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THE FOURTH FIVE YEAR PLAN 1990-95

PLANNING COMMISSION
MINISTRY OF PLANNING
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
DHAKA

JUNE 1995

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FOREWORD

The first draft of the Fourth Five Year Plan was brought out in June 1990. The revised draft of the Plan was published in October, 1990. After the transition to a democratic Government, the implementation strategies of the plan, with particular reference to human resources development, was deliberated upon at length in the Planning Commission and an integrated implementation matrix for the Plan was prepared. Accordingly, a second revised draft of the Plan was released on March 14, 1991; the total outlay of the Plan in this draft was Taka 68,900 crores. It may be mentioned here that the Plan document was not formally approved by the Government before its scheduled launching in July 1990.

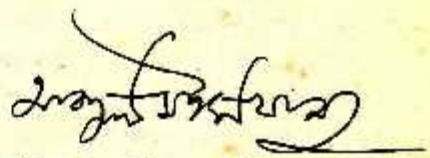
Subsequently, the Planning Commission once again undertook the arduous task of reviewing the draft Fourth Five Year Plan in early 1993 to give it an appropriate form in the context of the policy guidelines of the present Government. A major criticism of the draft Fourth Plan was the over-ambitious outlay in the backdrop of widespread fiscal indiscipline of the past years arising from large increases in the unproductive revenue expenditure and the accompanying shortfall in internal resource mobilization virtually resulting in negative revenue surplus. However, as a consequence of the restoration of fiscal discipline to a great extent by the present democratic government, the projection of domestic resources envisaged in the Fourth Plan outlay gradually began to appear more realistic. The other criticism labelled against the draft Plan related to implementation bottlenecks and it was argued that consequential delays might not justify a substantial increase in the public sector outlay. Here also several realistic steps undertaken by the present Government have led to improved project implementation, thus contributing to significant progress during the last couple of years and at the end helping the Fourth Plan outlay to be restored to its original size or even better in case of some of the sectors.

During the review process, the Plan was recast to reflect, as far as practicable, the New Development Perspective (NDP) of the present Government which attaches utmost priority to poverty alleviation and meeting the basic needs of the people, with a strong focus on human resources development, women's development and environmental sustainability. Keeping in view the past performance, the Plan size was determined at Taka 62,000 crores and the amended Plan was approved by the National Economic Council on March 7, 1993. While approving the Plan, it was, however, mentioned that the target of average annual growth rate of 5 percent could be achieved only if priorities were accorded to those sectors which were efficient in resource utilization. Further, it was recognized that in order to have an optimum use of resources in the public sector, allocation of funds to low-yielding projects would have to be slashed down and that allocation for development of physical and socio-economic infrastructure as well as labour intensive, community based, employment generating and gender specific activities, particularly in the rural areas, would have to be enhanced. The final version of the Fourth Five Year Plan, therefore had to undergo structural changes in macro as well as micro chapters in order to accommodate the changes mentioned above.

This exercise was naturally time consuming as well as painstaking and in a way more difficult than formulating a new Plan altogether. Meanwhile, the Three Year Rolling Investment Programme, a dynamic operational instrument for rationalizing public sector investment priorities, along with the draft Plan, also provided the continuity and needed flexibility in investment and developmental decisions. I am finally glad to mention that the Fourth Plan document, after several revisions, has been published in conjunction with the completion of the current Plan period and at a time when the exercise for the next Participatory Perspective Plan, which is an altogether new planning approach in Bangladesh continues simultaneously at the sectoral and local levels.

In finalizing this document, I would only say that the interest of the people of this country has been considered supreme and during the period of continual revision of the Fourth Plan by the present democratic Government, efforts had always been made to ensure that the benefit out of this Plan is delivered to the people at large who, in fact, must be the ultimate beneficiaries of all our development efforts.

In conclusion, it is a pleasure for me to convey my sincerest thanks to Mr. A. M. Zahiruddin Khan, former Minister for Planning as well as to all my colleagues in the Planning Commission and in other Ministries & Executive Agencies whose continued support contributed to the finalization of the Fourth Five Year Plan document.



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Minister of State for Planning

Jaistha 18, 1402 Bangla
June 1, 1995 A.D.



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CHAPTER-I

MACRO ECONOMIC FRAMEWORK FOR THE FOURTH FIVE YEAR PLAN

Socio-economic development is an on-going phenomenon in national life and development planning is the mechanism to strengthen and advance this continuous process. Development planning in a country like Bangladesh, apart from a stereo-typed vertical and horizontal growth in investments and production, has also the added responsibility of effecting socio-economic, administrative and technological transformation. This requires a clear vision of the type of future we want to build up over a foreseeable time horizon. As a conceptual and policy framework, a national perspective is therefore an indispensable operational tool in the endeavours to shape the destiny of the nation presently characterised by backwardness, stagnation and even regressive trends on certain fronts.

1.2 A consumption package at the mass level to ensure per capita calorie intake considered minimum for survival by eliminating acute poverty traps, behaviourial patterns in the families to stabilise population, high standards of education, science and technology for an efficient skill base and dynamic R&D to exploit and upgrade the potentials of the national economic geography and continuous promotion of the productivities of labour and capital under sustained full employment, an ecological attitude to protect Mother Earth everywhere and finally, ethical values to live within known and legitimate means are the goals to be pursued by the investment and production programmes and policies. It is in this context that the New Development Programme (NDP) was initiated in 1991-92 for preparing to usher into the upcoming 21st century.

1.3 The main features of NDP towards achieving the goals would be:

(i) Human resources development beginning with removal of illiteracy, provision of basic health facilities and effective population control measures through adequate allocations to socio-economic sectors.

(ii) Increased employment opportunities, particularly for the lower 50 percent of the population residing in the rural areas through appropriate organizational and institutional mechanisms for participatory planning including women's participation with sound financial discipline and efficient inputs delivery support.

(iii) Strengthening the rural economy with priority to the development of agriculture.

(iv) Promotion of competitive efficiency through appropriate transfer and adaptation of technology targeted towards supporting employment creation in agricultural and manufacturing sectors.

(v) Promotion of private enterprises based on competitive efficiency with thrust on export-oriented industries.

(vi) Maximizing inter-sectoral linkages.

(vii) Integration of sector-level as well as micro-level planning with macro planning alongwith built-in accountability at all stages of socio-economic development process and

(viii) Strengthening of national conservation policies to prevent the degradation of environment and enhance the potentials for sustainable development.

Major Constraints to Development Process

1.4 The following are the major constraints to the overall development process of the country:

(1) Inspite of substantial development of the economy, the labour productivity in Bangladesh continues to be low. As long the labour productivity remains low, income, savings and investment and hence labour productivity cannot rise substantially. However, small farmers and small enterprises have been found to be relatively more efficient in the utilization of both capital and labour. There is a scope for effecting sustained improvement of labour productivity through appropriate institutional support.

(2) Bangladesh has surplus labour but shortage of capital. It is possible to convert labour into capital through appropriate investments in human resources development. Per capita investment in human resources development is still very low in Bangladesh. In contrast, development targets clearly show a preference for investment relatively higher in components other than human resources development. The investment programme has to be correctly prioritized with focus on human resources development.

(3) A number of countries around Bangladesh have been vigorously pursuing "efficiency culture" in order to improve their economies through reduced cost and increased competitive strength. Such "efficiency culture" is still lacking in Bangladesh. Sizeable inefficiency still exists in the economy inspite of various corrective measures taken so far. If effort to upgrade efficiency, basked by technological innovation/adaption, is not mounted immediately it may prove too costly for the nation.

(4) It is observed that healthy labour management relationship so important for sustained labour productivity enhancement, is not sufficiently cordial and mutually cooperating in Bangladesh. A break- through is required on this front.

(5) Phenomenal rural-urban migration continues as a demographic problem. Not much could be done to take the industrialization and urbanization to the door step of the rural poor to retain them in the rural areas.

(6) Inspite of substantial investment in the economy financed by domestic and foreign resources, the size of the domestic market remains limited. Increase in output in domestic sectors, particularly in industry is highly constrained by lack of adequate purchasing power in the rural areas.

(7) Three strategic inputs namely iron and steel, cement and energy so critical for the modernization of any economy could not yet be developed adequately in Bangladesh and whatever development has taken place also remains highly uncoordinated resulting in serious under utilization of capacity. A poor country, can not afford to create excess capacities leaving it unutilized/under-utilized for long.

(8) (a) The vast potentials in pisciculture, (b) poultry and dairy, (c) horticulture and similar other potentials have remained untapped because of the inadequacy of central planning approach and absence of complementary locally initiated plan for these sectors.

(9) Development efforts have remained inadequate in handloom and sericulture which have immense possibilities of generating income and employment, particularly for women.

(10) Although commodity import has been increasing over the last two decades, commodity export has not expanded fast enough leading to domestic savings and investment needed to increased import dependence and a low growth of the local industries.

(11) Consequent on inadequate attention the environment of Bangladesh has suffered badly particularly through (a) deforestation (b) release of toxic industrial wastes and by-products in the air, soil and water, (c) emission of poisonous gases in the air through unregulated use of mechanical transport, etc.

(12) The geographical location of Bangladesh is such that environmental degradation in its neighbouring countries through such processes as deforestation also affects Bangladesh adversely through increased floods and siltation. Also, the 'Green House' effect caused by global warming of the atmosphere threatens to have particular adverse effect on the coastal belt of the country.

(13) The country's credit institutions are underdeveloped but whatever development is taking place is again very highly urban biased with large net transfer of rural deposits to urban areas. The rural socio-economic groups, particularly the small farmers and small enterprises are efficient but primarily they have to depend on the informal credit market where the cost of the credit is

exhorbitantly high. This calls for restructuring the banking and credit policies in favour of the poorer rural socio-economic groups.

(14) The public service delivery system including the input delivery system in Bangladesh seems to be significantly biased against the poor and the disadvantaged. This is both because (i) those who operate the system are not sufficiently motivated to go to the poor and the disadvantaged, and (ii) at the receiving end the poor and the disadvantaged do not have the organisational strength to get these services delivered to them by the administration.

(15) There are a large number of projects socio-economic infrastructural projects in the public sector which have been designed primarily to benefit the rural poor (such as health, family planning, education, etc.). As these projects have not provided for adequate involvement of the local community, their performance, particularly in terms of their impact on the beneficiary groups, have been far less than satisfactory.

(16) Most of the large projects implemented in the public sector are not adequately linked with the expansion programme of other related sectors. As a result, the economy continuously suffers from underutilization of their productive capacities. In addition, in the absence of inter-sectoral coordination, implementation of some projects have brought more harm than benefits. For example, some of roads and embankments constructed in the rural areas have created impediments in the outflow of excess water during the rainy season.

(17) By now Bangladesh has developed a reasonably adequate mechanism for (i) creation of employment opportunities for the poor including women, during the lean period, (ii) stabilization of food prices through public food distribution system, particularly in times of distress and (iii) provision of relief support to distressed groups and areas at times of emergencies arising from natural calamities such as floods, drought and cyclone. However, the above programmes are still mainly relief oriented making an increasing number of people relatively more relief dependent. There is a need as well as a scope to make them relief cum development oriented.

(18) Over the years, the economy has been shifting towards greater reliance on the market forces. However, in the absense of appropriate price, income and wage policies an efficient mechanism for diversion of resources to the efficient sectors and groups has not developed.

(19) Importance of operation and maintenance expenditures for completed projects is not adequately recognized and sufficient provisions are not made to finance such expenditures particularly through revenue earnings envisaged originally in the projects themselves.

(20) In the ultimate analysis, an important instrument to ensure efficient resources utilization is the extent of public accountability of the system. This has remained weak.

(21) The existing process of containing population growth by way of execution of such programmes primarily through central agencies has its inherent implementation of limitations manifested in the limitations. Contraceptive prevalence rate being as low as 39.0 percent. This calls for immediate and effective steps to integrate this programme with community development endeavours throughout the country.

(22) The process of privatization is likely to promote the growth of some monopolistic groups in the economy of Bangladesh. The historical process of counter-acting this situation has been through (a) some kind of anti-trust, anti-monopoly legislations (b) promotion and strengthening of grievance procedure (c) organisation of various consumer groups. These developments are weak in Bangladesh.

(23) The existing efforts for promoting competition in the private sector in Bangladesh through incentive package based on structural adjustment requirement identified in mid 1980s have not proved sufficiently effective at least partly because of the existence of wider opportunity for rent seeking activities. The incentive policy package, therefore, needs to be restructured so that rent seeking is discouraged and risk taking is encouraged.

(24) In the case of primary commodities, the small grower suffer seriously due to the existence of a large number of intermediates between them and the final consumers. This calls for an overhaul of the existing marketing structure.

(25) The existing administrative structure and functional system do not ensure formulation and implementation of individual projects with adequate inter-agency co-ordination and co-operative actions. In the case of bottom-up planning, the competence of the system is even less.

(26) Since 1972, the conventional implementation procedures for both the public and the private sector were mainly based on administrative regulation. Over the past few years, there has been a shift in emphasis from regulatory control to the use of market mechanism for management of the economy. However, administrative reform for achieving this objective has lagged behind. As a result the efforts for moving the economy toward greater competitive strength and efficiency has faltered.

(27) Bangladesh has been frequently suffering from natural calamities of one form or another. In addition, the Bangladesh economy is easily susceptible to external shocks. This calls for (a) preparation of contingency relief plans to face such emergencies and (b) adjustment plan that would identify the core investment programme to be protected in the event of the emergency situations. The later requires that the ministries/agencies have to prioritise their individual investment programme and project portfolio according to a scale of preferences. The present capacity in this regard is very limited in most ministries and agencies and needs to be enhanced.

(28) The process of economic development cannot be participatory unless the political process is participatory at the grass root. The western developed countries promoted participatory political development even in the face of opposition from traditional power structure through (a) promotion of the concept of human rights of the masses (b) promotion of a legal system that enforced the principles of human rights. (c) expansion of education to the entire populace and (d) creation of multiple job opportunities under a situation of systematic organization of labour. The current efforts for development of institutions on the above lines has to take care interalia of further strengthening the foundation for participatory economic development at the grass root.

The Framework of the Fourth Five Year Plan (1990-95)

Objectives of the Fourth Five Year Plan

1.5 The Fourth Five Year Plan with July 1990 as the commencement date has the following major objectives:

(a) Accelerating economic growth. It is envisaged that the annual growth rate of GDP would be 5 percent during the Plan period.

(b) Poverty alleviation and employment generation through human resources development.

(c) Increased self-reliance.

Major Strategies of Fourth Five Year Plan

1.6 The Plan strategies have to reflect the new vision of the democratic government that ushered in soon after the Fourth Five Year Plan was launched.

1.7 The vision for future socio-political and economic development of the country leads to the formulation of "New Development Perspective", which accords top priority to accelerated and sustainable economic development. The main thrust of NDP of the present democratic government is on the human resources development, generation of productive employment and alleviation of poverty. The major strategies of the NDP would be generation of productive employment particularly to meet the basic needs of the lower 50 percent of the population, thereby, raising savings, investments and the purchasing power of the community. The development perspective primarily focuses on creation of additional employment opportunities and alleviation of poverty of the masses. Emphasis will be given on local level participation and women's participation in the process of socio-economic development of the country. Export-led growth and promotion

of private investments will be the main focus of the development perspective and the government will scale down its operators to play a supportive role in accelerating the process of development.

1.8 The focus will be given on the inclusion of such projects in the ADP which will create opportunities for productive employment through human resources development towards achieving the objective of poverty alleviation. The main emphasis will be on the diversification of agriculture, establishment of agro-based industries and promotion of labour intensive export industries through private sector participation so that the government can concentrate mainly on erection of infrastructural and promotional facilites.

1.9 The Fourth Five Year Plan is expected to set the stage for overcoming the existing constrains to economic growth so that the growth rate of GDP in the subsequent Plans may be raised to 6-8 percent per annum. However, the strategies for achieving the objectives are complementary to each other and require to be pursued simultaneously. The mutually complementary strategies of the Fourth Five Year Plan grouped in to general and specific strategies are as follows:

General Strategies

1.10 Employment generation has been taken both as an objective as well as a strategy for the Fourth Plan. The Plan gives emphasis on generation of the productive employment as a single most important strategy for the short and medium terms. All objectives of the Plan revolve round the generation of employment. It is recognized that alleviation of poverty and the generation of employment will not necessarily be achieved through the pursuit of the objective of economic growth alone. One of the reasons is that the pattern of economic growth will determine whether it is labour-eliminating or labour absorbing. The country needs to pursue consciously a path of economic growth that attaches top priority to employment generation. The New Development Perspective gives primary emphasis on employment generation and secondary importance to growth. The main strategy for economic development and growth will be generation of productive employment. The allocation of resource will be based on labour intensity of sectors and projects. Consequently the labour absorbing sectors such as minor crops, goat and cattle rearing, poultry raising, pisciculture, horticulture, plantation, small and cottage industries etc. will receive higher priority. The Plan will emphasise on those short gestation and quick-yielding projects in the public sector that provides for direct access to employment and income to the unemployed and the underemployed.

1.11 For the medium to long-term tenure, the generation of employment is to be considered within the umbrella of human resources development. Because of scarcity funds constraints, the government has been able to spend only modest amounts of money on the social sectors and on the human development components of the project in other sectors. However, the Forth Plan attempts, to provide relatively greater amounts of resources for education, health, social welfare and manpower and labour. The government has already increased expenditure in these social sectors. The public service mix has also been changed towards increasing quality of public services. The proportion of government current expenditures on education and health has been increasing compared to those on general administration and defence. In Bangladesh those families headed by persons with atleast primary education are all above the hard core poverty line having per capita calory intake 1805 k.cal. Apart from increase in public outlay on education expenditure, health programmes are also being strengthened for universal primary health care by the year 2000.

1.12 It is recognized that the central government has a role to play in the financing of human development initiatives, but not necessarily a central one in the delivery system. Atleast a part of the resources can be raised locally and the responsibility for erecting facilities upto a size and their management can be delegated to local levels. This will also contribute to generation of employment through private initiative and community participation at the local level.

1.13 There will be optimal use of labour skills in the economy through proper linkage of functional groups with productive sectors. Employment generation will take place in the process of economic development and the targeted approach will step in only in the marginal cases. The Fourth Plan adopts employment approach in the development planning process principally to utilize the vast manpower resources to alleviate poverty within the shortest possible time. In this approach employment generation and economic development will take place simultaneously and government will provide with only promotional facilities particularly through human resource development and necessary inputs delivery system.

Export led Growth Strategy

1.14 The export led growth strategy aims at massive employment generation, poverty alleviation and bridging up the trade deficit. In view of limited domestic markets for generation of productive employment, the

export led growth strategy will lead to the expansion of competitive labour absorptive export industries in the economy. The Fourth Plan will initiate the process of creating further facilities for export oriented industries, particularly, electronics, leather, textiles, food processing etc. side by side with the expansion of existing non-traditional export products such as garments, fish processing, etc. The major aspects of export led growth strategy are as follows:

a) Under the export development strategy, arrangements will be made to remove all the regulatory constraints of export trade, initiate new policy incentives, create suitable institutional facilities, provide infrastructural support and formulate programme for the development of human resource for faster expansion of exports.

b) An export development programme will be implemented to expand and diversify the range of exportable products and provisions will be made for technical and financial assistance to individual exporting firms for undertaking product design, product engineering and development, market research, advertising and promotional campaign, overseas investment in marketing activities, sales missions, participation in international trade fairs and contacting foreign buyers.

c) Emphasis will be given on the development of financial and capital market in the economy and measures will be undertaken to attract export development and export promotion funds from abroad.

d) All regulatory and procedural bottlenecks which are incompatiable with the objective of the export strategy will be removed. Accordingly, urgent studies will be undertaken to identify such constraints and suggest practical mechanisms for their redress.

e) Provisions will be made to update policy support measures for the exporters comparable with those of other competing countries to enable Bangladeshi exporters to be on competitive footing in the international market.

f) Considerations will be undertaken to set up specially demarcated economic estates inclusive of Export Processing Zones (EPZ) with larger areas equipped with all necessary infrastructural and related facilities. Attention will be given to improve the functional efficiency of the Ministry of Commerce, Export Promotion Bureau (EPB) and related organisations so that they can be more effective for promoting exports and channeling investments to export oriented industries. Greater private sector representation at the board level of the EPB and related organisation are to be enacted.

g) The Bangladesh missions abroad are to be assigned greater responsibility and role to promote exports from Bangladesh to the accredited countries and Commercial Wings of the missions are needed to be further strengthened.

h) Greater emphasis will be given on massive development of textile, leather, marine fisheries and light manufacturing sectors in the country.

i) Efforts will be remain on-going for massive reforms and industrial restructuring programmes, recasting the educational policy for human resource development, liberalising trade and foreign exchange regime, rationalising fiscal and monetary policies, introducing measures to attract foreign investment and privatizing the economy to accelerate the pace of development with emphasis on productive employment and poverty alleviation.

Integration of Sector-based Planning with Group-based Planning

1.15 The group based approach is emphasized in the Fourth Plan because in the sector based approach the relatively poor and the disadvantaged who are scattered throughout the country, cannot be taken proper care of in the planning process. Therefore, if sector-based plans are integrated with group-based plans, there will be greater possibilities of poverty alleviation along with rapid economic growth.

1.16 In Bangladesh compilation of data relating to the functional labour groups such as agricultural labour, professional and administrative labour, service labour, skilled labour, semi-skilled labour and unskilled labour is comparatively easy than that of data relating to the socio-economic groups formed through farming categories in the formal and informal sectors. Among these groups, the landless and small farmers, rural and urban informal groups are relatively poor and disadvantaged. They account for about 50 percent of the total

population. They also comprise poor agriculture labour, unskilled labour and semi-skilled labour. All these groups are to be directly integrated with the sectoral programmes besides formulation of special projects for them for rapid alleviation of poverty.

1.17 The integration of this objective with the goal of self reliance would imply that necessary conditions need to be created so that the poor and the disadvantaged themselves are able to prepare projects for their own upliftment through proper organization. In addition, if credit and related input delivery system for them can be expanded through appropriate institutional framework, the overall savings, investments and the growth of the economy would be enhanced. In order to achieve this, each sectoral plan should contain programmes and policies to help and support the disadvantaged groups.

1.18 Within the above framework, the villagers would be able to identify their own problems and priorities and prepare their desired projects. In order to facilitate such bottom up planning, it would be necessary to establish agriculture oriented educational curricula, health service facilities, institutional banking facilities at the village level especially for the landless and the small farmers.

1.19 While evaluating the impact of an investment project of these various groups, it may be necessary to mainly focus on the lower 50 percent of the population to avoid complication in some cases. While organizing the rural population at the village level for local level planning, emphasis would have to be given more on functional groups (like small farmers, fishermen, women etc) in the context of the particular village so that their organizing and planning capabilities can be enhanced.

Achieving Inter-Sectoral Balance in Sectoral Planning

1.20 The principal issues regarding sectoral share of total allocated funds emphasized in the Fourth Plan are:

(a) achievement of maximum growth from the allocated funds through maximization of sectoral efficiency, and

(b) provision of adequate support to the growth of related sectors through increased consciousness about their inter dependence.

1.21 Such a consciousness about inter-sectoral linkages and dependence is a major pre-condition for the success of the Fourth Plan. In the Fourth Plan, resource allocations have been attempted on the basis of inter-sectoral efficiency in the use of resources assuming greater support and commitment on the part of the relevant sectors to this goal.

1.22 One of the most important pre-conditions of industrial growth in the country is expansion of internal market. Rapid agricultural development fosters the expansion of this internal market for domestic industrial goods particularly in rural areas as more than eighty percent of the people in Bangladesh live in rural areas. The demand for domestic industrial goods would not increase unless the incomes of the rural people increase. Therefore, it is necessary to have integrated agricultural-cum-industrial development strategies. In order to facilitate such development, expansion of infrastructures such as transport and communication, irrigation and drainage, power, etc. should be such that appropriate balance between their demand and supply may be attained. Alongwith the balanced development of physical infrastructures, there must also be balanced development in social infrastructures, such as education, health, technology, etc. Labour management system should also be changed, where necessary, for increasing the efficiency, creativity and productivity of labour. The public sector allocations in the Fourth Plan for social infrastructures have been earmarked keeping the above goals in mind.

1.23 If the perceived growth in agriculture and industry can be realized, supported by required developments in physical and social infrastructures and popular participation, the overall growth rate of the economy is likely to be about 5 percent per annum during the Fourth Plan period and even greater during the subsequent Plans.

Creation of an Efficiency Culture in the Economy

1.24 In relatively developed countries, the contribution of the 'residual factor' along with increase in capital and labour efficiency have been quite significant in increasing production. The primary inputs of the residual factor are: the use of appropriate and modern technology, development of human resources, administrative and management efficiency, inter-sectoral linkages, internal and external economies in production, expansion

of the external market, etc. In some developed countries more than 40 percent of increases in productive efficiency has come from increased efficiency in labour and capital, whereas the remaining contribution has come from the residual factor during their formative phase of development. During the Fourth Plan period, attempts would be made to increase overall efficiency by at least 25 percent through increases in efficiency of capital and labour and residual factors. In order to achieve this, an efficiency culture would be created in the economy.

Integration of Structural Adjustment with Real Sector Growth

1.25 The objectives of the Fourth Plan, as emphasised earlier, would be to increase the growth in national income and to help poverty alleviation by adopting group based planning alongwith bringing in a desirable financial structural adjustment. This is necessary because there may be occasions when structural adjustment process necessitates adoption of measures which might tend to push the poor from the center to the periphery of the development process. In such situations, specific efforts have to be made not only to protect the poor and the disadvantaged but also to ensure that they continue to play their dynamic role in the economy. If this can be done, then the effort of structural adjustment will have a better chance to get integrated with growth of real sectors.

Bringing Women into the Mainstream of Development Planning

1.26 Experience has indicated that in group-based planning women play creative role in such areas as generation of employment, income, savings, investment, as well as in family planning, literacy, tree plantation, health and sanitation at the local level. Therefore, in the Fourth Plan, special programmes would be undertaken for women on a priority basis in order to integrate them in the overall planning process.

1.27 However, it has been observed that the problems of the better off women are substantially different from those of the relatively poorer women and there have to be different approaches to solve their problems. Since the better off women would be more organized to handle their problems, the focus of the Fourth Plan would be more on the development of the poor and the disadvantaged women. For this purpose, special attention will have to be paid for integrating these women in income generating activities through greater inflow of institutional credit at their door steps and greater opportunities for them to organize themselves for participation in the bottom-up planning process.

1.28 Experience has further shown that the poor and the disadvantaged women can play pioneering role in development by getting themselves organized into functional groups whenever such opportunity arises as has been the case with Grameen Bank, Swanirvar Credit, some experiments by NGOs and in some BRDB experiments. It is, therefore, re-iterated that under the drive of decentralized participatory plan envisaged in the Fourth Plan, the rural women particularly the poor and the disadvantaged would get far greater opportunities to organize themselves in their respective functional groups. However, experience also shows that in such efforts, they require the help of their male counterparts particularly at the initial stage.

Reduction in the Rate of Growth of Population

1.29 As stated earlier one of the major constraints to development is the high growth rate of population. The land man ratio is already very low. It would become lower even if the rate of growth of population can not be reduced. The existing rate of growth of industry and urbanization cannot cope with the rate of increase of civilian labour force and rural- urban labour migration. The current drive of the country towards self sufficiency in foodgrain production is threatened by increased population growth. Therefore, high rate of growth of population has to be treated as one the most important areas of concern and the efforts to reduce this rate of growth over the Plan period has to be strengthened and intensified on a top priority basis.

Restructuring of Fiscal, Monetary and Commercial Policies

1.30 The existing tax policies have a number of weaknesses. The major share of national revenue is still dependent on indirect taxes, specially on import duties. In group based planning, the increased demand (that would be generated if more capital is invested in rural areas) would call for additional excise duties and income taxes along with expansion of domestic industries. In addition, if more bank loans can be invested in production oriented agriculture and other projects through banking and other integrative mechanisms, the economy will become more dynamic. For export promotion, the integration of private sector with the banking system and government initiatives would be promoted.

1.31 It may be further noted that the existing Annual Development Programme heavily depends on budgetary surplus requiring increased taxes for meeting increased expenditures. An appropriate fiscal policy, on the other hand, should aim at encouraging production in efficient sectors leading increased savings and

investment. Where distributive justice is included in the programme, the resource transfer should be from the rich to the poor. The efficiency of the current fiscal policy needs to be re-examined from these angles. Similarly the objective of the monetary policy should be to encourage savings and investment in the private sector and to channelize surplus savings, if any, to those sectors and groups that are more efficient in their use. In the case of commercial policy, the emphasis should be on increasing the strength of the economy through open trade multiplier and minimizing the leakages of resources from the country. However, the restructuring of the economic policies on the above line presupposes the restructuring of the development process itself.

Restructuring the Administrative System

1.32 In the context of Plan implementation, the existing administrative structure appears to be primarily sector-oriented. Under the existing situation, products are prepared for sectors. Therefore, it is difficult to properly assess as to what extent and in what ways these projects would benefit the poor and the disadvantaged groups. Such weaknesses need to be identified clearly and efforts are needed to overcome them during the Fourth Plan. In order to achieve this, the present administrative system would have to be restructured significantly.

1.33 The administrative structure, as it exists today, is also not in a position to develop human resources through decentralized participatory planning. For this, the government officials have to equip themselves to be able to act as catalytic agents through action training at the grass roots.

1.34 The existing administrative structure is regulation oriented. With the expansion of private sector activities, emphasis is shifting from regulation to policy management. The administrators, therefore, would have to be trained to operate in the market economy and maximize its advantages.

1.35 Further, administrative reform should aim at increasing the competitive strength of the economy through continuous technological innovations and adaptations. If the public administration of Bangladesh is not reoriented to handle these imperatives, the very survival of the country would be at stake in the context of the competition that Bangladesh is facing from its neighbouring countries in both the export and domestic markets. It should also be noted that Bangladesh inherited an administrative system mainly based on West-ministerial system of parliamentary government. In the meantime, administrative system even in Britain has undergone profound change to meet the new requirement of increased autonomy, accountability, efficiency and effectiveness particularly in the context of increased privatization. It would be necessary to take these realities into consideration and introduce further administrative reforms in Bangladesh on the basis of more systematic study.

1.36 Finally, public administration should be based on the philosophy of Extended Self-interest (in place of narrow self interest) a prescription explained in later parts of this chapter.

Specific Strategies

1.37 The specific strategies of the Fourth Five Year Plan have been discussed under the following areas :

(1) Public Sector Investment Programme.

(2) Private Sector Investment Programme.

(3) Community Participation through Non Government Organisations.

(4) Local level Planning and Resources Mobilization.

Component 1: Strategies for the Public Investment Programme

1.38 In view of the time that would be required to achieve suggested adjustments in development efforts for promoting participatory decentralized planning under the Fourth Five Year Plan, the Annual Development Programme (ADP) would remain as the main instrument of growth during the Plan period. However, in order to make the ADPs more effective, greater emphasis has to be laid on efficiency, economy, and impact of the projects included in the ADP rather than on the size of its financial outlays.

1.39 While a number of measures were adopted in recent years to improve the efficiency of resources invested through the ADPs, some of the shortcomings still persist. The main areas of such improvements are :

(1) The investment projects included in the ADPs are mostly prepared in relative isolation by the concerned ministries/agencies. As a result, sectoral projects frequently suffer from lack of coordination with projects of other related sectors leading to excess demand or excess supply situations in sectoral outputs without any coordinating programme to maintain balance among them.

(2) Many investment projects, included in the ADPs, are often biased towards high civil construction, excessive manpower and other overhead costs. Such project components disproportionately increase the total cost of the project and eventually make the projects unviable.

