectors are ministries of: health and family welfare (MoHFW); agriculture; fishery and livestock; food; while supportive sectors of importance are: social welfare; women and children affairs; primary and mass education; communication; science and information technology; local government; commerce; industries; water development; disaster management and relief; and environment and forestry, and law and parliamentary affairs. The Ministries of Planning and Ministry of Finance are also crucial, since they are the ones who decide country financial and developmental agenda. Policies, strategies and plans of action of some of these sectors are summarised below.

Policies

- **Vision 2021:** Envisions that by 2021 Bangladesh will be a middle-income country, to that end the government has developed some targets related to nutrition directly or indirectly¹⁴⁴:
 - 2011: Supply of pure drinking water for the entire population
 - 2012: Self-sufficiency in food
 - 2021: 85% of the population consume standard nutritional food
 - 2021: Poor ensured a minimum of 2122 kilo calories of food
- **Health Policy, 2011¹⁴⁵:** Defines 3 Goals to end malnutrition: Goal 1: develop the nutrition and health status of the population; Goal 2: reduce the level of malnutrition, emphasizing efforts for maternal and child malnutrition; and Goal 3: render quality food, food for children and safe water available. It also recommends that every upazila will have a nutrition and a health education unit.
- **Population Policy, 2012¹⁴⁶:** envisions people will have optimum nutrition to lead a healthy and productive life. The goal is to improve the nutritional status of people, especially children and women, prevent and control malnutrition, and thereby facilitate improvement in the quality of life for enhancing national development. Awareness activities will be implemented at the community and school levels to discourage child marriage and early child bearing, and encourage contraception. The country's exceptionally high population density has huge implications on food security, environmental pollution, disease transmission, and nutrition.
- **Food Policy, 2006¹⁴⁷:** aims to: ensure adequate and stable supply of safe and nutritious food; and enhance accessibility to food. The policy plans for diversification - increased production of vegetables, oilseeds, pulses and fruits; improve agricultural technology; develop poultry, livestock and fisheries; develop market infrastructure, price incentives for domestic food production; strengthen social safety network; distribute food grain at low price or free of cost to those who are nutritionally vulnerable; improve women's participation in agriculture and provide opportunity and tools to them to improve production, processing and marketing; ensure disabled- and women-focused targeted training programmes and their control over and access to resources; conduction of surveys on food intake containing adequate micronutrients; conduction of nutrition education programme; setting of standards and enforcement of Safe Food Act; campaign for nutrition quality and food safety; development and enforcement of regulatory mechanism to control indiscriminate use of harmful additives, preservatives and toxic elements in foodstuffs.
- **Agriculture Policy, 2013¹⁴⁸:** aims to increase production and supplies of more nutritious food crops and thereby ensure food security and quality and improve nutritional status of the people. The role of women in agriculture, and the effects of climate change, water logging and salinity aspects of the Policy are all related to nutrition. National Land Use Policy 2001 and Protection of Agricultural Land and Land Zoning Law, 2010 are also useful, if efficiently targeting the poor.
- **Fisheries Policy, 1998¹⁴⁹:** Prioritises poverty alleviation through self-employment, improving the socio-economic conditions of fishing communities and fulfilling demand for animal protein.
- **Livestock Development Policy, 2007¹⁵⁰:** focuses on promoting sustained improvements in income, nutrition, and employment for the landless, small and marginal farmers, particularly women, and where there is scarcity of alternative income generating opportunities.
- **National Women Development Policy, 2011¹⁵¹ and the National Policy for Women's Advancement 2011:** Out of 40% population living under the poverty line, two-thirds of them are women and female-headed families. This Policy aims to take appropriate steps to ensure their sound health and nutrition.
- **Education Policy, 2010¹⁵²:** Attaining food self-sufficiency, removing nutritional deficiency, and removing poverty are mentioned in the agricultural education system of the Education Policy.
Water and sanitation policies and plans: There are a number of activities to improve water quality and availability, and sanitation, especially focusing on the poor.
- **Social Welfare¹⁵³:** Bangladesh's commitment to social protection and safety-net programmes has contributed to a sustained decline in poverty which is partly related to the declining levels of child undernutrition. However, the Ministry of Social Welfare has yet to develop an effective Social Protection Strategy. It is under drafting but nutrition is not strongly reflected.
- **Policies related to children:** National Child Labour Elimination Policy (2010), National Children Policy (2011) and Children Act (2013) all aim to empower children and protect their rights.
- **A National Nutrition Policy and a National Micronutrient Policy** are currently being drafted.

- **Other supportive policies** relevant to nutrition are: Public Private Partnership Policy and Guidelines 2010; Broadband Policy; National Strategy Paper on e-Governance; e-Krishi Policy; National Telecom Policy 2010; Right to Information Act 2009; Mobile Banking Policy Guidance, which are excellent tools to empower the poor and the women.

Plans:

- **Food Policy Plan of Action 2008-2015:** This was developed by 11 line ministries, under the leadership of the FPMU of Ministry of Food and overall guidance of the Food Policy Working Group (FPWG) under the Food Planning and Monitoring Committee¹⁵⁴. Nutrition relevant policy objectives are: adequate and stable supply of safe and nutritious food and adequate nutrition for all individuals, especially women and children.
- **Health Population and Nutrition Sector Development Programme (HPNSDP) 2011-2016 and National Nutrition Services (NNS):** As part of the priority institutional initiatives of the HPNSDP, the nutrition service has been mainstreamed through DGHS and DGFP. NNS has created a new opportunity for establishing a country-wide cost-effective and comprehensive system of nutrition service delivery. A new Operational Plan (OP) for NNS was drawn up in 2011, at an estimated cost of Tk. 14,900.90 million, including project aid allocation of Tk. 12,048.10 million. NNS OP has formulated targets to reduce prevalence of underweight, stunting, wasting, anemia, night blindness and iodine deficiency disorders among many others.
- NNS is developing a 3-year **Nutrition Advocacy and Communications Strategy**.

Governance:

- **Bangladesh National Nutrition Council (BNNC):** BNNC was established by a Presidential Order in 1975. The Honourable Prime Minister chairs BNNC, with relevant Ministers as members. Its responsibilities include providing guidelines on nutrition, assessing the impacts of the programmes, coordination of nutrition activities across ministries. At present the Council is not functional, although there is skeletal revenue set up, to be led by its Secretary General (now vacant), at the level of an additional secretary of the government.
- **Institutional arrangements and coordination:** MoHFW shoulders the major responsibility of nutrition services under Health, Nutrition and Population Sector Program. Institute of Public Health Nutrition (IPHN) of MOHFW is mandated to assist in developing policies and strategies in relation to nutrition services. Since 2011 IPHN was made responsible to operate NNS. IPHN's role to develop human resources to provide leadership and undertake research to support nutrition programmes, has therefore taken a back seat. LD NNS is currently at the same level as the other nutrition relevant LDs, a But DGHS has too much, to do justice to NNS.
- **Coordination for multisectoral nutrition** is currently handled by two mechanisms in two different sectors – as detailed in **Table 3**.
 - In the health sector, a Multisectoral Steering Committee on Nutrition Initiative (SCNI) is chaired by MoHFW Secretary for quarterly review meetings. An additional Technical Nutrition Implementation Coordination Committee (NICC) is chaired by DG, DGHS.
 - In the food sector, to monitor the implementation of the Food Policy and Plan of Action, the Food Planning and Monitoring Committee (FPMC) is a cabinet-level committee, representing the ministers and secretaries of the ministries concerned with food security, using FPMU as its Secretariat.
- Coordination among the relevant ministries in both these mechanisms still needs to be more effective. There is concern among development partners that there is some duplication and confusion in the area of nutrition. While both the health and food sectors have results frameworks for nutrition-related activities in their mandates, there is no overarching, supra-ministerial coordination platform for multisectoral and multistakeholder nutrition as exists in some other countries that are having more success in scaling up nutrition (e.g. Senegal, Peru, Brazil, Nepal).

Table 3: Existing coordination mechanisms for nutrition in the health and food sectors

High level Coordination Mechanism\	Start	Host	Secretariat	Chair	Members
HEALTH SECTOR					
<p>Steering Committee for Nutrition Implementation/Nutrition Task Force <i>For formulation of policy and overall coordination of NNS, stock taking, policy direction, mainstreaming nutrition services in health and other sectors, stakeholder coordination, and review NICC activities.</i></p> <p><i>Meeting: every three months</i></p>	2011?	Ministry of Health and Family Welfare	National Nutrition Services NNS Staff: 1 Line Director, 3 Programme Managers and 10 Deputy Programme Managers	Secretary, MoHFW	<p>MoHFW: (DGHS, DGFP; LDs of Revitalisation of Community Clinics, NNS, ESD, MNCAH; Director, IPH, Nursing Services; Jt Secretary PH & WHO, Jt Chief, Planning Wing)</p> <p>Other Ministries: Food, Disaster Management, Agriculture, Fisheries & Livestock, local Govt, Women & Children Affairs, Education, Mass & Primary Education, Information, Industries, Forest & Environment,</p> <p>Development partners: World Bank, DfID, USAID, UNICEF, WHO, UNFPA, FAO, WFP</p> <p>Others: ICDDR,B, Nutrition Working Group</p>
<p>TECHNICAL: Nutrition Implementation Coordination Committee (NICC) / Nutrition Working Group <i>for monitoring of mainstreaming nutrition in DGHS and DGFP and operational collaboration between sectors</i></p> <p><i>Meeting bi-monthly</i></p>	2011	Institute of Public Health Nutrition IPHN, MoHFW	LD-NNS (Member Secretary)	Co-Chairs: DGHS DGFP	<p>Additional DGHS- Planning and Admin, Joint chief-Planning, LD-CBHC, ESD, MNCAH, HSM, NCD, MIS, MCRAH, IEM-DGFP, Planning-DGHS, CCSDP-DGFP, UPHCDSP and city corporations</p> <p>Representatives from World Bank, UNICEF, DFID WHO, UNFPA, FAO, WFP</p>
FOOD SECTOR					
<p>Food Policy Working Group (FPWG) and four Thematic Teams</p> <p>For coordination of collaboration, conduct monitoring of National Food Policy Plan of Action and Country Investment Plan CIP (a road map towards investment in agriculture, food security and nutrition).</p>	2006	FPMU	FMPU	Secretary, Ministry of Food	<p>Representatives from: Planning Commission (GED, Socio-Economic Infrastructure Division and Agriculture, Water Resources & Rural institutions), Finance (Finance Division, ERD), IMED, FPMU-MoFood</p>

CHAPTER 3: NUTRITION IN THE 6th FIVE YEAR PLAN

The 6th FYP identified MoHFW as the institutional home of nutrition. Successes and milestones related to nutrition during the 6th FYP period include:

- Mainstreaming of nutrition began across the health system
- MDG targets 1, 4 and 5, are on target, or already met
- The indicators of stunting and underweight show a fall during 2011-2014 from 41% to 37% and 36% to 32% respectively
- Underweight in women has fallen to 24%
- In the area of policy, National Health Policy and National Food Policy were adopted, the National Nutrition Policy was finalised and is ready for Cabinet approval, the National Micronutrient Deficiency Control Strategy and a Nutrition Advocacy and Communications Strategy for Bangladesh are in final development stage.

Although the wider contextual scope for the determinants of nutrition (as outlined in the Conceptual Framework in section one) was not considered fully in past FYPs, several multisectoral coordination mechanisms related to nutrition are now operational, under different sectoral leadership and linked to two different Policies (one to the Food Policy 2006 updated from the Food and Nutrition Policy 1997; the other was established to steer the NNS and to formulate a Nutrition Policy currently being drafted). **Table 3** details these two coordinating mechanisms related to nutrition in Bangladesh.

3.1. Nutrition-specific mechanisms and interventions

Nutrition prior to the 6th FYP:

Nutrition was covered in two consecutive PRSPs and under the fifth FYP. The mechanisms for nutrition specific intervention prior to the 6th FYP were: BINP (1995-2000) and NNP (2003-2011), managed by MoHFW under HPSP and HPNSP.

The under 5 stunting rate was 71% and the EBR was 43% in 1993. In the past 20 years, there has been a halving of the stunting rate with no improvement in EBR according to the latest data (FSNSP 2013). This has happened because stunting reduction is a secular trend in any country undergoing economic transformation. For breastfeeding indicators, the situation under the 6th FYP is worse than under the previous 5th FYP - due to the existence in the earlier plan of the 109 National Nutrition Programme (NNP) upazilas where an area based community nutrition (ABCN) intervention of nutrition promotion was implemented through the Community Nutrition Promoters (called *Pushti Apa* locally). This programme resulted in neonatal mortality falling to 13 per 1,000 live births¹⁵⁵ in 2007-08 compared to a national figure of 37¹⁵⁶. At the same time, infant mortality fell to 22 compared to a national figure of 57 (contrasting findings have also been reported)¹⁵⁷. In 2007, 73%¹⁵⁸ of NNP mothers breastfed their babies within the first hour of birth compared to a national figure of 43%. Similarly EBR below six months of age was significantly higher in NNP areas (61% compared to 43% nationally). Breastfeeding performance has not improved because there is no country-wide IYCF programme. This needs to be addressed under the 7th FYP.

When a mother has difficulties with breastfeeding – and difficulties occur as early as the 1st day of her baby's life – the feeding has to be assessed by a trained person who can identify problems with position and attachment. This had been recognized prior to the 6th FYP. The BBF, with UNICEF, World Bank and subsequently CIDA funding, began to train doctors and nurses across the country to transform 500 maternity service providing hospitals into baby-friendly ones. In a country with such a high rate of home deliveries, it was no surprise this country-wide effort led to no improvement in EBR. The BBF was also directly involved in the training up of the large numbers of Community Nutrition Promoters (CNP or *Pushti Apa*) of the erstwhile BINP/NNP between 1995 and 2011. The impact was demonstrated when repeated World Bank assessments^{159, 160} showed that both 1st hour breastfeeding and EBR had improved in NNP areas. The 2010 assessment showed that 72% of mothers in NNP areas

breastfed their newborns within 1 hour of delivery, whereas in non-NNP areas this was 50%. Similarly 64% of NNP mothers exclusively breastfed their <6 month old infants compared to 50% mothers in non-NNP areas. Unfortunately NNP covered only a third of the country until it came to an end in 2011. The lesson learnt from the NNP is that it is possible through a high-coverage Area Based Community Nutrition (ABCN) programme to increase breastfeeding and is an important minimum cost intervention.

Nutrition during the 6th FYP:

Under the 6th FYP, objectives were to ensure access and utilization of HPN services for every citizen of the country, particularly elderly, women, children, poor, disadvantaged and those living in difficult areas and to ensure nutrition to children and women. Two areas identified as needing attention were: addressing the gender dimension in health and nutrition; and requirement for coordinated, multi-sectoral interventions on a sustained basis. Under the 6th FYP, targets for reducing night blindness among pregnant women, and childhood underweight and stunting (6-59 months) were specified. Strategies for improving nutrition included: improving maternal and infant nutrition, strengthening institutional capacity, improving overall nutrition status, treating SAM, BCC to promote good nutritional practice and mainstreaming gender into nutrition programming. Interventions that were relatively unattended were: supplementary feeding for malnourished and marginalised pregnant and lactating women; complementary feeding and micronutrient supplements for children; monitoring of universal iodization of edible salt; emphasis on Zinc for treatment of diarrhoea; improving the quality of diets of children aged 6 to 23 months; development of strategies to increase coverage and access to safe water and improved sanitation in vulnerable areas; emphasis on homestead food production; nutrition education for diet diversity; translation of nutrition related research into action; increasing awareness about proper nutrition.

A new modality of nutrition service delivery was introduced: mainstreaming of nutrition services through health and family planning platforms. Progress has also been made in the preparation of a draft nutrition policy, preparation of a structured proposal for appointing nutritionists, providing in-service training, collaboration with NGOs, BBF, UPHCP; training on basic nutrition including GMP to field workers, operation research, roll-out plan for training and management for SAM and CMAM, distribution of logistics to 130 upazilas. The prioritised interventions were iron-folate supplementation to pregnant and lactating women and adolescent girls, postpartum vitamin A supplementation, implementation of the national strategy on IYCF, early initiation and exclusive breastfeeding up to six months of babies, strengthening of institutional capacity at facility and community levels, management of severely malnourished children, some BCC, and nutrition surveillance. The integration of nutrition indicators in the routine information system of health and family planning MIS has begun. A nutrition information planning unit (NIPU) was established and is receiving reports from 350 IMCI nutrition corners and 65 percent of CCs. Some emphasis on the psychosocial development of children was given, through entero-education, behaviour-oriented studies and training of relevant staff in paediatric departments of public sector hospitals (piloted through Shishu Hospital, Dhaka).

A few outcome and baselines oriented data and targets for nutrition were given in the 6th FYP but the process for attaining these targets was not elaborated. No results framework, logical framework, M&E framework or action plan was given in the 6th FYP. An HPNSDP Result Framework was supposed to form the core of M&E function. The Programme Management and Monitoring Unit (PMMU) of MOHFW is expected to monitor program performance for the ministry. The Implementation Monitoring and Evaluation Division (IMED) continues to play a vital role in routine monitoring of activities but only of HPNSDP. In addition, the MOHFW should be conducting routine surveys to assess the progress of the HPN related indicators.

Revised Breast-milk Substitute Code was passed in 2013 and BMS monitoring system established in all the districts through NNS. IYCF Counselling Guidelines were prepared, disseminated in all the districts and trainings were held based on these guidelines. Mass media based IYCF communication interventions were carried out and two mobile phone applications were developed for population awareness intervention. Mandatory law was promulgated on vitamin A fortification of edible oils.

National Food Safety Act has been passed in 2013. Training was given on IDD. Bangladesh National Food Safety Network is in the offing. Guidelines for risk categorization of food products and business in Bangladesh and guidelines for food inspections in Bangladesh have been prepared. Training and equipment were given for in-patient management of SAM cases. IMCI-N corners have been opened in upazila health complexes to screen and refer SAM cases. National guidelines on community-based management of acute malnutrition were published and managers and service providers were trained as trainers on CMAM. Nutrition Information and Planning Unit (NIPU) was established in NNS. Seven nutritional indicators were included into the CC register and reporting forms¹⁶¹.

3.2. Nutrition-sensitive mechanisms and interventions

Only two of the 12 objectives in the 6th FYP were related to nutrition-sensitive interventions - diversification and commercialisation of the agriculture sector; and food security. Of the seven core targets, four nutrition-sensitive targets were on: income and poverty; water and sanitation; gender equality and empowerment; and on environmental sustainability. Food production has shown remarkable achievement. Although achievements in livestock were not noticeable, in other areas there is room for improvement.

Strengthening Agriculture, Fisheries and Livestock: The Ministry of **Agriculture** has commissioned new crop varieties that have higher level of Zinc and also saline resistant. Drought resistant crops are reported. Crop production has shown a steady increase between 1961 and 2011 from 39.22 MT per hectares to 134.87 per hectare¹⁶². **Fish** is the main source of animal protein in Bangladesh. Aquaculture provides an available and high-quality nutrition source. Fish is particularly nutritious and beneficial during pregnancy and early childhood, ensuring optimal growth and mental development. Fishery is a national success story¹⁶³. The increase in yearly yield of cultured fishery was 5.2% more in 2012 in comparison to 2011, with a 5-fold increase in fish production since early 1990s. However, there has been a decrease in fresh water fish production due to various causes created by the agricultural system and conversion of wetlands to agricultural land, along with adverse impact of pesticides and chemical fertilizers.

Livelihoods and Resilience: Under the 6th FYP, following the approach of CARE's SHOUHARDO project¹⁶⁴, the Government launched a large-scale nutrition orientated project emphasising a livelihoods and resilience approach. This project *Ekti Bari:Ekti Khamar* (One House:One Farm) includes development of farm-based volunteers mainly in the field of homestead agriculture, poultry, fish culture, livestock farming, forest nursery and horticulture. This programme is developing cooperative marketing to ensure proper prices for the farmers and promoting food processing and other agriculture product processing at the grassroots level. Efforts are also being made to develop community food storage system to ensure food supply and food security at lower cost at the community level.

Nutrition-sensitive social welfare (social protection, inclusion and social safety nets): Bangladesh has an extensive social safety net system in place, with over 90 programmes, many of which seek to address gender, food security and nutrition¹⁶⁵. Under the 6th FYP, some progress has been made on making social protection more nutrition-sensitive. The Vulnerable Groups Development (VGD) programme is one of the country's largest social safety net programmes, managed and funded by the Ministry of Women and Children Affairs. Other Ministries are also providing social protection services (e.g. Ministry of Disaster Management, Ministry of Local Government, Rural Development and Cooperatives, Ministry of Education and Ministry of Health). In the new VGD programme cycle for 2015, a compulsory minimum of 10% of target beneficiaries to be pregnant women, or women with children under 2, was introduced. This recognises the importance of the 1000 day window of opportunity, and moves away from a tight targeting on the poor only. This is commendable and should be continued, and even expanded beyond a 10% minimum in the future.

Food safety: Ensuring safe and nutritious food for all is the constitutional obligation of the Government as per Sections 15(A) and Section 18(A) respectively of the Constitution of Bangladesh. More details on this can be found in the Background Papers for Food Security and for Health.

3.3. The broader context for nutrition under the 6th Five Year Plan

Implementation of the 6th FYP's goals for nutrition took 2 different avenues: through the Country Investment Plan for the Ministry of Agriculture, Food Security and Nutrition (CIP), and the National Health Policy with the HPNSDP:

- **CIP** provides a strategic and coherent set of twelve investment programmes to improve food and nutrition security in an integrated way, coinciding with the term of the 6th FYP. These are based on the three pillars of food security: availability, access and utilisation. Under the CIP monitoring process, there is a thematic team on nutrition. MoHFW, MoCHA, Ministry of Primary and Mass Education and LGRD&C are core members who deliberate regularly to update progress. Although this process is facilitated by the Ministry of Food, the monitoring report is collaborative and involves the coordinated effort of 13 relevant ministries. This arrangement is evidence of government's commitment to policy governance for improving nutrition and food security across multiple sector. At central level, a revision of the structuring of the 2015 Monitoring Report for the CIP has recently led to the mainstreaming of gender across the monitoring process and provide a gender sensitive analysis of the agriculture, food security and nutrition outcomes, with the active involvement of MoWCA.
- The **Health Policy** of 2000 and 2011 suggested establishment of nutrition units at upazila health complexes – this has not materialised. **HPNSDP** created a line director for nutrition for the first time in MoHFW, but it has too many activities to be implemented without adequate institutional strengthening. **Mainstreaming gender** is expected in nutrition programmes at health facility and community levels, involving all community and household decision makers and those who can influence maternal, infant and young child feeding practices as well as other relevant nutrition behaviours. Limited progress has been made on this either in health facilities or in community based nutrition programmes.

While these different avenues go a long way to building an enabling environment for nutrition, a multisectoral and multistakeholder Common Results Framework, or a multisectoral and multistakeholder planning and review platform, has to be created for effective collaboration and coordination between the relevant implementing sectors and all implementing stakeholders.

Partnership with the agencies of the United Nations and with other Development Partners on nutrition strengthened under the 6th FYP. **The Local Consultative Group Sub-group on Health** was formed to provide a platform for continuous GOB-DP dialogue in order to promote harmonisation and alignment of activities. External and independent reviews of the sector programme are conducted annually (APR) and at mid-term (MTR). Nutrition specific policies and activities have been included in the APRs and MTR. Between 2010 and 2013, a **Joint Program** “Protecting and promoting food security and nutrition for families and children in Bangladesh” was implemented under The Millennium Development Goal Fund (MDGF), funded by the Government of Spain. In this MDGF Joint Programme, three UN agencies (FAO, UNICEF, WFP) worked together to support GoB emphasise decentralised decision-making around nutrition in priority United Nations Development Assistance Framework (UNDAF) districts. This adopted a new and different modality – referred to as the ‘**convergent or co-location**’ approach’ which selects geographical areas based on malnutrition and food insecurity mapping and then concentrates activities in these areas from each of the relevant sectors which address the underlying determinants of malnutrition, plus the health sector addressing the problems directly. A recent evaluation found that coordination was better than expected and programme planning and implementation were well executed, despite many challenges¹⁶⁶.

Research institutes on nutrition: Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) came into existence through Act-2012 (Act No. XVIII of 2012). The primary goal of BIRTAN is to impart training and conduct field research on applied nutrition.

CHAPTER 4: ISSUES AND CHALLENGES

The outstanding challenges ahead are: the lack of effective multisector and multistakeholder coordination, weak institutional capacity and human resources, inadequacy in management of resources, and insufficient attention to contextual underlying determinants of nutritional problems in all the dimensions of food, health and care as depicted in the ‘Conceptual Framework’ (Figure 1).