(3) Some of the projects are heavily dependent on tied assistance in some form or other. Sometimes, this raises the costs of the projects and when the costs of management inefficiency in project implementation, if any, of such projects are added, the initial cost overrun becomes significantly higher. As a consequence, these projects are needed to be continuously salvaged through price increases and/or continuous subsidies.

(4) The implementing environment, culture and conditionalities of most of the investment projects are such that the transfer of technology is seldom achieved. As a result, inefficiency becomes an integral part of such enterprises.

(5) Limited availability of domestic resources often results in thinning out of resources over a large number of projects. This, in its turn, increases total project costs due to time overrun and other factors making it increasingly difficult for projects to become viable in future.

(6) The sectoral allocations in the ADP may also contain a bias against the social sectors (education, health, social welfare etc.) due to relatively greater availability of project aid for such modern sectors as industry, energy etc. In addition, as the social sector projects in the ADP are usually characterized by higher overhead costs compared to similar projects in the private sector, the desired impact of such projects particularly on the poor, may turn out to be marginal.

(7) Finally the present mechanism for formulation and implementation of public sector projects through the ADPs frequently lack transparency in terms of their input-output relationship and cash inflow. They are particularly deficient in the matter of monitoring the impact of such projects on the poor and the disadvantaged and in integrating such groups into the planning process itself.

1.40 The Fourth Five Year Plan would, therefore, aim at initiating changes in the framework of formulation and implementation of public sector projects through the ADPs which would be further consolidated in the subsequent Plans during the Perspective Plan period with emphasis on :

(a) Formulation of comprehensive public sector investment programme within the framework of the ADP with integration of projects of one sector with the projects of other related sectors so that they may support each other. As far as possible, achievements of inter-sectoral balances would be made the most important criterion for inclusion of a project in the ADP. The Ministries/Agencies should be able to prepare individual projects as part of a comprehensive inter-related sectoral as well as macro economic programmes.

(b) In order to ensure that the projects/programmes included in the ADP would benefit largely the poor and the disadvantaged groups (including the women), the sectoral approach to the ADP would be appropriately linked with a group-based approach. As a first step in this direction, the Project Proforma (PP) of the investment projects submitted for ADP funding would be revised to indicate the extent of benefit of the stipulated investment accruing to the lower 50 percent of the population and to women.

1.41 The on-going projects, along with the new ones submitted by different Ministries, have to be continuously pruned as part of the prioritization exercise. This pruning exercise would be the first attempt to take into consideration the above criteria of project selection so that the implementation of the the ADPs in future can ensure

(i) realization of the goals of the Fourth Plan with focus on poverty alleviation, employment generation, self-reliance and accelerated growth; and

(ii) greater efficiency in resource use in the public sector in order to achieve the desired macro-economic efficiency.

1.42 The increased linkage effects of ADP projects generated through the proposed measures are expected to be reinforced with higher investment in science and technology, manpower training and human resources development. The re-structured ADP would then be integrated with the decentralized participatory planning at the local level and increased private investment throughout the country during the Fourth Five Year Plan period. It would be seen later, when discussion on decentralized participatory plan would be undertaken, that when a village organises itself for development, and links up various sectoral programmes under ADP with its activities, the development capability and effectiveness of both the bottom up and the top down programmes increase simultaneously.

1.43 Discussion on resource mobilization for financing public sector investment programme may be seen in Chapter IV.

Component 2: Strategies for the Private Sector Investment Programme

1.44 The Fourth Five Year Plan envisages the development of a dynamic private sector making maximum contribution to :

a) Generation of savings,
b) Creation of additional capacities.

1.45 While the estimates of savings by private households are uncertain, recent evidences show that the household savings rates are significantly higher than the national average. Contrary to a popular myth that rural population particularly, the rural poor, do not save, evidence points out that the rural poor are extraordinarily conscious in this regard. To meet emergencies they must have a liquid reserve or they must have a high ability to divert their inadequate consumption expenditure to replacement production purpose. This is evident from the successful rehabilitation of the economy after the repeated natural calamities in the country and by the growth of private investment in agriculture and small and cottage industries, against heavy odds.

1.46 During the Fourth Five Year Plan period, steps would be taken to increase the generation of savings by increasing the income-earning opportunities of the poor who potentially seem to be highly productive socio-economic groups. For this, credit would be targeted to such disadvantaged groups through an institutional framework where group cohesion and higher moral values would be developed as collateral for borrowing money from financial institutions.

1.47 During the Fourth Plan period, attempts would also be made to mobilize small savings in the rural areas by tailoring financial instruments in accordance with the preference of such savers. Particular attempts would be made to mobilize savings from remittances received from abroad. Steps would be taken so that resources mobilized in the rural areas are not transferred to the urban areas (as is the existing case) but are mainly invested in the rural areas.

1.48 The larger entrepreneurs based in the urban areas had far better access to the policy incentives such as subsidized credit, favourable terms of trade, tariff and non-tariff incentives etc. As the relative returns are such that trading is more profitable than manufacturing and as Bangladesh has a porous border, some of these entrepreneurs had not contributed either much to the net creation of additional capacities or to the fuller utilization of existing capacities. As a result, number of sick industries have multiplied and the upsurge of private investment appears to be much less than was expected, given the policy incentives provided by the government. In fact private investment in real terms have failed to show much upward trend in recent years.

1.49 In view of this, the policy framework for the development of the private sector will be restructured during the Fourth Five Year Plan period particularly with a view to encouraging the genuine business enterprises. The Industrial Policy had created an environment of free enterprises and started a shift towards liberalization, privatization, relaxation of restrictions, lifting of ceilings on investment, concessions for foreign collaboration, and simplification of sanctioning procedures etc. The Industrial Policy provided generous fiscal, credit, and other incentives to investment, exports, capacity utilization, indigenous raw material use and decentralization.

1.50 Even though it is too early to make an analysis of the effectiveness of such policies, the above discussion and further analysis point to following future policy direction for the private sector:

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(1) Removal of bias against industrial investment relative to rent seeking activities. The Government would have to play a more positive role for discouraging rent seeking activities and encouraging genuine investments in industry.

(2) Reduction of existing discrimination against export oriented industries in terms of tariff support.

(3) Targeting of credit to poorer households in order to support their investments both in agriculture and small non-farm enterprises.

(4) Improving the access of the poor but enterprising section of the population to the policy benefits by restructuring various aspects of policies such as licensing system, exchange rate policies, tariff policies, investment and credit policies, etc.

(5) Reorganisation of existing institutions such as BSCIC, BKB, BRDB, etc. and setting up of new institutions such as small farmers bank/new credit lines etc. for supporting the growth of small private entrepreneurship and investment in different sectors.

(6) Creation of an overall efficiency culture so that any effort towards promotion of private investment by rewarding the inefficient sectors and penalizing the efficient sectors is discouraged and technological innovation/adaptation is widely encouraged.

(7) Private investments in the various sectors are so integrated that there are maximum forward and backward linkage effects and the domestic market expands constantly to encourage further investment in both productive sectors and infrastructure development.

(8) Utilization of the opportunity of joint-venture particularly export industries now available to Bangladesh for its large supply of relatively cheap labour force, and

(9) Reorganization of Bangladesh's production structure in future particularly to take advantage of the expected shift in the world structure of production and demand in the face of acute competition among the developed countries.

Component 3 : Strategies for Community Participation through NGOs

1.51 The number of Non-Governmental Organizations (NGOs) have increased significantly in Bangladesh over the last two decades. However, Bangladesh has a tradition of substantial socio-economic development through NGO activities. In the past the NGOs were divided mainly into two groups :

(1) NGOs who financed their activities exclusively from private contributions and motivated exclusively by a high sense of compassion for the poor and the disadvantaged such as Anjuman-e-Mufidul Islam.

(2) NGOs that undertook community development work by mobilizing resources mainly from their respective communities. This type of NGO activities have been responsible for setting up many educational institutions and health centres in rural areas. Over the last two decades a number of Government and/or foreign financed NGOs have emerged in Bangladesh and have expanded their activities over large areas. Some of these NGOs have been claiming that : (a) they are more effective in implementing specific target-group oriented programmes for poverty alleviation and employment generation at the grass root level relative to the government programme in this area and (b) they have developed some innovative strategies in this field which they are now in a position to replicate in wider areas if they get adequate opportunities. However, these NGOs are sometimes criticised for : (a) their relatively high overhead cost as a result of which the target group receives much less benefit than are apparently indicated in the project proposals and (b) the concentration of their activities in some specific areas around better roads and communication network and, therefore, small coverage of their activities in terms of population served relative to investment.

1.52 The Fourth Five Year Plan recognises the importance and contribution of all the different types of NGOs mentioned above and seeks to utilize their services in a more cost effective and co-ordinated way. In expanding the roles and impact of the NGOs for benefiting the poor and the disadvantaged, the following special aspects of the Fourth Five Year Plan have to be kept in mind: (a) The Fourth Five Year Plan considers

the poor and the disadvantaged as relatively efficient and therefore aims at bringing them from the periphery to the centre of the development process. The NGO activities, therefore, should supplement the main thrust towards decentralized participatory planning (b) Where the NGO activities have to be specific target-group oriented, it would be advisable to fix income generating targets for the respective income groups and specify the strategies through which these poorer income groups can graduate to self-reliance over a specific period of time. It may be mentioned in this connection that some developing countries like India have even restructured their Government programmes like Integrated Rural Development Programme in this way. They have even set up regional targets for graduating the poor and the disadvantaged to self reliance over specified time period. Past experience shows that the most critical input for increasing the capability of the poor and the disadvantaged is access to supervised institutional credit. Therefore, all NGO programmes should aim at increasing the capability of the poor and the disadvantaged to save and invest over time so that an NGO can gradually withdraw its activities from the concerned area at an early date and shift its activities to another area not yet covered by such programme of graduation to self-reliance.

1.53 As far as possible, the Government should also encourage the voluntary type NGOs which depend on their own resources for delivering services to the poor and the disadvantaged. The Government should also try to enhance the capability of the community to take the responsibility of looking after its poor and the disadvantaged since without this pre-condition the activities of aid financed NGOs would not be sustained for long.

1.54 Therefore, all concerned ministries/agencies would have to restructure their programmes of utilization of NGOs for development along the above lines.

1.55 Needless to say that training would remain an important input for integrating the NGO activities for self reliant type of growth for the poor and the disadvantaged. It is advisable that the existing facilities for different established training institutions at all levels are utilized in a co-ordinated manner for this purpose, as far as possible.

Component 4 : Strategies for Community Participation through

Local Level Planning and Resource Mobilization.

1.56 Decentralized participatory planning would be the most critical input and as well as the output of the Fourth Five Year Plan. This is so because the Fourth Plan aims at accelerated economic growth, poverty alleviation, employment generation and self-reliance through human resource development. Human resources development in this context has been defined as the increase in the ability of the people, particularly the poor and the disadvantaged, to identify their own problems, prepare and implement their own plans particularly in areas which concern them most. Indeed past experiences have shown that whenever a village gets organized and its whole population participates in development activities, family planning acceptance rate goes up to above 50 percent, literacy rate increases to over 60 percent, income, savings and investment of even the poor and the disadvantaged rise rapidly through income generating activities. Simultaneously, people's consciousness about health and sanitation, tree plantation and technology adaptation improves. In the second stage of such development, therefore, the village is likely to get more involved in infrastructure development, with focus on water management for improved agriculture, and complementary non-farm activities.

1.57 Over the last three decades (1960-1990) the rural development experiments under various Ministries/Agencies have spread all over Bangladesh. However, they still remain uncoordinated among themselves as well as with the macro plan of the country and as such, their potentials cannot be fully realized.

1.58 Another problem area in promoting local level planning at the grass roots with the focus on organization of the people at the village, has been the conflict resolution among the various functional groups. Proponents of the Comilla model, for example, regard the village as a more or less cohesive unit and maintain that the whole village can be brought under one umbrella co-operative. The Comilla Academy has, therefore, been experimenting with comprehensive village development programme around Comilla. The most successful example is the Deedar Co-operative. Some others, however, feel that the problems of the very poor are different from the problems of the relatively well-to-do section of the village. The Grameen Bank, for example, tries to organize the very poor into separate co-operatives of their own and concentrates on solving the problems of these groups. Similarly, some other organizations/NGOs tried to organize the poor and the disadvantaged into separate functional groups.

1.59 The linkages of local level planning effort with local administration as well as with the macro economic plan are of crucial importance. Unfortunately, this aspect did not receive proper attention in the past. As a result, substantial innovative experiments developed at the grass root, over the last three decades, remained unutilized.

1.60 The Fourth Plan suggests that the village should be the main focus of development. As such the overall macro economic policies should be so designed as to strengthen the service delivery system at the village level for complementing people's initiative in development at the grass roots. This effort should also be politically complemented by increased devolution of decision making power in favour of local administration.

The Implementation Philosophy of the Fourth Five Year Plan

1.61 The Fourth Five Year Plan intends to bring the poor and the disadvantaged from the periphery to centre of the development process. The plan justifies this primarily on the ground that the majority of the people in Bangladesh are relatively poor and significantly disadvantaged and therefore if the development process pushes them out of the mainstream, then the validity of the whole planning process in terms of its impact on the society comes into question. However, the existing development processes in a number of developing countries appear to be such that usually they do not directly benefit the poor and the disadvantaged. In fact, the development process primarily benefits a small elite particularly in the early stage of development. To counteract the resultant social discontent it becomes necessary to devise some specific target group oriented programmes for the poor and the disadvantaged. Such process may be made workable in countries where the number of poor and the disadvantaged is still small. But in countries like Bangladesh where the poor and the disadvantaged constitute the vast majority of the people, the process cannot be accepted as the best alternative. This is particularly so when it has been established that the poor and the disadvantaged are not liabilities to the country. They are assets. Their efficiency can be increased further through appropriate institutional support.

1.62 To make the poor and disadvantaged groups more efficient and to make them play a more productive role in the economy, the Fourth Five Year Plan has suggested a number of innovative strategies such as

a) Integration of group based approach with sector based approach;

b) community involvement in the implementation of public sector programme in the rural areas;

c) promotion of decentralized participatory planning; and

d) cultivation of efficiency culture throughout the economy.

1.63 However, it would not be possible to achieve the above objective of bringing the poor and the disadvantaged to the centre of development process if market forces operate only on the basis of narrow self-interest. This would have to be complemented with the development philosophy for the Fourth Plan that is based on extended self interest.

1.64 The philosophy of extended self interest has its international connotation. There has been demand at the level of the United Nations to help the poor countries of the world with the transfer of 1% of the GNP of the developed countries. Various efforts made by GATT, UNSNPA (United Nations Substantial New Programme for Action) etc. have been struggling to give a better deal to the least developed countries. However, unless the developed countries have the philosophy of extended self interest, the current frustration with the quantum of resource flow from the developed to less developed countries would continue.

Manpower Planning for the Fourth Five Year Plan

1.65 If the Fourth Five Year Plan is to be implemented through the philosophy of "extended self-interest" the education system of Bangladesh will have to be substantially restructured and significantly expanded. The current education system has two main deficiencies : a) it is biased more towards general education than technical education including skill training, b) it tends to make people more self-centred rather than community welfare-oriented. The effort to develop a sense of compassion and sacrifice particularly for the poor and the disadvantaged is still marginal in education and training processes of Bangladesh. It also does not highlight the sacrifices that millions of people have made for the independence of this country and the need for further sacrifice particularly if the aim of the country is to achieve self-reliant growth at an early date.

Along with this value-oriented education, the younger generation also needs skill development on a large scale to become more useful to the country.

1.66 However, unlike the urban centres, the villages in Bangladesh have historically displayed a high sense of collective responsibility particularly towards the poor and the disadvantaged. The philosophy of "extended self-interest" is therefore, not a new invention. It is deeply rooted in the soil of Bangladesh. All religions of Bangladesh, namely, Buddhism, Hinduism, Islam and Christianity have also preached high sense of compassion and collective responsibility towards the poor and the disadvantaged in Bangladesh. It is necessary that this historical teaching is adequately reflected in Bangladesh education system. This is particularly necessary because the government, at present, is not in a position to cover the poorer section of the community under a comprehensive social welfare programme (compulsory health care for all for example) as has been the case in the developed countries. If education system preaches and expands the spirit of collective responsibility, the rural communities in Bangladesh would in particular play a more critical role in human resources development. This is a new concept in manpower planning. The conventional approach makes the Government exclusively responsible for manpower development. The Fourth Plan also emphasizes the expanded role that the Government must play in manpower development. Therefore, it would like to make available as much resources as possible for education and training in the public sector. But it also emphasizes the responsibility of the private sector and of the community in this respect. Hence, the education system should be of such type that would induce the people to give more to the society than they would like to take from it. If this trend can be set, the sense of collective responsibility is likely to increase throughout Bangladesh and grassroot communities would come forward to participate and mobilize further resources in the exciting experiments of human resources development.

1.67 However, the above efforts would have to be complemented with the development of high level of work ethics, competitive spirits, sense of responsibility and accountability and technology orientation. These are the elements which gives labour that competitive edge so badly needed for survival in the competitive world of trade and industry that exists today. The present education curriculum is out of gear with this requirement. The sooner the gap is closed, the better it is for the country.

1.68 In recent years, many countries have benefited by integrating education with skill training. This needs to be organized on a national scale, integrating local demand and supply of various categories of skilled labour at various levels of local and regional governments with their respective educational and training programme.

1.69 However, the above educational efforts would have to be complemented by a separate module of manpower planning during the Plan period keeping in view the requirement of the economy. It may also be mentioned that the world economic system is getting restructured particularly with the rise of Japan and NICs, as economic powers and changes that are occurring in Eastern Europe. Manpower planning has to be devised also in relation to world demand for labour, both skilled and unskilled.

The Technical Framework

1.70 In order to provide a technical framework for the Fourth Five Year Plan, a new Input-Output Table was constructed in the Planning Commission on the basis of 1981/82 data which has been updated for 1986/87 prices. Besides, it is being augmented by division of labour into skill categories in order to get additional weight into the implications of sectoral employment of different categories of labour in the economy. An aggregative macro as well as a disaggregative input output framework has been used in arriving at the sectoral allocations for the Fourth Five Year Plan. The sectoral allocation is shown in following section.

Sectoral Growth and Composition of GDP during the Fourth Five Year Plan

1.71 The estimated sectoral growth rates of GDP during the Fourth Plan is provided in Table 1.1.

Table-1.1 GDP Growth and Composition during the Fourth Five Year Plan Period (1990-1995) (At 1989/90 Prices)

(In Crore Taka)

Sector		1989/90 GDP	1989/90 Share of GDP (%)	1994/95 GDP	1994/95 Share of GDP(%)	Annual growth rate
1.	Agriculture	27474	39.39	32508	36.51	3.42
2.	Industry	5228	7.49	8051	9.04	9.02
3.	Power, Gas, Water and Sanitary Services	758	1.09	1181	1.33	9.28
4.	Construction	3615	5.18	4804	5.40	5.86
5.	Transport & Communication	6979	10.00	9076	10.19	5.39
6.	Trade & Other services	15885	22.77	20273	22.77	5.00
7.	Housing Services	6781	9.72	8101	9.10	3.62
8.	Public Services	3041	4.36	5045	5.67	10.65
	Total:	69761	100.00	89039	100.00	5.00
	As percentage of GDP					
(a)	Domestic Savings		3.8		8.6	
(b)	Investment		13.15		14.8	
(c)	Tax Receipts		8.27		9.7	

Sectoral Allocations under the Fourth Five Year Plan

1.72 The total size of the Fourth Five Year Plan has been estimated at Tk. 62,000 crore at 1989/90 prices of which Tk. 34,700 crore has been allocated in the public sector and Tk. 27,300 crore in the private sector. This sectoral allocation is shown in Table-1.2:

Table-1.2 Sectoral Allocation under the Fourth Five Year Plan (1990-95) (At 1989/90 Prices)

(In Crore Taka)

Sector	Public Sector Allocation	%	Private Sector Allocation	%	Total Allocation	%
1. Agriculture, Water Resources and Rural Development	7805	22.49	7428	27.21	15233	24.57
a) Agriculture	2326	6.70	-	-	-	-
Crop	(1109)	(3.20)	-	-	-	-
Livestock	(331)	(0.95)	-	-	-	-
Forestry	(336)	(0.97)	-	-	-	-
Fisheries	(420)	(1.21)	-	-	-	-
Food	(130)	(0.37)	-	-	-	-
b) Water Resources	3829	11.03	-	-	-	-
c) Rural Institution	1650	4.76	-	-	-	-
2. Industry	1684	4.85	4494	16.46	6178	9.96
3. Electricity, Oil, Gas, and Nr.	6934	19.98	-	-	(6934)	(11.18)
a) Electricity	(4536)	(13.07)	-	-	(4536)	-
b) Oil, Gas, Nr.	(2398)	(6.91)	-	-	(2398)	-
4. Transport and Communication	5305	15.29	3276	12.00	8581	13.84
a) Transport	(4653)	(13.41)	(3251)	(11.91)	(7904)	-
b) Communication	(652)	(1.88)	(25)	(0.09)	(677)	-
5. Physical Planning and Water Supply	1842	5.31	6402	23.45	8244	13.30
6. Education and Religious Affairs	2658	7.66	915	3.35	3573	5.76
7. Health	1060	3.05	186	0.68	1246	2.01
8. Population Control and Family Planning	1598	4.61	112	0.41	1710	2.76
9. Socio-Economic Infrastructure	504	1.43	27	0.10	531	0.86
a) Social Welfare	(115)	(0.33)	-	-	-	-
b) Women Affairs	(36)	(0.10)	-	-	-	-
c) Youth Development	(84)	(0.24)	-	-	-	-
d) Cultural Development	(80)	(0.23)	-	-	-	-
e) Development of Sports	(66)	(0.19)	-	-	-	-
f) Mass Media	(123)	(0.36)	-	-	-	-
10. STR	54	0.16	-	-	54	0.09
11. Manpower and Labour	85	0.24	-	-	85	0.14
12. Public Administration	201	0.58	-	-	201	0.32
13. Trade and other	-	-	4422	16.20	4422	7.13
Sub-total :	29730	85.07	27262	-	56992	91.92
Block Allocation:	4588	13.22	38	0.14	4626	7.46
Joint Sector:	382	1.10	-	-	382	0.62
Total:	34700	100.00	27300	100.00	62000	100.00

CHAPTER-II

IMPLEMENTATION STRATEGIES FOR THE FOURTH FIVE YEAR PLAN

The implementation strategies for the Fourth Five Year Plan are discussed under the following major heads:

I. Implementation Strategies for Public Sector Investment Programme

2.2 Ideally, the macro directions of the Fourth Five Year Plan should be reflected in the sectoral plans through their investment and production programmes as well as appropriate policy packages. For charting out the sectoral programmes, the macro plan emphasizes, in particular :

(i) interdependence of various sectoral projects and programmes;

(ii) incorporation of the group-based approach in the formulation of inter-sectoral projects and programmes;

(iii) reduction of dependence on public sector investment and promotion of private sector for enhanced sectoral growth;

(iv) transfer of divisible components of public sector investment programmes to the local government institutions;

(v) increased involvement of the community for implementation of public sector projects; and

(vi) continuous sharpening of the professional capabilities of the public servants for preparing sectoral programmes and projects on the above basis.

2.3 Presently, skill deficiencies of a serious magnitude prevails in the matter of preparation of sectoral programmes along the above lines. By and large, the ministries/agencies are not fully tuned to the preparation of the above type of interdependent sectoral programmes leading to significant gaps between the macro-economic directions and the sectoral programmes. Therefore, several steps have been suggested to overcome this gap. These are :

(i) strengthening the Planning Cells of the various ministries, in order to make them capable for carring out interdependent sectoral programmes on the basis of appropriate technical framework like augmented input-output table. Social accounting matrix and applied general equilibrium model developed in General Economics Division of Planning Commission.

(ii) upgrading the standard of personnel management and their mode of functioning in order to reduce the stereo-typed bureaucratic constraints on interdepartmental and inter-agency coordination and cooperation and widen the scope for public participation in developmental activities.

(iii) strengthening the existing institutional structure and development of new institutions to foster more effective coordination and greater peoples' participation at the local level.

2.4 All these will enable a better blending of the top-down process, and the bottom-up mechanism for a more effective multisectoral development programming

2.5 The existing process of public sector plan implementation is mainly top-down. It consists of preparation of sectoral projects by the various sectoral ministries. These projects are then integrated into an Annual Development Programme (ADP) which is implemented by sectoral ministries. During the Fourth Plan this process is proposed to be improved as follows : the sectoral ministries would be required to prepare a sectoral programme prior to the preparation of sectoral projects. Some ministries/agencies (e.g. Ministry of Agriculture) have already initiated this process of preparation of sectoral programmes which will be replicated in other sectors as well. As the next step this would be followed by the preparation of an investment programme with distinct prioritisation list of projects and a sectoral resource plan which would show how the interse priorities of the projects would be adjusted in case of a resource shortfall arising from exigencies of

circumstances. Simultaneously, there would be constant interactions at regular intervals between the public and the private sector investment functionaries and financial institutions so that investment which could be made more efficiently in the private sector would not be undertaken in the public sector.

2.6 Under the bottom-up process that is virtually non existent now, to be the village which would become the centre of focus for local plan formulation and implementation would have to be properly organized. The process would be initiated mainly through the collection of statistics by the local people at their own initiatives. It is expected that in the process of data collection they would identify their problems, form functional groups and prepare projects to be integrated later at appropriate levels to develop into Union and Thana Plans. This participatory process of Union/Thana Planning would then be coordinated and administered at the Thana level as an institutionalised practice.

2.7 In order to make the local government system more effective and accountable to the people, the present democratic government set up a Review Commission in November, 1991, which recommended the setting up of two principal tiers of development, viz., the Union and the Zila and advocated that the Union and the Zilas should be strengthened further for mobilizing local resources. It was invisaged that in each union there will be a village development committee for development and welfare activities at the community level. The union will be entrusted with the following development activities: (i) construction, repair and maintenance of rural roads; (ii) implementation of Food For Works programme at the union level; (iii) Other rural works programme and (iv) implementation of small irrigation projects to boost up agricultural production etc.

2.8 The Union Parishads have been empowered to levy taxes in accordance with the local needs to develop and maintain the local level infrastructures. The Thana level will provide technical support to the Union Parishads to identify development needs, set out priorities and integrate local level plans with the national plans and prepare schemes for local level development.

2.9 The recommendations of the Review Commission together with the suggestions of the Ministry of Local Government, Rural Development and Co-operatives thereon were submitted to the Cabinet and approved by the Government in October, 1992. The implementation of recommendations have already begun. The Union Parishads and Pourashavas have been declared as administrative units. Necessary ammendments of Pourashava Ordinance, 1977 have been effected and subsequently passed in the Parliament, based on which elections to 84 Pourashavas of the country were held in January, 1993. Necessary steps are under way to constitute Thana Development Co-ordination Committee and Village Development Committees. An Inter-Ministerial Committee to evaluate and assess requirement of manpower, logistic support and other resources for the new local government system has already been formed. Necessary laws and regulations have been drafted to help the local bodies function effectively.

2.10 The emphasis would not be on rigid mechanisation of the process once introduced, but innovative approaches to participatory planning and not on the standardization of the process so that regional variations, and adjustments can be constantly accommodated. The main emphasis would be on equipping and empowering the people to be able to think for themselves and mobilize their present human and physical resources and future potentials for formulation and implementation of development plans at the local level. This process can be constinuously strengthened by imparting appropriate operational skills to the local people for compilation of their own statistics and upgrading their acumen for problem identification, project conceptualisation and implementation. Officials of the different ministries/agencies at the Thana level by initiating, promoting and participating in the skill dissemination and updating process, would themselves get integrated with the people at the grass-root and with their local representatives thereby eliminating a presently persisting missing link.

2.11 The need for bottom-up planning is also being increasingly emphasised at international professional fora as an useful instrument of human resources development defined inter alia as increased ability of the poor and the disadvantaged to plan for themselves in areas which concern them most. It may also be mentioned in this connection that the Thana development process in Bangladesh is now at the fourth stage of experimentation which is characterized by greater demand for developing more systematic structure of local level planning through the Thana Parishads so that development resources can be generated and utilised more efficiently. Efforts are also being made to make the process more participatory through appropriate training. Simultaneously, the civil servants are being trained to enable them to 'empower' the local people to plan for themselves and to act as 'catalytic agents for change' for facilitating and advancing the process. The process would remain difficult but it makes new implementation strategy quite clear there would be a combination of the bottom-up and the top-down process for local level planning with focus on the former.

2.12 The next step would be the consolidation of the various Thana Plans into respective Regional Plans by dividing Bangladesh into appropriate regions based on characteristics of economic geography. Studies undertaken for the Flood Action Plan would help conceptualisation and articulation of the Regional Plans, (as also its synchronisation with) with appropriate water management programmes. Further the existing process of integration of sector-based plan with group based plan supported by collection of appropriate data on Social Accounting matrix from a large number of Thanas would lend further support to the Regional Plans getting institutionalised.

The technical framework of the macro-plan also provides for scope of its future integration with Thana Plans as well as Regional Plans. Necessary adjustments of the framework would be made in the framework as and when required. Increased capabilities of the people to prepare Thana Plans through the participatory process would simultaneously increase their ability to implement the 'divisible' components of the centrally executed public sector projects and would increase the scope for 'community involvement' in the implementation of those projects. This, in turn, would also contribute to the integration of the macro-plan with the local level plans.

2.13 The implementation strategy, outlined above would be rounded off by spelling out a viable time-schedule for instituting participatory local plans at the Thana and programme based project planning at the central level. This time schedule can consist the following components :

(a) information to be furnished by all concerned central ministries/agencies on their investment programmes (including the 'divisible' components in every Thana and their periodic plan, if any) for any particular Thana by September of the previous year;

(b) indications to be provided by the central government about the minimum amount of development grant that the Thana is likely to receive in the following financial year;

(c) facts and figures to be compiled and disseminated by the various NGOs operating in the particular Thana about their likely development activities for the following financial year. The respective Thana would then firm up (i) the estimate of their own income from taxation and fees (raised locally) by March and (ii) their investment plan for the next financial year based on information received from the central agencies as well as through a process of bottom-up planning described earlier.

2.14 Because of the uncertainities arising from natural calamities and other exogeneous circumstances, each Thana would also have to prepare a 'Core Investment Programme' that would indicate the relative priorities of its investment plan as well as the mechanism for adjustment in case of any shortfall of resources from its demand. Similar priority portfolios of adjustment of investments would also have to be made by the Ministries/Agencies of the central government by carring out a 'Core Investment Programme'.

2.15 Basic elements in the 'Core Investment Programme' incorporated in the macro-framework are: (a) maximization of inter-sectoral linkages that would increase output with minimum of investment (b) increased capacity utilisation, (c) investment in human resources development, (d) investment designed to benefit comparatively advantaged and proven more efficient sectors and groups where saving and investments re-investment potentials are relatively high (e.g. agriculture, small industries etc.) (e) investment related to target-group oriented poverty alleviation programme and (f) protection to the core investment programme prepared at the Thana by combining their own as also the central government investment outlays.

2.16 The above implementation strategies presume of sectoral programmes prepared in accordance with the macro-economic framework and preparation and prioritisation of sectoral project portfolios to be financed both nationally and internationally. If these integrations exist, any cut in resources at the time of contingencies of circumstances, would not disrupt much the inflow of foreign assistance because foreign assistance would automatically flow to the priority sectors. This integration, being currently weak a major thrust of the Fourth Five Year Plan would be to achieve this integration between the programmes and the projects and between the central government and local level planning.