4.1. Institutions, coordination and capacity for nutrition

Nutrition is a low priority in the political economy¹⁶⁷ and in public sector budgeting:

Bangladesh spends about 3% of GDP on education and health from the budget as compared with 5-6% in East Asian countries. Bangladesh needs to gear up its human resource development expenditure to at least 4-5% of GDP. This financing challenge was recognized in the 6th FYP but remains unaddressed¹⁶⁸. Allocation for the agricultural, food and the health sectors has to be higher, if these are to impact people’s nutritional status. Poor families can get substantial boost in nutritional status through family-based kitchen gardening, poultry rearing and fishery, but these need budget support.. The 6th FYP recommended to decentralise service responsibilities in health and education to the local governments. However actual implementation is slow.

Weak coordination between sectors; fragmented, heavily centralised coordination within sectors

Given all the complex multi-dimensional causes of nutrition, the NNS, MoHFW, as lead Ministry alone will not be sufficient to carry the nation to its aspirations. The engagement and capacity of the other relevant ministries is still not enough to take the multisectoral nutrition agenda forward. Coordination between them is also weak: the oversight function needs to be strengthened. The various ministries operate independently, with little horizontal leverage. Multisectoral coordination of ministries and other stakeholders was first proposed in the 1997 National Plan of Action for Nutrition (NPAN)¹⁶⁹, with 13 sectors identified as directly relevant to nutrition. There is more scope to further strengthen effective coordination of multisectoral and multistakeholder nutrition. A Common Results Framework (CRF) for multisectoral nutrition has not yet been developed. As a result of poor governance, programme and actions have been piecemeal and multisectoral coordination is weak. For example, no effective strategy has yet evolved for effective marketing and consumption of iodised salt at family level. Production, distribution, monitoring and behaviour change communication are weak, as a result less than 60% of the people consume iodised salt. The relevant ministries and agencies for universal salt iodisation have no collaborative and coordinated activities at any level.

Variable program design and coverage by different implementing stakeholders:

Adopted by the public sector and NGO service providers and development partners create conflicting, confusing and duplicative plans and implementation at the ground. Not all partners support or implement a ‘full set’ of nutrition-specific interventions.

Inadequate and unskilled human resources:

There is a huge challenge in upgrading skills of the labour force for both nutrition-specific and nutrition-sensitive interventions, particularly in the areas of programme implementation, management, multisector/multistakeholder coordination, monitoring, data analysis and utilisation.

Weak monitoring and evaluation function:

Due to a weak M&E system and a weak practice of performance and results review, based on a common results framework across the relevant sectors, assessment of adequate progress seems formidable. A more focused and results-oriented strategy which will relate to policies, regulations, incentives, investment and capacity building is needed.

Poor knowledge management infrastructure:

Research in nutrition is not always relevant to, nor does it adequately inform, nutrition-related policy decisions. For example, national nutrition-related policies on Vitamin A and iron supplementation of pregnant women may need re-thinking based on recent international commentaries^{170, 171, 172}. Studies to understand the effect of interaction of different types of foods in meals, (e.g. phytates, polyphenols, calcium, milk, soya and muscle tissue and their bioavailability) are insufficient.

Weak implementation of laws in relation to nutrition:

Wide and effective enforcement of laws relevant to nutrition and food remains a big challenge. The relevant laws are: Breast-milk substitutes, baby food, commercially manufactured supplementary baby food and the accessories thereof (regulation of marketing) Act, 2013; Maternity Protection Law 2011; Prevention of Iodine Deficiency Disorders Act 1989; Food Safety Ordinance 1985; Bangladesh Pure Food (Amendments) Act 2005; National Food Safety Act 2013; Formalin Control Act 2014.

Resisting harmful commercial influences in nutrition and stopping conflict of interest:

The IOM defined a conflict of interest as “a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest.”¹⁷³ This not only encompasses multi-national corporate bodies (e.g. milk companies) but also the academic, bureaucratic, technical and managerial domains, including media and mass media. Corporate bodies often influence the policy makers, bureaucrats, professionals and academics to help promote their products. People are often misdirected by the promotional activities of the infant and other food manufacturers. False claims of the processed foods of the corporate bodies are common and should be counteracted.

4.2. Nutrition-specific solutions

Weaknesses in management of NNS capacity and programme implementation

The present NNS capacity is not adequate to carry out planning, coordination, supervision, monitoring, management, implementation, or procurement effectively. The dearth of trained managers in NNS makes supervision and monitoring, as well as coordination with other OPs and partners difficult. Staff (about 50) from former NNP are employed but are not utilized due to lack of office space. Retention of trained and skilled human resources and inadequate staffing mix has become a problem, in light of the different tedious functions in NNS, e.g., BCC, multisectoral collaboration, nutrition information system, M&E and food safety. Another important challenge is to focus on scaling up priority activities of the NNS. NNS OP currently pursues 20 priority interventions, not all of which are strongly visible at the field level. Managers of the MOHFW could not go beyond its own sectoral bounds, which hamper in shaping effective sectoral policies. Furthermore, there is a gross mismatch between the extensive activities planned under NNS (20 priority areas) and the 13 managers who have been entrusted to look after the country-wide programme. Whereas expensive supplementation programmes^{174, 175, 176, 177, 178, 179} continue to eat into scarce national resources, the core intervention of IYCF is plagued by flaws in design and implementation. IYCF promotion has been planned to hinge on a curative service platform, where only sick children are brought. The existing supplementary programmes take up lots of resources, which will be challenging to maintain in light of the future population size and other priorities. Further continuation would need to be justified, evaluated, and reviewed, in light of future changes in micronutrient deficiency status.

Relative lack of focus on community-based nutrition interventions: Without a community based nutrition programme, with community involvement, nutrition-specific interventions cannot be implemented fully. Focusing on facility based interventions and personnel only is insufficient.

Insufficient attention to, and programme interventions for, addressing maternal nutrition

The prevention of maternal and adolescent girl undernutrition is a long term investment and will benefit the present and the future generations. In terms of breaking the intergenerational cycle of undernutrition, adolescent girls are an important target group not receiving enough attention. Apart from the contraceptive use rate of married adolescents, all other family planning indicators (age of marriage, age at first birth) have failed to show significant progress. Demand for ante and post natal care needs to be built and the supply side strengthened.

Insufficient data and programme to address low birth weight

Low birth weight (LBW), due to pre-term birth and intra-uterine growth retardation, is an important indicator and determinant of nutrition and care and predicts for early neonatal mortality as well as adult

onset NCDs.¹⁸⁰ There is a real dearth of data on the risk factors, beyond what is known, on how best to address LBW. Recent multi-country data analysis¹⁸¹ has shown that since the 1990s, half of all LBW babies born in LMICs are preterm – greater than estimated in the past. A study in Bangladesh has shown effective antenatal care can reduce the incidence of preterm deliveries.¹⁸²

Insufficient activities to support IYCF practices and Early Childhood Development

About 50% of mothers have problems with positioning and attachment at day three of life. While 45% of neonatal deaths are due to suboptimal breastfeeding, universal coverage with first hour breastfeeding could cut it down by 30%. At the village or at the urban slum level, a young mother who falls into difficulty with breastfeeding has absolutely no one to turn to for sound advice and IYCF counselling. No trained field level worker is currently visiting newly delivered mothers to help them with position and attachment. Research¹⁸³ on early postnatal home visits in 3,495 mother-newborn pairs in Sylhet has shown that inappropriate breastfeeding position and attachment were predominant problems (12 to 15%) in the 1st three days of life. Only 6% of newborns who received home visits by community health workers within 3 days had feeding difficulties, compared to 34% of those who did not. The latter group was 11.4 times more likely to have feeding problems as late as days 6 to 7. Many local recipes have recently been compiled by the Bangladesh Breastfeeding Foundation (BBF)¹⁸⁴ but are not yet widely available. In NNP, one community nutrition promoter (CNP) was working per 250 households. Since the NNP's discontinuation this cadre of workers was abandoned, as a result of which nutrition related interventions stopped. Unless these workers are commissioned again it will not be possible by the present cadre of health and family planning workers to take up the agenda of nutrition in their stride. A holistic approach to Early Childhood Development is needed, encompassing appropriate feeding, care practices and psychosocial stimulation.

Persisting micronutrient deficiencies and lack of public awareness

The figures obtained from the National Micronutrient Survey reveal that the situation for some micronutrient deficiencies is changing. This may warrant review of the use of multiple micronutrients for women and children, especially in view of recent meta-analyses casting doubt on their use^{185,186,187,188}. Historically breastfed infants are not anaemic¹⁸⁹ because bioavailability of iron is so much higher from breast milk with lactoferrin and vitamin C in breast-milk enhancing iron absorption. The sustainable solution to anaemia lies in adequate intake of diversified family food that promotes the absorption and storage of usable iron. With a sub-clinical vitamin A deficiency level in 20% of preschool children, the current practice of universal high potency vitamin A capsule supplementation may need revision as the level of sub-clinical deficiency is approaching the WHO cut-off¹⁹⁰, and a more targeted approach may be considered^{191,192,193}. Despite the abundance of micronutrient rich foods in the country, people are unaware of importance and availability of these micronutrients. In the iodised salt fortification programme, which involves private sector, recent data causes concern as it shows a fall in the number of households consuming adequate iodised salt. Continual vigilance and monitoring in the entire implementation chain across the relevant sectors need attention. Zinc supplementation during diarrhoeal episodes has been advocated quite strongly but has not become a part of culture, like ORS and EPI vaccines yet. Meat is a good source of zinc but not within everyone's reach. The intensive focus on Iron, Vitamin A and Zinc may have distracted attention from other important micronutrients, which can largely be addressed through diversity of food intake. Interaction between the micronutrients and other food items as inhibitors or facilitators is not fully understood yet.

Inadequate identification and management of acute malnutrition

Currently the NNS is proposing two activities for the detection of children with acute malnutrition –the domiciliary visit by HAs (to measure MUAC in children 6-59 months of age¹⁹⁴), and Growth Monitoring and Promotion (GMP) sessions in CCs.¹⁹⁵ The first process yields very few cases because so few (2%) under-fives in Bangladesh have MUAC<12.5 (the cut-off recommended for MAM – moderate acute malnutrition). CCs on the other hand, have to take care of 10 such children up to two years of age, per day, if every child reports for these services. This will require re-designing of other services given from CCs. There has been some deviation from the NNS OP in the way activities to detect and manage acute malnutrition are implemented.

Insufficient attention to increasing dietary diversity

The lack of dietary diversity contributes to persisting undernutrition. Among adults too much dependence on staples and poor diversification of food types, with low consumption of micronutrient rich foods, contributes to an unhealthy diets. Diversified diets are associated with better nutrition¹⁹⁶. Rice is still the main source of energy in Bangladesh (70% of calories) but it should ideally be 60%¹⁹⁷. There are some signs of a recent fall in the consumption of rice¹⁹⁸.

4.3. Nutrition-sensitive solutions

Insufficient connection between nutrition and reproductive health/family planning services:

Safe pregnancy and childbirth and good practices in the postpartum, neonatal and infant period in the family planning and reproductive health sectors have not yet been strongly related to nutritional outcomes. Nutrition is related to the rate of pregnancy and pregnancy among adolescent girls. The MOHFW through the PMMU has already completed the revision exercise of all the OP-level indicators. It is time now to relate these to nutritional goals.

Lack of nutrition-sensitive emphasis in the Agriculture sector

Bangladesh has commendable policy framework for agriculture¹⁹⁹. However, the focus is mainly on enhancing economic productivity through increased production of cash crops and poverty alleviation (through sale of agricultural products). These priorities do not naturally coexist with those of nutrition-sensitive agriculture, such as increasing the production of a diverse range of nutrient-rich foods, improving food processing and storage to retain nutritional value, and targeting populations vulnerable to malnutrition. Links to other sectors are still weak.

Commercial emphasis in Livestock and Fisheries sectors

Contribution of the livestock sector remains at 13% of the total agricultural output for last 20 years. Animal diseases, which wipe out half of the livestock (BIDS 2015) and weak infrastructure to address this issue; poor availability of hybrid stocks of animals, which could resist disease; lack of knowledge among the people on how to maintain animal husbandry; lack of marketing facilities; low investment in animal oriented research, and availability of fodder. Three main problems plague the fisheries sector in relation to nutrition: adulteration with preservatives, a focus on yield and export rather than local consumption, and people's reluctance to consume sea fish. Continuous shrinkage of the natural water bodies and emphasis on exportable shrimp culture take away poor people's access to fish.