II. Implementation Strategies for Private Sector Investment Programme

2.17 The implementation strategy for the private sector investment programme would significantly depend on carrying forward the materialisation of the structural reform programmes, the detailed schedules

have already been outlined by the government. However, some gaps needed to be bridged up in this respect are as follows:

(a) Various elements of the recommended reforms package (e.g. tariff rationalization, flexible interest rates etc.) have been treated in relative isolation from each other and consequently, their mutual consistencies have not been ensured; (for example the various structural rigidities like the disproportionate rent seeking opportunities or the existence of monopoly/oligopoly conditions have not been properly taken into account in making the stipulations.

(b) The existence of the large non-monetized sector in the country does not seem to have been kept in full view.

(c) The mechanism of synchronising the suggested structural adjustment with the planned sectoral growth has not been spelt out.

(d) For monitoring and evaluation of performance of these reform programmes, objective parameters were not set out as indicators of success or otherwise.

2.18 The process can be facilitated and supported through an 'Action Plan'. Initially experiment can start in some selected Thanas where under a time frame the local government employees can be trained (i) in the art of stimulating private investment and the delivery of inputs according to the needs of the private sector; (ii) taking the delivery system including institutional finance nearer to the people and (iii) developing a network of processing and marketing centres in support of the private investment.

2.19 The Action Plan can also integrate the various small and cottage industries in the private sector with larger industries (where possible) through such processes as sub-contracting and also link these industries to the export market wherever possible. Under the Action Plan, different areas can have different kinds of specialization in production according to the local resource endowments.

2.20 Such an Action Plan would provide better opportunities for the desired linkage of structural adjustment programme with the investment and production realities in rural Bangladesh.

2.21 In the case of large industries in the private sector, the main problem would be minimisation of inefficiencies that still persists. With this end in view the existing incentive package needs to be re-examined item by item. The focus should be on promotion of competition through technology upgradation so that Bangladeshi products can compete both in domestic and external markets. This calls for a total blending of fiscal, monetary and commercial policies. The objective of monetary policy would be mobilization and diversion of savings to the more efficient investment ventures. Naturally the rate of interest should be allowed to get adjusted according to the investment demands of the capital market. A rapid increase in financial intermediation needs to be patronized. In addition, appropriate administrative intervention would be needed to channelise the flow of institutional funds from the rent-seekers to more productive (usually small) investors whom structural rigidities at times donot favour. The fiscal and commercial policies should be complementary to such monetary policies to further stimulate private investment and promote competitive efficiency.

2.22 The SAM-based General Equilibrium Model would help identify the flow of increased income to the hands of various socio-economic groups and would give new insights on the extent to which the various groups should be taxed or subsidized. It would also identify the credit needs of various socio-economic groups. In addition, the broad directions of import requirements would come from the investment and production plans of the various sectors. The augmented Input-Output Table of Planning Commission would have to be continuously updated for this purpose to incorporate the changing parameters.

III. Implementation Strategies for Community Participation through NGOs

2.23 A large number of Non-Governmental Organisations (NGOs) are now working in Bangladesh. Some of them claim that they have developed innovative strategies for reaching the target groups. There is, therefore, a demand that the NGOs should be allowed to expand their activities further to make the national poverty alleviation programmes more broad-based.

2.24 The recently set up Palli Karma Sahayak Foundation has already started functioning. It would undertake poverty alleviation programmes through both governmental and non-governmental organizations.

It has been given adequate autonomy to make the programmes flexible. An NGO Bureau has also been set up in the government to streamline and support NGO activities.

2.25 Simultaneously, there has been an increased realization that the NGO programmes at the Thana level should be co-ordinated and integrated with other Thana development activities for which no formal mechanism exists at the moment. Mostly NGOs get their funds from abroad and conduct their activities in relative isolation. In some areas, this can lead to duplications and overlaps with other NGOs and government organizations. Such problems will be attended to by the NGO Bureau as a part of its regular monitoring responsibility.

2.26 The NGOs can play an important role in Thana development by imparting training in the techniques of participatory development and income generating activities. This, however, requires that the NGO programmes would have to be substantially restructured so that they can work more effectively for establishing the target groups stable income-generating vocations within a given period. This would facilitate work completion in one area and transfer to another area in order to cover new target groups without much of strain on their manpower and physical logistics. Detailed action programmes would, however, have to be worked out at the local level in conjunction with all concerned.

IV. Implementation Strategies for Community Participation through Local-Level Planning

2.27 It has already been suggested that formulation of local level participatory plans would be the result of two distinct processes, the top-down and the bottom-up.

2.28 The framework of the top-down process would be as follows :

(a) The Thana Parishad would identify their strategies to participate in the implementation of indivisible (if necessary) components of various programmes/projects/activities. They will simultaneously formulate programmes/projects for instituing links with the various central programmes and projects in order to maximise the benefits to accrue wherefrom.

(b) On lines indicated above, the Thana Parishad will also prepare its own programmes/projects in various sectors in collaboration with the concerned officials in the Thana and the Union Parishads. These draft programmes will then be circulated for wider discussion.

(c) As suggested earlier by March every year, the Thana Parishad will firm up the estimates of its own income from taxes and fees to be raised locally as well as of the central grant to be received by the Thana.This will also be firmed up and circulated alongwith the draft programmes/projects for discussion.

2.29 The Thana Consultative Plan, so prepared, may involve the villagers in its preparation to ensure the wider participation of the people in it. A bottom-up participatory process would also have to be encouraged simultaneously. To facilitate this process, the following steps will be taken :

(a) A Village Development Committee will be set up informally representing the different functional groups. The process can be activated initially by making the elected Ward Member as the Chairman of the Village Development Committee.

(b) The Village Development Committee will train local youths for collecting statistics from the village through action training, compile the data so collected and in the process organize and identify the problems of the various functional groups. The Union and the Thana Parishads will strengthen this process of training and data collection by extending necessary funds and providing the services of knowledgeable persons for this purpose. The statistics so collected can actually be compiled into a Village Book. The village statistics can then be combined into a Union Book which can then be assimilated into a Thana Book. If these statistics can be updated every year, the task of preparation of the Upazila Plan as well as the National Plan will be greatly facilitated in the subsequent years.

(c) If the Village Book can be prepared by August/September, the various functional groups can then be given about three months' time (October-December) for preparing projects to be included in the Village Plan. Again, where necessary these various functional groups can be trained in the

techniques of project preparation with the funds and expertise available in the Union and the Thana Parishad.

(d) The Union Parishad will collect these Village Plans and consolidate them into a participatory Union Plan during January-March. In April, they can examine the Draft Consultative Plan prepared by the Thana Parishad with their Draft Participatory Plan and integrate them as necessary.

(e) The integrated Draft Union Parishad Plan can be sent to the Thana Parishad by May. The Thana Parishad will then finalize the Integrated Plan by June and put them into action by July.

2.30 The process need not be rigid. It would take better shape as experience of local planning keeps on increasing. The important thing is to utilize and accelerate such endeavours through existing local government institutions.

2.31 If the responsibility for creative participatory planning is shared by the Union Parishads under the overall supervision of the Thana Parishads with focus on village initiative, local government institutions as a whole would come into the forefront of development. It may be mentioned in this connection that during 1965-70, the Comilla Academy for Rural Development had developed comprehensive training modules for training the representatives of local government institutions and other concerned people for preparing comprehensive Thana Plan based on appropriate land utilization. During 1970s, this effort lost its momentum. Its importance has re-emerged in the 1980s with the experiments of comprehensive village development programmes undertaken in selected villages by the Rural Development Academies both at Comilla and Bogra. Further details on this can be seen in the Chapter (Chapter x.6) on Rural Development and Institutions. Similar efforts for comprehensive village development have also been made in some other areas (e.g. Dhamsona, Savar mentioned earlier). These isolated efforts need to be coordinated and replicated rapidly. The Action Plan, suggested above, would initiate the process of coordination and expansion of these programmes for village development.

2.32 The development of participatory local plan is crucial for the implementation of the Fourth Five Year Plan in view of the following considerations.

(a) Through this process it would be possible to mobilize untapped resources both human and physical for development. The Dhamsona case, for example, shows how resources can be generated without much external support (details may be seen in chapter on Domestic Resources);

(b) Such bottom-up participatory planning will integrate macro-economic policies with the felt need of the people, a link which has not been appreciated and strengthened uptill now with the degree of seriousness it deserves.

V. Strategy for Creation of 'Efficiency Culture' in the Economy

2.33 The strategy for the creation of 'Efficiency Culture' in Bangladesh should be practised at the micro, sectoral and the macro-levels simultaneously. The crucial step for promoting efficiency culture at micro/grass-root level would be the task of creating and operationalising organizations of functional groups. If people at the grass-root level can be organized into their own functional groups, accountability for better service delivery can be forced on the local government officials. If the process of preparation of Village and Union Plans start in the rural areas, the local government officials would then be motivated/under obligation to attend 'development meetings' at regular intervals at village/union levels. The efficiency of officials in service delivery and resource use would increase as the coordination and cooperation among the government officers, public representatives and the people at grass-root level get institutionalised.

2.34 The integration of the top-down Consultative Plan prepared at the Thana with the bottom-up participatory plan prepared by the villagers through the respective Union Parishads would also increase the efficiency of resource use. If the Thana Plans can be integrated into Regional Plans and Regional Plans with the Macro Plan, there would be further enhanced coordination, cooperation and efficiency at various tiers of the government.

2.35 At the macro-level, sources of inefficiency in various sectors have already been significantly identified by the government and a number of steps have been taken (e.g. rationalisation of tariff discrimination against the export sector, reduction of subsidized credit to relatively inefficient sectors, etc.). These policies are also being reviewed at regular intervals. However, there is a need for incorporating a greater

transparent logic into the process and to train the government officers to handle these policy stipulations more effectively. The critical area for increased efficiency in this respect would be the ability to integrate fiscal, monetary and commercial policies with each other particularly in the context of micro-sectoral and macro-planning.

2.36 In a number of areas, it has been seen that the small farmers and non-farm enterprises have been using their capital more efficiently. If these enterprising units can be supported with increased flow of capital, skill upgradation and access to better technology, they would do far better both in domestic production and in export. An integrated action programme encompassing credit, training and improved technical know-how therefore, has to be prepared and executed within a definite time schedule.

2.37 The question of administrative efficiency has been dealt in the section on Administrative Reforms. For management efficiency, public enterprises would be required to identify their own problems and devise out their own solutions. There is also the need to restructure the existing labour management relations in Bangladesh enterprises on the basis of experience of leading Asian countries like Singapore, Japan and the like. In any case, Bangladesh will have to evolve its own management system based on its own management culture and tradition with focus on efficiency. This can be looked into by a 'Task Force' recommended to be constituted for this purpose.

VI. Strategy for Bringing Women into the Mainstream of Development Process

2.38 The Plan recognizes the important role that women have been playing in the various production avenues in Bangladesh and envisages its further enhancement. With this end in view, the Plan aims at bringing women into the mainstream of the socio-economic development process.

2.39 For mainstreaming of women into the mainstream of development mechanics, the Plan distinguishes women into two groups : the relatively poor and the relatively better-off. The strategies for integrating these two groups into the development dynamics have to be different.

2.40 The poor and the disadvantaged women are exploited on two accounts; as members of the poor and the disadvantaged groups irrespective of gender and also as women. For the second groups, the discrimination mainly relates to gender.

2.41 For the poor and the disadvantaged women, therefore, the main strategy would consist of organising them into functional groups so as to (a) increase their occupational capabilities for income generating activities and to resist getting exploited due to poor bargaining strength on account of poverty and (b) raising their consciousness about their rights and privileges as women in the society. Since most of the poor and the disadvantaged women in Bangladesh live in rural areas, the main focus of implementing this strategy would be the village. While organizing the villagers into different functional groups for promoting decentralized participatory local level planning for development, the women particularly the poor and the disadvantaged women, should be allowed to have their separate functional groups. Particular efforts would also have to be made for increased delivery of raw materials and other inputs including credit to these groups, upgradation of their skill, and marketing support for their products through their own organizations. This will facilitate the rapid expansion of informal sector female employment through organisation of various home-based income generating activities.

2.42 Women organizations would also play a critical role in increasing their consciousness about their rights and privileges. But this process would also be complemented by a number of steps such as :

(a) Increased opportunity for female education (the government has already made female education free upto Class-X in non-municipal areas in addition to making primary education free and compulsory).

(b) Since Muslim marriages in Bangladesh are regulated by Muslim Law and there exist progressive elements (e.g. Marriage is a civil contract with right of divorce for both the parties on breach of this contract by either party, the right to inherit property of father, husband and son, etc.) in favour of women in these laws, it is necessary to educate the Muslim women about their rights and privileges under these laws in a systematic way over a time-bound period through the mass media.

(c) In recent years, women rights and privileges have also been enhanced by appropriate amendments in civil laws and enactment of new laws (e.g. Muslim Family Laws). These laws/legal provisions should also be given wide publicity.

(d) The mechanism for enforcement of these laws would have to be strengthened. In this respect the educated women can play an important role in helping the relatively poor women in protecting their rights and privileges by going in the rural areas and educating them.

(e) In the field of employment, particularly in the private sector, the women are discriminated against in terms of wage payments. Particular efforts would have to be made for implementation of minimum wage legislations in every Thana and Municipal areas.

2.43 Job opportunities would have to be expanded for all categories of women. For the relatively more educated, the government has already increased the quota for women employment in government services. In particular, the employment of women would be increased in such sectors/services as health, education, telecommunication, computer installations/operations and similar other areas (the details may be seen in different sectoral chapters). Vast potential for women employment also exist in such areas as handloom and sericulture throughout Bangladesh. These subsectors would be further developed for women employment. Simultaneously, there has to be expansion of enabling facilities such as day-care centres etc. for women employment. Particular attention would also have to be given to reducing the hardship of the poor and the disadvantaged with particular focus on women through greater use of technical devices that reduce drudgery and physical labour. Needless to say that so long women continue to suffer from malnutrition and morbidity problems, their contribution to productive employment would remain significantly less relative to its vast potential. So the question of health and nutrition of women would have to be approached on top-priority basis. The suggested programmes in this direction may be seen in relevant chapters.

2.44 Because of the multi-sectoral nature of women's programme, coordination among the concerned ministries/agencies would be important. As such a National Council for Women's Development would be formed under the Chairmanship of the Prime Minister to oversee multisectoral women development programmes. The Fourth Five Year Plan also envisages that the Project Proforma for public sector projects should give enough information on how such a Project benefit the women group. It is stipulated that the projects which would give greater benefit to women would get greater policy priority.

2.45 It may be mentioned here that the Bangladesh society still puts high value on the sanctity of family. Therefore, the Fourth Plan aims at expansion of rights and privileges of women and their participation in productive activities with a view to promoting the cooperative role of both male and female, both at home and outside, as equal partners in development.

VII. Implementation Strategy for Self-Reliance

2.46 One of the major objectives of the Fourth Five Year Plan is to achieve greater self-reliance. Usually, the term self-reliance refers to reduction of dependence on foreign assistance for financing development plans. In the Fourth Five Year Plan, however, the term self-reliance has a wider meaning. It includes the ability of the poor and the disadvantaged to think and plan for themselves in areas which concern them most. The poor and the disadvantaged constitute the majority of the population in Bangladesh. Unless they can be made substantially self-reliant in their thinking, and in income, the country would not be able to achieve self-reliance.

2.47 The plan also assumes that the capacity for promoting bottom-up participatory planning through an increased process of self-reliance exists in rural Bangladesh. The plan aims at taking measures for further facilitating this dynamism. Experience shows (Comilla Model, Deedar Cooperative, Dhamsona format etc.) that where this kind of grass root development takes place, substantial mobilization of local resources, both human and material, as matching fund for central resources takes place. As consciousness for self-reliance increases, people become more inclined to mobilize their own resources for development in preference to central resources. And where peoples' preference for use of local resources exist, their desire to utilise resources more efficiently also follows. On the other hand, where people rely more on outside resources, not only does their sense of dependence increase, but also they become less efficient in resource use.

2.48 Finally, increased accountability appears to be a function of greater self-reliance. The more the people get dependent on mobilization of local resources, the more accountable they become to themselves for more efficient use of their resources.

2.49 It is envisaged in the Fourth Five Year Plan that this quest for self-reliance would take its root in the rural areas and then spread throughout for the other national segments to follow. If the quest for efficiency culture and greater self-reliance are vigorously pursued from the centre throughout all the agencies, there will be substantial and visible progress in this arena during the Plan period. At the macro level, the crucial tests of self-reliance are: whether foreign assistance (a) increases domestic savings and investment; (b) reduces import dependence and increases export earnings over a definite time schedule. The Central Ministries and Agencies will have to incorporate these indicators of self-reliance through inter-dependent sectoral programmes over the Fourth Plan period.

VIII. Implementation Strategy for Population Control

2.50 The Fourth Five Year Plan envisages two types of strategies for population control. The conventional one relies mainly on central government activities for success of the programme. In this process, people's participation is achieved through a top-down approach. There is, however, an increasing effort in the central programmes to get integrated with the grass root development activities through greater participation of the people. The process has its limitations because it is very difficult to motivate the people for effective participation through a beauracratic process. The Fourth Five Year Plan, therefore, envisages that for more effective population control programmes, the central process would have to be complemented with a participatory development process. Experience shows that a centralised approach to population control is usually more effective for the well-to-do and educated people particularly in urban areas. Its impact on the rural poor is significantly less. As a result, it is very difficult to raise the Contraceptive Prevalance Rate (CPR) above 30 percent. On the other hand, if the village gets organized through a process of participatory development, the CPR can easily go above 50 percent. More important, a centralized approach to population planning is uni-directional. It concentrates mainly on fertility control. A participatory development achieves population control objectives as a part of an integrated package for the development of the village as a whole. The village achieves not only a high CPR but also a higher rate of literacy, lower incidence of crime and greater opportunities for income generating activities. Therefore, the implementation strategy for population control would aim at integration of the central approach with the bottom up planning process to make the programme more comprehensive and more effective.

IX. Implementation Strategy for Restructuring the Administration

2.51 The implementation of the Fourth Five Year Plan presumes substantial restructuring of the administrative system because the conventional administrative structure and processes are not adequately geared to many of the components and strategies of the Fourth Plan particularly to :

(a) promotion of inter-sectoral balancing of the economy;
(b) integration of the group-based plan with the sector-based plan;
(c) promotion of decentralized participatory process of local planning;
(d) integration of macro-plan with local and regional plans;
(e) promotion of market economy and technological advancement in economic development; and
(f) promotion of efficiency culture in resource management.

2.52 For promoting efficiency in the public service, both merit and commitment of civil servants are important. The conventional approach, however, was to emphasize merit cum seniority principles in promotion. But for participatory planning in particular, commitment seems to be as important as merit. Where administrative personnel combine merit with commitment, the progress towards participatory development can be rapid and substantial.

2.53 One of the tested mechanism of increasing commitment in Government servants is to make them work with the people at the grass root level. Some countries have devised their own form of action training for this purpose. In South Korea, action training is organized for combined groups consisting of civil servants, politicians, technocrats and farmers with focus on solving the farmers' problems at the grass root. In Bangladesh, the Comilla approach envisaged to bring the above groups into action training in the Thana Training and Development Centres (TTDCs). The success of this experiment at the Comilla Kotwali Thana was substantial but the process of its replication throughout Bangladesh later faltered because of lack of adequate political and administrative support. Time has come to realize the potentials of this process and devise ways and means for bringing different groups of people together in action training and integrative planning.

2.54 In the case of public sector investment, Bangladesh bureaucracy has acquired considerable expertise in formulating projects which are usually aid dependent, has substantial components of civil construction, purchase of vehicles, consultancy deployments and personnel app. In many cases, these are

weak in terms of inter-sectoral balance, benefits to the target groups especially to the lower 50 percent of the population and participation of the intended beneficiary group in project formulation and implementation. To overcome these defects, the civil servants would have to be trained in the new method of project formulation and implementation based on :

(a) intersectoral dependence of the project;
(b) integration of group-based approach in sectoral planning;
(c) decentralized participatory planning, and
(d) wider community involvement in centrally executed projects.

2.55 The current orientation of the civil servants towards administrative regulation of the economy also has to be substantially changed. They have to be educated and trained for using market economy more effectively for promoting economic development. This also calls for new kind of cooperation among the civil servants, private industrialists, businessmen and financial institutions. Economic and administative policies should bring these three groups together rather than push them apart.

2.56 Such integration of the civil servants, entrepreneurs and the banking system is also required for promotion and adaptation of technology for economic growth. Unless technological development and transfer is a joint effort of the government, the private sector, the financial institutions and academic and research institutions, the country cannot really go very far. In the past, this issue was overshadowed by the controversies over the relative efficiencies of the generalists and the technicians and the gap that existed between the researchers and the practitioners. It is now necessary to improve coordination among the various research and development agencies, academic institutions and commercial business and financial institutions. This also calls for a new kind of action training for the civil servants.

2.57 Bangladesh administrative structure is based on rule of law. The Parliament is the highest law-making agency. The civil servants are to administer the country according to these laws and the judiciary is to oversee the execution of these laws. This represents a sophisticated system and calls for the highest degree of commitment to the rule of law and its efficient administering. This is particularly important as the number of the poor and the disadvantaged in Bangladesh is quite large and therefore, the administration is to play a critical role in protecting the rights of these people. Bangladesh has come a long way in this direction but much more is needed to be done. The law enforcing agencies instead of scaring the poor and the disadvantaged have to be their "friends" who would establish their "rights" in society. Without such a re-orientation, achievement of participatory development would be difficult.

2.58 The present education system in Bangladesh with its emphasis on formal education promotes the idea that the illiterates cannot effectively participate in decision making. The administrators, therefore, frequently tend to develop themselves as the god-fathers. Some of them tend to question the utility of participatory development with focus on the illiterates. It may take many years for some educated people to learn that illiteracy does not necessarily imply lack of education. An illiterate man may be highly educated. He may even have better knowledge about his environment, his problems and their possible solutions. The important thing for the administration is to learn to appreciate this and, where possible, to "empower" these people to play more creative and innovative roles as functionaries and partners in development.

X. Use of "Extended Self-Interest" as an Implementation Strategy

2.59 Neo-classical economics presumes the existence of rational economic man for economic development. Under such a system, a man's life is propelled by his self-interest and achievement motive. It envisages man's unsatiable quest for money based on a high degree of work ethics. The socio-economic system of the Western countries shows such characteristics in man. However, the efforts to promote such a philosophy of life in the developing countries of Asia have succeeded only partially. It appears that in those communities where a business class existed as part of the society, the promotion of the above philosophy had been relatively easy. In such countries, these business communities have played a pioneering role in economic development (e.g. Marwaris in India, Memons, Bohras in Pakistan). In Bangladesh such business community is conspicuous by its absence particularly in Muslim society.

2.60 However, a Muslim business community is emerging in recent years in Bangladesh. But, for larger enterprises the regulatory bottlenecks for promoting business are still so high and the opportunities for rent-seeking activities are still so numerous that the development of genuine enterpreneurship has been hampered considerably.

2.61 On the other hand, lack of competition in the economy and the resultant distortions in wage, income and price policies have proved particularly disadvantageous to the poorer section of the community. As a result a large number of the people have gone below the poverty line. In the developed countries the number of such group is quite small. They also have, in most cases, comprehensive welfare programmes backed by recognition of legal rights of these people in society for appropriate employment opportunities and decent living.

2.62 The rights of the poor and the disadvantaged for a decent living are embodied in the Constitution of Bangladesh but this could not yet be made a part of the economic management in the country. Apparently this owes to shortage of resources for welfare expenditures. But in reality this has also been due to the distortions that the economy characterised by rent-seeking activities and other failures in policies that lead to inefficient use of resources, both labour and capital.

2.63 To counter the situation, the Fourth Five Year Plan suggests improvement in the competitive strength of the economy through appropriate wage, income and price policies. The process has to be reinforced by organization of the poor and the disadvantaged into functional groups for participatory development as explained earlier.

2.64 In the past, participatory development through organisation of the poor was substantially frustrated by lack of reciprocation from the local elites. This accounts for lack of replication of Comilla Model for rural development through Bangladesh Rural Development Board (BRDB). The same applies to other innovative experiments for rural development.

2.65 By now, there is increased realization that

(i) the development of the rural poor can be complementary in an area that develops as a whole because both the poor and the rich can share the benefits of development (as happened in Comilla Sadar Thana, Deeder Cooperatives, Dhamsona Union etc.);

(ii) the very poor and the disadvantaged can increase the development potential of the economy if they can be brought from the periphery to the mainstream of development (e.g. the role of small farmers in HYV paddy cultivation, the role of small enterprises as sub-contracting units for large enterprises etc.);

(iii) the implementation of central government programmes improves wherever there is community involvement in such programmes (experience of family planning and population control programme in recent years).

2.66 It is in the above context that the Fourth Five Year Plan suggests a more creative role for the poor and the disadvantaged and a more integrated role among the different socio-economic groups through :

(a) integration of group based approach with sector based approach;

(b) community involvement in the implementation of public sector programmes in the rural areas;

(c) promotion of decentralized participatory planning and

(d) cultivation of efficiency culture throughout the economy.

2.67 To achieve the above integration in the economy, it would be necessary to complement the development of the market forces with the philosophy of extended self-interest. The expansion of market forces would increase the competitive strength of the economy, reduce its rent-seeking elements and tend to correct relative distortions in wage, income and price policies. However, where such market forces are based exclusively on narrow self-interest, organizational efficiency might decrease if there is a mis-match between the interests of the employees (based on narrow self-interest) and organizational goals (based on larger consideration of societal welfare). The situation can be more difficult in the absence of a well-developed legal system to protect the rights of the poor and a comprehensive welfare programme for looking after the basic needs to the poor and the disadvantaged.

2.68 In this context, the philosophy of extended self-interest can play a significant role in the achievement of the objectives of the Fourth Five Year Plan.

2.69 The philosophy of extended self-interest is particularly important for Bangladesh for the following reasons : (i) the vast majority of the people in this country are poor. If the development process pushes them further to the periphery, the system would not be able to sustain itself for long. Therefore, the well-to-do in Bangladesh will be required to (a) reduce consumption (particularly of luxury commodities) and divert this saving for increased investment in productive activities; (b) reduce rent-seeking activities and invest more in genuinely risk-taking productive sectors that generate income and employment; (c) divert more resources to the projects that would benefit the lower 50 percent of the population; and (d) accept wage, income and price policies that would give labour a better deal in distribution of output between labour and capital. Similarly, the philosophy of extended self-interest is likely to (i) improve the delivery system so that the benefits of development primarily goes to the poor and the disadvantaged; (ii) increase community involvement in centrally executed projects for greater accountability, transperency and effectiveness; (iii) promote decentralized participatory planning through "empowerment" of the people by the government functionaries; and (iv) reduce wastages in the public sector programmes and divert the funds so saved to the benefit of the lower 50 percent of the population. Finally, the philosophy of extended self-interest would have to be supported by political commitment appropriately complemented by a legal system designed to protect the rights of the poor and reinforced by a welfare programme (education, health, etc.) that would help the conversion of labour into capital.

2.70 Finally, the philosophy of extended self-interest may also be considered important in terms of three important abilities required of the individuals involved in development planning in the developing countries;

(a) the ability to control his own weaknesses for the welfare of the society;

(b) the ability to overcome the obstacles of the social system to benefit the poor and the disadvantaged; and

(c) the ability to advance in science and technology to control the vagaries of nature for the welfare of the people at large.

2.71 The implementation strategies envisaged for the Fourth Five Year Plan would reinforce Bangladesh's aspiration for progress towards further politico-economic development based on popular participation, increased accountability, efficiency and welfare.

XI. Time Frame for Implementation

2.72 The switch over from the conventional top-down mainly aid-dependent development to a participatory self-reliant type of development with decreasing dependence on foreign aid would take time. The Fourth Five Year Plan would start the process and strengthen it over the Perspective Plan. The initial emphasis, however, would remain on the top-down process because the switch over to the participatory planning process has to be on a phased basis.

2.73 In the top-down process the development programmes would primarily benefit the upper 50 percent of the population. The lower 50 percent would get benefit only over a long time if at all, particularly if resource use can be made adequately efficient.

2.74 The vital question in restructuring the planning process is whether the Plan would bring the poor and the disadvantaged from the periphery to the centre of the development process. Historically, societies that could achieve this upward mobility had displayed higher rates of growth. Bangladesh has come a long way in this process but there still exists constraints that stand on the way. Some of these have been identified and strategies suggested to overcome them. It is envisaged that two years may be needed to bring in the desired momentum for the process to sustain itself. It would be necessary for the political, administrative and the social systems to reinforce each other to facilitate their processes of 'empowerment' and 'participatory development'.

2.75 Shortage of resources has been one of the main constraints for development in Bangladesh. The situation becomes critical in the event of natural calamities or external shocks. The conventional response to these situations has been the preparation of a core development programme and protect it. However, the core development programme can be prepared on the basis of a number of objectives. It is proposed that in

future core investment projects in the public sector should be prepared with focus on human resource development and foreign assistance should be so restructured that it also aims at similar objectives.

2.76 If the core development programme is prepared on the basis of human resource development and priority given to the efficient sectors, Bangladesh would be able to sustain a relatively higher rate of growth even with the existing shortages of resources.

2.77 The Third year of the Fourth Five Year Plan is, therefore, contemplated to be the critical year for the new dynamics to set in. The entire machinery of the government has to be mobilized for implementation of the new direction of the Plan. For this purpose, the Action Programme may be divided into short, medium and long term categories. In the short run, the existing institutions would have to be vigorously utilized for participatory planning, human resource development, improved delivery system, greater benefit to the target group and greater efficiency and accountability as far as possible. The medium term steps would focus on the development of new administrative and development structures and processes based on 'empowerment' of the poor and disadvantaged and the concept of participatory planning. The longer term view would reconcile the competitive efficiency with participatory development where there is a gap.

2.78 Within the above framework, concerted efforts will be made to bring the sectoral positions in line with macro directions. At present the sectoral investment programmes and their strategies are not appropriately linked with macro structure of the Plan for reasons which have already been explained in Chapter I. Each sector, therefore, has to prepare its own action programme for bringing greater integration between its existing sectoral thrust and the plan's macro perspective.

2.79 Finally, there also has to be a schedule for monitoring and implementation as to how the above integration will have been achieved.

2.80 It may be mentioned in this connection that the Government of Bangladesh has already set out a time schedule for implementing various structural adjustment programme with particular reference to the next three years (1990-1993). These structural adjustment programmes cover detailed implementation strategies for agriculture, industry, energy and financial sectors in particular. These implementation strategies have been described in respective sectoral chapters. The integration of physical and social infrastructures with the productive sectors would remain crucial for achieving efficiency in the economy and maximize benefits. However, there is also a need to integrate these structural adjustment programmes with accelerated real sector growth which the action programme outlined above for participatory development is expected to facilitate. Therefore, the two processes have to go simultaneously and they have to be made consistent with each other. The alternative would be to concentrate mainly on structural adjustment programme, allow social inequality to increase as an inevitable consequence of the growth process and attempt to partially counteract it by some increase of investment in the social sectors. The Fourth Five Year Plan identifies the poor and the disadvantaged as the relatively efficient group and therefore intends to promote structural adjustment by bringing them in the mainstream of development so that structural adjustment can have a humane base.

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CHAPTER-III

REVIEW OF PLANNED DEVELOPMENT

An Overview of Previous Plans In Bangladesh (1973-85)

3.1 The First Five Year Plan (1973-78) launched in July 1973 envisaged an outlay of Tk.4,455 crore at 1972/73 prices (Tk.3,952 crore in the public sector and Tk.503 crore in the private sector). The Plan aimed at both economic rehabilitation of the war-damaged economy as well as acceleration of economic growth mainly through public sector investment programmes. The Plan faced difficulties in implementation mainly due to the oil price hike of 1973 and the consequent disruptions of cost structure embodied in the Plan. The Plan, therefore, had to be revised and an annual average growth rate of 4.0 percent in GDP was achieved against the target of 5.5 percent.