Challenges to sustaining availability of food for human consumption

There has been inadequate progress with diversification and commercialization in this sector, a lack of modernization of soil and water tests, lack of modern form of production-contract farming and value chain, absence of farm and non-farm linkages, feed and fodder, non-availability of grazing ground, poor genetically bred better quality animals, weak control of animal and poultry disease are the challenges. Shrinking of land for farming, lack of agro-based micro-enterprises are the other formidable issues. Public sector banks are inefficient and costly, and are not able to expand financial services to poor households. The rate of growth of agricultural GDP which was 3.14%, has been falling gradually over the years (World Bank, WDI 2012), while savings had been increasing by 19% (Mid-term Implementation Review of the Sixth Five Year Plan. (2011-2015) in Bangladesh. The challenge now is to channel this saving to some efficient productive process. A balance between agriculture for revenue and export, and more nutrition-sensitive actions focused on producing nutritious, affordable and safe foods for local consumption and nutritional gain, needs to be found.

Failure to link environment, and the negative effects of climate change, to undernutrition

Climate change amplifies the threats for all underlying causes of undernutrition – food security, water and sanitation and care practices. As the effects of climate change (drought, variations in monsoon and other rainfall, floods, cyclones, higher temperatures, sea level rise, salinity seepage) grow in Bangladesh, ensuring long-term access to sufficient and nutritious food for all will become an enormous challenge. Food availability and nutrition will be adversely affected by environmental degradation, complicated by climate change. Haor and forest preservation, prevention of ecosystem and biodiversity

loss, coastal zone management and management of land degradation and river erosion will be key to mitigating the effects of this. As well as damage to crops and homestead gardens, wood gathering, livestock pasturing, water fetching, and availability of indigenous food crops will become more difficult, particularly affecting women in terms of labour time burden and livelihood and income opportunities and options. Climate change models in the Himalayan watershed region indicate a 30–50% reduction in dry season water flow on downstream economic growth, livelihood conditions, and urban water use²⁰⁰. Decreased agricultural productivity and high demand could result in increased prices, create price volatility, and subsequently lead to hunger²⁰¹. Indeed, based on estimates from the World Bank, FAO, and the UN Environment Programme, coupled with scenarios of the environmental food crisis, food prices may increase by 30 to 50% on average²⁰². Using A2 emission scenario, with mitigation, global costs of climate change, though relatively small in absolute amounts, were reduced by 75–100%; and the number of additional people at risk of malnutrition would be reduced by 80–95%. Further deterioration in the availability of water and reduction of food grains due to climate change will have to be addressed through alternative approaches (e.g. harvesting and storage of rain water, exploiting so called blue economy-sea resources and research on shallow water fishery).

Poor focus on nutrition through social protection programmes:

The Ministry of Social Welfare has the scope to strengthen nutrition-sensitive approaches to safety nets with activities implemented in accordance with article 15 (GHA) of the Constitution of Bangladesh. However, there has not yet been an intensive systematic approach to ensuring that staff in this Ministry are aware of their nutrition-sensitive roles. Many social safety net programs - such as Food for Work, 100-day employment guarantee scheme, maternal health voucher scheme and health services, old age pension scheme – could provide opportunities for people to increase their knowledge on good nutritional behaviours in relation to their nutritional needs. However, despite their expansion, these programmes are fragmented, not all poor are covered by these programs and the amount of benefit is often small. Fragmentation and duplications are also apparent, and some issues in design, targeting, implementation and funding have limited their impact. Under the current Social Protection Policy Reform Process, a National Social Security Strategy (NSSS) has been drafted to make the social protection system function more effectively to protect the poor and vulnerable, but so far, nutrition is not strongly reflected. Moreover, despite the increased prioritisation of social protection, the actual resource allocation has remained at 2.2 to 2.4% of GDP, compared to the target to reach 3% of GDP by 2015. The government spends about 2-3% of the GDP on the 100 or so social protection schemes aimed at the poor. Social and environmental protection measures that are expected to address poverty and nutritional deficiency are: elimination of all forms of discrimination against women; equal rights in development; social protection programs, e.g., livestock, housing for homeless, employment for the unemployed youth, Abashan Project, fund for mitigating risks due to disasters, program for mitigating economic shocks, programs for reducing poverty and generating employment; birth registration and controlling child labour and marriage.

Unplanned urbanisation and transport infrastructure:

The population is set to reach some 270 million by 2050. Most of these people will live in the urban areas. In addition, climate change is predicted to raise average sea levels by around 30 cm by 2050, and could make an additional 14% of the country extremely vulnerable to floods by 2030 (6thFY). Urbanisation, which is happening at an alarmingly fast rate in Bangladesh, due to migration from rural to urban areas, begins in slums (Urban Health Survey), with little health and nutrition care to the migrants and with poor environment and sanitation. Transport and infrastructure policies need to be mindful of promoting a healthy lifestyle, allowing more increased physical activity that encourages walking and cycling. This would also help in reducing GHG gas emission and help in control global warming.

CHAPTER 5: DEVELOPMENT VISION FOR NUTRITION IN THE 7TH FYP

5.1. Vision, Goals and Objectives

The **vision** for nutrition in the 7th FYP is that all the people of Bangladesh will enjoy optimum nutrition to lead healthy and productive lives. The **goal** is to improve the nutritional status of all people of Bangladesh through prioritised measures particularly aimed at poor adolescent girls, pregnant and lactating women. The **objectives** are to:

- a. Identify prioritised target groups
- b. Scale up nutrition-specific interventions
- c. Scale up nutrition-sensitive multi-stakeholder interventions
- d. Strengthen and create stewardship and management skills.

5.2. Strategies

This section outlines broad strategies for improving nutrition under 3 headings:

- 1) Strengthening the enabling environment for scaling up nutrition
- 2) Nutrition-specific
- 3) Nutrition-sensitive

Several figures and tables are provided with more details. Given the scale of the challenges, the 7th FYP must take bold steps to chart effective collaborative ways for all relevant sectors and stakeholders to align more strongly around nutrition.

5.2.1. Strengthening the enabling environment for scaling up nutrition

Build multisectoral and multistakeholder coordination for nutrition – see Figure 6

The Bangladesh National Nutrition Council, headed by the Prime Minister, may convene meetings every six months in the beginning and every year thereafter. BNNC will be responsible for policy and strategic decisions. Planning should be done under the mentoring of BNNC. Programme implementation will be a multisectoral task; each ministry with its own outfit will implement the relevant portion of the programme. The present ToR of the Council may be reviewed and updated. An additional Secretary from the MoHFW may be the Member Secretary of the Council. All the 17 relevant ministries would be the members. The fundamental principle is to establish, strengthen and scale up horizontal as well as vertical collaboration and coordination- both in terms of structural forms and functional strength. In doing so a balance would be required between speed and sustainability (alone we are faster but together we go further)²⁰³. During times of disaster, all the nutrition-sensitive and nutrition-specific sectors have to come together at the operational (upazila and union levels) as well as at central level, form coordination committees (if they do not exist already), develop joint plans and decide collaboratively on disaster, and post-disaster assistance. Participation of civil society membership organisations, private sector, academia and DPs must be assured.

Implementation of sectoral policies and plans:

In order for Government to deliver on its promise on nutrition, efforts across sectors – and beyond the lead Ministry of Health and Family Welfare – will be needed. **Table 4** outlines the roles and key activities of some of the most relevant sectors. In addition, the Planning Ministry has the scope to enhance and ensure placing nutrition in all the relevant sectors through the planning organs of the relevant ministries and see to it that these ministries embark on relevant nutritional interventions. A re-examination of budgetary priorities is needed to allocate more resources for health and education at macro level. A universal health coverage scheme may include nutrition as a component of the service package. Greater decentralisation, with responsibilities and budgets divided between the different institutions and levels up to upazila level will help coordination considerably at operational levels. This will avoid overlaps of projects and ensure that the objectives and targets are aligned across the relevant sectors, creating synergy and avoiding inefficiency caused by duplications.

Table 4: Roles of some government sectors (outside health) in improving nutrition

Domain	Role and activity towards scaling up nutrition	Ministry
Education	<ul style="list-style-type: none"> • Incorporate nutrition and hygiene education in curriculum, including school vegetable garden and cooking demonstrations • Ensure regular Health and Nutrition Days in the schools 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	<ul style="list-style-type: none"> • 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, Coops, Health & Family Welfare, Water Devt
Social protection	<ul style="list-style-type: none"> • Ensure that extreme poor households can access adequate (quality and quantity) of resources and access to basic health services • Targeted support to pregnant women and children under 2 (1000 days) • Ensure Social Protection Strategy is nutrition sensitive, and monitor nutrition-related results • Incorporate nutrition-related behavior change interventions as an integral part of social protection 	Social Welfare, Food, Disaster Management, Health and Family Welfare, Information, Women and Children Affairs, Religious Affairs
Food	<ul style="list-style-type: none"> • 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, Fisheries & Livestock, Health & Family Welfare, Agriculture
Agriculture, Fisheries and Livestock	<ul style="list-style-type: none"> • 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 Development
Women and children affairs	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Increase availability of fortified staples e.g. salt and oil • Adhere to high standards in advertising/marketing, focus on children 	Industry, Food Agriculture
Environment, forestry and natural resources	<ul style="list-style-type: none"> • 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 and Forestry Chittagong Hill Tracts
	<ul style="list-style-type: none"> • 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; water and rights, focus on marginalized groups, poor households and women) • Uphold refugee and humanitarian law in protracted crises 	Women and Children Affairs, Justice

Source: Compiled by FAO, UNICEF, WFP, WHO (partnering as UN REACH) with Canada DFATD, DfID, EU, USAID and World Bank, as part of their joint work on "Undernutrition in Bangladesh: A Common Narrative". Version 1, 2014 (more can be found in NPAN 1997)

Strengthening multisectoral and multistakeholder collaboration

NNS at all levels should work with this fundamental concept for successful nutrition services. Organograms for nutrition governance and services are provided in this paper for guidance: See Figures 6 and 7. With a view to transforming weak inter-OP coordination into a strengthened one, in addition to periodic meetings of the SCNI and the NICC, Line Director-NNS needs to communicate and coordinate with relevant OPs on a regular basis to ensure implementation of mainstreamed nutrition services. NNS needs to promote collaboration with civil society and community based NGOs. Line Director-NNS needs to communicate and coordinate with relevant OPs on a regular basis to ensure implementation of mainstreamed nutrition services. NNS needs to promote collaboration with non-government and community based entities.

Develop coordinated and collaborative intervention plans at sub-national levels:

Ministries represented at district, upazila, union and ward levels should form a functionally unified body for developing joint planning, implementation and review functions. In situations where there is no departmental personnel, others may participate (e.g. school teachers at ward level representing Ministry of Education). These bodies would develop how personnel of different sectors can come together to work for enhancing the cause of nutrition. For example, a plan at union level may identify roles of the potential beneficiaries of support to be given for family-based fishery, kitchen gardening, horticulture, poultry and animal husbandry, to be led by the local government bodies, while actual support will be given by the relevant sectors. Monitoring of the progress at the family level may be done by the personnel from the Ministries of Local Government Rural Development & Cooperatives, Health & Family Welfare, Education (through teachers) and Religious Affairs (imams of mosques), as these are the only sectors which have presence at ward level.