3.2 Because of resource constraints, a large number of projects remained incomplete at the end of the First Plan. A Two-Year Plan (1978-80) was, therefore, implemented to complete as many of the on-going projects as possible. The Plan envisaged a total outlay of Tk.3,861 crore at 1977-78 prices - Tk.3,261 crore in the public sector and Tk.600 crore in the private sector. The Two-Year Plan realized an annual average growth rate of 3.5 percent compared to the target of 5.6 percent.

3.3 The Second Five Year Plan (1980-85) tried to lay the foundation of a process of systematic planning in Bangladesh for accelerated economic growth but it faced a number of difficulties during the initial years. Large shortfalls in both domestic and external resources necessitated revision of the Plan in 1982 to a size of Tk.17,200 crore at 1979/80 prices (Tk.11,100 crore in the public sector and Tk.6,109 crore in the private sector). During the Plan period, GDP grew at an annual rate of 3.8 percent as against the target of 5.4 percent.

3.4 Table 3.1 shows the size of the successive Plans, actual outlays and GDP growth rates.

Table - 3.1 Plan Size, Actual Outlay and GDP Growth (At Respective Base-Year Prices)

(In Crore Taka)

Plans	Plan-size	Acual Outlay	GDP Growth Rate (%)	
			Target	Actual
First Five Year Plan (1973-78)	4,455	2,074	5.5	4.0
Two Year Plan (1978-80)	3,861	3,359	5.6	3.5
Second Five Year Plan (1980-85)	17,200	15,297	5.4	3.8

Evaluation of the Third Five Year Plan (1985-90):

GDP and Sectoral Growth

3.5 The Third Five Year Plan was launched in 1985. The Plan envisaged an outlay of Tk.38,600 crore at 1984-85 prices (Tk.25,000 crore in the public sector and Tk.13,600 crore in the private sector). The major emphasis of the Plan was to develop infrastructure particularly energy and induce private sector investment in both agriculture and industry.

3.6 It envisaged an average annual growth rate of 5.4 percent in GDP during the Plan period against which a growth rate of 3.8 percent has been achieved. The growth rates of sectoral value added and GDP achieved during the Plan period are shown in Table 3.2. There was considerable fluctuation in yearly growth performance, specially in 1986/87 and 1987/88 due to severe floods and other natural calamities. However, there was significant improvement in growth performance in the terminal year with a GDP growth rate of 5.8 percent mainly because of record harvest of Aman crop.



Table - 3.2 GDP and Sectoral Growth Rates (1985-90) (At Constant Factor Cost of 1984/85)

(In Crore Taka)

Sector	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	Annual Compound Growth Rate (%) Target	Achievement
1. Agriculture	16,864.80	17,364.10	17,493.30	17,399.80	17,396.30	18,369.80	4.00	1.72
2. Industry	3,532.70	3,589.10	3,826.90	3,883.20	3,971.00	3,971.00	10.10	4.02
3. Electricity, Gas and Natural Resources	230.20	262.10	320.50	349.50	349.80	513.20	9.60	17.39
4. Construction	1,851.90	1,910.20	2,030.60	2,256.30	2,388.20	2,604.10	4.90	7.06
5. Transport	4,051.20	4,248.40	4,558.20	4,853.30	5,096.30	5,402.10	6.90	5.92
6. Trade and other Services	7,824.00	8,186.30	8,693.00	9,187.50	9,444.40	9,945.00	6.40	4.91
7. Housing Services	3,244.10	3,343.50	3,453.40	3,564.50	3,681.10	3,806.50	3.70	3.25
8. Public Services	1,323.50	1,594.40	1,719.10	1,855.30	1,907.70	1,971.80	4.60	8.30
GDP	38,922.40	40,498.10	42,095.00	43,349.40	44,324.80	46,915.10	5.40	3.81

3.7 During the Plan period, GDP increased slowly and the shares of the major sectors underwent marginal changes. The structural change in the GDP during the Plan period is shown in Table 3.3.

Table 3.3 Structural Change in the Economy (1985-90)

(In Percent)

Sector	Composition of GDP 1984/85	Composition of GDP 1989/90	Contribution to incremental GDP
1. Agriculture	43.32	39.15	18.83
2. Industry	9.07	9.17	9.63
3. Electricity, Gas & N.R.	0.60	1.09	3.54
4. Construction	4.75	5.55	9.41
5. Transport and Communication	10.41	11.50	16.90
6. Trade and Other Services	20.11	21.20	26.54
7. Housing Services	8.33	8.14	7.04
8. Public Services	3.41	4.20	8.11
Total :	100	100	100

Saving and Investment :

3.8 Although various measures were adopted to encourage private saving and investment, the rates of domestic saving and investment declined over the Plan period. Major macro indicators during the Third Plan period are given in Table 3.4.

Table-3.4 Major Macro Economic Indicators (At Current Market Prices)

(In Crore Taka)

Items	1984-85	1989-90
1. GDP at current market prices	40,541	74,400
2. Gross Investment	5,273	9,176
3. Consumption	36,550	67,688
4. Foreign Aid (Net)	3,208	4,414
5. Gross Domestic Savings	1,704	2,651
6. As percentage of GDP		
(a) Investment	13.00	12.33
(b) Foreign Aid (net)	7.91	5.93
(c) Gross Domestic Savings	4.21	3.80

Public Sector Financing

3.9. Of the planned development outlay of Tk. 25,000 crore at 1984/85 prices in the public sector, Tk.5,960 crore was estimated to come from domestic resources and the balance of Tk.19,040 crore from external resources. Despite significant discretionary revenue measures adopted during the Third Plan period,domestic resource mobilisation suffered set-backs on account of various factors especially natural calamities. The total domestic resources during the Third Plan period are estimated at Tk.1,405 crore at 1984/85 prices. Total revenue receipt during the Third Plan increased at an average annual rate of 4.7 percent in real terms against a target of 7.1 percent. Tax revenue in real terms increased at the rate of 5.3 percent against the Plan projection of 6.9 percent. Non-tax revenue in real terms increased at the rate of 1.8 percent. Tax-GDP ratio increased to 7.8 percent in 1989/90 against the Plan target of 9.4 percent.

Money and Prices

3.10 It was envisaged that liquidity expansion during the Third Plan period should not exceed 17.5 percent a year so that inflation might be kept below 10 percent. During the Third Plan, Broad money (M_2) increased to Tk.22,297.60 crore in June 1990 showing an average annual rate of increase of 21.6 percent. Total domestic credit increased at an average annual rate of 18.5 percent.

3.11 The Consumer Price Index for middle income families at Dhaka rose by 9.8 percent per annum during Third Plan period. Consumer price index for high and low income families at Dhaka increased at an average annual rate of 9.3 and 9.4 percent respectively.

Balance of Payments

3.12 The balance of payments situation improved during the Plan period as shown in Table 3.5:

Table - 3.5 Balance of Payments (1985-90) (At 1984/85 Prices)

(In Million US $)

Categories	Third Plan Target	Actual	Achievement (In percent)
1. **Import Payments**	(-) 17,01	(-) 17,761	104.4
a) Goods (c.i.f.)	(-) 14,677	(-)15,445	105.2
b) Services	(-) 2,333	(-) 2,316	99.3
2. **Export Receipts**	7,140	8,660	121.3
a) Goods (c.o.b)	5,384	6,881	127.8
b) Services	1,756	1,779	101.3
3. Balance of goods & Services	(-) 9,870	(-) 9,101	92.2
4. Remittances	2,233	3,523	157.8
5. Current Account Balance	(-) 7,637	(-) 5,578	73.0
6. MLT Debt. Repayments	(-) 678	(-) 778	114.7
7. Balance of Payments	(-) 8,315	(-) 6,356	76.4
8. Aid Inflow	7,245	7,797	107.6

3.13 Total import payments increased at an annual rate of 6.0 percent in real terms. Total export earnings grew at an average annual rate of 11.1 percent over the period in real terms. Workers' remittances exceeded the target growth rate of 3.8 percent and showed an estimated growth rate of more than 9.6 percent. The disbursement rate of foreign aid over the Plan period was 4.7 percent compared to the planned rate of 3.1 percent. Actual disbursement of foreign aid compared with their projected levels during the Plan period are given in Table 3.6 :

Table - 3.6 Disbursement of Foreign Aid during the Third Plan Period (1985-90) (At 1984/85 Prices)

(In Million US$)

Category of Aid	Plan projection	Actual	Achievement (%)
Food	1,240	1,184	95.5
Commodity	2,695	2,408	89.4
Project	3,310	4,205	127.0
Total :	7,245	7,797	107.6

Private Investment

3.14 As a result of improvement in policy environment, private investment began to pick up gradually . However, the estimated total private investment stood at Tk.9,882 crore during the Third Plan period as against the projection of Tk.13,600 crore at 1984/85 prices. Table 3.7 shows the projected and actual private investment during the Third Plan period.

Table - 3.7 Private Investment (*) during the Third Plan Period (1985-90) (At 1984/85 Prices)

(In Crore Taka)

Sector	Third Plan Target	Estimated Investment	Percentage of Target achieved
1. Agriculture	4,400	2,311	53
2. Manufacturing	3,200	1,314	41
3. Physical Planning and Housing	3,650	1,995	55
4. Transport and Communication	1,500	2,137	143
5. Trade and other Services	850	2,125	250
Total :	13,600	9,882	73

(*) Excluding non-monetized investment.

Poverty and Employment

3.15 The economy of Bangladesh suffers from the chronic problems of poverty and unemployment. The 1985-86 Household Expenditure Survey reveals that about 51 percent of the rural population and 65 percent of urban population are poor. Although the incidence of poverty seems to have registered some decline during the early eighties, the poverty situation in Bangladesh still remains overwhelming.

3.16 It is estimated that about 3.93 million man-years of employment were generated during the Third Plan period as against the Plan target of 5.1 million. The employment situation may be seen in table 3.8 :

Table - 3.8 Estimated Employment during the Third Five Year Plan Period (1985-90)

(In Million man years)

Sector	1984-85	1989-90	Change (1985-90)
Agriculture	11.64	12.85	1.21
Manufacturing	1.90	2.52	0.62
Construction	0.59	0.92	0.33
Electricity and Gas	0.04	0.05	0.01
Transport & Communication	1.71	2.18	0.47
Trade & other Services	1.41	2.10	0.69
Health, Education, Banking & Public Administration	2.03	2.63	0.60
Total :	19.32	23.25	3.93

Grants to Erstwhile Upazila Parishads

3.17 The erstwhile Upazila Parishads had been receiving development assistance funds on grant basis since 1983/84. Table 3.9 shows yearwise Upazila block allocations and expenditures during the Third Five Year Plan period.

Table - 3.9 Erstwhile Upazila Block Allocations and Expenditures during the Third Plan (1985-90)

(In Crore Taka)

Year	ErstwhileUpazila infrastructure grant	ErstwhileUpazila Development grant	Total	Expenditure on Development grant
1985-86	225.00	200.00	425.00	168.00
1986-87	175.00	160.00	335.00	135.00
1987-88	170.00	200.00	370.00	120.00
1988-89	130.00	70.00	200.00	37.00
1989-90	150.63	50.00	200.63	37.00(P)
Total :	850.63	780.00	1,530.63	497.00

Project Implementation

3.18 Inspite of substantial increases in outlay, implementation of development programmes suffered from a number of problems during the Third Plan period. Certain measures were initiated in order to help quick implementation of projects. These measures included :

(a) simplification of fund release procedures;

(b) delegation of authority to project directors/managers;

(c) introduction of 'core' programming system;

(d) simplification of procedures for procurement of goods and supplies and hiring of project personnel;

(e) specific provision for CDST in the development budget;

(f) strengthening of Implementation, Monitoring and Evaluation Division (IMED); and

(g) convening of regular meetings in the Line Ministries and of the Executive Committee of the National Economic Council (ECNEC) for periodically reviewing the progress of implementation of various projects and programmes and adopting measures for overcoming implementation bottlenecks:

In addition, efforts were also made to reduce rationalise the total number of projects included in the ADP. The implementation performance of the ADPs may be seen in Table 3.10 :

Table-3.10 Implementation Performance of the ADPs (At Current Prices)

(In Crore Taka)

Year	ADP Allocation (Revised)	Actual Expenditure	No. of Schemes under taken	No.of Schemes Completed
1979/80	2,330	2,188	1,406	359
1980/81	2,369	2,466	1,520	160
1981/82	2,715	2,391	1,675	133
1982/83	3,126	2,688	1,178	166
1983/84	3,858	3,006	992	245
1984/85	3,498	3,167	938	323
1985/86	4,096	3,628	816	103
1986/87	4,513	4,439	842	108
1987/88	4,651	4,150	880	99
1988/89	4,595	4,622	929	88
1989/90	5,103	5,717	925	198

Financial Achievements In the Public Sector

3.19 The total development expenditure in the public sector during the Plan period is estimated at Tk.21,942.48 crore in current prices which stands at Tk.16,757.28 crore at 1984/85 prices. The sector-wise distribution of development expenditure is presented in Table 3.11 :

Table - 3.11 Development Expenditure in the Public Sector during Third Plan Period (1985-90)

(In Crore Taka)

	Sector	Plan Allocation (1984/85 prices)	Total Expenditure (1985-90) At current prices	Total Expenditure (1985-90) At 1984/85 prices	Percentage of Plan Target Achieved
1.	Agriculture, Water Resources & Rural Institutions	7,060.0	4,611.64	3,478.21	49.27
2.	Industries	2,600.0	2,407.13	1,902.28	73.16
3.	Power, Gas & Natural Resources	5,675.0	4,893.29	3,800.55	66.97
4.	Transport	2,637.0	2,387.50	1,791.84	67.95
5.	Communications	388.0	507.76	370.12	95.39
6.	Physical Planning & Housing	550.0	772.36	585.79	106.51
7.	Education & Religious Affairs	1,220.0	1,169.21	879.68	72.10
8.	Labour & Manpower	93.0	23.54	18.61	20.01
9.	Public Administration	65.0	47.45	37.22	57.26
10.	SCYSWAM & STR	367.0	113.60	84.99	23.16
11.	Health	550.0	435.83	328.85	59.79
12.	Population Control & Family Planning	870.0	798.25	588.70	67.67
13.	Others	2,925.0	3,774.92	2,890.44	98.82
	Total :	25,000.0	21,942.48	16,757.28	67.03

Sectoral Development :

3.20 Sectoral performance during the Third Plan period has been discussed in details in the respective sectoral chapters. The subsequent paragraphs contain discussion on major aspects of sectoral development.

(a) Agriculture, Water Resources and Rural Development

3.21 The growth performance in agriculture during the Third Plan period has been influenced by two major factors - natural phenomena (floods, droughts, cyclones etc.) and policy changes, particularly in the area of input distribution and pricing. Production target for rice and wheat was fixed at 206.0 lakh tons by 1989/90 against which 184.64 lakh tons were estimated to have been produced. The average percentage increase of rice and wheat production during the Third Plan period was about 1.5 percent against the Plan target of 4.5 percent. The production of high yielding varieties of rice and wheat increased by 2.7 percent during the Plan period contributing about 49 percent to total production in 1989/90 against the Plan target of 57 percent. The growth rate for agriculture sector averaged 1.72 percent per annum compared to the target of 4.0 percent.

3.22 Although crop diversification was a goal of the Third Plan, the crop base did not expand to achieve the object in order to improve dietary quality and food security. Pulses and oilseeds, the crops selected for first major diversification efforts continued to lose out to cereals. An important development in agriculture was the adoption of a food policy with the objectives of attainment of self sufficiency in foodgrain production by 1992, maintenance of adequate food reserve for price stabilization and food security.

3.23 Planned utilization and efficient management of water resources is considered as one of the crucial elements in achieving desired changes in agricultural production and productivity. The Third Plan envisaged a target of irrigating 96.44 lakh acres of land in 1989/90 against 61.20 lakh acres in 1984/85. Total area under irrigation is estimated at 76.52 lakh acres in 1989/90. Total area under flood control and drainage facilities is estimated to have increased to 80 lakh acres in 1989/90 against a target of 82.54 lakh acres, from the bench-mark position of 64.00 lakh acres in 1984/85.

3.24 The programme under Rural Development and Institution Sector during the Third Plan period encompassed development of physical infrastructures, irrigated agriculture, drainage and minor flood control and production and employment programme for the rural poor. Achievement during the period included the development of 72 growth centres, 435 km of Type B feeder roads and 1195 metres of bridges and culverts. The programme for irrigated agriculture envisaged distribution of minor irrigation equipments and implementation of Irrigation Management Programme (IMP). Under the programme, 6488 DTWs and 2786 LLPs were covered. The irrigation programme was implemented by BRDB in association with other related agencies and the farmers' cooperatives (KSS). During the period, 5400 KSSs with 1.27 lakh members were formed and Tk.33300 lakh was distributed as credit to the members of the KSS. Under the Production and Employment Programme (PEP) for the rural poor, 16090 BSS/MBSS/informal groups were organised with 3.76 lakh members. By the end of June 1990, 567 cluster villages were estiblished in which about 21,000 homeless and landless families were settled to benefit.

(b) Industry

3.25 The Third Plan envisaged a growth rate of 10.1 percent per annum for the industry sector. During the period, the sector attained an annual average rate of growth of 4.02 percent. However, production in most of the major items lagged behind the targets mainly due to depressed demand for manufacturing goods in the home market along with a low demand for jute goods in foreign market. However, due to introduction of the New Industrial Policy of 1982 and the Revised Policy of 1986, a number of changes and improvement were introduced in procedures and incentive structures to promote private investment in industry. As a result, non-traditional export industries viz, readymade garments, frozen food etc. have become important sources of industrial growth.

(c) Power and Gas

3.26 Energy supply situation to meet the growing needs of various sectors of the economy has improved considerably although it is still less than satisfactory compared to the demand. However, the demand for commercial energy has been growing very fast in recent years. During 1984/85, energy generation was only 4528 GWH. It rose to 7700 GWH in 1989/90 as against a target of 8933 GWH. However, the development in the Power sector could not also remove the imbalance between generation, transmission and distribution. In the gas sector, 850 km of transmission lines had been laid, 405 thousand gas connections were provided and 165 thousand MMCF of natural gas were supplied against the target of 1280 R.M, 400 thousand nos. and 180 thousand MMCF in 1989/90.

(d) Transport and Communications

3.27 Transport sector contributes about 8 percent to the GDP. One of the important objectives of the Third Plan was to develop adequate transport facilities to connect Thana head quarters as part of national transport net-work. Under the Roads and Highway sub-sector, 744 km of paved roads including partly paved roads were added to the road net-work along with a total of 10,149 meters of bridges and culverts. Under the thana connecting road programme, 718 km of paved roads and 9357 meters of bridges and Culverts were constructed. Under Telecommunications sub-sector, the Plan target was to add 75,000 new telephones to existing 1,82,000 line units. However, the actual number of new lines added during the five years was 59,190. As a result, telephone density per 100 population was increased from 0.10 in 1984/85 to 0.21 in 1989/90 and the total number of telephone in the country has increased to 2,41,190 in 1989/90. Twenty-eight automatic telephone exchanges have been installed in Thana headquarters as against the target of forty two exchanges. The Railways programme in the TFYP laid more emphasis on improvement of the quality of services of the railway operations. Average load per Kilometer increased from 2615.0 in 1984/85 to 2634.0 in 1988/89. Similarly, ton-km per wagon perday increased from 6122.3 in 1984/85 to 6542.9 in 1988/89. However, during the same period, passenger-km came down for both BG and MG from 6005.26 million to 5256.03 million.

(e) Physical Planning and Housing

3.28 The programmes of Physical Planning and Housing sector during the Third Plan consisted of development of housing, office and commercial buildings, rural and urban water supplies, sewerage and sanitation, city roads and civic facilities. Major physical achievements included the International Conference Centre, National Monuments at Savar and Mujib Nagar, Osmani Memorial Hall and residential and office building at Zila and Thana headquarters. In the field of water supply, all the 64 District Headquarters have been covered with piped water supply alongwith the expansion of water supply facilities in Dhaka and Chittagong cities. In the rural areas 1,22,082 shallow tubewells, 5,665 deep tubewells and 18,340 deep set Tara Pumps were installed. As a result, rural water supply coverage was increased from 1 tubewell for 138 persons to 1 tubewell for 118 persons against the target of 1 tubewell for 125 persons.

(f) Education

3.29 In order to remedy the imbalances in the education system, the Third Plan was formulated with increased emphasis on vocational and technical streams and reduced priority to liberal education. The enrolment target of 116.00 lakh in the field of primary education seemed to have been achieved. In secondary education, the enrolment has been estimated at 32.43 lakh as against the target of 27.50 lakh students. The Third Plan enrolment target in college education was 4.40 against which 9.02 lakh was attained. The enrolment in universities was estimated at 52.25 thousand in 1989/90 as against the 44.61 envisaged. Enrolment in the existing 51 VTIs stood at 5,040 in 1990 as against 4,490 in 1985. In the field of religious affairs, 64 Islamic Cultural Centres are operating in the country against 21 in 1985.

(g) Health

3.30 Health sector programme in the Third Five Year Plan was based essentially on Primary Health Care (PHC) as the key approach towards providing a minimal level of health care to all. In order to achieve this, under the Thana Health Complex (THC) programme, 351 THCs out of 397 had been made funcational and out of them 245 health complexes had been completed in all respects. To improve the availability of health facilities, efforts have been made for increasing the number of hospital beds in the country. At the end of the Third Plan period, the total number of hospital beds stood at 34,488 (24501 in the public sector) giving a bed population ratio of 1,3314. Under the immunisation programme for the Third Plan period, the coverage achieved was 75% for BCG, 68% for DPT, 50% for measles, 68% for polio and 45% for TT (pregnancy).

(h) Population Control and Family Planning

3.31 Over the Third Five Year Plan period, the rate of population growth declined from 2.4 percent in 1985 to 2.16 percent in 1990 as against the target of 1.8 percent. During the same period, the Contraceptive Prevalance Rate (CPR) increased from 25 percent to 35.5 percent against the target of 40 percent. Field and clinical workers continued to provide services to all eligible couples. Consequent upon intensive efforts, infant mortality and maternal mortality were estimated in 1989 at 110 and 5.7 respectively per 1000 live births. At present there are 86 functional MCWs, 347 MCH units of Thana Health Complex and 1793 Union Health and Family Welfare Centres through out the country to deliver MCH and F.P. Services.

(i) Social Welfare and Women's Affairs

3.32 During the period, physical facilities for 17 Sarkari Shishu Sadans were created and were converted into Shishu Paribars. The institutional service provided is estimated to have benefitted a total of 18,000 handicapped persons and 12,000 orphans in continued maintenance.

3.33 The programmes on Women's Affairs aimed at promoting activities for overall development of women and children. To increase female employment in public and private sectors, a number of measures were taken by the government which included reservation of 15 percent jobs for women in the public sector and raising the age limit for entry into public service to 30 years. Under the women's affairs sub-sector, around 60,000 women were trained in different vocational skills and other human resource development activities, about 2 lakh women were given non-formal education and 20,000 women were provided credit facilities for self-employment.

(j) Public Administration

3.34 Creation of an efficient public administrative system was one of the major objectives pursued under the Third Plan. Enhancement of job knowledge and skills of the public officials through systematic training, establishment of training institutes for such purpose, organisational development, improvement of personnel administration in the government, semi-government, autonomus bodies, streamlining of administration through simplification of accounts, budgeting and financial and administrative procedures and restructuring of government offices and agencies were some of the major efforts undertaken towards bringing efficiency in administration.

(k) Manpower and Labour

3.35 The Third Plan assigned significant priority to training programmes for skill development. Skill development programmes were carried out through the institutional network of 12 TTCs including the Institute of Marine Technology (BIMT) and also non-institutionally in the form of apprenticeship, in-plant and up-gradation along with supervisory level training in industries.

3.36 By the end of the Third Plan, the country had a network of 21 District Employment and Manpower Offices (DEMO) to operate as Faculty centres for promotion of employment, both at home and abroad. Considerable progress took place during the Plan period in respect of overseas employment particularly in the Middle-East and the Gulf-areas.

A THREE YEAR (1990-93) REVIEW OF THE FOURTH FIVE YEAR PLAN

3.37 The Fourth Five Year Plan (1990-95) envisaged an outlay of Tk. 62,00 crore at 1989/90 prices (Tk. 34,700 crore in the public sector and Tk. 27,300 crore in the private sector). The main objective of the Fourth Plan are as follows:

(i) Achieving an annual growth rate of 5% in the GDP.

(ii) Poverty alleviation and employment generation through human resource development.

(iii) Increased self-reliance.

3.38 The economy of Bangladesh has now entered the third year of the Fourth Plan. A review of the performance of the economy during the First three years of the Plan (1990-93) is highlighted in the following paragraphs:

Gross Domestic Product

3.39 Gross Domestic Product (GDP) at constant factor cost of 1989/90 increased by 3.91 percent in 1991/92 against 3.60 percent in 1990/91. A relatively higher growth of GDP in 1991/92 resulted from increased activity in the industry, electricity and gas sectors and a moderate increase in service sector growth. Some overall growth rate of GDP is estimated to be 5.11 percent in 1992/93 as compared to 3.91 percent in 1991/92 Growth rate in agriculture sector is expected to be 4.0 percent in 1992/93 as against 2.43 percent in 1991/92 as a result of higher Aman production and expected good weather conditions benefiting other crops. Growth rate in industrial sector is estimated to be 8.58% in 1992/93 compared to 7.68% in the previous year.

The sectoral GDP and growth rates during the period under review are shown in the table below:

Table - 3.12 : Gross Domestic Product (At 1989/90 constant prices)

(In million Taka)

Sector	1990/91	1991/92	1992/93 (Estimate)	Growth Rate % 1991/92	1992/93 (Estimate)
1. Agriculture	282,128	288,995	300,555	2.43	4.00
2. Industry	55,386	59,641	64,759	7.68	8.58
3. Construction	37,618	33,236	41,198	4.30	5.00
4. Power & Gas	7,914	8,615	9,416	8.86	9.31
5. Trade and other services	164,594	171,672	180,427	4.30	5.10
6. Transport and Communication	72,981	76,272	80,467	4.51	5.50
7. Housing Services	69,983	72,363	74,895	3.40	3.50
8. Public Services	32,123	34,221	37,667	6.53	10.07
Total:	722,727	751,015	789,384	3.91	5.11

Source: Planning Commission.

Agriculture

3.40 The agricultural sector policy continued to be liberal and market based with emphasis on increased use of minor irrigation equipment, fertilizer and HYV seeds. To improve the nutritional status of the population is a central objective of the country's medium term plan. In order to achieve this, emphasis has been given on the sustained growth of the agricultural sector.

3.41 Foodgrain production during 1990/91 and 1991/92 were 18.85 million tons and 19.32 million tons respectively. Aus registered a decline in production in 1991/92 and 1992/93. But this decline in Aus production was more than made up by increase in Boro and Aman production and a marginal increase in wheat output on account of increase in HYV rice acreage, expansion of irrigation facilities, increase in fertilizer use and cropping intensity etc. Foodgrain production in 1992/93 is expected to be 19.66 million tons against 19.32 million tons in the previous year. Typewise cereal production during 1991/92 and 1992/93 are given in the table below:

Table - 3.13: Foodgrain Production in 1990/91 to 1992/93 (At 1989/90 Constant Prices)

(In '000' MT)

Crop	1990/91	1991/92	1992/93
Aus	2,328	2,179	2,075
Aman	9,167	9,269	9,680
Boro	6,357	6,500	6,586
Wheat	1,004	1,065	1,176
Total cereal:	18,856	19,013	19,518

Source: BBS and M/O. Food.

Industry

3.42 The Industrial Policy, 1991, greatly simplified procedural obstacles to private investment. There are no investment-sanctioning requirements and power, gas and telecommunication sectors are now open to private investment. There was some recovery in inudstrial production after the depressed situation in 1990/91 caused by the effects of the Gulf crisis, political transition and the April 1991 cyclone. Production of cotton yarn, fertilizer, petroleum products and readymade garments, other chemicals and pharmaceuticals increased during 1991/92. Production of jute goods is expected to increase during 1992/93 after a continuous decline during the last three years.

The output of major manufactures for 1990-93 is given in the following table.

Table - 3.14 : Industrial Production

Sector		Unit	1991/92	1992/93
1.	Jute goods	M.Ton	4,16,364	4,57,227 (p)
2.	Cotton yarn	'000' Kg	60,516	58,439(p)
3.	Mill-made cloth	'000' metre	58,865	45,766(p)
4.	Paper	M.Ton	41,294	43,454
5.	Newsprint	M.Ton	47,031	46,290
6.	Fertilizer	M.Ton	17,35,551	20,50,614
7.	Cement	M.Ton	2,72,452	2,07,464
8.	Sugar	M.Ton	1,95,418	1,87,483
9.	Matches	'000'	12,149	12,418(p)
10.	Cigarettes	Mill. sticks	12,535	11,290(p)
11.	Petroleum Products	M.Ton	10,17,315	13,20,742

Source: BBS.

Private Investment

3.43 The scope of operation of the private sector is being expanded over the recent years. Emphasis has been given on private investment, both domestic and foreign. The Government is taking steps to improve efficiency of the private sector as the major economic agent. The New Industrial Policy 1991 (NIP 1991) provides various incentives, policy support and institutional measures to accelerate the level of private investment. Recently, the Government has further liberalized the NIP, 1991 allowing private investment in power generation, transmission and distribution and in privatization of public manufacturing enterprises. The level of private investment in current prices stood at Tk. 37,350 million and Tk. 47,570 million in 1990/91 and 1991/92 respectively. It is expected to reach the level of Tk. 61,800 million in 1992/93.

Balance of Payments

3.44 In 1991/92, the country enjoyed a relatively comfortable balance of payments situation due largely to lower than expected imports and an upsurge in exports and remittances. Imports fell to $ 3,463 million in 1991/92 from $ 3,470 million in 1990/91 while exports exceeded by far their preceding year's level of $ 1,669 million rising to S 1,904 million. Remittances increased to $ 845 million in 1991/92 from $ 764 million in 1990/91. The balance of payments situation is likely to improve further in 1992/93. Export earnings are projected to increase to $ 2,400 million mainly due to a continued expansion of garments exports and a rise in workers' remittances from abroad. The import bill is expected to rise substantially to $ 4,000 million (all at current prices).

Foreign Exchange Reserve

3.45 Foreign exchange reserve is estimated to reach $ 2,000 million by the end of the FY 1992/93 against $ 1,608.0 million on 30.6.92 and $ 880 million on 30.6.91.

Money and Prices

3.46 Monetary and credit expansion were restricted to safe limits contributing to a lowering of inflation rate from 8.9 percent in 1990/91 to 5.1 percent in 1991/92. The inflation rate declined further to 1.4 percent upto March 1993. Broad Money (M2) increased by Tk. 35,216.0 million or 14.1 percent to Tk. 2,85,259.0 million in 1991/92. Total domestic credit increased by Tk. 18,399.0 million or 7.3 percent to Tk. 2,72,083.0 million in 1991/92. The target for expansion of Broad Money (M2) has been set at Tk. 3,99,407.0 million during 1992/3. Total domestic credit declined to Tk. 2,64,328.8 million upto March '93 from Tk. 2,72,083.0 million in 1991/92.

Revenue Receipts

3.47 Revenue receipts increased to Tk. 97236 million in 1991/92 from Tk. 81769 million in 1990/91 and in 1992/93, the amount is expected to rise to Tk. 110600 million. To maintain macro-economic balance against pressure for growth in current expenditure, the Government undertook major tax reform measures in a bid to

generate more domestic resources. Value Added Tax (VAT) was the central point of this reform programme. Simultaneously, a determined effort was made to restrain growth in current expenditure below nominal growth of GDP.

Annual Development Programme (ADP)

3.48 The ADP has been given a position of central importance in the medium term policy framework. ADP will be used to address the goals of poverty alleviation, increasing investment outlay and infrastructure and human resources development. Streamlined project approval procedures have resulted in 90 percent of ADP projects being approved. A Committee has completed review of PCP (Project Concept Paper) and PP (Project Proforma) formats to identify means of further streamlining the project approval process. A formalized system of implementation monitoring by the IMED is now operational and periodic review is being conducted under the direct supervision of the Prime Minister. Increased attention is being given to education and health sectors in terms of ADP allocation as well as implementation and monitoring. The revised ADP of 1991/92 was fixed at Tk. 7150 crore of which an amount of Tk. 6024 crore was spent representing 84 percent of the RADP. In the RADP of 1991/92, 619 investment projects were undertaken and 151 projects were completed against the target of 142. A sum of Tk. 4246 crore has been spent upto April 1992/93 against the allocation of Tk. 8121 crore in the RADP of 1992/93 and the total number of investment projects are 648 of which 149 projects are expected to be completed. Implementation of development projects as per schedule continues to receive high priority in Governments efforts for Plan implementation.

Annual Development Programme (ADP) 1993/94

3.49 Total size of ADP for 1993/94 is estimated to the tune of Tk. 9750 crore, out of which Tk. 3231 crore i.e. 33% will be available from local resources and rest of the amount of Tk. 6519 crore i.e. 57% will be available as foreign assistance. The ADP allocation for 1993/94 is 20% higher than that of the total allocation of 1992/93. In ADP 1993/94, there will be a total of 663 investment projects (including 107 new projects), 190 T.A. projects (including 15 new ones and 57 self-financed projects (including 10 new schemes) leading the total number of projects proposed for inclusion to be 910. It may be recalled that in 1992/93, total number of projects were 928.

3.50 The ADP 1993/94 provides higher allocations for agriculture, education, health; poverty alleviation programmes, energy, transport and communications, family planning, WID and manpower development. In line with Government's emphasis on providing infrastructural facilities to the private sector, allocations for power, transport, physical planning and industries sectors have been substantial.

3.51 It is envisaged that GDP growth rate of 6.2% will be achieved during 1993-94 if the proposed projects are implemented smoothly and effectively. The ADP 1993-94, has provided for enhanced allocations to the productive sectors to attain a higher growth rate. The Government is encouraging further export oriented industries and the private sector has been allowed to participate in Telecommunication, Power and Gas Sectors. In order to promote human resources development, due emphasis has been given to the growth of socio-economic infrastructures.

CHAPTER - IV

DOMESTIC RESOURCES

Introduction

4.1 A major constraint on economic growth and development in Bangladesh has been the low level of domestic resource mobilisation resulting in heavy dependence on external assistance to finance development expenditure and sometimes consumption needs too. As in the past plans, the investment targets of the Fourth Plan are largely dependent on mobilisation of domestic resources. Of the planned outlay of Tk.68,930 crore in the original Fourth Plan, Tk.35,565 crore was expected to be externally financed and the balance Tk.33,365 crore would have to be internally mobilised. The projected financing arrangement of the original Fourth Plan thus indicated that over 48 percent of the overall Plan size needed to be financed through domestic resources compared to an estimated figure of 35 percent for the Third Plan. This implied a big shift in relative share of financing through domestic resources. Meanwhile, since 1990/91, there have been improvements in domestic resource mobilization and the proportion of domestic resources to the financing of the revised Fourth Plan has now been estimated to be 56 percent. However, there has simultaneously been a downward revision of the overall size of the Fourth Plan from Tk. 68,930 crore to Tk. 62,000 crore. Notwithstanding this reduction in the Plan outlay, the significant stride in domestic resource mobilization is unmistakable.

Resource Mobilisation in the Public Sector : Major Constraints

4.2 Public sector plays a dominant role in savings mobilisation through taxes, public expenditure policy and generation of surplus of public enterprises and utilities. The major instrument for mobilising public resources in Bangladesh has been the tax system which, during the Third Plan period, was characterised on an average basis by (i) a tax/GDP ratio of 7.3 percent and (ii) a ratio of direct tax to total tax revenue of 21 percent.

4.3 The tax/GDP ratio may be taken as an indicator of the government's tax effort.[1/] The tax/GDP ratio which stood at 7.89 in 1980/81, the first year of the Second Five-Year Plan, started to decline from 1981/82 and stood more than a whole percentage point lower at 6.69 in 1983/84. It then showed a slight improvement during the Third Plan period, albeit unevenly, and stood at 7.32 in 1987/88. The Third Plan projected that the tax/GDP ratio would stand at about 8.70 percent in 1989/90, the terminal year of the Plan. As against that, the tax/GDP ratio for 1989/90 stood at 7.77 percent, a level lower than that of 1980/81.The present tax/GDP ratio of Bangladesh ranks the country among the lowest of the low-income countries (per-capita GNP of US$ 610 or less in 1990).

4.4 As mentioned in the Third Plan, there are some structural rigidities inherent in the tax system which continue to depress the tax/GDP ratio in Bangladesh. The tax base is narrow, tax elasticity is low and the tax administration remains weak. A substantial proportion of GDP originating in agriculture is unmarketed. At the same time, the tax system captures only a very small percentage of income generated in agriculture although the agriculture sector contributed on average about 39 percent to GDP during the Third Plan period. Secondly, the share of direct tax to total tax revenue, compared to other low income countries, is lower in Bangladesh. Revenue arising from the taxation of personal and company income, which is relatively more responsive to growth in GDP, currently acounts for only 15 percent of total tax revenue or about 1.1 percent of GDP. Other direct taxes of significance are the non-judicial stamp duty and the land development tax. At 1972/73 prices, these two heads generated equal amount of revenue in 1975/76. During the Third Plan period, land tax revenue in real terms, on average, was just half of what had been accrued through non-judicial stamp. Despite the introduction of a graduated land tax system during the Second Plan period, a revenue yield substantially in excess of what had been collected became infeasible ostensibly because of problems with land records and the land administration itself. Thirdly, a clear four-fifths of the total tax revenue in Bangladesh continues to be collected through indirect taxes on goods and services where again the share of taxes on foreign trade predominates. Import duty and sales tax (the latter is being replaced by VAT) together averaged 51 percent of the total tax revenue and 64 percent of the total indirect tax revenue during the Third Plan period compared to 57 and 70 percent respectively at the end of the First Plan. An excessive dependence of the tax system on foreign trade in turn implies a dependence on external aid which finances currently upto 50 percent of import trade. This makes the tax system vulnerable to changes in international trade and aid environment.

1/ GDP series used are those which have been revised by the BBS beginning 1990. All tax/GDP ratios used in this Chapter as a consequence are not strictly comparable with the ratios quoted in the past Plans.

4.5 Beyond taxation, public finances are largely influenced by the status of financial performances of public sector corporations. Most Manufacturing Public Enterprises (MPEs) have shown poor financial performance. As a result, these as well as other public enterprises have become dependent on allocations from the Annual Development Programmes and advances from the nationalised commercial banks. The net claims on the Government budget by all the public enterprises rose from 0.8 percent to 3.2 percent of GDP between 1985/86 and 1988/89. The continued poor financial performance of the MPEs *vis-a-vis* their huge borrowing have caused their debt to equity ratios to fall to a range which is much below the desired level. The MPEs thus compete for scarce government resources and make little contribution to domestic resource mobilisation. Major reasons for poor performance of the MPEs include, among others, the inability to abide by standard commercial practices, insufficient managerial autonomy and accountability, over-employment, weak financial structure, etc. Another serious drain on government resources has been accounted for by the deficits of the Bangladesh Railway and those of the Post Office Department.

4.6 An estimate by the Planning Commission shows that the combined losses of all corporations and government departments during 1982/83 through 1991/92 totalled over Tk. 11,000 crore and that their present annual losses run over Tk. 2,000 crore. The reduction of this huge amount of losses would significantly augment the domestic resource situation.

4.7 Current expenditure in real terms during the Second and Third Plan periods grew at a much higher pace than the total government revenue. What is more disturbing is that current expenditure grew much faster rate than the Annual Development Programme (ADP) during the Third Plan period. During the Second Five Year Plan (1980-85), current expenditure as a proportion of GDP averaged 6.4 percent compared with 8.7 percent for the ADP. This had risen to 8.8 percent during the Third Five Year Plan compared with 7.3 percent for the ADP. Largely because of a phenomenal growth in current expenditure, revenue surplus during the Third Plan period exhibited a negative growth rate.

Review of the Third Plan

4.8 A major objective of the Third Plan was to accelerate the pace of and strengthen the measures for mobilisation of domestic resources. This was envisaged to be achieved by a higher amount of tax collection, a significant contribution by the public financial and non-financial institutions and above all by a total austerity in revenue expenditure. The Plan declared that " a major goal of fiscal management during the Third Plan period will be to restrain the growth of current expenditure which increased at an accelerated pace ever since independence in 1971. Efficient functioning of administration and reduction of wasteful expenditure will be the keynote of public expenditure policy". Of the total financial outlay of Tk. 38,600 crore, it was projected that domestic resources would amount to Tk. 17,572 crore and that net foreign capital inflow would yield a total of Tk.21,028 crore, or 45.5 percent and 54.5 percent respectively of the total outlay. This scenario entailed raising the domestic saving/GDP ratio to 7.0 percent in 1989/90 from an estimated of 4.2 percent in 1984/85 and the tax/GDP ratio to 9.4 percent from 8.2 percent over the same period where the old GDP series have been used in arriving at the ratios.

4.9 Of the planned outlay of Tk.25,000 crore at 1984/85 prices in the public sector, Tk.5,960 crore and Tk.19,040 crore were projected to be financed respectively through domestic resources and external assistance.

4.10 The target of domestic resource mobilisation in the public sector remained largely unfulfilled during the Third Plan period. Bangladesh embarked on a major macroeconomic stabilisation programme in the mid 1980s that coincided with the launching of the Third Five Year Plan. An overly cautious fiscal management subsequently helped to reduce the budget deficit whose main brunt was borne by the public sector development programme.

4.11 A review of the implementation of the structural adjustment policies during the second quinquennium of the 1980s suggests that key objectives of the structural adjustment programme during that period remained unfulfilled. A tight fiscal policy aimed at curtailing public expenditure to improve the fiscal balance was frustrated by sharp increase in public consumption expenditures. The emphasis on increasing public revenues was not strong enough and the revenue-GDP ratio stagnated while the revenue surplus was permitted to erode. Faced with revenue shortfalls due to existence of ceilings on borrowing from the banking system, the Government diverted investment resources into current consumption. A tight monetary policy was implemented through squeezing credit to the Government and the public sector was directed to reduce public current expenditure. But, the Government violated the financial discipline by diverting investment resources into consumption, which forced public investment rates to drop significantly.

4.12 Private investment rates also dropped sharply during the later part of the 1980s with the decline in public investment. The fall in overall investment rate slowed down economic growth and employment and hence hindered poverty alleviation measures.

4.13 Revenue surplus as projected in the Plan was virtually wiped out primarily because of a very rapid increase in current expenditure. Total revenue surplus amounted to a paltry sum of Tk. 1,451 crore compared to the Plan estimate of Tk. 4,983 crore, both in 1984/85 prices. The distribution of this substantial shortfall in the projected revenue surplus was as follows: 56 percent due to overrun in current expenditure projections, 32 percent due to a shortfall in tax revenue projections, and 12 percent due to a shortfall in non-tax revenue projections.

4.14 A detailed review of all relevant fiscal variables during the Third Plan period was provided in the draft Fourth Plan document printed in March, 1991.

FOURTH FIVE YEAR PLAN

A Mid-term Review

A. Public Sector Development Programme

4.15 The implementation of the development programmes (ADPs) in the public sector since 1990/91 has been on a much lower scale than what has been envisaged in the Fourth Plan.

4.16 The following table provides a comparative picture of the public sector outlay for 1990/91 through 1992/93 implemented under the Three-Year Rolling programmes and the phasing of the public sector outlay envisaged in the original Fourth Plan.

Table-4.1: Annual Phasing of the Public Sector Outlay (Tk. Crore at 1989/90 Prices)

1990/91		1991/92		1992/93		1990/91-1992/93	
Plan	Actual	Plan	Actual	Plan	Actual*	Plan	Actual
5,153	4,839	6,385	5,507	7,980	7,011	19,518	17,357

* Provisional

4.17 As is evident from the above table, the total amount of development expenditure in the public sector for the first three years of the Fourth Plan amounted to Tk. 17,357 crore at 1989/90 prices compared to Tk. 19,518 crore envisaged in the original outlay of the Fourth Plan, a shortfall of over 11 percent. The shortfall in the implementation of development programme in the public sector is ascribed to several factors: allocation of insufficient funds compared to the requirements established in the project proforma, delay in finalising project documents and release of funds, delay in procurement and lack of construction materials, equipment, etc., delay in land acquisition, delay in arranging external assistance, lack of qualified project personnel and inordinate delay in decision making by the concerned Ministries and project authorities.

4.18 Details regarding the trend in private investment during the first three years of the Fourth Plan and other related issues are discussed in the chapter on private sector. Despite about a 5 percent shortfall in private investment from the Plan projections during 1990-91 through 1992/93, the revised estimate of private investment for the Fourth Plan is Tk. 27,300 crore compared to Tk. 27,000 crore originally projected. The government has already undertaken a wide range of policy measures to boost private investment and it is expected that private investment would soon gear up.

B. Domestic Resource Mobilisation in the Public Sector

4.19 The Fourth Plan projected that the tax revenue would grow at 9 percent in real terms. The growth in tax revenue during the first three years of the Plan was precisely in line with the original projections. The projected growth rate for non-tax revenue at 11 percent in real terms was exceeded and the actual growth rate

turned out to be over 17 percent during 1990/91 through 1992/93. The Plan projected that current expenditure would grow by 3.59 percent (4 percent for 1991/92 through 1994/95) in real terms whereas the actual growth for the period 1990/91 to 1992/93 was contained well below 3 percent in real terms. As a result of improved fiscal performance, the projected revenue surplus for 1990/91 through 1992/93 was overshot by 18 percent in real terms. Table 4.2 below provides a comparative picture of the Plan projections and the actual outturn of the above fiscal variables :

Table 4.2 : Revenue Situation, 1990/91-1992/93: Projection and the Actual (at 1989/90 prices)

(Tk. crore)

	1990/91		1991/92		1992/93		1990/91-1992/93	
	Plan	Actual	Plan	Actual	Plan	Actual*	Plan	Actual
Tax	6,364	6,049	6855	6,856	7,472	7,473	20,691	20,378
Non-tax	1,160	1,293	1,250	1,617	1,388	1,641	3,798	4,551
Total revenue	7,524	7,342	8,105	8,473	8,860	9,114	24,489	24,929
Current expenditure	6,636	6,637	6,917	6,783	7,193	7,081	20,746	20,501
Revenue surplus	888	705	1,188	1,690	1,667	2,033	3,743	4,428

* Provisional

4.20 The good performance of tax revenue during 1990/91 to 1992/93 is attributed to a better collection in most heads as well as due to an impressive growth in value added tax (VAT) since its introduction in July, 1991. Of the total tax revenue, VAT worked out to be 22 percent in 1991/92 and 28 percent in 1992/93. The collection of non-tax revenue during 1990/91 to 1992/93 exceeded the Plan projection mainly because of higher profits transferred by the Bangladesh Petroleum Corporation as well as a larger amount of dividend transferred by the Bangladesh Bank. In accordance with the stipulation of the Policy Framework Paper (PFP) drawn up to implement the IMF-supported structural adjustment reforms, the Government committed to contain the growth of current expenditure below the nominal growth of GDP during 1990/91 through 1992/93. The Government has successfully contained the growth of current expenditure well below that target.

4.21 Domestic resources as a proportion of ADP on average during 1990/91 through 1992/93 ranged well above the Plan projections of 26 percent. While the slow-down in ADP implementation jirked up the percentage, the actual performance of domestic resource mobilisation would still match the Plan projections had the size of development programmes each year remained at the original level.

The Revision of the Fourth Plan

4.22 The Fourth Five Year Plan (1990/91-1994/95) was launched in July, 1990. The draft Plan was approved by the National Economic Council (NEC) in October, 1990. However, because of the change of government in December, 1990, the official communication according approval by NEC was delayed.

4.23 The Fourth Plan has been recast in the light of the progress made in investment programmes in both the public and private sectors since 1990/91. The imperatives for reflecting the objectives of the New Development Perspective (NDP) of the present Government had also to be recognized. The revised Fourth Plan has been formally approved by the NEC on March 7, 1993.

4.24 The following table provides the size and financing of the revised Fourth Plan and compares them with those of the original Fourth Plan.

Table 4.3 : Financing of the Fourth Plan (At 1989/90 Prices)

(Taka in Crore)

Financing	Total		Public		Private	
	Original	Revised	Original	Revised	Original	Revised
Plan size	68,930	62,000	41,930	34,700	27,000	27,300
Domestic Resources	33,365	34,550	10,950	11,900	22,415	22,650
External Resources (Net)	35,565	27,450	30,980	22,800	4,585	4,650

4.25 As would be evident form the above table, total domestic resources in the revised Plan outlay amount to Tk. 34,550 crore or about 56 percent compared to Tk. 33,365 crore or 48 percent projected in the original Plan. As regards the public sector outlay, domestic resources are estimated to finance 34 percent as against 26 percent estimated in the original Plan. The total outlay in the private sector is estimated to exceed the original outlay by Tk. 300 crore with domestic and foreign finance remaining unchanged in the ratio of 83:17.

Financing of the Public Sector Outlay

4.26 The estimates for financing the public sector outlay in the revised Fourth Plan along with the projections made for the original Plan are set out in table 4.4 below :

Table 4.4 : Financing of the Public Sector Outlay (At 1989/90 Prices)

(Taka in crore)

Source	Amount	
	Original	Revised
1. External Resources	30,980	22,800
2. Domestic Resources	10,950	11,900
a) Total Current Revenue	44,763	45,790
Of which		
Tax Revenue	37,714	37,400
Non-tax Revenue	7,049	8,390
b) Current expenditure	36,008	35,440
c) Revenue Surplus	8,755	10,350
d) Capital Receipts	720	490
e) Self-financing by autonomous bodies	1,475	1,600
f) Impact of Food Budget	-	540

4.27 The table above shows that the revised estimate of domestic resources for the Fourth Plan period has increased from the original estimate of Tk. 10,950 crore to Tk. 11,900 crore at 1989/90 prices. The estimated increase in domestic resources has been largely due to an impressive growth in non-tax revenue compared to the orginal projection as well as due to successfully containing the pace of revenue expenditure below what has been originally projected. There has however been a countervailing factor not accounted for in the original projection of domestic resources. The Food Budget is now estimated to siphon off over Tk. 500 crore from the total amount of domestic resources available for financing the Fourth Plan.

4.28 The revised estimates of different parameters in domestic resource mobilization for the Fourth Plan period have naturally taken into consideration the actual trend of these parameters during the first three years of the Plan. The projection of domestic resources made in the original Fourth Plan laid great emphasis on opting for stronger measures for domestic resource mobilization. It is to be noted that the Government since 1991/92 had taken adequate measures to increase the amount of domestic resources gradually. These

measures include, among others, the introduction of the VAT in July, 1991, containing current expenditures within the nominal growth of GDP, gradual strengthening of the tax administration etc.

4.29 The total tax revenue under the revised scenario is estimated to grow at 9 percent and non-tax revenue at about 15 percent while revenue expenditure is projected to grow at around 3 percent annually, all in real terms. It is important to note that the projection of tax revenue made for the original Fourth Plan has been exactly in line with the revised estimation which is based on the actual trend in tax collection for the first three years of the Fourth Plan.

4.30 Since the original projection of tax revenue had been made before the VAT system was introduced, the revised projections of different categories of taxes reflect the changes affected through the imposition of VAT on commodities imported and locally produced. VAT has replaced the previous sales tax at the import stage and excise duties for almost all domestic goods and services. The details of the revised projection for tax revenues for the Fourth Plan are the following : (i) customs duties are estimated to grow by 3.45 percent compared to 4.7 percent projected earlier because a lower growth in customs duty was the result of a slow movement in imports; (ii) excise duty is going to be fully covered by VAT at the end of the Fourth Plan with only about Tk. 100 crore being levied under the former in 1994/95; (iii) VAT is to grow by over 20 percent during the period 1991/92 through 1994/95; (iv) supplementary duty, imposed under VAT on luxury items in addition to value added tax itself, is estimated to witness a steep rise from a small base of Tk. 36 crore in 1991/92 to about Tk. 1000 crore in 1994/95; and (v) income tax is estimated to grow at 14 percent compared to 11.53 percent projected earlier. Table 4.5 gives the revised projection for major components of tax revenues for the Fourth Five Year Plan.

Table 4.5 Projection of Tax Revenue (At 1989/90 Prices)

(Taka in Crore)

	Tax	1989/90	1994/95	Total (1990-95)
1.	Customs Duty	2,194	2,600	12,025
2.	Sales Tax	512	-	733
3.	Excise Duty	1,732	100	3,356
4.	Value added Tax (VAT)	-	2,875	8,920
5.	Supplementary Duty	-	1,000	2,715
6.	Income Tax	875	1,685	6,804
7.	Land Development Tax	104	88	438
8.	Others	353	528	2,409
	Total	5,770	8,876	37,400

4.31 Non-tax revenue in real terms was originally projected to grow at a rate of 11 percent annually from Tk. 1015 crore in 1989/90 to Tk. 1710 crore in 1994/95. The revised projection envisages that non-tax revenue would grow almost by 15 percent in real terms during the Fourth Plan period. The actual total collection of non-tax revenue during the Plan period is estimated to exceed the projected amount by Tk. 1346 crore at 1989/90 prices principally on account of contributions made by Bangladesh Petroleum Corporation and Bangladesh Bank as mentioned earlier.

Capital Receipts (Net)

4.32 Capital receipts (net) shown in Table 4.4 have been in deficit in most years over the past. However, the preparation of budget estimates of various accounts and their outturn under this head reflect wide variations. For example, the 1991/92 budget estimate for net capital receipts was in the negative which turned out to be positive (over Tk. 138 crore) at the end of the year. Since the experience with the outturn of capital receipts (net) for many other years is the same, the preparation and administration of accounts under this head will have to be strengthened. A noteworthy item under this head is the deposit under various national savings schemes which has grown significantly during the recent past. The strengthening of administration for recovery of loans and advances made to the public enterprises for non-development purposes will also contribute positively towards capital receipts. The revised projection of capital receipts (net) for the Fourth Plan is Tk. 490 crore compared to Tk. 720 crore made in the original projections.

Revenue Expenditure

4.33 The original projection of resource mobilization stated that an overriding concern regarding resource mobilisation in the public sector was to put an immediate brake on the accelerating trend of revenue

expenditure and eventually to contain it within the projected amount of growth. The originally projected amount of growth in revenue or current expenditure for the Fourth Plan was below 3.59 percent in real terms. The government has been successful in containing current expenditure on average well within the original projections during 1990/91 through 1992/93. The following table provides a revised estimate for major components of current expenditure for the period 1990/91 through 1994/95.

Table-4.6 : Projection of Major Components of Current Expenditure for the Revised Fourth Five Year Plan (At 1989/90 Prices)

(Taka in Crore)

Components	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	Total 1990/91-1994/95	Growth(%) 1990/91-1994/95
1. General services	2,450	2,269	2,510	2,832	2,860	2,965	13,436	3.89
2. Economic services	660	719	678	850	954	990	4,191	8.45
3. Social services	1,880	2,000	2,238	2,337	2,421	2,510	11,506	5.95
4. Subsidies	880	700	475	212	147	152	1,686	(-)29.62
5. Debt services	655	927	882	850	953	987	4,599	8.55
6. Others	-	22	-	-	-	-	22	-
Total	6,525	6,637	6,783	7,081	7,335	7,604	35,440	3.11

Strategies and Policies

4.34 The central purpose of the macro-economic management during the Fourth Plan period is to significantly improve domestic resource mobilisation both in the public and the private sectors. The key ingredients include raising the levels of both tax and non-tax revenues and containing the revenue expenditure for unproductive purposes. In the area of taxation, many measures in both policy and administrative areas have already been undertaken and some others are being implemented. In the area of non-tax revenue, a wide array of reform measures involving financial institutions, public manufacturing enterprises and public utilities are in the process of implementation.

4.35 The major thrust of Government's resource mobilisation efforts in both the public and private sectors is to carry forward the structural adjustment reforms in a stable macro-economic environment. The Government has successfully stabilized the economy since 1990/91 which provides the foundation for structural reforms at raising internal resources and boosting investment and growth.

4.36 The three-year structural adjustment reforms under the IMF's Enhanced Structural Adjustment Facility (ESAF) that began in 1990/91 cover wide areas of the economy: finance and banking sectors, public finance, industrial and trade sectors, public enterprises, external source, agriculture, human resources and poverty alleviation, environment, etc. These wide ranging reform measures are primarily aimed at increasing internal resources and redirecting those resources towards more efficient use.

4.37 In the short-term, the effective policy of increasing resources in the public sector is to contain revenue expenditure, especially unproductive revenue expenditure. In accordance with the target of stabilization programme, the Government has successfully restrained the growth of revenue expenditure. Beginning with the Budget of 1992/93, the Government has conciously started to provide more allocations to development projects compared to revenue expenses.

4.38 In order to augment public resources on a sustainable basis, the value added tax (VAT) was introduced in Bangladesh in July, 1991. The VAT system in Bangladesh covers imports, domestic manufacturing and certain selected services. As is known, VAT is considered to be the most modern, efficient and progressive tax system and hence it is possible to expand the tax base, simplify the collection procedure and reduce evasion under VAT. In terms of revenue collection, the VAT system has performed creditably in Bangladesh since its introduction in 1991. The VAT procedures are gradually being made simpler and transparent. The administrative consolidation of VAT has however remained less than satisfactory, especially in case of services. There is also a significant scope to increase VAT collection from goods through strengthening the VAT administration. The policy of the Government in this regard is to continue to adopt measures to strengthen the VAT administration.

4.39 The main vehicle for carrying out the declared Government policy of import liberalization has been the rationalisation of customs duty structure. While the Government wants to provide protection to domestic industries, it is also conscious about the fact that there is a limit to protection. The rate of protection is determined in accordance with a legal procedure and the Tariff Commission advises the Government on protection. The Government policy on customs duty is in line with its policy of open and competitive economy.

4.40 In order to make the income tax system more efficient and progressive, a fundamental structural change was effected since 1992/93. The 'filing threshold' system was replaced by the conventional 'exemption limit'. In conjunction with this structural change, the Government has been aiming at reducing the income tax rates, widening its coverage in the economy, eliminating the complexities of existing income tax law and strengthening the tax administration.

4.41 As regards framing the policy for company income tax, no reliable account is available regarding the benefits of fiscal incentives. As such, studies would have to be undertaken to find out the correspondence between costs and benefits of fiscal incentives. Results of such studies are expected to guide in designing government policies regarding the nature and the quantity of fiscal incentives to be offered to the private sector.

4.42 The prospects for increasing non-tax revenue beyond the magnitude projected in the Plan depend on expediting the various structural adjustment measures which are currently under implementation. The financial sector reforms, restructuring of public enterprises and the government departments and the policy of privatization remain the central elements of structural reforms.

4.43 Under the financial sector reform programmes, the interest rate structure has been substantially liberalised, actions to improve the performance of the nationalised commercial banks have continued, a programme to further develop the banking and financial system and to improve banking supervision and regulation has been initiated, amendments to banking law have been made to allow effective prosecution of defaulters of bank loans and the initial steps towards promoting monetary and capital market development have been undertaken. A profitable commercial banking network will contribute positively towards raising government revenue.

4.44 A stable macroeconomic management and the continuing positive interest rate in the economy have substantially expanded the amount of savings mopped up by the various national saving schemes in recent years. It is expected that the amount of savings to be mobilised through these small savers' schemes will accelerate beyond what has been estimated in the Fourth Plan.

4.45 The Government's programme of voluntary separation of labour and restructuring of public enterprises will continue to improve domestic resource mobilisation in the public sector. For example, the retrenchment of excess labour in the Bangladesh Railway and the elimination of system losses in the power sector may immediately save the Government exchequer an amount of over Tk. 1,000 crore.

4.46 Experience with public enterprise reform in other countries suggests that privatisation is the most effective way of eliminating public enterprise losses and enhancing their efficiency. The Government has also chosen privatisation as its pricipal policy towards public enterprise reform. However, the implementation of the policy of privatisation needs careful, efficient and speedy handling.

Domestic Resource Mobilisation in the Private Sector

4.47 Bangladesh has had a very low savings rate even compared to the countries in the South Asian region. One of the reasons for low savings rate in Bangladesh is that public savings have been consistently negative in Bangladesh[2]. Private savings, albeit low, have been positive in the country. Although its actual magnitude is not available, households account for the single largest component of gross domestic savings in Bangladesh which is true of other Asian countries as well.

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[2] To account for the true picture of savings in the public sector, one needs to deduct non-investment development expenditure from the revenue surplus.

Financial Savings

4.48 It has been found that of the increase in financial savings in Bangladesh that had taken place during 1973-84, an increasing proportion was accounted for by the acquisition of income yielding financial assets. Two policy issues that are apparent from the foregoing discussions are that measures are to be taken for encouraging household savings and that the rate of return on financial assets will have to be kept sufficiently attractive to tap more savings through the income-yielding financial assets. The amount of savings through the various instruments of the national savings scheme has in the recent past demonstrated a significant growth. Studies on financial savings as a whole in Bangladesh have found that the real rate of return on financial assets has been an important determinant of such savings. It is, therefore, important that while the interest rate structure of the country continues to undergo adequate liberalisation, the millions of small and medium sized savers will have to remain assured of positive real returns on the myriad of savings instruments that are being offered to them. Moreover, it is also necessary to increase people's accessibility to different savings instruments all across the country.

Innovative Approach for generating savings

4.49 Some experience of the past few years has revealed that if the poor people can be organised under special supervised credit and other related inputs schemes they can rapidly increase their savings and investment through utilisation of resources with austerity and prudence. Therefore, if credit and related input delivery system can be expanded for the poor people through a proper institutional framework, the overall savings and growth of the economy would be enhanced.

4.50 During the 1970s and the 1980s various efforts were made to evolve an institutional framework to attain the objective of increased productivity, saving and income at the grass root level. Based on those experience, the local level planning may be attuned in such a way that the villagers are able to indentify their own problems and priorities by surveying their socio-economic condition and prepare their own projects on the basis of their felt needs. Within these village-based projects, pisciculture, poultry, livestock and forestry development may be given priorities. To help this bottom up planning process, it would be necessary to undertake public sector projects at the local level for establishment of agricultural schools, health clinics and institutional banking facilities for landless and the small farmers. The Government will also have to continue to expand rural infrastructure facilities including rural electricity. Should such innovative development efforts get initiated and properly implemented, they would not only generate additional household savings but would also stimulate latent initiatives of the poor and the disadvantaged.

4.51 The experience of the Grameen Bank clearly demonstrates that mobilization of domestic resources across the rural Bangladesh would have to depend on such non-traditional and innovative approaches as have been practised by it as well by other co-operative societies such as Deedar Co-operative Society of Comilla and Dhamsona Union Development Model of Savar Thana in Dhaka Districts.