Reorganising the directorate of health:

The MOH&FW is comprised of Health and Family planning sub-sectors. At present the Director General of Health Services (DGHS) looks after the huge curative and preventive Directorates as well as the main streaming programme of NNS. The Director General of Family Planning (DGFP) is responsible in the population control programme as well as shares the mainstreaming programme of NNS along with DGHS. For DGHS, running the NNS effectively is too enormous a responsibility. Based on the size of the task and complexity of nutrition (and also public health), conversion of one of the posts of additional directors general of health services into a **post of Director General of Public Health and Nutrition (DGPHN)** is required to coordinate implementation of NNS (i.e., bring in the other relevant line directors to assist implementation), which will be overseen by IPHN, subject to approval of the government. See FIG 7 below

Addressing the status of girls and women and gender inequality for improving nutrition:

Systematic action to improve the nutrition and care of girls and women will have major long-term and far-reaching benefits and must be an important consideration for the country's 7th FYP. Improvement in women's status and education may account for half of the reduction in child underweight²⁰⁴. Income controlled by women has been seen to have a significantly positive effect on child nutrition and household food security²⁰⁵, efficient mobilization of family resources and better financial management. While building women's empowerment will improve nutrition, the reverse relationship is also important: well-nourished girls and women will be better students and become assets for the productivity and growth of the economy (at household, community and national levels). Gender inequality in livelihoods programmes is not only unfair to women: it is also bad for child and maternal nutrition – which is bad for economics. ANC and PNC services are key opportunities to influence nutrition awareness and related practices among pregnant and lactating women of all ages. Contraceptive services and birth registration responsibilities should also be given to the Community Health Care Providers (CHCPs) and Health Assistants (HAs). Fewer pregnancies mean that women will have more time to earn their own income and take better care of their existing children. Negative gendered norms must also be addressed, particularly through engaging men and boys as active agents of change. Helen Keller International's "Nurturing Connections" approach to gendered determinants of undernutrition in Bangladesh combined gender and nutrition interventions to empower women in

improving the nutrition of themselves and their children²⁰⁶ as part of the Building Equity in Agriculture and Markets (BEAM) project (2011-2013). This helped communities and families talk about the gender-power relations and highly sensitive topics such as sexual norms, which underlie nutritional problems. Violence against women is associated with poor nutrition. Family harmony, and absence of any form of abuse or violence, is important for creating an enabling environment for parents and caregivers to take adequate care of their children, including correct feeding and hygiene behaviours, and promoting optimal early child development. Empowering the women and the children is the responsibility of MoWCA. It has the mandate to enhance the knowledge base of women, children and their families on aspects of nutrition, support families on horticulture, kitchen gardening, family fishery, poultry and animal husbandry (in collaboration with the Ministry of Agriculture and Ministry of Fishery and Livestock) and conduct orientations in collaboration with the Ministry of Education among high school adolescents. Finding ways to amplify the voice and participation of particularly women and children is also needed.

Building resilience and minimising risk to nutrition in the context of climate change

Through steps to:

- Increase financial support for nutrition-specific and nutrition-sensitive interventions that successfully address the expected rise of undernutrition as a consequence of climate change
- Prioritize actions for most vulnerable groups, households and individuals in the most prone areas
- Develop multisectoral programmes to manage risk and enhance resilience through a nutrition lens
- Assistance given in post-disaster period might be made conditional to enhancing nutrition related goals. Crop insurance may be provided by the Ministries of Social Welfare, Food and Disaster Management, Agriculture, Women and Children Affairs²⁰⁷ and Local Government
- Attention to the needs of adolescent girls and women with young children should be prioritised. The present design of the cyclone shelters might be reviewed to enhance the safety and privacy of women and adolescent girls. Support and counselling for breastfeeding should be a priority, and efforts made to ensure adequate and safe complementary foods for young children
- Disasters offer new opportunities to the different sectors to work together. Lessons can be learned on how better to work multisectorally in post-disaster periods
- Ensure minimal disruption to correct IYCF practices during disasters
- Prioritize the stabilization of food prices²⁰⁸ in the aftermath of natural disasters.

Aligning advocacy, social mobilisation and behaviour change communication interventions

Awareness of the people needs to be built and enhanced to an effective level on the proper ways of food processing, preparation, cooking, preservation, and safety. People need information about all sorts of nutrients and their sources for a sustained period and about food based dietary guidelines for different ages in different physical and pathological conditions. These may be imparted effectively if special classes are taken up for family care takers by community based organizations. People need advice when they or their children are sick from malnutrition. They need support during chronic debilitating conditions that either occur from malnutrition or cause malnutrition. Former NNP-like volunteers may be recruited temporarily for a period of five years and trained as counselors, to be stationed in the CCs. A comprehensive national Strategy for Nutrition Advocacy and Communication is near completion and adequate resources will be needed for its effective implementation. Front-line workers in non-health sectors (agriculture, social welfare, education, fisheries and livestock, women and children affairs, and others) will also need this same information on a regular basis. An intensive media campaign is advisable.

Capacity building

Human resource strengthening and capacity building has to take place at every level and in every sector. Field level volunteers will be needed, recruited locally– akin to the Community Nutrition Promoter (CNP) of the NNP. A comprehensive cross sectoral Human Resource Development Master Plan for Public Health Nutrition, may be considered (as under development in Nepal).

Improving monitoring and evaluation:

It is essential that account is taken of activities to ensure effective programme. Supervision, review, monitoring and evaluation functions should be given adequate importance if success is to be attained. Adequate fund needs to be allocated for these functions in the revised and subsequent OP. HMIS has included indicators on nutrition for regular reporting from the different tiers of the health systems. It has to be seen now that the collected data is valid, timely, usable and used for management, policy and planning purpose. The upazila and district level units of the relevant ministries need to arrange quarterly public meetings wherein dissemination of nutrition relevant information and messages may be arranged. Programme review function needs to be instituted quarterly from the national to the upazila level as was done in the initial period of EPI including public and community leaders besides the sectoral representatives. Transparency in ensuring access to nutrition-related information in public affairs will need strengthening. Measures to introduce participatory monitoring for accountability to citizens can be considered.

More working in partnership for nutrition:

Collaborative models will have to be developed at the community level between the public and the private sector for taking up preventive measures as the first priority, and diagnosis of the cases of malnutrition and referral to the public sector hospitals for treatment. Civil society can play important roles in familiarising, popularising and empowering the vulnerable people. The quality control oversight capacity of public institutions needs strengthening. Stronger partnership with international institutions/agencies such as UNICEF/FAO/WHO/WFP, other bilateral development partners and with NGOs, research organisations and centres of excellence can provide greater push and visibility to these efforts. CG and CSG members need to support the nutrition programme at the CC level.

Improving knowledge management:

Research into the nutrient values of different food items, their marketability, availability and price; their bioavailability and serum levels; people's value of those foods, their interest and practices around those food items; and family interest and capacity to produce those must be studied periodically. Other research topics may be on what would make people interested on homestead kitchen gardening, homestead horticulture, poultry farming and aquaculture. Studies are also needed on developing efficient drought, saline water and standing water crop varieties and short duration varieties. Efficient integrated culture of poultry and aquaculture and agriculture may also be studied. How the disaster situation may be better managed, e.g., shelter management, livelihood guarantee and post disaster assistance seen through the lens of nutrition need to be studied and policy brief prepared for the relevant ministries.

Curbing harmful influences and conflicts of interest:

There needs to be a strong legislation and enforcement to curb undue commercial influence on dietary habits of the people. The proposed BNNC may establish a multistakeholder Sub-Committee to discuss how to manage conflict of interest, and monitor its management. Civil society must play a key role in this to mobilise citizen awareness and hold private sector and government to account.

5.2.2 Scale up nutrition-specific interventions

Identify prioritised target groups and areas

Access to the right nutrition in the 1,000-days period between the start of pregnancy and a child's second birthday builds the foundation for a child's ability to grow, learn and will have health benefits throughout the life span. Longitudinal data²⁰⁹ from Bangladesh has clearly shown that appropriate infant feeding practices are associated with greater gain in weight and length during infancy. Based on these facts nutritional interventions need to prioritise pregnant and lactating women, newborn and growing children along with adolescent girls. For efficient programme management, the following targets will be prioritised, with a focus on the poorest groups:

- i. Children less than five years of age
- ii. Pregnant women
- iii. Lactating women
- iv. Married adolescents

- v. Other adolescents
 - vi. Women caretaker of the family or women headed families
- People living in hills, wetlands, coastal belts, forest lands and riverine areas, and the urban extreme poor, should be targeted to improve area/geographical inequities.

NNS interventions for prevention and management of undernutrition:

The full range of direct NNS interventions should be further resourced and scaled up including deworming, vitamin A and MNP supplementation, food based fortification (iodine, vitamin A), promotion of hygiene practices, safe food. Supplementation and fortification programmes may be revisited periodically on the basis of emerging scientific evidence. Mid-Upper Arm Circumference (MUAC) measurement for MAM and SAM cases, and GMP, are conducted in some of the UHCs. This needs to be expanded to all other UHCs and also to lower level health facilities, extending up to referral of appropriate cases. It is expected that 5-10% of SAM children will require institutional interventions, capacity needs to be developed accordingly in the UHCs. Attention needs to be given to managing other co-morbidities as well.

Maternal and adolescent girl nutrition:

A greater attention on maternal nutrition is needed, e.g., promoting appropriate pre-pregnancy diet, and micronutrient status assessment and treatment of deficiency, strengthening ante-natal care and supplementation, emphasising nutrition during pregnancy and lactation. Particular targeting is required of married adolescent girls. Maternal nutrition also needs to take into account the rising prevalence of obesity in women.

IYCF:

IYCF support needs to start from antenatal period, extended through delivery and neonatal care and continued through two years of age²¹⁰. The success of *IYCF* interventions depend primarily on the quantity and quality of counselling, such as reflecting back, empathy and using non judging words²¹¹. Newborns should be put to mother's breast within 1 hour of delivery. The current mandatory home visit by the government health care provider should be ensured within 24 hours of birth to make sure position and attachment for breastfeeding are correct. Subsequent follow up of *IYCF* practices and counselling will take place at CCs and EPI outreach centres, where a community based trained volunteer will counsel mothers for breastfeeding and complementary feeding.

Community-based nutrition programme:

For this, community involvement needs to be established and implemented effectively, in addition to the facility based interventions.

Voluntary workers:

Orientation and supervision of voluntary workers will be provided by CHCPs and AHIs and will be stationed in CCs and EPI outreach centres

Utilisation of facilities:

MUAC measurements for MAM and SAM, and GMP sessions have to be conducted at every health, family planning facility, starting from CCs and at EPI outreach sites, which would lead to appropriate referral.

Policies:

The draft National Nutrition Policy and National Micronutrient Strategy need to take into account nutrition-related challenges and changes in micronutrient status highlighted in this document.

Promoting food-based approaches and dietary guidelines:

Nutritional interventions must prioritise food based dietary practices and promote diversity. These interventions have to be balanced with relevant specific and sensitive programmes, which would address the underlying determinants in all areas of food, health and care. Food contains all nutrients essential for health and these foods are in plentiful supply in this country. Good counselling about what

to eat will ensure optimal nutrition. Effect of deficiency and the cheap sources of nutrients, minerals, e.g., iron, iodine, potassium, calcium, zinc; and vitamins A, B, C, E and K, should be known to the people. There is a need for the promotion of locally available diversified family foods as complementary food from 6 months, (containing for example rice, legumes, fish, chicken, seasonal fruits, vegetables, eggs, *shemai*, *suji* and the like). People need to know more about the source of nutrients and good care practices for nutrition, including how to cook and store. To meet the major challenge of undernutrition, hidden hunger and nutrition-related NCDs, in addition to proper IYCF the need will grow for affordable sources of animal protein, fruits, vegetables and fibre-rich foods. Under the 7th FYP, multisectoral approaches should be designed and implemented to promote food-based diets, using the guidelines for the Bangladeshi population²¹². At district and upazila levels, the relevant ministries may develop joint plans to implement the food based dietary guidelines. This can be assisted at the union level and below by MoHFW, Local Government Ministry and Ministry of Education personnel and other ministries which have extension workers at those levels.

Relate nutrition to climate change and building resilience:

Better nutritional health can improve the resilience of a population to climate-related shocks and stresses. Prioritising nutrition in the 7th FYP, and ensuring that more people are better nourished, will also help mitigate against the damaging effects of any disaster or shock, and reduce deaths, illness and lost productivity. Further efforts to protect the poor from the adverse effects of environmental degradation and climate change are needed to build the resilience of the people and to minimize the adverse impacts of natural disasters and climate change on people's livelihoods, health and nutritional well-being. It is expected that those most affected will be those who have the least capacity to adapt to climate change related impacts²¹³. The resilience of people will have to be strengthened, physically and financially. Poorest households, including women-headed households, are most vulnerable to shocks and unable to invest in the future because most of their income is spent on meeting basic needs. Very poor households are less able to protect themselves from adversity, often resorting to distress coping strategies such as further reducing expenditure on nutritious food (e.g. meat and fish) or discontinuing education for children²¹⁴. Diversifying livelihoods is a key strategy for these households to cope with risk and build their resilience. More large-scale nutrition orientated projects taking livelihoods and resilience approach are needed (e.g. CARE's SHOUHARDO project)²¹⁵.