The Informal Sector

4.52 Informal sector in national income estimation in Bangladesh has remained largely unaccounted for. Analysts would argue that a complete accounting of this sector might raise national income and savings.

4.53 The extent of underestimation of national income due to the the missing informal sector emanates from poor data base of the sector. Added to this is the controversy about what economic units belong to the informal sector. There are proponents advocating own-account household workers to constitute the informal sector. Others distinguish informal sector enterprises by their sizes and accept own-account small-scale activities with or without hired workers upto 4 to constitute this sector. There is, however, no universal agreement.

4.54 The features invariably observed for informal sector are low investments and low skill requirement, subsistence production and income earning, high attrition following changes in the demand of their goods and services, and low productivity. The numbers of different enterprises are also very large and geographically scattered. Moreover, they are proliferating due to easier access by the gradually increasing unskilled labour force as a result of population growth.

4.55 Activities and output of informal sector are quite diverse. Besides, producing for own consumption, the activities respond to market opportunities and compete with formal sector in meeting demands for wide range of goods and services. Informal sector outputs can be grouped by types of activities. These are primary production, processing of primary production, manufacturing, repair and other services and fixed capital formation.

4.56 In order to account for the informal sector activities, the Government is contemplating to institute a mechanism to collect data on them. It has been proposed to combine both the household and establishment surveys to collect data in this regard. The data on informal sector activities would help gauge the real magnitude of domestic household savings and to formulate policies to augment them.

Non-Governmental Organizations (NGOs)

4.57 NGO activities in Bangladesh in the recent past have expanded manifold. For a number of years, the NGOs and private voluntary agencies have been involved in assisting the poor, first, in relief and rehabilitation and then in health, education and rural development. More recently, many NGOs have shifted their emphasis on income generating activities so that their beneficiaries can become self supporting and self-reliant. In most cases, they work in rural areas and their target population generally includes the landless and the marginal farmers, the disadvantaged women, the children and the youth. They are involved in a variety of income-generating activities in agriculture, handicrafts, rural industry, food processing, infrastructure and other development services. In addition, most of the agencies are also involved in non-income generating services which include adult literacy, education, maternal, child and adult health and nutrition, provision of drinking water and family planning and thus also indirectly contribute to rural welfare.

4.58 Many NGOs have developed understanding of the local institutions and of socio-cultural environment. Their process of involvement with the local problems and motivational work are able to bring together the target population into productive activities. NGOs have been often successful in organising the rural population around traditional vocations for generating additional income and have been able to promote low-cost technologies as well as implement innovative ideas. The lessons from their experience can be usefully incorporated in designing and implementation of projects aimed at poverty alleviation and employment/income generation for the rural poor.

4.59 The Government is aware that effective policies towards NGOs can significantly increase the mobilisation of domestic resource in the country. The policy of the Government is to encourage the well motivated and well-tested NGOs to expand their activities in the areas of poverty alleviation and human resource development. There is evidence that overhead expenses of many NGOs is relatively high. Therefore, it is necessary to bring down the overhead cost of those NGOs to make them cost-effective. The Government also encourages, as a matter of policy, healthy competition among NGOs which will bring down the delivery cost of services provided.

4.60 The wide array of macro-economic reforms already initiated by the Government is expected to help the NGOs to perform a vigorous role in domestic resource mobilisation. A stable macro-economic environment is also expected to augment domestic savings of the informal sector and create an enabling environment for increasing savings in the private sector through various innovative approaches discussed above.

CHAPTER - V

BALANCE OF PAYMENTS AND EXTERNAL RESOURCES

5.1 As in the case of domestic resources mobilization, balance of payments and external resources can be approached both from the conventional and innovative standpoints. The conventional approach highlights the current gap between import payments and export receipts and concentrates on the mechanism through which this gap can be filled up by way of appropriate fiscal, monetary and commercial policies. Inflow of external resources is then examined in the context of balance of payments as well as investment-savings gaps.

5.2 The innovative approach describes the balance of payments and external resources problems of Bangladesh in the context of focus on potential dynamics of human resources development.

Conventional Approach

5.3 Bangladesh's external sector has been characterised by a continued trade deficit. Exogenous factors such as the vagaries of nature, international prices of exports and imports, and the availability of external economic assistance continue to exert pressure on the balance of payments position of the country.

Review of the Third Five Year Plan

5.4 Despite repeated floods, cyclones and droughts affecting the country's economy and causing dislocation in both import and export trade, the balance of payments situation was comfortable during most of the Third Plan period. The total inflow of external assistance is estimated to have amounted to US $ 7,797 million, thereby exceeding the overall balance of payments gap of US $ 6,356 million by about 22.7 perent during the Plan period. The major factors contributing to the improvement in the external sector have been approximately a 28 percent increase in export earnings vis-a-vis about 5 percent increase in import payments, a rapid growth in workers' remittances which overshot the target by about a 58 percent, and a 7.6 percent increase in aid disbursement. However, around 15 percent rise in amortization of MLT debts eroded a large part of this gain in external resources. Furthermore, the trade gap increased at an annual average rate of 3.1 percent compared to 3.0 percent envisaged for the Plan period while there was a negligible growth in the current account balance as against the Plan expectation of a 2.9 percent growth, largely because of a much higher than projected growth in remittances and exports. A statement summarizing the balance of payments situation during the Third Plan period is given in Table 5.1.

Table -5.1 Balance of Payments Situation during the Third Plan Period (1985-90) (At 1984/85 Prices)

(In Million US $)

Catagory	Projection	Actual	Achievement (%)
Import Payments	**(-) 17,010**	**(-) 17,761**	**104.4**
a. Goods (c.i.f.)	(-) 14,677	(-) 15,445	105.2
b. Services	(-) 2,333	(-) 2,316	99.3
Export Receipts	**7,140**	**8,660**	**121.3**
a. Goods (f.o. b.)	5,384	6,881	127.8
b. Services	1,756	1,779	101.3
Balance of goods & services	(-) 9,870	(-) 9,101	92.2
Remittances	2,233	3,523	157.8
Current Account Balance	(-) 7,637	(-) 5,578	73.0
MLT debt repayments	(-) 678	(-) 778	114.7
Balance of payments gap	(-) 8,315	(-) 6,356	76.4
Aid Inflow	7,245	7,797	107.6

Import Trends

5.5 Total imports during the Plan period is estimated at US $ 15,445 against the target of US $ 14,677 million with an annual average growth rate of 6.0 percent compared with the Plan target of 2.8 percent. The

Plan projected foodgrains imports to fall progressively to 1.50 million tons in 1989/90 from 2.60 million tons in 1984/85. However, total imports during the Plan period increased to 9.64 million tons compared with 8.10 million tons envisaged in the Plan. On the otherhand, import of intermediate goods grew at 4.0 percent annually against the Plan target of 7 percent and the share of consumer goods including foodgrains declined in conformity with the Plan expectation. But in sharp contrast to the Plan projection of a relatively slower growth of 3.4 percent, capital goods imports during the Plan period grew at a higher rate of 12.2 percent. The capital goods imports increased as the project aid disbursements grew steadily both in nominal and real terms over the Plan period.

5.6 The annual import requirement of petroleum was all time high during the Plan period due to the growing demand of petroleum in the country. The import demand of edible oil and cement also grew at much faster rates than the target because of lower than expected production in case of edible oil and a persistently higher growth in the construction activities in the country. However, contrary to the Plan's expectation of a 9.4 percent growth, fertilizer import declined markedly to 375,000 tons in 1989/90 from 666,000 tons in 1984/85. Projected and actual imports of selected commodities are presented in Table 5.2.

Table-5.2 Merchandise Imports during the Third Plan Period (1985-90) (At 1984/85 c.i.f. Prices)

(Value in Million US $)

Commodity	Unit	1984/85		1989/90			
		Qty.	Value	Projection Qty.	Projection Value	Actual Qty.	Actual Value
Foodgrains	**Million tons**	**2.6**	**507**	**1.5**	**261**	**1.5**	**283**
1. Rice	Million tons	0.7	176	...	...	0.3	75
2. Wheat	Million tons	1.9	331	1.5	261	1.2	208
Non-Food			**2,193**		**2,845**		**3,255**
1. Edible oil	'000' tons	136	103	115	89	425	280
2. Oil seeds	'000' tons	28	11	100	32	50	15
3. Petroleum products	'000' tons	634	152	600	144	1,000	239
4. Crude petroleum	'000' tons	985	226	1,000	230	1,000	229
5. Cotton	'000' bales	236	79	415	138	375	125
6. Staple Fibre	'000' bales	10	3	10	3	25	8
7. Yarn	Million lbs	56	59	30	32	45	47
8. Textiles		...	45	...	46	...	193
9. Fertilizer	'000' tons	666	137	1,044	215	375	77
10. Cement	'000' tons	711	32	890	40	1,800	81
11. Capital goods		...	616	...	726	...	1,093
12. Others		...	730	...	1,150	...	868
Total			2,700		3,106		3,538

Export Performance

5.7 The performance of exports during the Plan period was much better than projected. The Plan envisaged total export earnings to grow at an average annual rate of 4.6 percent, those of traditional exports at a rate of 1.9 percent and non-traditional exports at 9 percent. Against this, the actual performance was 11.1 percent, 3.5 percent and 21.5 percent respectively. Total export earnings during the Plan period stood at $ 6,881 million compared to the target of $ 5,384 million. The better export performance was possible mainly due to a higher level of export volumes of garments, frozen food, raw jute, leather and urea.

5.8 Despite a fall in demand for Bangladeshi jute goods, in the world market , the country's raw jute exports expanded substantially during the four out of five years of the Plan. However, the target for jute goods exports

could not be attained although there were some increases in their exports as compared with the benchmark level. A substantial shortfall occurred in tea exports during the Plan period. Tea exports declined to 22.6 million kgs. in 1989/90 against the Plan projection of 34 million kgs.

5.9 There had been a rapid growth of non-traditional exports especially readymade garments, leather and frozen food during the Plan period. Earnings from garments increased steadily over the Plan period and amounted to US $ 514 million in 1989/90 thereby exceeding the target of US $ 193 million by as high as 166 percent in the terminal year of the Plan. The target for leather exports could be fulfilled. Moreover, production as well as exports of frozen food grew very fast. Frozen food was earmarked as the "Thrust Sector" in the export policies of 1986/87 and 1987/88. Frozen food exports far exceeded the target and reached a level of 48 million kgs. in 1989/90 compared with the target of 37.4 million kgs. Expansion of domestic production capacity enabled Bangladesh to export substantial quantities of urea during the last three years of the Plan. Export of vegetables had also risen at a more rapid rate than the Plan expectation and exceeded the target. In 1989/90 vegetables exports stood at 5,563 tons compared with 3,900 tons envisaged in the Plan. A relatively better export performance was recorded in respect of naphtha, furnace oil, handicrafts, dry fish, wires and cables and some other minor items during the Plan period.

5.10 Projected and actual merchandise exports by commodities during the Third Plan are presented in Table 5.3.

Table - 5.3 Merchandise Exports during the Third Plan Period (1985-90) (At 1984/85 f.o.b. Prices)

(Value in Million US $)

Commodity	Unit	1984/85		1989/90			
		Qty.	Value	Projection Qty.	Projection Value	Actual Qty.	Actual Value
Traditional	...	...	**609**	...	**669**	...	**723**
1. Raw jute	Million bales	1.4	150	1.7	155	2.1	221
2. Jute goods	'000' tons	480	399	590	440	545	449
3. Tea	Million kgs.	25.9	60	34.0	74	22.6	53
Non-Traditional	...	**330**		**507**		**870**	
1. Leather	Million sft.	...	68	...	125	157	134
2. Frozen food	Million lbs.	20.0	86	37.4	123	47.9	108
3. Vegetables	'000' tons	2.6	4	3.9	6	5.6	8
4. Tobacco and betel leaf	...	...	3	...	3	...	1
5. Garments	Million pieces	75	116	125	193	...	514
6. Newsprint & paper	'000' tons	20.5	10	25.0	12	5.3	2
7. Others	...	...	43	...	45	...	103
Total:			**939**		**1,176**		**1,593**

Terms or Trade

5.11 The commodity terms of trade improved substantially in the year 1984/85 as a result of recovery in world trade. This upturn was, however, reversed in 1985/86 when the terms of trade deteriorated by 18.4 percent largely due to a 27.5% decline in the average export prices as growth in developed countries became sluggish. Fall in the export prices of raw jute, jute goods and tea were mainly responsible for the decline in average export prices. During 1986/87, the terms of trade improved by 13.6 percent and the terms further improved by 15.1 percent in 1987/88. The terms of trade, however, deteriorated by 9.0 percent in 1988/89 and remained almost unchanged in 1989/90. Import and export price and the terms of trade during the Third Plan period are shown in Table 5.4.

Table - 5.4 Terms of Trade during the Third Plan Period (1985-90) (1979/80 = 100)

Year	Import Price Indices	Export Price Indices	Terms of Trade
1984/85	100.8 (-0.1)	108.8 (21.2)	98.2 (21.2)
1985/86	98.5 (-11.1)	78.9 (-27.5)	80.1 (-18.4)
1986/87	89.9 (-8.7)	81.8 (3.7)	91.0 (13.6)
1987/88	91.4 (1.7)	95.7 (17.0)	104.7 (15.1)
1988/89	97.2 (6.3)	92.6 (-3.2)	95.3 (-9.0)
1989/90 (Estimate)	102.6 (5.6)	99.0 (6.9)	96.5 (1.3)

Note : Figures in parentheses indicate annual percentage changes.

Workers' Remittances

5.12 The Third Plan had projected an annual average growth rate of 3.8 percent in remittances. However, the actual level of remittances exceeded the target growing at an annual average rate of 9.6 percent. Total remittances during the Plan period are estimated at US $ 3,523 million against the target of US $ 2,233 million.

Exchange Rate Policy

5.13 Bangladesh is pursuing a flexible exchange rate policy. Because of relative trade weight and international trade practices, US dollar is used as the intervention currency. This provides a mechanism for gradual adjustment of the nominal exchange rate of Taka with fluctuations in the currencies of Bangladesh's major trading partners in relation to the reference currency. The exchange value of Taka depreciated by about 21.1 percent during the Plan period. The Taka-dollar exchange rate stood at 32.92 in 1989/90 as compared to 25.96 in 1984/85.

5.14 While Taka depreciated in nominal terms by 21.1 percent, the value of exports increased in real terms by 11.1 percent during the Plan period as against the Plan target of 4.6 percent. Although the depreciation of the exchange value of Taka helped export growth, there were a number of constraints which impeded the growth of exports. There was a demand constraint in developed economies. Adjustment of production structure in favour of export was difficult because of inadequate investment. Although Taka depreciated in nominal terms, the effect of such depreciation was partly neutralized by domestic inflation. Though the exchange rate in nominal terms was Tk. 32.92 in 1989/90, the real exchange rate was estimated to be Tk. 13.00 only. While as indicated above the nominal exchange rate depreciated by 21.1 percent during the Third Plan period, depreciation in real terms was 22 percent. Because of exchage rate depreciation and other incentives, both traditional and non-traditional, exports increased. But non-traditional exports showed much greater flexibility.

5.15 Because of a small share in global trade, success in expansion of Bangladesh export will mainly depend on competitiveness of the products in terms of both quality and cost. Improving the access to markets of developed countries is also important. Export of readymade garments is a case in point. It may be mentioned that the fall in the value of Taka made imports costlier. This is also one of the reasons for the unfavourable movement of the terms of trade over some years.

Foreign Aid Inflow

5.16 The Third Plan envisaged a growth rate of 3.1 percent of foreign aid disbursement compared to 3.3 percent under the Second Plan. However, the disbursement rate of foreign aid over the Plan perod was 4.7

percent due to a faster growth in case of project aid. The levels of commitment and disbursement of aid during the Plan period were US $ 8,479 million and US $ 7,797 million respectively compared to US $ 11,513 million and US $ 7,245 million envisaged in the Plan. Total disbursement has increased by 7.6 percent over the planned levels despite an 10.6 percent shortfall in commodity aid disbursement. Higher disbursement of 27.0 percent in respect of project aid contributed to an overall growth in aid disbursement. Despite a loss in foodgrains production due to floods and droughts, total food aid disbursement did not exceed the target as the government resorted to commercial import of foodgrains.

5.17 The Plan assumed an improvement in aid composition in favour of commodity aid. Since there was a larger disbursement of project aid than envisaged, the composition of aid moved in favour of project aid rather than commodity aid. Because commitments and disbursements were stagnant, commodity aid disbursement as a percentage of total aid package was always lower during the Plan period than the benchmark level and declined sharply to 27.6 percent in 1989/90 from 34.0 percent in 1984/85. Table 5.5 presents commitment and disbursement position of foreign aid during the Third Plan peiod.

Table - 5.5 Commitment and Disbursement of Foreign Aid during the Third Plan (1985-90) Period (At 1984/85 Constant Prices)

(In Million US $)

Category of Aid	Commitment			Disbursement		
	Plan Projection	Actual	Achievement (%)	Plan Projection	Actual	Achievement (%)
Food	1,190	1,146	96.3	1,240	1,184	95.5
Commodity	3,245	2,369	73.0	2,695	2,408	89.4
Project	7,078	4,964	70.1	3,310	4,205	127.0
Total:	**11,513**	**8,479**	**73.6**	**7,245**	**7,797**	**107.6**

Debt Service Liabilities

5.18 External assistance has contributed to the growth of the economy. The gradual decline in the proportion of grant to total aid, large structural trade deficits, savings/investment gaps, low growth of domestic revenue coupled with rapid growth of current public expenditures have contributed to increase public indebtedness. With gradual expiry of the grace period, payment liabilities are mounting with the resultant pressure on total foreign exchange earnings. Debt service liabilities during the Third Plan period are shown in Table 5.6

Table - 5.6 Debt Service Liabilities of Medium and Long Term Loans during the Third Plan Period (1985-90) (At current Prices)

(In Million US $)

Year	Interest	Principal	Total	Total Export Earnings	DSL as a % of Export Earnings
1984/85	64.0	106.0	170.0	940	18.1
1985/86	72.8	110.9	183.7	845	21.7
1986/87	81.3	136.3	217.6	1065	20.4
1987/88	123.0	166.0	289.0	1219	23.7
1988/89	123.6	170.1	293.7	1300	22.6
1989/90 (Estimate)	114.4	176.0	290.4	1529	19.0

5.19 The debt service liabilities of M.L.T loans have grown at an annual average rate of 11.3 percent over the Third Plan period against a 10.2 percent growth in export earnings in nominal terms thereby increasing pressure on the capacity of the country to service its debt obligations. The pressure will exacerbate as more loans become due for repayment. The ratio of debt service payments to exports was always higher than the benchmark level of 18.1 percent during the Plan period. Debt service liability is increasing as a result of increasing quantum of loans and a rising cost of aid. The total outstanding debt of Bangladesh as of June, 1990 stands at US $ 10,659.2 million including medium and long-term debt of US $ 9,696.9 million. The total

debt service payments for the year 1988/89 was US $ 330.6 million representing 19.6 percent of the value of exports of goods and services and 13.4 percent of total foreign exchange receipts.

Import and Export Policies

5.20 Prior to 1985/86, Bangladesh had an import policy characterised by extensive quota restrictions and bans. In order to make the import policy responsive to the efficient growth of domestic industries, a number of reform measures was adopted during the Plan period for rationalization, simplification and liberalization of imports. Beginning with the 1985/86 Import Policy, a new system of showing products in two lists, Negative and Restrictive lists, was adopted. Items not appearing in either list were made freely importable. Since 1987/88, the number of items in these lists were gradually reduced. In line with the government's avowed intention of continuing a policy of rationalizing trade and industrial policies and to help the importers to plan their procurement on a longer term basis, a new Two Year Import Policy has been announced from 1989/90. The import policy now contains only a single list called Control List and all other items are freely importable. Some of the items in the Control List can be imported by interested importers on fulfilment of certain conditions. The requirements for registration of importers, exporters and indebtors have been simplified. Moreover, the industrial consumers now get their Import Registration Certificates, Import Entitlements and Pass Books delivered from the Board of Investment. All items importable by industries have also been made so commercially as well to assist the smaller industrial units to maximize their capacity utilisation and free the importers from the burden of import trade. Other major reform measures in the import regime included simplification of import procedures, gradual expansion of imports through the Secondary Exchange Market (SEM), relaxation of quantitative restrictions, rationalization of tariffs, etc.

5.21 Diversification and improvement of quality of export products, encouragement for setting up of backward linkage facilities, adoption of crash programmes for some prospective export oriented products and streamlining of procedures continued to be the major objectives of Export Policy during the Third Plan period. Incentives and facilities comprising both financial and non-financial were made available to the exporters to boost exports. Major incentives included (a) concessional credit facilities; (b) expansion of Export Performance Benefit; (c) import of capital goods machinery for export oriented industries at a concessional rate; (d) award of President's trophy to outstanding exporters annually; (e) identification of 'Thrust Sector' every year, etc.

FOURTH FIVE YEAR PLAN

Balance of Payments Strategies

5.22 The major balance of payments objective of the Plan will be to restrain the export-import gap from widening beyond the level of foreseeable external assistance. The major Fourth Plan Strategies will consist of accelerating the pace of growth of exports vis-a-vis liberalising of imports, substituting imports on a competitive basis, containing import of non-essentials and encouraging overseas employment and home remittances. While the programme of export development and diversification will be undertaken during the Plan period, efforts will be made to utilize the existing potentials of both traditional and non traditional items. Exports of a number of products like readymade garments, frozen food, knitwear, specialized textiles and textile fabrics, footwear, leather products, electronics, electrical goods, ceramics tableware, toys, luggage and fashion goods are expected to make considerable progress during the Fourth Plan period. The Government has already announced a set of measures aimed at reviving the country's lagging jute industry. These measures include provisions relating to credit and moratorium on loan repayments, export subsidy, rationalisation of cost structure of jute mills, research and market promotion. Side by side the Government has taken several measures to discourage exports of wet blue leather and to facilitate quick switch over to production and export of value-added crust and finished leather.

5.23 The success of Bangladesh's export development programme will depend critically on the free access of the country's exports to both developed and developing countries. Apart from encouraging development of trade with developed countries, trading arrangements with the developing countries should be strengthened. The SAARC countries could significantly improve the prospect of their economic development through specialisation and trade among themselves. The flexible exchange rate policy which works as a stimulus to remittances will continue throughout the Fourth Plan period. Alongwith export promotion measures, a selective import substitution programme would be implemented during the Plan period. There are potentials to increase domestic production in both agriculture and industries sectors. Autarky in foodgrains production is expected to be achieved during the Plan period. Food import may be allowed only through food aid in order to ensure food security and sustain the VGD and FFW programmes.

5.24 Despite increased efforts for mobilisation of domestic resources, Bangladesh will continue to depend on increased real resource transfer from external sources in order to meet the balance of payments gap. The total amount of external resources that the country requires during the Fourth Plan is estimated at US$ 8,338 million (Tk. 27,450 crore) against a total import estimated at US$ 19,811 million (Tk. 65,218 crore).

Import Projections

5.25 The value of merchandise imports is projected to increase at an annual average growth rate of 5.1 percent from US $ 3,750 million in 1989/90 to US $ 4,800 million in 1994/95. In view of the expected food self-sufficiency, the value of foodgrains import is projected to fall to US $ 100 million in 1994/95 from a level of US $ 343 million in 1989/90. Thus the share of food import to the total import value will fall to 2.1 percent in 1994/95 from 9.1 percent in 1989/90. Non-food imports are projected to grow at a rate of 6.6 percent and those of intermediate goods will grow at the rate of 9.8 percent. During the Plan period, emphasis will be given on local production of investment goods. As such, import of capital goods is projected at a rate of 1.7 percent a year. The projections of merchandise imports by major commodities is presented in Table 5.7.

Table - 5.7 Merchandise Imports during the Fourth Five Year Plan Period (1990-95) (At 1989/90 Prices)

(Value in Million US $)

Item	Unit	1989/90		1994/95	
		Qty.	Value	Qty.	Value
FOODGRAINS	**Million tons**	**1.523**	**343**	**0.510**	**100**
1. Rice	Million tons	0.300	102	—	—
2. Wheat	Million tons	1.223	241	0.510	100
NON-FOOD	...	...	**3,407**	...	**4,700**
1. Edible oil & oil seeds	'000' tons	294	131	570	268
2. Crude petroleum	'000' tons	904	125	1400	193
3. Petroleum products	'000' tons	983	197	1000	200
4. Cotton and staple fibre	'000' bales	371	137	420	156
5. Yarn	Million lbs.	20	37	35	64
6. Textiles	...	...	288	...	735
7. Fertilizer	'000' tons	375	74	775	153
8. Cement	'000' tons	1606	95	1800	106
9. Chemicals (organic & inorganic)	...	...	87	...	150
10. Iron & steel (plain sheet)	...	...	177	...	250
11. Milk & cream	'000' tons	63	88	80	113
12. Sugar	'000' tons	91	44	100	48
13. Spices	'000' tons	11	13	35	41
14. Coconut oil	'000' tons	30	22	40	29
15. Medicinal & pharma-ceutical products	'000' tons	...	28	...	40
16. Dyeing, Tanning & Colouring materials	...	...	29	...	40
17. Capital goods		...	1296	...	1410
18. Others		...	539	...	704
Total:			**3,750**		**4,800**

The major assumptions behind import projections are discussed below :

Foodgrains

5.26 Foodgrains production will be accelerated to achieve self-sufficiency during the Plan period. Imports of foodgrains are, therefore, projected to gradually decline to 0.510 million tons in 1994/95 from 1.523 million

tons in 1989/90 and total up to nearly 5.7 million tons over the Plan period compared to 9.6 million tons actually imported during the Third Plan period.

Petroleum

5.27 To reduce the dependence on imported fuel, emphasis will be given on the use of natural gas. Based on sectoral requirement and keeping in view the enhanced processing capacity of the country's only refinery after its BMRE, total import need of crude petroleum oil and POL is projected to rise to 2.4 million tons in 1994/95 from 1.9 million tons in 1989/90.

Capital goods

5.28 During the Plan period, efforts will be made to manufacture as much of capital goods within the country as possible. Imports of capital goods will be limited to specific items for which domestic production capacity does not exist. Under project aid, imports of semi-processed goods will be preferred which will encourage production of machinery and equipment locally. Capital goods import is projected to go up to US $ 1,410 million in 1994/95 from US $ 1,296 million in 1989/90.

Fertilizer

5.29 Bangladesh has already reached self-sufficiency in urea and urea is also being exported. The import of fertiliser, will, therefore, consist of TSP, MP and a small quantity of Zinc sulphate. Fertilizer import is estimated to rise to 775,000 tons in 1994/95 from 375,000 tons in 1989/90.

Cement

5.30 Import requirement of cement has been worked out as the gap between the anticipated demand and indigenous production, and is expected to increase to 1.8 million tons in 1994/95 from 1.6 million tons in 1989/90.

Other imports

5.31 Imports of some other major items like edible oil, cotton, yarn, sugar, spices, textiles, iron & steel, chemicals, milk & cream, pharmaceutical products, etc. have been projected to go up during the Plan period to meet the growing demand of these products in the country.

Export Projections

5.32 Total export earnings are projected to grow at an annual average rate of 11.6 percent in real terms as against an estimated rate of 11.1 percent in the Third Plan period. A special feature of the export regime envisaged for the Fourth Plan is that raw jute and jute manufactures are not likely to remain the mainstay of foreign exchange earnings. Instead, three key non-traditional items, i.e. garments, frozen food and leather, are expected to contribute significantly towards realisation of the targetted growth in export earnings. The shift in the growth pattern of export, from traditional to non-traditional items, is likely to continue throughout the Plan period. While traditional exports are projected to decrease marginally to $ 487 million in 1994/95 from $ 501 million in 1989/90, non-traditional exports are expected to grow at the annual average rate of 16.0 percent. Total export earnings are projected to increase from US $ 1,529 million in 1989/90 to US $ 2,650 million in 1994/95 and would amount to US $ 10,792 million for the Plan period as a whole. Table 5.8 gives the projection of merchandise exports by major commodities.

Table - 5.8 Merchandise Exports during the Fourth Five Year Plan Period (1990-95) (At 1989/90 Prices)

(Value in Million US $)

Item	Unit	1989/90		1994/95	
		Qty.	Value	Qty.	Value
TRADITIONAL	...	...	**501**	...	**487**
1. Raw jute	Million bales	2.06	125	1.80	106
2. Jute goods	'000' tons	545	337	525	325
3. Tea	Million kgs.	22.6	39	31	54
NON-TRADITIONAL	...	...	**1,028**	...	**2,163**
1. Leather	Million sft.	157	179	160	182
2. Frozen food	Million lbs.	48	138	55	158
3. Readymade garments	...	...	609	...	1,480
4. Fertilizer	'000' tons	144	21	500	74
5. Naphtha	'000' tons	59	8	50	7
6. Furnace oil	'000' tons	130	11	-	-
7. Newsprint	'000' tons	5	3	1.5	1
8. Paper	'000' tons	0.6	1	1	2
9. Handicrafts	...	...	5	...	8
10. Specialized textiles & Household linen	...	...	4	...	25
11. Knit wear	...	...	15	...	155
12. Vegetables	'000' tons	5.6	8	10	14
13. Tobacco	'000' tons	0.5	1	4	2
14. Betel leaves	'000' tons	0.2	..	2	3
15. Others	...	...	25	...	52
Total:			1,529		2,650

.. = negligible

Traditional Exports

Raw Jute

5.33 Jute plays a dominant role in the economy of Bangladesh. Currently about 30 percent of the total export earnings of the country comes from the exports of raw jute and jute manufactures. Though their share in exports has gradually declined, jute items still remain the second largest export earner after garments. In view of a large carryover stock of low grade jute which has a limited market in the outside world and the planned slow growth of output, raw jute exports, after making allowances for domestic consumption by mills and other users, are projected to decline to 1.80 million bales in 1994/95 from 2.06 million bales in 1989/90.

Jute Goods

5.34 Jute industry has been facing serious problems. Despite measures taken by the government for revitalising the industry, jute goods exports are not expected to increase during the Plan period because of a decling world demand. Exports of jute goods is projected to decline to 525,000 tons in 1994/95 from 545,000 tons in 1989/90.

Tea

5.35 Tea exports suffered a setback due to droughts and floods, and marketing problems during the closing years of the Third Plan. Consequent upon adoption of various export promotion measures, it is expected that tea exports will incoase to 31 million kgs. in 1994/95 from 23 million kgs. in 1989/90.

Non-traditional Exports

5.36 In the face of a debilitating raw jute and jute goods trade, the non-traditional exports are expected to sustain their continued upward trend during the Plan period. Non-traditional exports are projected to grow at a rapid rate of 16.0 percent during the Plan period, from $ 1,028 million in 1989/90 to $ 2,163 million in 1994/95.

Readymade Garments

5.37 Readymade garments constitute the most important and the largest export earner among all the non-traditional export items. Despite quota restrictions, garments exports have expanded very significantly since 1984/85. Export earnings from garments are projected to grow at an annual average rate of 19.5 percent, rising to US $ 1,480 million in 1994/95 from $ 609 million in 1989/90. Efforts would be directed towards diversifying export markets through increased sales to both Western and Eastern European markets and moving into higher value-added products. Backward linkages would be established by setting up specialized textiles mills for eventual stimulation of exports.

Frozen Food

5.38 Frozen food is a very important element in the export arena of Bangladesh. Shrimps figure prominently in this category accounting for more than 85 percent of the export earnings of this group. Largely through intensified exploitation of existing capture potential and through a massive shift from traditional (natural) culture to modern culture technology, the production of shrimps is expected to expand and as a result exports are expected to increase to 55 million lbs. in 1994/95 from 48 million lbs. in 1989/90.

Leather

5.39 Leather exports of the country consisted mainly of wet blue leather. The Government has taken several measures to discourage export of wet blue leather and facilitate production and export of value-added crust and finished leather. In conformity with the policies and measures adopted by the Government, the export of wet blue leather has been banned with effect from July, 1990. The projection of leather export is set at 160 million sft. in 1994/95, increasing from the benchmark level of 157 million sft.

Urea

5.40 Till 1987, Bangladesh was a net importer of urea although a small quantity was used to be exported to neighbouring countries. In addition to the existing five urea factories, two more units would go into production during the Plan period. This will raise the production of urea substantially. Urea export is projected to increase to 500,000 tons in 1994/95 from 144,000 tons in 1989/90.

Knit wear

5.41 Knit wear exports have grown very fast in recent years both because of an expansion in domestic production as well as a rise up in demand in the world market. In nominal terms, earnings from export of knit wear rose to $ 131 million in 1990/91 and $ 119 million in 1991/92 from only $ 15 million in 1989/90. New knit wear industries continue to spring up in the country to meet the demand of the foreign markets. Export receipts from knit wear have, thus, been projected to increase almost ten times to $ 155 million by the terminal year of the Plan.

Other exports

5.42 Exports of naphtha furnace oil, newsprint, paper, etc. are projected to decline or stabilize largely due to supply constraints while availability of surplus quantities is expected to increase exports of some minor items like tobacco, betel leaves, handicrafts, foot wear, ceramic products, etc. during the Plan period.

Invisible Payments and Receipts

5.43 Invisible receipts from various sources such as foreign exchange earnings of the Bangladesh Biman and the Bangladesh Shipping Corporation, income from supply of aviation fuel to foreign airlines and shipping lines, expenses of foreign ships calling at Bangladesh ports, expenditure of foreign missions in Bangladesh etc. are projected to increase to US $ 610 million in 1994/95 from the level of US $ 446 million in 1989/90. On the otherhand, payments on these accounts are expected to reach a level of US $ 650 million in 1994/95 from US $ 560 million in 1989/90.

Private Transfers

5.44 A significant growth in home remittances by Bangladeshi nationals working abroad largely contributed towards improvement in the balance of payments situation during the Third Plan period. The level of remittances during the Fourth Plan period will depend, among other things, on the outflow of migrant workers, their skills and investment opportunities available in Bangladesh. Besides, an aggressive manpower export policy would be pursued. The country is deprived of a sizeable amount of potential remittances which is routed through "Hundies" and other improper exchange arrangments. Efforts would be made to encourage free flow of foreign currency into the country. Various promotional and development progammes are under implementation for co-ordinated and integrated training for potential overseas employment, market surveys

and market promotion. Necessary arrangements are being finalized for setting up a Trust aimed at proper utilisation of remittances by Bangladeshi nationals working abroad as well as their proper establishment in the society. Bangladeshis working abroad would be given every possible assistance in terms of consular support from the Missions abroad, by the banking sector and by other different agencies in Bangladesh. Foreign exchange earnings from home remittances are expected to reach a level of US $ 761 million implying a growth of 5.1 percent per annum.

Balance of Payments Projections

5.45 Based upon the foregoing projections and assumptions, the balance of payments outlook for the Fourth Plan period has been worked out and presented in Table 5.9.

Table - 5.9 Balance of Payments Projections for the Fourth Five Year Plan Period (1990-95) (At 1989/90 Prices)

(In Million US $)

Category	1989/90	1994/95	1990-95
Import Payments	**(-) 4,310**	**(-) 5,450**	**(-) 22,668**
a. Goods (c.i.f.)	(-) 3,750	(-) 4,800	(-) 19,811
b. Services	(-) 560	(-) 650	(-) 2,857
Export Earnings	**1,975**	**3,260**	**13,528**
a. Goods (f.o.b.)	1,529	2,650	10,792
b. Services	446	610	2,736
Balance of Trade & Services	(-) 2,335	(-) 2,190	(-) 9,140
Remittances	761	975	4,326
Current Account Deficit	(-) 1,574	(-) 1,215	(-) 4,814
MLT Debt Repayments	(-) 176	(-) 350	(-) 1,343
Balance of Payments Gap	(-) 1,750	(-) 1,565	(-) 6,157
Disbursement of Aid	**1,810**	**1,737**	**8,388**
a. Food	188	100	972
b. Commodity	457	487	2,100
c. Project	1,165	1,150	5,266

5.46 The balance of payments projections show that the share of imports financed through exports would increase to 55.2 percent in 1994/95 compared with 40.8 percent in 1989/90. A projected continued improvement in export earnings in association with an estimated higher growth in remittances is expected to decrease the current account deficit to $ 1,215 million in 1994/95 from $ 1,574 million in 1989/90. Debt service ratio with respect to export earnings would, however, increase to 13.2 percent in 1994/95 from 11.5 percent in 1989/90, owing mainly to higher payments for MLT debts.

Foreign Capital Inflow

5.47 The global recession after the Gulf war as well as the events in the former Soviet Union caused a slashdown in the flow of foreign assistance to Bangladesh over the first two years of the Plan both in nominal and real terms. At current prices in terms of dollars, aid disbursement fell from $ 1,810 million in 1989/90 to $ 1,733 million in 1990/91 and $ 1,611 million in 1991/92. In view of the prevailing aid climate the Plan, therefore, envisages a decline in foreign aid disbursements to $ 1,737 million in 1994/95 as against an annual rate of growth of 4.7 percent realised during the Third Plan period. While project aid is projected to remain below the benchmark throughout the Plan period, commodity aid is envisaged to recover gradually and exceed the benchmark marginally by the turn of the Plan. Food aid will decline in line with the expected self-sufficiency in foodgrains during the Plan period.

Food Aid

5.48 Bangladesh is a food deficit area. Food is a critical item in the aid programme of the country. Besides its nutritional effect on the poorer section of the population and its critical role in times of natural calamities, food aid during recent years has become an important instrument for agricultural and rural development. It is expected that food self-sufficiency would be achieved during the Fourth Five Year Plan period. But because of vulnerability of the agriculture sector and the necessity of keeping up the VGD and the Test Relief

Programmes, food aid will continue over the Fourth Plan period. Sales proceeds of food aid will also be utilised for various agricultural and water management projects to be implemented through the ADP. A part of food aid will also be used for financing rural infrastructure. Food aid is eslimated to reach some US $ 100 million by the end of the Fourth Plan.

Commodity Aid

5.49 Commodity aid is by far the most important category of external assistance for Bangladesh as it helps maintain the flow of essential raw materials for industries and generate counterpart fund in support of the development budget. Commodity aid has been helpful in liberalising import policy. A large range of commodities such as cotton, edible oil, milk food, pig iron and billets, fertilizer, clinker, cement, tallow, soda ash, dyes and chemicals, raw materials for pharmaceutical industries, spares and accessories for jute and textile mills, engineering industries, power and transport sectors is imported under commodity aid. As already mentioned, a 10.6 percent shortfall occured in case of commodity aid disbursement during the Third Plan period. The main reason for slowdown in commodity aid disbursement was a decline in its commitment. There is a tendency among the donors to move away from commodity aid to project aid. The decline in the level of commodity aid reduced the availability of counterpart fund which in turn affected project implementation. The modality of commodity aid disbursement has also changed to the disadvantage of Bangladesh. It has become increasingly tied to the domestic market of the donors. In addition, some major donors have designated projects where the counterpart fund to be generated through their respective commodity aid progammes have to be utilised. This has severely limited the flexibility of the counterpart fund. Commodity assistance is expected to increase slightly to US $ 487 million in 1994/95 from US $ 457 million in 1989/90.

Project Aid

5.50 A higher absorption of project aid is essential for steady growth of the economy but the utilisation of project aid in the past suffered due to a shortfall in matching domestic resources availability and other implementation problems. Although project aid disbursement as a percentage of the pipeline was higher (25.3%) in 1989/90, it was only around 20% in the earlier years of the Third Plan. The pipeline of project aid has reached a level of US $ 4,601 million in 1989/90 as compared to US $ 3,703 million in 1984/85. Therefore, a quick utilisation of funds in the pipeline have to be given priority. The utilisation of project aid will depend on greater availability of commodity aid, reimbursible project aid and mobilisation of public savings. Aid utilisation will also be facilitated through project formulation prior to aid negotiations. As donor procedures sometimes complicate the utilisation of project aid, conditionalities under project aid should be flexible to the maximum extent possible in order to ensure smooth utilisation. During the Plan period, disbursement of project aid is expected to decrease from the level of US $ 1,165 million in 1989/90 to US $ 1,150 million in 1994/95. Projected commitment and disbursement of foreign aid for the Fourth Five Year Plan are shown in Table 5.10.

Table - 5.10 Foreign Aid Projections during the Fourth Five Year Plan Period (1990-95) (At 1989/90 Constant Prices)

(In Million US $)

Year	Food	Commodity	Project	Total
1989/90				
Opening Pipeline	232	504	4,840	5,576
Fresh Commitment	160	431	1,553	2,144
Total Available	392	935	6,393	7,720
Disbursement	188	457	1,165	1,810
1994/95				
Opening Pipeline	118	551	5,066	5,735
Fresh Commitment	100	425	1,325	1,850
Total Available	218	976	6,391	7,585
Disbursement	100	487	1,150	1,737
1990-95				
Opening Pipeline	624	2,858	25,447	28,929
Fresh Commitment	886	2,111	5,279	8,276
Total Available	1,510	4,969	30,726	37,205
Disbursement	972	2,100	5,266	8,338

Note: Opening pipeline for 1989/90 is adjusted for cancellations and exchange rate adjustments.

Technical Assistance

5.51 Technical assistance for both macro-planning and sectoral investment programme is very crucial. Flow of appropriate technical assistance can play a major role in strengthening the development process by

way of transferring technology. Technical assistance should be demand related rather than supply based and it should aim at gradual upgradation of skill-base in the recipient country. Technical assistance should be untied as far as possible and promote technical co-operation among developing countries.

5.52 One of the difficult problems associated with technical assistance is a synthesis between donor preference and recipient priority. The problems of diverse priority, time frame and attitudes and preferences on many occasions may turn out to be critical.

Quality of Aid

5.53 Assistance to Bangladesh should be provided as grants and on an untied basis. The need for increased commodity assistance is also of vital importance to the country. The shortage of matching funds for local expenditure on aided projects delays or even holds up project implementation. Therefore, it becomes necessary to finance local cost expenditure through external aid. External financing of recurrent cost is also sometimes needed during the initial period.

Foreign Trade Policy and Balance of Payments

5.54 The import-export policy has to be based on national development programmes and should also reflect provisions envisaged in the Plan. These policies must encourage more efficient use of limited resources. This will also have to be consistent with the policy for development of the private sector. Import and export problems will have to be managed with the ultimate objective of redemption of balance of payments crisis and to contain the import-export gap within the limit of availability of external resources.

5.55 The development strategy of the Fourth Plan focussing on poverty alleviation programmes and agricultural development is unlikely to have significant adverse impact on the balance of payments as most of these programmes and sub-sectors of agriculture have low import intensity. The import requirement for domestic production in various sectors would be minimised by improving capacity utilisation through maximisation of inter-sectoral linkages. Import substitution strategy would be followed in selected areas taking into account dynamic comparative advantage and steps would be taken so that such industries move from import zone to the export front. An export oriented industrial development strategy would be followed keeping in view again the principle of comparative advantage. The role of commercial policy would be to facilitate export oriented-cum-selective import substitution strategy simultaneously with import liberalization measures. Various policy measures would be adopted to attain the objective of outward looking industrialisation and selective import substitution. Bangladesh would continue to pursue a flexible exchange rate policy. Export promotion measures would be rationalised so as to maximise benefit to the exporters.

5.56 The structural adjustment programme implemented by the government during the Third Five Year Plan produced the desired impact on the external sector. The adjustment programme resulted in a reduction of budgetary and external deficits. The current account deficit was brought down through reduction of imports and rapid growth of non-traditional exports and workers' remittances. Bangladesh also implemented trade liberalisation measures and put into practice a number of incentive schemes for exporters. The adjustment programme was expected to serve as a catalyst to mobilise additional resources from bilateral donors and multilateral financing agencies. But there is little evidence that this has happened in Bangladesh. A depressed international demand for jute goods and quota restrictions on export of garments have resulted in lower capacity utilisation in these industries. Structural problems in Bangladesh can be better tackled by pursuing a growth-oriented adjustment over a long period.

5.57 All-out efforts aimed at expansion of the country's exports in the markets of both developed and developing countries would continue to be made by way of strengthening economic cooperation with them. Emphasis will be given on promotion of the country's external trade with the neighbouring countries, particularly with the SAARC countries. With this end in view, Bangladesh has already entered into the South Asian Preferential Trade Agreement (SAPTA) concluded in April 1993. The SAPTA envisages a concessionary tariff arrangement on duty structure among the member countries of the SAARC to boost intra-regional trade. In addition, close collaboration with EEC, UNCTAD, GATT and similar other international agencies would be maintained for reduction of tariffs and other trade barriers to Bangladesh products.

Innovative Approach

5.58 The balance of payments and external resources problem may also be described in the innovative context of human resources development of the Fourth Plan. As human resource develops, their ability to plan and implement these plans at the local-level through mobilization of local resources would increase. To support this process, institutions-financial as well as administrative-have to be restructured.

5.59 As local resource increases, the absorption capacity of the economy for the utilization of greater quantum of foreign assistance also gets enhanced. As the expansion of the economy through this strategy is primarily based on efficiency, the competitive strength of the economy also increases both in domestic production and production of exportables. Even presently, this relative efficiency of the rural sector is pronouncedly visible. Agricultural commodities in Bangladesh are produced at prices which are highly competitive in the export market. Further human resources development would strengthen this competitive advantage. Already a number of new commodities such as asparagus, mushrooms, orchids etc. are making their inroads on the Bangladesh production front. In the non-agriculture sector, garments and processed food have already carved out a position in the export market. If the economy can be properly restructured, the competitive strength of Bangladesh product can increase further. Such increase in competitive strength cannot be achieved exclusively by financial adjustment process. Financial adjustment process has to be supplemented through a massive effort of human resource development.

SAARC PREFERENTIAL TRADING AGREEMENT (SAPTA)

5.60 The most recent step towards strengthening of intra-regional economic cooperation is the agreement on the South Asian Preferential Trade Agreement (SAPTA) which was signed in Dhaka during the concluding session of the seventh summit of SAARC leaders in April, 1993. The SAPTA envisages a concessionary tariff arrangement on duty structure among the SAARC countries to boost intra regional trade.

5.61 The Dhaka Declaration adopted by the seventh SAARC summit called for, among other things, a step by step approach towards trade liberalization in such a manner that all countries in the region could share the benefits of trade expansion equitably. The SAPTA provides a framework for a series of negotiations to exchange trade preferences among the member states. The agreement underlines the imperatives of promoting intra-regional cooperation particularly in the area of manufacturing in order to enhance the productive capacity of the member countries and to promote sustained growth and development to prevent the marginalisation of South Asia's trade at the expense of larger global interests.

5.62 SAPTA may be considered as the first step towards higher levels of trade and economic cooperation in the region. The main features of SAPTA are as follows:

a) SAPTA shall be based and applied on the principles of overall reciprocity and mutuality of advantages in such a way as to benefit equitably all member states, taking into account their respective levels of economic and industrial development, the pattern of their external trade, commercial policies and tariff structure;

b) SAPTA shall be negotiated step by step, improved and extended in successive stages with periodic reviews;

c) The special needs of the least developed Contracting States (among them Bangladesh) shall be clearly recognised and concrete preferential measures in their favour should be agreed upon;

d) SAPTA shall include all products, manufactures and commodities in their raw, semi-processed and processed forms.

5.63 It is proposed that SAPTA will consist of arrangements relating to (a) tariffs; (b) para-tariffs; (c) non-tariff measures; and (d) direct trade measures. It is further envisaged that the SAARC countries will conduct their negotiations for trade liberalisation in accordance with any or a combination of the following approaches and procedures (a) Product by-product basis; (b) Across the-broad tariff reductions; (c) Sectoral basis; (d) Direct trade measures. To start with, the member countries have agreed to negotiate tariff preferences initially on a product-by-product basis.

Additional Measures in Favour of the Least Developed Contracting States

5.64 SAPTA contains provisions for additional measures, over & above those set out in the above mentioned components, for the adoption of trade facilitation and other arrangements to accord special consideration to requests from least developed countries of SAARC for technical assistance and cooperation

framework designed to assist them in expanding their trade with other member countries and in taking advantage of the potential benefits of SAPTA. The possible areas for such technical assistance and cooperation are as follows:

(a) identification, preparation and launching of industrial and agricultural projects in the territories of least developed countries which could provide the production base for the expansion of exports of least developed countries to other relatively more developed SAARC countries, instituted with co-operative financing and buy-back facilities;

(b) setting up of manufacturing and other facilities in least developed SAARC member countries to meet intraregional demand under co operative arrangements;

(c) formulation of export promotion policies and the establishment of training facilities in the field of trade to assist least developed Contracting States in expanding their exports and maximising their benefits from SAPTA.

(d) provision of support to export marketing of products of least developed member countries by enabling these countries to share existing facilities (for example, with respect to export credit insurance, access to market information) and by institutional and other positive measures to promote imports from these least developed Contracting States into their own markets;

(e) bringing together of enterprises in relatively developed member States with project sponsors in the least developed Contracting States (both public and private) with a view to fostering joint ventures in projects designed to lead to the expansion of trade;

(f) the provision of special facilities and rates in respect to shipping.

Special Treatment for the Least Developed Contracting States

5.65 In addition to other provisions of this Agreement, all Contracting States shall provide, wherever possible, special and more favourable treatment exclusively to the least developed Contracting States in forms set out as follows.

a) Duty-free access, exclusive tariff preferences or deeper tariff preferences for the export products;

b) Removal of non-tariff barriers;

c) Elimination, where appropriate, of para-tariff barriers;

d) Negotiations of long-term contracts with a view to assisting least developed Contracting States to achieve reasonable levels of sustainable exports of their products;

e) Special consideration of exports from least developed member countries in the application of safeguard measures;

f) Greater flexibility in the introduction and continuance of quantitative or other restrictions provisionally and without discrimination in critical circumstances by the least developed member countries on imports from other member countries.

Safeguard Measures

5.66 If any product, which is a subject of a concession with respect to a preference under this Agreement, is imported into the territory of a Contracting State in such a manner or in such quantities as to cause serious injury to the importing Contracting State, the importing Contracting State concerned may, with prior consultations, suspend provisionally the concession accorded under the Agreement. When such action has taken place the Contracting State which initiates such action shall notify the other Contracting State(s) concerned and the SAARC countries will collectively enter into consultations with the concerned Contracting State and endavour to reach mutually acceptable agreements to remedy the situation. In the event of the failure of the Contracting States to resolve the issue within a specified time frame, the parties affected by such action shall have the right to withdraw equivalent concession(s) or other obligation(s).

5.67 The framework agreement on the SAPTA does not make it immediately operative but only after 1995. This will afford all member countries sufficient time to examine and consider the proposed agreement in minutest detail before committing themselves to it. Its operation or implementation will depend on further negotiations among the member countries. It is flexible in many ways and a SAARC member country can unilaterally reduce its level of duty generally to all other members uniformly; it may reduce duty on a particular commodity or group of commodities applicable to all countries, or it may reduce duty on a particular commodity or group of commodities applying to selected countries of its own choice.

5.68 The framework agreement on the SAPTA is undoubtedly an achievement for increasing trade among the SAARC countries. If successful, dependence of this region for the commodities of other trade areas, specially the developed world, will reduce and at the same time a market for the products of this region will be created. Joint venture industries can also develop in the region.

5.59 The most important issue for consideration, particularly from the context of industrially backward and less diversified economies like Bangladesh, centres round the effects of intra-regional trade creating or trade augmenting moves on their future investment efforts for its sustained growth and poverty alleviation. As a late starter, Bangladesh needs new industrial investments which must be assigned top most priority. For the success and derivation of equitable benefits from SAPTA and for the advancement of SAARC cooperation, its relatively more industrially developed members have to come forward to help those member countries beginning late than others.

CHAPTER - VI

ISSUES IN THE DEVELOPMENT OF PRIVATE SECTOR

6.1 In Bangladesh, policy positions have undergone profound changes in the matter of the status of private sector in the economy. Under the First Five Year Plan, it was the public sector which was accepted as the main engine of growth. It had to be so because of the socialist overtone in the Plan. Over the years there has been a substantial shift in attitude on the weight of private sector in the economy of Bangladesh. Today there is greater societal concensus on the potential role that the private sector can and should play in the economic development of Bangladesh.

6.2 The crucial role of the private sector is evident from the fact that agriculture which still contributes about 40% of GDP is mostly in the private hands. During the First Five Year Plan period, the share of agriculture in GDP was even higher (nearly 60% in the early 1970s). Public sector expanded mainly in large scale industry and foreign trade. During the late 1970s, however, it was realized that the public sector in Bangladesh was not contributing much to development and that there was a strong case for allowing the private sector to demonstrate its potentials. The realization increased in the early 1980s partly due to the detereorating economic conditions of the developing economies arising from the second oil price hike and partly due to the emergence of newly industrialized countries (e.g. South Korea, Singapore and Hongkong) as excellent cases of development through private sector pioneered outward looking development strategies. From 1982, therefore, a series of steps were taken by the Government of Bangladesh covering the fields of trade, industry and finance for stimulating private investment. In particular, the New Industrial Policy (1982) and Revised Industrial Policy (1986) stipulated liberalization of tariffs for industrial investment with focus on reduction of discrimination against export oriented industries, disinvestment of a larger number of public enterprises to private hands, enlargement of the freelist for private investment, greater deregulation, creation of export processing zones and promotion of joint ventures.

6.3 Simultaneously, private sector investment in agriculture was further encouraged through a policy of privatization of distribution of pesticide, fertilizer, minor irrigation equipments and other inputs.

6.4 Institutional and financial support for expansion of private investment in transport, construction, trade and other services have also been expanded.

6.5 As a result, the private sector has shown some promising results. However, these developments seem to have been constrained by the following factors:

1) In agriculture, the small farmers have acquired considerable technical knowledge for improved cultivation but access to credit and other inputs particularly irrigation facilities have not expanded adequately. In addition, their investment is adversely affected by lack of marketing facilities and the presence of a large number of rent-seeking intermediaries between the primary producers and the final consumers. The same is true for a number of small and cottage industries.

2) Bangladesh has achieved considerable expansion in foodgrains production but private investment in ancilliary activities such as storage, transportation etc. have not expanded proportionately.

3) The prospects of foodgrains export from Bangladesh seem to be bright, if the foodgrain production is adequately backed by appropriate price, transportation and marketing policies. Similar prospects also exist for the export of vegetables and some non-traditional agricultural items such as mushrooms, asparagus, flowers, orchids etc. In all these areas the national private sector has already stepped in, but these private initiatives are yet to be supported in a big way by appropriate government policies.

4) Some progress has also been made to establish linkages between small and large industries through sub-contracting. This needs to be further expanded project wise and by way of sectoral policies.

5) Large scale industries particularly in the public sector are characterised by sizeable capacitor under utilization warranting the following steps :

(a) a rigorous marketing drive on the part of these enterprises to sell their products to other sectors;

(b) an effort to make the Ministries and Agencies (that formulate and implement development projects) more oriented towards the use of domestic inputs to imported inputs;

(c) restructure the inflow of foreign assistance and purchase procedures to facilitate this diversion to the use of local products;

(d) increase the efficiency of public enterprises through innovative management practices so that they can produce output at lower costs. It may be mentioned in this connection that Bangladesh labour is still one of the cheapest in the world and its quality is also good provided it is properly organised and trained (as has been the case with Bangladeshi labour working abroad). Presence of efficient public sector enterprises would stimulate private sector development and conversely.

6) The labour management relationship is one of the areas that deserves immediate attention. It has been seen that where labour and management work in greater partnership, the efficiency of enterprise, public or private, increases. The Japanese management system has very efficiently used this cooperative inclination of labour by giving it a greater stake in the enterprises.

7) Most private enterprises in Bangladesh are still run by family members. Development of a professional managerial class and use of this professional managers in private enterprises is still at its infancy. This professional class would have to be built up and private sector be induced to see the advantage of their development. The newly emerging private consulting firms, if properly organized, may play an important role in this area.

8) Bangladeshi Muslim society does not have a business community (like the Memons, Bohras in Pakistan). As a result, the entrepreneurial class has to be created from scratch. The conventional method for businessmen to turn into entrepreneurs has been through making easy money at the beginning with the help of the government (the Korean War in 1950-51 gave such opportunities to Pakistani businessmen). For Bangladeshi businessmen it was not possible to make such easy money from international trade right at the beginning. So some businessmen looked for rent-seeking opportunities inside the country and in illegal border trade. This partly explains why trade and commerce has expanded at a greater rate than investments in industries. This historical void needs to be taken into account in planning for capital formation for the manufacturing sector.

6.6 Table 6.1 shows the target and actual (estimated) investment during past Plan periods in Bangladesh.

Table-6.1 Target, Estimated Investment and the Trend Levels of Private Investment during Various Plan Period of Bangladesh.

(In Crore Taka)

		First Five Year Plan (1973-78)	Two Year Plan (1978-80)	Second Five Year Plan (1980-85)	Third Five Year Plan (1985-90)
1. Total Allocation (at base-year prices)		503	600	6,100	13,600
2. Average Annual Allocation (at 1972-73 prices)		101	125	414	530
3. Estimated Plan period Investment (realised)	i. at base-year prices	436	957	4,969	9,882
	ii. at 1972/73 prices	436	399	1,684	1,926
4. Average Annual Investment (realised)(at 1972/73 prices)		87	200	337	385
Average Annual Increase in (at 1972/73 prices)	Allocation:		24%	231%	28%
	Estimated Investment		130%	68%	14%

6.7 Table 6.1 shows that the average annual allocation for the First Five Year Plan at 1972-73 prices was Tk. 101 crore which has been raised to Tk.125 crore in the Two-Year Plan representing an average annual increase of about 24 percent over the preceding Plan period in real terms. However, the realized average annual investment during the First Plan period was Tk. 87 crore at 1972-73 prices. But the investment rose significantly to Tk. 200 crore per annum during the Two-Year Plan period which showed an acceleration of 130 percent in real terms. This increase in the realized investment, in fact, led to even higher target for the private sector under the Second Five Year Plan. In the Second Five Year Plan, annual target rose to Tk. 414 crore at 1972/73 prices indicating an average annual increase of 231 percent over the preceding Plan period. However, the realized average annual investment increased by 68 percent compared to the level of estimated investment over the Two-year Plan period. The average annual target for the private sector during the Third Five Year Plan period increased by 28 percent to Tk. 530 crore at 1972-73 prices. The realized investment increased by 14 percent per annum over the level recorded during the Second Five Year Plan period.

6.8 However, a comparision of sectoral investments in the private sector as given in Table 6.2 shows relatively better performance of the private sector in respect of investments in trade, commerce and in housing in preference to industry during the Third Plan period.

Table-6.2 Comparison between the Third Plan (1985-90) and Revised Fourth Plan (1990-95) : Private Sector Target, Realized Investment and Relative Share.

(In Crore Taka)

Sector	Third Five Year Plan, 1985-90 (at 1984-85 prices)		Fourth Five Year Plan, 1990-95 (at 1989-90 prices)
	Target %	Realized Investment	Target (%)
Agriculture	4,400 (32.4)	2,311 (23.4)	3,678 (13.5)
Industry	3,200 (23.5)	1,314 (13.3)	4,420 (16.2)
Physical Planning & Housing	3,650 (26.8)	1,995 (20.2)	4,206 (15.4)
Transport and Communications	1,500 (11.0)	2,137 (21.6)	3,909 (14.3)
Trade & Other Services	850 (6.3)	2,125 (21.5)	11,087 (40.6)
Total	13,600 (100.0)	9,882 (100.0)	27,300 (100.0)

6.9 The table shows that during the Revised Fourth Plan period, the estimated investment is likely to follow more or less similar trends with some minor changes. In the industrial sector, private investment is envisaged to increase from about Tk. 1314 crore to about Tk. 4,420 crore. The expectation is based on the potentials that are visible and imminent.

6.10 The private enterprises are often viewed as basically of rent seeking type in Bangladesh. They would demand various protection from the government in the form of subsidized interest, subsidized inputs prices (of gas, electricity etc.) subsidized foreign exchange (at official rate), lower wages (preferably without minimum wage legislation), high tariff on import competing products etc. The other view is that the greatest bottleneck to private investment is regulatory control on the investment process by the government officials and the accompanied corruption and inefficiency that go with it. This view also maintains that the structural adjustment in the financial sector that has taken place so far in Bangladesh since 1982, is not adequate and further deregulation of administrative control accompanied by an enhanced incentive pacakge are immediately needed to create opportunities for investment. There is truth in both the views. However, the aim of the new

industrial policy should be to minimise inefficiencies arising out of protective conditions that still exist in the public sector and put more emphasis on competition particularly through technology transfer, adaptation and upgradation.

6.11 Some private enterprises in Bangladesh are working under conditions of monopoly or oligopoly. Greater efforts have to be made also to reduce this monopolistic/oligopolistic control through competition. Again technology transfer, upgradation and adaptation can help through promoting greater competition among enterprises resulting in lowering the costs of production. The Korean Institute of Science and Technology of South Korea had played a significant role in promoting industrial development in the country through technology development and adaptation. In Bangladesh too there is a need to co-ordinate the Research and Development activities of the various agencies with this particular aim in view.

6.12 Issues on private investment have been dealt appropriately in the sectoral chapters. On the macro front, it may be highlighted that the Fourth Five Year Plan, aims at identifying the dynamic sectors for private investment for focussing special attention (already industries like textile, leather, garments, electronics etc. have been designated as avenues of promise and potentials in Bangladesh) and to ensure that the following considerations are taken better care of :

(a) removing inefficiency generating protection to infuse competitive strength in the enterprises.

(b) Promoting technology transfer, adaptation and upgradation as elements of building competitive strength in and

(c) restructuring the incentive package in such a way that it rewards risk taking and efficiency rather than rent seeking and inefficiency.

6.13 In the past, structural adjustment paid more attention to inflation, balance of payments deficit, and foreign exchange reserve position than to expansion of the domestic market. As a result, the financial sector showed some improvements but it did not expand the internal market through adequate growth in the real sector. The Fourth Five Year Plan intends to bring about this improvement by integrating the financial sector with the real sector with the pronounced objective of broadening about the domestic market. How this would stimulate private investment has been described in Chapter-II.

6.14 It is relevant to recall that the estimates of private sector investment in the Fourth Plan is mainly based on information collected from the country's financial institutions. However, the economy has a large non-monetized sector. Further, a substantial amount of private investment is self-financing or partly financed by informal money market. These are not usually accounted for in the estimates of private investment. Finally monetary (particularly credit) policy in Bangladesh, need to be restructured so that the share of the private sector to the total domestic credit improves.

6.15 Mentionably, share of private sector in the total domestic credit was only 24 percent at the end of 1973/74, which increased to 69 percent at the end of the Third Plan. This ratio is expected to increase to 73 percent by the end of the Revised Fourth Five Year Plan.

6.16 Under the Financial sector Reform Programme the monetary authorities in Bangladesh have undertaken the task of policy and institutional changes in the financial sector. The objective is to improve the functioning of the banking system so that it can play an increasingly effective role in supporting the development programmes and resource mobilisation requirements. The objective is expected to be achieved by (i) removing gradually the distorions in the interest rate structure with a view to improving the allocation of scarce bank resources, (ii) providing increased incentives for priority sector lending and making subsidies in these sectors visibly logical and transparent, (iii) promoting better monetary management by moving towards flexible and indirect instruments of monetary control, (iv) placing the banking system on a sound financial basis by establishing appropriate accounting policies including recapitalization and strengthening regulation and supervision of banks, (v) improving loan recovery through establishment of efficient loan recovery procedures and enactment of new legislation and (vi) strengthening the capital market in the country. The ultimate aim under the Financial Sector Reform Programme (FSRP) is to move gradually towards a market oriented competitive economy ensuring a larger role to the private sector.