During periods of disasters, maximum effort should be paid to supporting breastfeeding women to initiate and continue breastfeeding, as well as provide support on the safe preparation of appropriate complementary foods. Attention to hand-washing and hygiene will also be very important, at all times, but particularly during periods of crisis when water supplies may be scarce or contaminated. In post-tsunami Sri Lanka, high levels of breastfeeding were sustained in the shelters because of the pre-disaster regular promotion of good feeding practices in normal times. The Breast-milk substitutes, baby food, commercially manufactured supplementary baby food and its equipment (regulation of marketing) Act, 2013 clearly stipulates in section 4 (2) against the marketing and distribution of breast milk substitutes in times of emergency and disaster.

Food supply in times of crisis:

Disasters create a cycle of undernutrition as the scarcity of food pushes prices high, beyond the reach of those who are the most vulnerable. When a crisis hits, women are generally the first to sacrifice their food consumption, in order to protect the food consumption of their families. Households with only one income, especially from agricultural labour or fishing, are more vulnerable to seasonal or climatic change than households with several sources of income. The experience of relief after the cyclones in recent years (cyclones Sidr 2007, Aila 2009, Mahasen 2013) show that relief given in the form of rice, seeds, saplings or housing materials in kind and in cash for buying nets for fishing, or seed or saplings for agriculture were not enough and efforts were uncoordinated. The Ministry of Disaster Management has the responsibility of dealing with the aftermath of any disaster. The MoHFW will have to give priority attention to strengthen the health resilience of the people in the coastal areas through vaccination, and child, pregnancy and lactation targeted services. The Ministries of Agriculture, Food, and Livestock and Fisheries will address the issue of food security and availability during disasters using relevant policies (e.g. Food Policy and Agriculture Policy).

Build stronger leadership in NNS

The NNS currently has four objectives:

- 1) secure universal access to nutrition services through mainstreaming nutrition within health and family planning services,
- 2) pursue a multi-sectoral approach to address malnutrition through improved coordination between relevant ministries
- 3) human resource capacity to manage, and deliver the nutrition services
- 4) adequate management of the information system, monitoring and evaluation.

These require a highly structured operating system for which the following inputs are essential to strengthen the NNS in order to provide services for undernutrition and nutrition-related NCDs.

Strong and stable leadership is essential to ensure and oversee integrated and well-coordinated comprehensive nutrition service delivery. In order to coordinate all nutrition-relevant Line Directors, a higher level position is recommended to be created in MoHFW which may be easily be done by converting one of the existing posts of Additional Directors General to a ***post of DG Public Health and Nutrition (DGPHN)***. This can be done without any financial implication. The LD of nutrition, who is also the Director of IPHN, should work under the direct supervision of the proposed DGPHN. S/he should also preferably have a nutrition and administrative background and should remain in the post for at least 3 years. At the NNS OP level, a working committee may be formed under the leadership of LD-NNS to be represented by the other relevant directors, as shown in Figure 7, to supervise, monitor and coordinate OP activities. Other lie directors under DGHS who need to support DGPHN/LD-NNS are line directors of MIS of DGHS and DGFP. Divisional Directors should convene monthly coordination and monitoring meetings with a view to making mainstreamed nutrition service effective. Similar monthly meetings should also be held at district, upazila, community and CC level including all the relevant sectors and stakeholders.

Rationalise nutrition services in NNS

In its present strength, NNS should cut down on the 20 priority activities laid down in the OP. Instead, NNS should put more focus on nutrition care during the antenatal period, helping the mother to breastfeed within 1 hour of birth, IYCF, early child development, management of severe acute malnutrition in the community, the programmes in relation to NCD, advocacy and BCC, community based nutrition programmes, and evidence based supplementation and fortification programmes. All these should be implemented under the platform of the Direct Nutrition Interventions (DNIs) specified in the HPNSDP. All advocacy and behaviour change communication should be guided by the forthcoming Nutrition Advocacy and Communications Strategy for Bangladesh. Monitoring and implementation of the 2013 Parliament Act on breast-milk substitutes, baby food, commercially manufactured supplementary baby food and its accessories is another priority nutrition service. Food safety may be excluded from NNS as it is covered by other ministries.

Incorporate local volunteer recruitment into NNS for strengthening community involvement

Volunteers will be essential to strengthen NNS. This will also ensure community involvement. The community volunteers will help the mothers to breastfeed within 1 hour of birth, will do 3rd day post-partum home visit, and support these mothers at CCs, (EPI outreach on a pilot basis) and other designated centres to counsel mothers for proper IYCF practices. For example, When community clinics observe GMP days, local community and leaders should be actively engaged to popularise nutrition services at field level.

Strengthen training across the health sector to raise awareness and deliver nutrition services

Training may be contracted out to effective institutes or team of trainers as the NNS does not have the manpower to provide quality training as necessary²¹⁶. A system of training audit and web-based MIS on nutrition indicators and outcomes, along with other nutrition-related services, need to be developed. Capacities of UHC and district hospitals will be strengthened to adequately manage severe malnourished cases. All types of health and family planning workers (e.g. health assistants, family

welfare assistants, assistant health inspectors, family planning inspectors, family welfare visitors, sub-assistant community medical officers) will be appropriately trained in nutrition education.

Increase capacity and efficiency in NNS procurement

Centre for Medical Stores and Depot should make separate arrangements for nutrition-related procurement and there should be a designated staff member in NNS to handle procurement.

Improve service delivery platforms

Service delivery under the NNS is intended to occur through diverse delivery platforms: Integrated Management of Childhood Illnesses (IMCI) with Nutrition Corners, ANC, inpatient care, sick child visits at Community Clinics, and EPI outreach through health assistants (HAs) and family welfare visitors (FWVs) and community. These all need to be effectively coordinated to ensure they take up their responsibilities efficiently. Recruitment of community volunteers is recommended.

Ensure adequate manpower for NNS

The Government is urged to examine the human resource requirement for this vast task to provide country wide nutrition services. Besides the community and facility based basic health care staff providing nutrition services meanwhile it is essential that the LD/Director IPHN is helped by 3 Deputy Directors/3 Programme Managers (PMs), and 10 Deputy Programme Managers (DPMs). Posts of Nutrition Managers at District and Upazila levels should be created (the Upazila level post is already recommended in the Health Policies of 2000 and 2011). This manpower at IPHN central, district and Upazila levels should preferably have nutrition background or at least be trained in nutrition. A qualified and experienced Account/Finance person at the level of Assistant Director (or above), with support staff, is essential. A review of the existing personnel structure available to the DGHS and DGFP would help in identifying the personnel who may be made available at upazila, union and community level for effective functioning for nutrition as supervisors. Local nutrition volunteers should also be recruited to provide IYCF and other NNS services. Other CC staff (e.g. HA, CHCP, FWA) should also be involved more in nutrition promotion for nutrition-related NCD services.

Expand area coverage of NNS

This will be throughout the country, in the community covering all homes but with prioritization of convergence of all DNIs, and collaboration on nutrition-sensitive related interventions with all other relevant sectors in the most remote, vulnerable and high burden (of stunting) areas. All medical colleges, 34 district hospitals, 425 out of 483 upazila health complexes now have nutrition corners, while 400 of them are covered with web-based MIS. An effective strategy and plan is required to effectively utilise the services available in these facilities for the benefit of nutritional interventions. The Urban Health Survey conducted recently (2014) by NIPORT with USAID funding highlights the need for the development and implementation of nutrition oriented programmes in urban slums.

Enhance role of Institute of Public Health Nutrition (IPHN) as hub of NNS

IPHN should be considered as a clearing house of nutrition related information. It should be strengthened as a training and research institute accordingly, for which it was established in 1975.

5.2.2 Scale up nutrition-sensitive interventions across multiple sectors

Make Social Welfare more nutrition sensitive

There is now a vast body of evidence that social protection programmes, when designed and delivered well, can effectively increase the nutrition, health and educational status of children and reduce the risk of abuse, exploitation and neglect. Studies show that food-based interventions, when coupled with education, social marketing or mass media, positively impact nutritional outcomes²¹⁷. The role of the Social Welfare Ministry may therefore be expanded to not only provide cash transfers to patients suffering from malnutrition but also provide other productive incentives - during disasters and in normal times - in the form of cash and capitals to the poor and severely affected families (e.g., housing materials, fishing nets, seeds/ saplings for horticulture, support to women to rear family poultry and animals). Since women often cannot control their own income coming from home gardening and rearing

of animals, targeted support should be given to them. VGD already includes a number of nutrition related activities, such as nutrition education and the provision of fortified rice to a sub-group of beneficiaries. In the case of *monga* type of situation, off-farm economic activities need to be created so that farm-based employments can be largely substituted by off-farm based employment opportunities in off-seasons. In the case of impact of cyclone, larger and timelier interventions are warranted. In either of the cases, two financial services will be required – provision of micro-finance (credit, savings) and provision for micro-insurance. Bangladesh Rural Development Board (BRDB) and *Palli Daridra Bimachan* Foundation (PDBF) have been promoting rural development through providing both rural finance including micro finance, and skill development training. Beggars, destitute, landless, daily wage earners, bonded labour, female-headed poor households, physically handicapped, seasonal labour, poor households living in char and/or flood prone or river erosion areas and households with no regular income flow are generally under the ultra-poor (UP) programs on NGOs like BRAC. This type of support to the ultra-poor should help them to take some care of their nutritional needs provided they are informed about nutrition and recommended dietary practices. Programmes like CARE's 'SHOUHARDO' that use of social safety nets through pro-poor targeting of womens' groups and diversifying livelihoods have demonstrated improvements in childhood stunting, and should also be used for learning lessons. Test relief, vulnerable group feeding, vulnerable group development, food for work, employment guarantee schemes, allowances for destitute and old age pensions all need to be seen through the lens of nutrition. Social Welfare Department will have to work in tandem with the Ministries of Agriculture, Fishery and Livestock, Food, Disaster Management and MoHFW.

Make agriculture more nutrition-sensitive

Nutrition-sensitive agriculture refers to dietary diversity promotion, backyard gardening, horticulture, livestock, dairy, fish and healthy indigenous foods. It requires home economics extension services, biofortification, food fortification (e.g cereals, vegetable oils, milk), market-based food products and women-focused agriculture²¹⁸. If the agriculture sector is to be more nutrition-sensitive, it must develop crops which are micronutrient-rich and which shift the present emphasis from cereals, particularly rice, towards other foods. It needs to encourage, support and fund horticulture and kitchen gardening, targeting poorest families and areas where the undernutrition rates are highest. Support also needs to be extended in disasters to the poorest families in the form of providing seeds and saplings or support of microfinancing institutes. agriculture-led growth has led to faster declines in undernutrition than non-agriculture based growth, although the decline was still insufficient²¹⁹. Programmes that integrate gender have been shown to generate improved agricultural productivity and better household nutritional status²²⁰. The deteriorating balance of trade in agriculture (declined by USD 5 billion-four times in the past decade) may be addressed by scaling up fruits and vegetables (trade deficit of USD 870 million), legumes (trade deficit of USD 379 million) and dairy and poultry (egg) products (deficit of USD 236 million) and fish (Sixth Five Year Plan).

Enhance nutrition in education:

Studentship offers the best opportunity of learning on the issues and solutions of nutrition. Periodic review will be needed to update the nutrition-related curriculum and more serious attention needs to be given to discuss the issues of malnutrition, value of nutrients and their sources. The socio-economic, environmental and gender determinants of nutrition also need to be paid attention to in school curriculum. Children need to have a good hygienic and sanitary school environment with enough toilets and safe water faucets, and privacy for menstruating girls. Students also need to be encouraged to create demonstration plots of kitchen gardens and horticulture in the school premises. Teachers in schools and fathers at home should also teach the students to wash hand with soap for example, before taking food and after coming from toilets. The Mass Education department sprawls to the nooks and corners of the country and offers good opportunity to enter-educate the community. These activities may be undertaken by contracting the private sector parties.

Address food prices and food safety

Ministry of Food, as well as Disaster Management and Ministry of Commerce, need to work in tandem to ensure enough stock of food to absorb market volatility. These two ministries also need to control

import of foods - processed or otherwise, that are harmful to human health²²¹. The Ministry of Food and Ministry of Disaster Management have to ensure safety of food in the public eateries and also in raw food markets. The ministry would need strengthening of its regulatory wing, to collaborate with the Ministry of Health & Family Welfare. In a disaster situation, distributed foods are usually grains (e.g. rice) which are very difficult to prepare without cooking and water and utensils. This puts children in particular in danger of nutritional deficiencies. Some ready-to-eat food for children above 6 months of age is a short-term pragmatic option. Encouragement is also necessary to continue breastfeeding in disaster situation. Measures will be required against toxic foods, as these will be more and more seen in the markets with affluence and regressive food habits. The Ministry of Commerce has to effectively control production, importation and marketing of these foods and drinks.

Strengthen role of local government:

Local Government Ministry can take lead in homestead kitchen gardening, horticulture, fishery, poultry and animal husbandry. It has cognisable social capital to mobilise the families and the community and can coordinate the roles of the relevant sectors to provide technical support and materialistic capital. Local Government Ministry has a pivotal role in social safety net based services and in identifying micro-finance beneficiaries. These activities may be conducted through a nutrition lens. Ministry of Local Government Rural Development and Cooperatives will have to work towards food safety, e.g., control the quality of street vended food, eateries, fast food joints and markets, in collaboration with the Ministries of Food, Livestock and Fishery, Commerce.

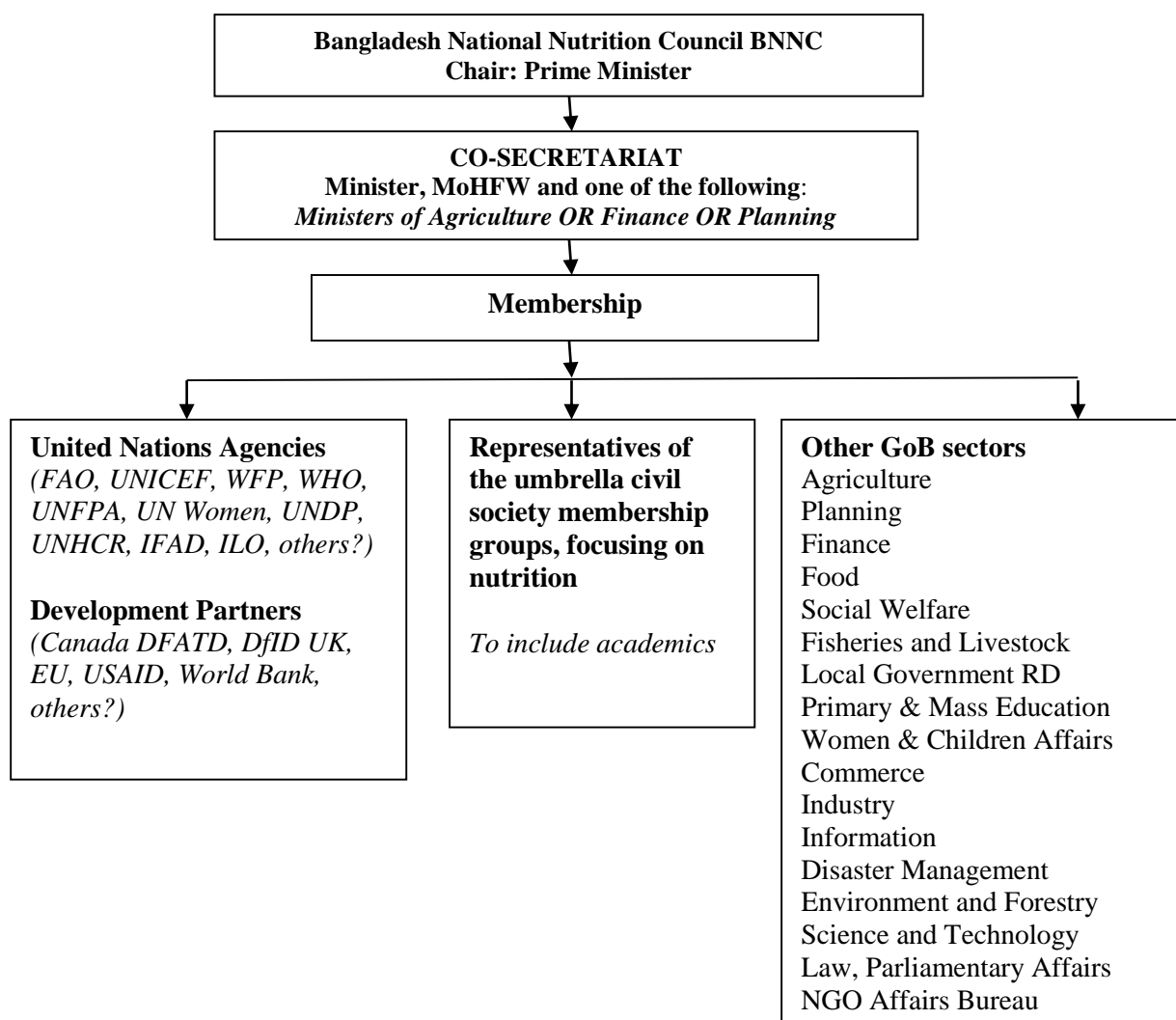
CHAPTER 6: RECOMMENDATIONS

1. Establish an effective multisectoral leadership and multistakeholder coordination mechanism to plan, review and monitor the scale up of nutrition interventions: see Figure 6.

Firstly, nutrition must be strongly acknowledged at the highest level as a multisectoral and multistakeholder priority issue for the country's development, with a clear call to move away from the current fragmented and silo programme functioning towards more linked and convergent collaboration and coordination.

To this effect, an **apex nutrition coordinating mechanism** is necessary, with the Prime Minister as head. Consideration could be given to the revival of the existing (since 1975) governmental structure, the BNNC, but with a more effective and accountable terms of reference. This will provide high-level leadership to focus on meeting the 2025 WHA targets. A mechanism such as the revived BNNC may have a Co-Secretariat function, with the MoHFW together with either one of the Ministries of Agriculture, Finance or Planning, with 13 other relevant Ministries as members. A robust Terms of Reference should be developed, based on other global examples (e.g. Nepal, Brazil, Peru) and taking advice from development partners. This apex mechanism will take responsibility for developing and implementing a **multisectoral and multistakeholder Nutrition Common Results Framework CRF**, delineating the roles and responsibilities of all the relevant stakeholders and drawing on the existing sectoral results frameworks. The rationale for this will be to plan, implement and review multisectorally. It will also develop action plans, implementation and review processes jointly, involving all relevant ministries and other stakeholders, from the central to the field level. This will help the development of preventive and pro-resilience measures.

Figure 6: Proposed Multistakeholder Nutrition Coordination and Governance Mechanism



2. Prioritise a convergence and equity approach to programming, targeting vulnerable geographical areas (highlands, forest fringe coastal areas, wetlands and riverine areas) and population groups having high rates of child and maternal undernutrition with strongly coordinated multisectoral and multistakeholder activities. This should draw on the lessons from the MDGF Joint Programme (GOB/UN) implementing intensive combinations of nutrition-specific and nutrition-sensitive interventions, involving different government sectors, civil society and the private sector.

1. All proposals for future development partner-funded programmes related to nutrition, as well as operational research, should be fully presented and reviewed by the BNNC Secretariat.
2. Human resource capacity will be developed for all relevant personnel working in this coordination mechanism: developing multisectoral plans, decentralised management, multistakeholder dialogue, mobilising and tracking funds for nutrition across sectors, financial management, monitoring CRF; knowledge sharing; and monitoring and evaluation.
3. Research organizations, universities, NGOs, private sector, civil society and development partners should be involved in relevant functions of this mechanism.
4. The coordination mechanism will be framed around the National Nutrition Policy once it is endorsed and activated from the beginning of the 7th FYP
5. A Costed Plan of Action should be developed that builds closely on the multisectoral approach of the 1997 National Plan of Action for Nutrition
6. This coordination mechanism will oversee implementation of the Nutrition Advocacy and Communications Strategy (draft), and mobilise relevant resources for activities
7. This mechanism must be reflected at sub-national level to develop joint plans (at district, upazila, union, ward levels), following the same multisectoral and multistakeholder processes.
8. Capacity needs to be developed at nodal levels (district, upazila, union, ward) to develop joint plans, implement, monitor and review. They will also identify potential beneficiaries for technical, capital and financial support for income generation and nutrition-related activities (e.g. raising poultry, fishery, animal husbandry, horticulture, kitchen gardening, beneficial indigenous foods) through the formation of multisectoral bodies at relevant levels. **Figure 8**

3. Strengthen the capacity for delivery of nutrition-specific interventions: see Figure 7

1. Strengthen the resourcing of NNS, so that it can deliver on effective mainstreaming of nutrition-specific interventions through health sector programmes. This will require strong stable leadership, with necessary management competencies.
2. UNICEF established an infrastructure for nutrition at district and divisional levels, with district nutrition support officers (DNSOs) and zonal nutrition officers (ZNOs) with funding from various development partners. Its The functioning needs to be independently reviewed and monitored for its impact on nutrition outcomes and sustainability.
3. Conduct an urgent review of the current organisational structure of the Health Service Directorate and its capacity to ensure effective leadership and delivery for nutrition.
4. Increased staff capacity will be needed, tasked with delivery and implementation processes. Good managerial oversight will be needed at the centre, along with key staff having strong technical skills in public health nutrition. High quality field level staff are needed to deliver services to reach every mother and baby.
5. Conduct operations research to continually develop optimal services and effective delivery mechanism options of the health system.

4. Build a stronger focus and investment on IYCF practices and Early Child Development:

1. The current delivery platforms for the promotion of IYCF should be reviewed to identify how best to scale up service reach and quality, through CCs or complementary service providers.
2. Place greater investment in preventative measures targeting the 1000 days from conception to the child's second birthday.
3. Place greater focus on the intensive promotion of breastfeeding and complementary feeding (collectively IYCF) as a core activity of the NNS, in both community and health facilities
4. Relevant activities specified in the (draft) National Advocacy and Communications Strategy for Nutrition should be implemented, including all BCC.

Figure 7. Proposed National Nutrition Services Management Structure in the Ministry of Health and Family Welfare

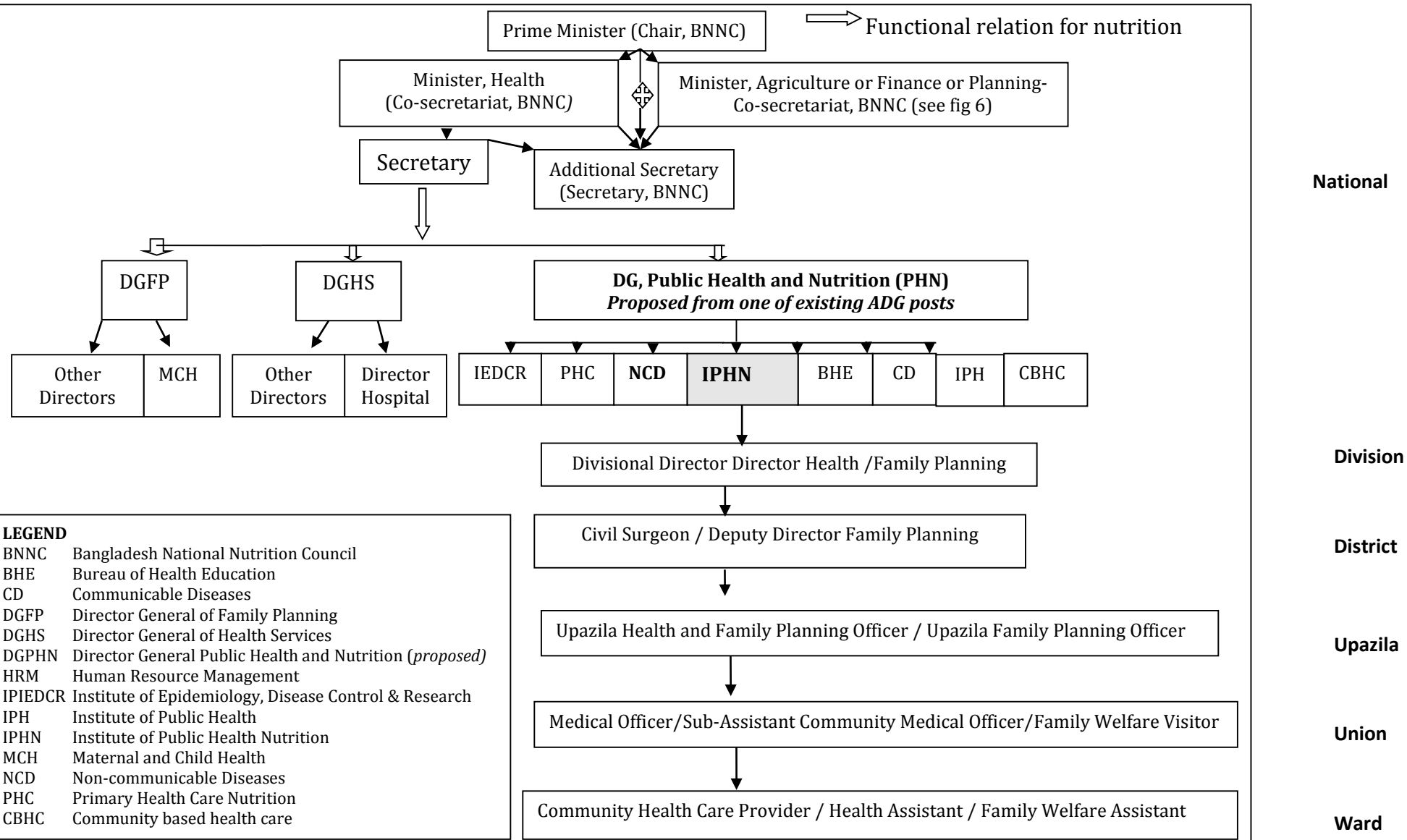


FIGURE 8: Multisectoral Nutrition Governance at different levels

	GOVERNMENT MINISTRY								
LEVEL	Health & Family Welfare	Education	Local Government	Agriculture	Fisheries and Livestock	Social Welfare	Women & Children Affairs	Environment and Forestry	Information
National	Secretary / Additional Secretary (PH & WHO) * / DGs	Secretary / DG	Secretary / DG	Secretary / DG	Secretary / DG	Secretary / DG	Secretary / DG	Secretary / DG	Secretary / DG
Divisional	Deputy Director Health / Family Planning	Divisional Education Officer	Commissioner	Divisional Agriculture Officer	Divisional Fisheries & Livestock Officer	Divisional Social Welfare Officer		Deputy Conservator of Forests	Divisional Information Officer
District	CS / DDFP / MO / HEO / Nurse	District Education Officer	Deputy Commissioner	District Agriculture Officer	District Fisheries & Livestock Officer	District Social Welfare Officer	District W&CA Officer	Divisional Forest Officer	District Information Officer
Upazila	UHFPO / UFPO / MO / FWV / midwife / SACMO	Upazilla Education Assistant / Officer	Upazila Chair / Vice Chair (F) / UNO / LGED	Upazila Agriculture Officer	Senior. Upazila Fisheries Officer, Assistant Fisheries Officer, Field Assistant & QA Officer, Upazila Livestock Officer, Veterinary Surgeon, Upazila Livestock Assistants (3), Compounder, Director	Upazila Social Welfare Officer	Upazila W&CA Officer	Upazila E&F Officer	Upazila Information Officer
Union	AHI / FPI / MO / FWV / SACMO / midwife	Teachers	UP Chairmen members	Block supervisor (3)					
Ward	CCHP / HA / FWA	Teachers							

* SUN Focal Point

For Ministry of Food, refer to CIP and Monitoring Reports

5. Quality counselling on Food Based Dietary Guidelines, breastfeeding, complementary feeding and Minimum Acceptable Diet (MAD) should be provided, available at all government and private health facilities including medicine shops (pharmacies), EPI outreach sites (on a pilot basis), satellite clinics, upazila health complex, union health and family welfare centres and CCs.. School curricula should also include these as core subjects
6. Detection of severe malnutrition (children at high risk of dying) will begin with Growth Monitoring and Promotion (GMP) for all children coming to Community Clinics for immunisation and/or well-baby clinics. Children with WAZ<-3, and or who are acutely ill with diarrhoea, pneumonia and other illnesses will be referred and appropriately managed at health facilities. Those with SAM and/or severe underweight without complications should be managed in the community with home-cooked energy dense foods, treating service providers may other-wise refer to the presently recommended guidelines, until the home care givers are well versed with the energy dense foods. Those with complications will be treated in hospital. Children with MAM will be counselled on home-cooked energy dense foods.
7. Intensify promotion of proper antenatal care for every pregnant woman.
8. A nationally representative survey on the incidence of low birth weight is needed
9. Locally elected officials and community leaders should be actively involved in GMP events.

5. Strengthen focus on nutrition related to gender equality and women's empowerment:

1. Collect and report sex disaggregated data across all the underlying determinants of malnutrition to better understand, address and monitor gender inequality as it affects nutrition.
2. Ensure that more nutrition intervention projects specifically address gender equality.
3. To break the intergenerational cycle of undernutrition, adolescent girls should be a prioritised target group. The newly-wed registration system needs to be strengthened for giving special and extra care (including enquiry about eating habits and monthly weight monitoring).
4. Ensure that the gendered determinants of undernutrition, and the intergenerational cycle of undernutrition, and their negative impact on economic growth, are well known across government sectors, through training of all service providers related to nutrition-specific and nutrition-sensitive interventions. In particular, Family Welfare Assistants (FWA), Community Health Care Providers (CHCPs) Health Assistants (HAs) and midwives should be aware of the links between early childbearing, multiple pregnancies, contraception and the nutrition well-being of both the child and the mother.
5. Strengthen, and initiate, programmes that work with boys, fathers and other male community leaders, to improve their understanding of early childhood development, nutrition and care practices (such as IYCF, washing hands with soap before taking food or after using toilets) and provide spaces for them to reflect on, question and potentially re-shape social norms that discriminate against girls and women, including in the area of nutrition
6. Increase women's access to technical, capital, financial and informational support for home based kitchen gardening, animal husbandry, poultry, fishery and horticulture. Target access to new resources and female-controlled assets to women (e.g. time-saving technologies; micro-credit programmes for livelihood diversification and income generation; social safety nets; cash transfers; subsidies to promote good quality child-care crèches for working mothers)
7. Ensure that future Demographic Health Surveys include more sampling of 10-14 year old children as an age group. This will give vital information on adolescent girls/boys, their pre-marital nutritional status as well as child marriage, and the relationship between them.
10. Continue to expand programmes that prevent girls dropping out of secondary school, prevent child marriage/early childbearing, and promote their control over family planning.
11. Support women-headed households to increase engagement in nutrition-related services.
12. Prioritise women for post-disaster support.

6. Emphasise dietary diversity as a nutrition-sensitive priority and food-related intervention:

1. Step up nutrition sensitive interventions that promote dietary diversity (through improved availability, access and demand) across all relevant line ministries, including Food, Agriculture, Livestock and Fisheries, Forestry, including building on existing work promoted by FPMU.

2. Conduct research on the context-specific food determinants of undernutrition, and learn more about food-based nutrition and the nutritional behaviour of different population groups, with a focus on breastfeeding complementary feeding of young children.
3. Conduct research on saline and drought resistant crop varieties and innovative processes of aquaculture/fisheries, poultry and horticulture
4. Ensure food safety (Agriculture, Food, Fisheries and Livestock, Commerce and Industry).
5. Micronutrient deficiencies must be addressed in the medium to long term by diversified food intake. Current supplementation programmes should be phased out gradually on the basis of scientific evidence of extensive reduction/eradication of micronutrient deficiencies and through a national consultation process.
6. Universal iodisation of salt will continue
7. Relevant activities specified in the (draft) Nutrition Advocacy and Communications Strategy for Bangladesh (MoHFW) should be resourced and implemented.

7. Increase support and capacity for interventions that address nutrition-related NCDs:

1. Without diverting attention from the significant task to reduce undernutrition or overwhelming existing service delivery platforms, develop a national action plan across line ministries to promote healthy diets, leveraging the respective roles of the food, agriculture, fisheries and livestock, education and health systems.
2. Promote citizen's knowledge of preventing NCDs through a healthy diet (using food-based dietary guidelines) and lifestyle with physical activity.

8. Strengthen nutrition-sensitive WASH, social protection and education interventions:

WASH:

1. Build the nutrition knowledge of staff within nutrition relevant sectors (e.g. education, local government, water development, information, science and technology). Include more training on sanitation/hand hygiene and horticulture in school and technical college curricula.
2. Hand washing and nail cutting components of WASH should be promoted throughout NNS.
3. Hand washing and nail cutting components of WASH should be promoted by community-level staff of other sectors such as Agriculture, Fisheries and Livestock, Local Government and Rural Development, Women and Children Affairs, Education and Food
4. Relevant activities specified in the (draft) National Advocacy and Communications Strategy for Nutrition should be implemented.

Social protection:

1. Women headed-households should be registered with safety net programmes and their members monitored for both food intake and anthropometry.
2. Selection criteria target group for social protection programmes such as VGD should continue to move towards the 1,000 days “window of opportunity” approach, rather than a tight targeting on the poor generally. VGD can also be strengthened to adopt a stronger nutrition and food security model. Target malnourished women and adolescent girls before pregnancy rather than identifying malnourished women who are already pregnant. The compulsory 10% minimum of targeting to beneficiaries to pregnant women, or women with children under 2, can be increased.
3. Allocate greater resource funding for social protection, thereby indirectly improving the allocation for nutrition-sensitive interventions
4. Build the nutrition and WASH knowledge of staff within social safety net programmes (Ministries of Women and Children Affairs, Ministry of Environment and Forest, Local Government and Rural Development) and the capacity of implementing NGOs
5. Include relevant nutrition indicators in social protection programmes
6. Depending on contextual analysis, consider the replacement of food-based transfer payments with more cash-based payments, accompanied by context-specific Behaviour Change Interventions related to nutrition-promoting care behaviours (IYCF, hand washing, dietary diversity, food based dietary guidelines). Tailor the choice or combination of transfer to the context, and consider fortified rice or a complementary feeding supplement.

7. Relevant activities in the Nutrition Advocacy and Communications Strategy for Bangladesh (draft) should be implemented in social protection programmes
8. Design and implement pilot studies to test new programme design and delivery mechanisms for social protection
9. Increase financial support and access to micro-credit to build resilience, e.g., capital and technological support, e.g., seed/ sapling, fish fry, fishing net, boat, cash for other livelihood and medical necessities, training, information, demonstration etc. to minimise risk in the area of undernutrition, particularly those activities that address the expected consequences of climate change.

Education:

1. Both formal and non-formal system should prioritise nutrition-related education.
2. Teachers should be trained in basic nutrition, particularly the underlying determinants and the best practice preventative interventions needed at individual and household levels.

9. Improve nutrition in urban areas:

1. Continued high levels of undernutrition in urban slums, alongside rising nutrition-related NCDs in the upper wealth quintiles in urban areas, demand a specific and strategic response across government, bringing together the mandates and expertise of multiple ministries, (Local Government, Education, Food, Commerce, Industry), civil society and private sector.
2. Urban slums should be targeted for more nutrition communication including sanitation and hygiene, growth monitoring, IYCF, dietary diversity, food based dietary guidelines, referral and treatment.

10. Strengthen institutions and civil society to address conflict of interest in nutrition programmes:

1. Good nutrition will depend on the combined efforts of both public and private actors. However, policies and programmes related to, or impacting on nutrition, should not be driven or influenced by commercial interests.
2. All country laws related to nutrition (e.g. breast milk substitutes, baby food, commercially manufactured supplementary baby food and its equipment, regulation of marketing Act, 2013; and other laws) will be strictly implemented
3. Form a sub-committee under the proposed BNNC coordination mechanism to manage and monitor conflict of interest and harmful commercial influence in nutrition.
4. Support and strengthen civil society to mobilise against conflict of interest in nutrition.

11. Effective monitoring, evaluation and accountability

1. Develop a common set of metrics to focus action and track progress across line ministries under an overall goal to reduce stunting, including clear nutrition-related indicators for food sector programming.
2. Develop a comprehensive CRF, underpinned by an independent monitoring system to measure and analyse progress on an annual basis.
3. Key indicators should be used to assess programme management, financing, resource management, and performance (output/outcome), with relevance to strategies and plans of action of different ministries.
4. Participatory monitoring for accountability should be initiated in the area of nutrition to enhance the demand side of services and amplify citizen voice. Examples include: tracking (over time) community perceptions in changes in delivery and quality of nutrition-specific and nutrition-sensitive interventions; making public (through social media, display charts in government facilities publically record the inclusion/tracking criteria and coverage and effectiveness of social safety net programmes and community clinic and UHC services using the Access to Information Act; Score Cards; Social Audits; visits of Parliamentary Standing Committees.

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