6.17 The Government would pursue an exchange rate policy to ensure external competitiveness, support the import liberalisation programme and promote efficient import substitution industries. At present, the Real Effective Exchange Rate (REER) index is compiled and used to monitor the external competitiveness, and Bangladesh Taka is adjusted in terms of US dollar in line with the movement of REER index. Monitoring of REER index and adjustment of nominal exchange rate of Bangladeshi Taka would be followed in future.

6.18 The annual rate of monetary expansion during the Fourth Plan will be planned with the objective of containing the annual rate of inflation to 7 percent. The authorities will continue to pursue market oriented flexible interest rate policy. Floors and ceilings will be set for savings and fixed deposits, and the banks will be given freedom to fix their own rates of interest within the prescribed bounds. Floor for fixed deposits will be set at slightly higher than the expected rate of inflation, while that for savings deposits will be set at somewhat lower than the expected rate of inflation. Market oriented interest rate on lending will be followed during the Fourth Five Year Plan. It is also the intention of the government to unify the official exchange rate and secondary market exchange rate as soon as practicable. Pending the unification of the dual exchange rates, the spread between the official and secondary exchange rates will be reduced to 2 percent or less.

6.19 However, special attention has to be paid to improve the access of small farmers, businessmen and the landless in rural areas to institutional credit. It may be noted that there are large number of branches of nationalized commercial banks in the rural areas. If properly supported they can play a critical role in giving loans to the poor and the disadvantaged without collaterals somewhat on the line of the Grameen Bank. The technique of extending loans to the poor and the disadvantaged is now known to many bank officials. However, the constraints to such efforts are twofold : (a) such a system involves extra work for them because it needs intensive supervision and (b) such operations cannot be undertaken unless the banks get loanable funds at lower interest rates like the Grameen Bank. The problem can be partially met by raising the rate of interest on such loans to cover the extra costs. Since most of the poor and the disadvantaged borrow their money from the informal money market at exhorbitant rates, some increase in the interest rate of the financial institutions would not be disadvantageous if such loans are delivered to them at the appropriate time and in adequate amounts. On the other hand, this higher rate of interest on loans for these groups is likely to reduce the misuse of the fund by inefficient groups and intermediaries.

CHAPTER - VII

POVERTY ALLEVIATION, EMPLOYMENT AND HUMAN RESOURCES DEVELOPMENT

One of three main objectives of the Fourth Plan is poverty alleviation and creation of employment opportunities through human resource development. To recapitulate, the Plan assumes that the poor and the disadvantaged are assets, not liabilities and therefore, they should be brought to the centre of the development process from the periphery. The major strategies suggested for achieving these would involve: (i) integration of group-based approach with sector-based approach; (ii) community involvement in the centrally implemented projects; and (iii) participatory planning in rural areas. Past planning experience in Bangladesh shows that without the above strategies the development process (a) tends to push the poor and the disadvantaged to the periphery of planning and (b) benefits of development do not adequately percolate to the poor and the disadvantaged groups. The strategies of the Fouth Plan discussed above have, therefore, been specially devised to overcome these weaknesses of the existing planning process and allow the poor and the disadvantaged to play more creative and dynamic role in the development of the economy. The objective of poverty alleviation and employment generation has been linked to human resources development under the Fourth Plan.

7.2 Besides the above steps for poverty alleviation, the Plan envisages a growth rate of agriculture (including forestry, fisheries, and livestock) of about 3.4 percent per annum. This growth rate would induce complementory growth rate of 9.0 percent per annum in industries assuming interdependant growth rates in social and physical infrastructure. In order to ensure that these sectoral growth rates would expand employment to the maximum and could particularly accrue benefit to the poor and the disadvantaged, the Plan insists that the public sector projects should be so formulated as to accord priority to these objectives. The project proforma has already been revised to incorporate interalia this goal of poverty alleviation.

7.3 However, the problems of poverty alleviation and employment generation are too gigantic in Bangladesh. The size of the population has been estimated at 114 million in 1990 which is expected to increase to 125 million by 1995. Estimated labour force of 1990 is 37.13 million which is expected to increase to 43.88 million in 1995. The population has been projected to grow at the rate of 2.04 percent per annum during the Fourth Plan period while labour force is projected to grow at the rate of 3.40 percent per annum. The higher growth of labour force compared to the growth rate of population is accounted for by the increasing female participation rate in the labour force. The crude female participation rate was only 2.5 percent in 1974 which increased to 3.4 percent in 1981 and 6.4 percent in 1985/86. It almost doubled in five years over the first half of 1980s. The higher growth rate of female participation resulted from favorable government policy on female employment in the public sector, introduction of special food for works programme for women and the rapid growth of the garment industries during the early eighties which employ mostly female workers. A still higher growth of the garment industry is unlikely to continue during the Fourth Five Year Plan, but the government; promotional policy on female education and public sector employment will have significant impact on female labour participation during the Plan period. The labour force projection has assumed a growth rate of female labour force at around 7.2 percent per annum.

7.4 The Fourth Plan envisages to create incremental employment of about 5.05 million man-years. It may be mentioned here that during the Third Five Year Plan period, about 3.93 million man-years of additional employment was created against the target of 5.09 million man-years. The employment projection for Fourth Five Year Plan including sectoral breakdown may be seen in table 7.1

7.5 The trend in the growth rate of GDP in Bangladesh in 1980s could not be more than 3.8 percent per annum against the target of more than 5 percent. Naturally, actual generation of employment fell short of the target. In this context the Fourth Five Year Plan brings in an innovative approach to poverty alleviation and employment through human resource development. In line with this approach, the Plan maintains that the wide-spread prevalence of poverty in Bangladesh is significantly related to the lack of organizational strength of the poor. It has been found that the poor and the disadvantaged if organized, can have better access to credit and other input services even when they are virtually assetless. If adequate credit is made available to them through their organization, they can help create their own income-generation activities. This has been a major lesson from Comilla approach, the Grameen Bank and the Swanirvar-loan programmes.

Table : 7.1 Employment Projections under the Fourth Five Year Plan

(In Million Man-Years)

Sector	Estimated Benchmark 1989/90	Projection 1994/95	Increase under FFYP (1990-95)
Agriculture	12.85	14.04	1.19
Manufacturing	2.52	3.56	1.04
Construction	0.92	1.77	0.85
Electricity and Gas	0.05	0.08	0.03
Transport and Communication	2.18	2.84	0.66
Trade and other services	2.10	2.86	0.76
Health, Education, Banking and public Administration	2.63	3.15	0.52
Total :	**23.25**	**28.30**	**5.05**

7.6 Another cause of the poverty is the size and the structure of the Bangladesh labour market. The overall supply of labour is in far excess of demand and since labour productivity is low, wage payment is also very low. When labour is not organized particularly in unskilled category, wage payment can be lower.

7.7 In the past, the situation had been aggravated by repeated natural calamities. The poor and the disadvantaged in particular have very little assets to withstand such adversities particularly when they are so frequent. The inherent resilience of the poor and some bold Government actions have so far enabled them to survive under such situation. However, it also calls for a more organized action in the future.

7.8 As part of this long term response for poverty alleviation in Bangladesh, the Fourth Plan envisages the following steps.

(i) Accelerate the process of conversion of relief oriented Food For Works and Vulnerable Group Feeding Programmes into development oriented target group programme so that the poor and the disadvantaged can gradually be made self reliant over a stipulated period of time.

(ii) Restructure the allocation for sectoral investment under the Fourth Five Year Plan in favour of those sectors which promote human resources development and enhance the income particularly of the lower 50 percent of the population. During the Fourth Plan period, it is expected that the rate of growth of income and consumption of the poorer groups would be relatively high as shown in Table 7.2 below.

Table 7.2 Per Capita Income and Cereal Consumption During the Fourth Plan

	Consumption (Kg. per year)		Income Tk. at 1989-90 prices		% Change over FFYP	
	1989/90	1994/95	1989/90	1994/95	Consumption	Income
Landless Farmers	147	152	4659	5668	3.4	21.7
Small Farmers	149	152	4933	5716	2.0	15.9
Medium Farmers	164	166	5828	6705	1.2	15.0
Medium own	172	174	6021	6864	1.2	14.0
Large Farmers	177	179	7064	8057	1.1	14.0
Very large Farmers	178	179	7908	8844	0.6	11.8
Rural Informal	148	152	4331	5354	2.7	23.6
Rural Formal	185	186	12699	14092	0.5	11.0
Urban Informal	151	153	5542	6678	1.3	20.5
Urban Formal	165	166	15333	18936	0.6	23.5
Rural	161	164	6082	7067	1.9	16.2
Urban	156	157	9419	11669	0.6	23.9
Bangladesh	**161**	**163**	**6459**	**7577**	**1.2**	**17.3**

7.9 Attainment of above targets would significantly depend on the kinds of programmes and policies undertaken. It is believed that conventional project based approach not directly concerned with poverty alleviation, will not be adequate to deal with the issue. Therefore, it would be necessary to formulate special projects for rapid alleviation of poverty if desirable increases in the income and consumption of the poor are to be achieved. The success of such approach would depend substantially on the innovative strategies described earlier. Detailed implementation strategies for this process of poverty alleviation and human resources development have been given in Chapter II.

7.10 In order to achieve increased labour productivity, adequate attention has to be paid to the issue of technology adoption, transfer and development in Bangladesh. It may be noted that technological base and its management in Bangladesh is still under-developed. In agriculture, for example, technological package is mostly available for cereals especially rice and wheat. Appropriate technology to bring about desired changes in production possibilities in crops like pulses, oil seeds, jute, cotton, sugarcane etc. needs to be adopted and further improved. Research and development efforts are needed to be focused on other crops and location specific problems within the framework of a "whole farm" approach.

7.11 In the industrial sector, there is a need for research for development of appropriate technology in almost all sectors of the economy. Technological innovations in the informal sector industries for making them competitive with appropriate linkages would contribute to increasing production, income and employment.

7.12 In order to achieve the above goals, the National Council of Science and Technology (NCST) has formulated a national science and technology policy which was adopted by the Government in 1986. A Consultative Committee on Transfer of Technology has been set up to formulate a work plan for assessment of technological needs (both indigenous and imported), prepare a mid-term technology schedule including adoption of legal and financial measures and other policy measures. The assessment of technological needs and capabilities are to be carried out by instituting Technical Committees in the concerned Ministries. Details may be seen in chapter on Scientific and Technological Research.

7.13 Malnutrition is wide spread in Bangladesh. More than 75 percent households are deficient in calorie intake. The average per capita calorie intake is 1850 kcal. About 70 percent of young children suffer from moderate to severe malnutrition and 50% of infants born in rural areas are under-weight compared to acceptable levels i.e. below 2.5 kg. The health, nutrition and socio-economic problems interact with each other and are aggravated and compounded by rapidly growing and largely illiterate population. Hunger and malnutrition affect people at all ages of life. Poor nutrition undermines health. Nutrition problems encompass all ages and both sexes, although the very young, pregnant and lactating women are generally in the risk groups. In Bangladesh malnutrition is often endemic. Conditions of high prevalence include protein-energy malnutrition (PEM), micronutrient deficiencies, and parasitic infestations. Malnutrition causes considerable human and economic waste. It impairs physical growth, capacity to work and learning and earning abilities. Malnutrition is now considered both as the cause and effect of underdevelopment. Therefore, nutrition of the population must be seen as both a means for development and objective of development. The Fourth Five Year Plan tries to attack the problem of malnutrition in Bangladesh by increasing income level of consumption of the poorer section of the community in particular and dissemination of knowledge of nutrition and prevention of parasitic infection. An outline of this endeavour and its intended result may be seen in Table 7.2 given above.

CHAPTER-VIII

WOMEN IN DEVELOPMENT

Introduction

8.1 The Fourth Five Year Plan aims at integration of women into the development process. Women constitute nearly 50 percent of the total population and almost half of potential labour force in Bangladesh. Any meaningful development planning efforts must incorporate problems, prospects and aspirations of this vast multitude of womenfolk especially women workforce. Bringing women into the mainstream of development planning has, therefore, been taken as one of the major strategies of the Fourth Five Year Plan. Women issues have been made more specified and operational and efforts are being made to ascertain growth and equality more emphatically through productive use of underutilized women-power resources. Poverty, mulnutrition, hunger, illiteracy etc. are largely centered around womenfolk and as such women can act as most suitable agents for removal of these socio-economic maladies.

8.2 Substantial participation of women labour in family-based nutritional agriculture, livestock raising, tea plantation and processing, export-oriented garments, electronics, frozen fish, small and cottage industries in organized sector has made it imperative to integrate women into the main frame of planning and development. While sector-wise development programmes for women are necessary, there should also be programmes which would operate across sectors to be truly effective, because women as a group comprises a major portion of the target population in most sectors since they form a vast majority of landless and poor both in urban and rural areas.

8.3 The female population of Bangladesh has been estimated at 53.3 million during 1989-90 representing 48.5 percent of the total population. Of these, 22.0 million women are in the reproductive age group indicating serious implications for future population growth. The annual growth rate of the labour force which has been projected at 3.4 percent during the Plan period is higher than the population growth rate. This would be mostly contributed by the increasing female participation in the labour force which has more than doubled in recent times. The labour force projection has assumed the growth rate of female labour force at around 7.2 percent per annum. It is expected that the female labour force participation rate could well rise to 25 percent by the year 2000.

8.4 Possibilities of employment expansion is envisaged in the form of family labour in agriculture, specially the crop sub-sector where women can importantly participate as gainfully deployed workforce. The major source of further employment growth would be the manufacturing sector specially the small and informal manufacturing activities, non-crop agriculture and other services. In order to harness the potentials of women, conscious efforts will be needed to channelize greater investments to promote female employment.

Constraints to Women in Development

8.5 The following major constraints in bringing women in the mainstream of development have been observed :

(1) Due to gender inequality and inferior status, women in and outside the family remain vulnerable, subordinate and dependent. Traditional social institutional norms, customs and believes deter women from participating in socio-economic activities.

(2) Official statistics have failed to capture women's participation in economic activities. Substantial contribution made by women specially in agriculture, livestock, poultry and fisheries have remained unrecognised and due to such inadequacy, women have so far been left at the periphery of economic development.

(3) It is not only difficult for women to obtain paid jobs but also to get equal wages compared to men. Women comprise over 77.0 percent of unpaid family workers. Majority of the female labour are involved in unskilled and semi-skilled jobs with low returns and wages. And they generally lose their jobs to men when traditional working methods are substituted in favour of the introduction of new technologies.

(4) Female literacy is half of that of males which limits their opportunities for occupational training and skill development.

(5) Due to inadequate data base, it is difficult to design multi-sectoral or multi-ministerial approach in respect of programmes to mainstream women.

(6) There is a lack of general awareness regarding the concept of WID in favour of sectoral and gender differentiated approach in economic activities and employment.

Objectives of Women in Development

8.6 The purpose of mainstreaming women in the development dynamics is to ensure the achievement of the objectives of Fourth Five Year Plan. Attainment of a reasonable growth rate, alleviation of poverty through generation of productive employment opportunities and increased self-reliance are inextricably linked to the increasing participation of women in the development activities. The following major objectives with regard to women in development have been identified to further the cause of fuller and optimal utilization of the potentials in women :

(1) to integrate women in the mainstream economic activities so as to reduce gradually the gender disparity in all socio-economic spheres;

(2) to increase women's participation in the public sector decision making both at national and local levels;

(3) to raise the productivity and income opportunities of female labour force through skill development and training;

(4) to achieve a drastic cut in the fertility rate through enhancement of socio-economic status of women;

(5) to reduce substantially the male-female literacy gap;

(6) to raise female nutrition level and improve provision of health services to women;

(7) to enhance the participation of women in nutrition-based agriculture and maintenance of ecological balance;

(8) to reduce substantially infant and maternal mortality rates, and

(9) to ensure participation of poor 50 percent women in the development process more effectively.

Strategies and Policies for Women in Development

8.7 The focus of women in development under Fourth Five Year Plan will be on the formulation of national policies for women to ensure their participation in productive activities as well as in the decision making process both at macro and sectoral levels. Based upon the strategies and targets spelt out in the macro framework, each sector would identify integrated cluster of projects for women as well as women-specific investment packages and production programmes.

8.8 To achieve the above objectives of women in development under Fourth Five Year Plan, major strategies to be followed are :

(1) Adoption of multi-sectoral approach to the problems of women in development to make them explicit within the framework of sector based planning;

(2) Making women more productive by introducing appropriate production technology and skill development training;

(3) Diversification of women's employment both in public and private sectors through increased quota and better training facilities in non-traditional areas;

(4) Taking necessary steps for increased female education through gender-based human resource planning, free education for girls upto class ten, scholarships and stipends at all level and types of education and training institutions and reservation of female quota in educational institutes;

(5) Making provision of increased credit facilities for income generation activities to women at the local level;

(6) Increased provisions of health and nutrition to women and children, child care and accommodation facilities for working women;

(7) Promotion of appropriate technology with a view to reducing drudgery and increase productivity of women;

(8) Consideration of women as a target group in all sectoral programmes and formulation of development projects accordingly so as to ensure their effective participation;

(9) Undertaking advocacy, awareness and social mobilization programmes through the mass media and local organizations to bring a general awareness about the concept of WID;

(10) Establishment of appropriate institutions to develop monitoring mechanism for inter-sectoral and intra-sectoral co-ordination and to ensure optimal utilization of facilities meant for women in different sectors and to minimize leakages, and

(11) Development of mechanism to assess, evaluate and monitor the impact of all development projects on WID.

8.9 The main thrust of the Fourth Plan will be on raising productivity of women who are already in work and increase opportunities for new female entrants to the labour force. This will lend support to the macro objectives of attaining projected 5.0 percent growth rate of the economy and employment generation where women would form part of the productive agents both as labour and entreprenuer.

8.10 The productivity of men and women differs due to existing constraints and there are gender specific production possibilities which need specific strategies and policies to be addressed. The development objectives and strategies as well as policies with regard to women are to be placed within the context of the macro economic framework and they are to be visualized as distinct target group in all sectors of the economy. As a first step in this direction, women are to be comprehensively integrated to the development process. The Plan will initiate the process and formulate policies and strategies to achieve the long term goals of equal participation of women in development activities.

8.11 Female labour participation rate has gone up during the eighties due to increased incidence of poverty and greater awareness among women. Majority of the female job seekers are from landless small farmer households and poor informal socio-economic groups. This provides scope of integrating women with micro development of marginal and small holding farms on the one hand and landless poor informal socio-economic groups on the other.

8.12 Alleviation of poverty is the major theme of our entire planning process. The overwhelming number of the poorest of the poor are women and children. This requires the establishment of the link between the needed structural adjustments and poverty alleviation particularly the poverty of women and children.

8.13 To address the basic needs of women in extreme poverty, the Ministry of Relief and Rehabilitation instituted in 1975 food distribution through Vulnerable Group Development (VGD) programme as a relief mechanism. Since mid-1980's, there has been a progressive shift in the VGD programme to provide food in exchange of rural development and other extension services. The VGD programme with nationwide coverage providing food aid to nearly 500,000 women from among the poorest of the poor is the largest poverty alleviation programme targeted exclusively to assestless women to provide development input with the aim of enabling them to improve their economic and social condition. The programme now also covers areas like health, education, agriculture and livestock training and for sustaining the programme's development orientation, a co-ordinating council has been set up under the MInistry of Planning

8.14 While the Fourth Five Year Plan stresses the importance of supplementing sector-based planning with group based planning, the major issues of women in development are also identified to be group-oriented. Women will form separate groups in all spheres of activities under the group based approach to ensure proper input and service delivery to them. Group based planning can integrate women with development in more effective ways. Plans and programmes for productive employment including self-

employment of women from landless, small farm and poor informal socio-economic groups will raise labour productivity, output and growth which will lead to increased purchasing power of these groups and consequently household consumption of landless, small farm and poor informal groups will increase. This will exert positive impact on poverty situation and nutrition levels. Moreover, increased utilization of women for overall socio-economic development of poorer groups will facilitate the attainment of objectives with respect to education and human resources development, health, family planning and nutrition, environment protection, and other related areas.

8.15 Increase of productive employment of target group women will increase output and income of these socio-economic groups which will raise the potentials to save. Evidence shows that women's marginal propensity to save is higher than that of men. With the increase in employment, earning capacity and decision making power of women in the household, the savings and consumption of these lower income households will increase which will also exert positive impact on the economy through the multiplier mehanism.

8.16 One of the major objectives of the Fourth Five Year Plan will be agricultural diversification for the promotion of a nutrition-based agriculture. This calls for emphasis on human resources development and training, particularly for women. The participation of women in nutrition based agriculture is significant as vegetables, species, fruits, trees, fire wood, etc. are produced mostly by women in homesteads, livestock, poultry and their products are also produced and marketed by women. Fish processing and drying and similar other activities are largely performed by female labour. There are potentials to increase productivity and employment of women in these sectors.

8.17 According to official statistics of the employed women, 92 percent are categorized as non-agricultural labour of which more than a quarter are involved in rural and urban manufacturing sectors. Rural industries extend to women unskilled and semi-skilled jobs with low returns and wages. Since most of these labour are unskilled and semi-skilled, training and skill development programmes will raise productivity of these female labour.

8.18 To operationalize universal literacy programme during the Plan period, measures are underway to reduce the male-female literacy gap. A comprehensive female education policy has been taken up to provide free education to all girls upto class ten outside the municipal area. For enhancement of female enrolment and retention, uniform and mid-day tiffin for girls will be provided in selected areas. Financial support for promoting female education at all levels will be provided by geneous provision of scholarships and stipends. In backward areas, separate schools will be earmarked for girl students. Non-formal education for girls outside the school system would be provided with the help of NGOs and other community organizations.

8.19 The government is committed to Health for All by the year 2000 and with the realization that female health status is markedly low, the Fourth Plan would attach priority to female health development programmes. One of the major objectives of the health sector programme is to make provisions for visible improvement in the health status of women and children. To attach severity of malnutrition and iron deficiency anemia among women, special nutrition and immunization programme will be undertaken at the Thana level. The family planning services will be provided in a package to the household to increase overall family welfare. Adequate number of female health workers will be recru ted for dissemination of health information to rural women and school children.

8.20 In the scenario described above to achieve the development objectives of the Fourth Five Year Plan and the Perspective Plan, investments on womens' programmes are essential in order to enhance the returns of development endeavours. Ensuring women's access to education and skill training can facilitate their transition to remunerative occupations and employment through increased option in gaining access to economic resources. Improved maternal and child health would contribute to reduce fertility and population growth. Raising the legal and social status of women would help realize the gender specific development policies more meaningfully.

8.21 While planning for women, multiplicity of their role would be given due consideration. Having the prime responsibilities as child bearer, carer of children and elders and home managers, women almost always face more severe constraints and harsher choices in their use of time. Technological changes and structural adjustments, therefore, will be planned to incorporate women's concerns and needs.

8.22 To remove the unequal status of women in all spheres, changes will also be required in attitude and fundamental structure of project formulation. For mainstreaming, emphasis would be given on visibility of

women and their needs. All development policies/ projects would be formulated keeping in view that benefits including access to or control of resources are to be derived more or less equally both by men and women. All economic and social sectors, therefore, would address identifiable gender-specific constraints with quantifiable targets to be achieved within the Plan period.

8.23 Under the Fourth Five Year Plan, the general strategy would be to take up sectoral/multi-sectoral programmes with special thrust on education, health, family planning, agriculture, industry, trade and services, environment and natural resources. The broad objectives of these sectors would be framed keeping in view the necessity of extensive participation of women in these sectors. However, programmes/projects in special concern areas of women and to alter the traditional concept of women to bring about a significant change in the socio-cultural millieu would be undertaken by the Ministry of Women's Affairs as the lead Agency.

Policy Planning, Coordination and Monitoring

8.24 Due to multi-sectoral nature of women's programmes under Fourth Plan, inter-ministerial monitoring and coordination of WID aiming at the promotion of cross sectoral aspects and ensuring participation of different ministries/implementing agencies would be very important. In this connection, formation of a 'National Council for Women's Development' (NCWD) is under the active consideration of the Government. The proposed Council will have two organs namely "The Standing Committee of the National Council for Women's Development" and "The Executive Committee of the National Council for Women's Development". The Standing Committee will be located in the Ministry of Women's Affairs. The main tasks of the Standing Committee will be to monitor and evaluate the women's development projects, to identify the main constraints and potentials of women's development and to take up necessary steps for protection of legal rights of women, etc. The Executive Committee of the National Council for Women's Development will be located in the Planning Commission. The tasks of the Executive Committee will be formulation of macro policies, intersectoral coordination of WID programmes, ensuring inclusion of women component in the multisectoral projects, assessing overall development impact on women and to take up necessary steps for policy interventions.

CHAPTER-IX

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT



9.1 Awareness about the environmental health of the world began two decades ago which was echoed at the Stockholm Conference on the Environment in 1972 and lately dramatised at the Earth Summit, 1992 at Rio, Brazil. Since then the phenomenon of a constantly degrading world environment has been receiving international attention. Increased human activities have been destroying the earth's inventories of soils, forests, wetlands and grasslands. Each year 25 billion tons of topsoil are lost and 42.5 million acres of tropical forests are destroyed. The ozone layer is thining, potential for global warming and flooding the low-lying areas of the world exists. In big cities, millions breathe toxic air, and the situation will be fast worsening in excessively over populated megacities by the year 2000, one of which will be the city of Dhaka.

9.2 The General Assembly of the United Nations has taken due cognizance of these alarming decline in environment. These worries based on the foundation of empirical evidence have led to the "Report of the World Commission on Environment" and the "Environment Perspective to the Year 2000 and Beyond". International community's concern for continuous ecological decline ultimately culminated in the holding of the Earth Summit in June 1992 under the auspices of United Nations. The main agenda in the Earth Summit were (i) Global Warming: A treaty intended to curb emissions of greenhouse gases-principally carbon dioxide; (ii) Biodiversity: A treaty to slow the loss of endangered species and (iii) Agenda 21: A plan of action for the industrial nations to help poor countries develop their economies without ruining their environment or the planets.

9.3 In the Earth Summit, agreements were reached without timelimit to contain global warming and preserving biodiversity. An agreement on Agenda 21 was also reached. Bangladesh participated in Earth Summit and is a signator country of the agreements on global warming, biodiversity and Agenda 21.

Factors Affecting Environment in Bangladesh

9.4 Environment and ecological decline is essentially a global problem. But obviously it has regional and country level dimensions.

9.5 A number of important factors have been identified which would affect environment in now and in the near future:

(a) Pervasive poverty and illiteracy of the vast majority of population. Poverty is the main polluter of environment in Bangladesh.

(b) The high level of current population density along with the high rate of population growth and the concomitant pressure on natural resources;

(c) Increasing salinity in the south-western coastal belt and increasing desertification in the north-western part of the country due to unilateral withdrawal of water from the rivers at the upstream beyond its border. The biodiversity of the Sundarban has been under severe threat due to excessive salinity;

(d) Continuous falling of underground water level due to excessive water lifting for irrigation in absence of surface water because of withdrawal of water from the rivers at the upstreams;

(e) The siltation of rivers causing recurring floods due to deforestation and unplanned logging in the Himalayan foothills;

(f) Global warming could cause flooding of low-lying areas of Bangladesh coast. Up to 30% of the total land mass may be submerged due to global warming effect by the middle of the next century;

(g) Use of chemical fertilizer and pesticides causing harm to aquatic life, soil microflora etc. Fresh water fish availability has been declining as a consequence;

(h) Rapid migration of unemployed rural population to urban areas, specially to the capital city Dhaka leading to unhealthy growth of slums. This has been causing heavy pressure on urban water supply, sanitation and other physical infrastructure. It has been projected that Dhaka would be one of the mega-city (population more than ten million) out of 21 cities of the world by the year 2000. At present 40% of the 7 million population of the Dhaka city live in slums causing immense environmental pollution;

(i) Discharge of industrial wastes and urban sewerage system in the rivers;

(j) Industrial smoke and increasing vehicular emission in the big cities, and so on and so forth.

Reveiw of Past Performances

9.6 The environmental activities in Bangladesh were organised by the Department of Public Health Engineering (DPHE) through the Water Pollution Control Ordinance of 1973. Municipal bodies in different towns were also involved in some environmental management activities. The promulgation of Environment Pollution Control Ordinance, 1974 and creation of a Department of Environment Pollution Control (DEPC) were significant steps in environmental promotion in this country.

9.7 In order to promote environmental consciousness and arrest degradation, the following measures have been undertaken:

A National Environment Policy has been finalized in 1992 as a guide to long term sustainable environment friendly development. The environment policy 1992 spelt out the following objectives;

i) Preservation and improvement of ecological balance;

ii) Identifying and controlling all environment polluting and degrading activities;

iii) Minimizing the impact of natural disaster on environment;

iv) Ensuring environment friendly development in all sectors;

v) Ensuring long term sustainable/environmentally sound utilization of natural resources; and

vi) Active promotion and participation in all international initiative for the improvement of global/regional environment.

9.8 To achieve these objectives in the long-run, the Environment Policy 1992 identifies possible remedial measures to be taken up by the concerned Ministries/ Agencies:

(a) The government has attached high priority to environmental promotion, protection and preservation. This has been highlighted in national and international fora.

(b) A separate Ministry of Environment and Forests and a Department of Environment have been established.

(c) A National Conservation Strategy is under formulation.

(d) The year 1990 was observed as "Year of Environment" and the following decade has been identified as "The Decade of Environment";

(e) Environmental concerns have duly been recognised by the development planners and decision-makers. This has been reflected through inclusion of environmental issues in all development projects. Besides, Environmental Impact Assessment (EIA) by the Ministry of Environment and Forests has been undertaken. In order to consider the environmental impacts of the public sector development projects, the Minister for Environment and Forests has been included as a permanent member of the Executive Committee of the National Economic Council;

(f) Formulation of a comprehensive and updated ordinance named "Bangladesh Environment Preservation Ordinance" is in the process of finalization. Two other new laws relating to radiation control and protection of marine environment are under preparation;

(g) Major ecologically critical areas of environmental pollution have been spotted and environmental upgradation programmes have been undertaken by the Department.

(h) Major polluting industries/establishments have been identified and remedial measures are being pursued. Establishment of new industries either in public or private sector requires the clearance of the Ministry of Environment.

(i) Programmes for creation of environmental awareness have been undertaken through the mass media. As a part of educational curricula, "Environment" has been introduced at school level and higher degrees are also being offered on this subject;

(j) Use of fuelwood in brick burning and cutting of forest reserves have been banned. Social Forestry Programme has been undertaken on a priority basis;

(k) In order to maintain ecological balance, preservation of wildlife is being emphasized and killing or export of frogs, lizards and all kinds of birds and animal species have been banned;

(l) Use of improved varieties of oven/stove and installation of low cost latrines and tubewells in rural areas have been undertaken in the public sector which are being complemented by the NGOs;

(m) A Master Plan Organisation has been established to effectively manage and improve water resources taking due consideration of environmental issues;

(n) A Coastal Environment Management Plan for Bangladesh has been prepared;

(o) Import of toxic waste and its recycling have been banned;

(p) An International Institute for Environmental Studies and Disaster Management has been established in Dhaka;

(q) The Montreal Protocol for protection of ozone layer has been ratified by the Government; and so forth.

Objectives of the Fourth Five Year Plan on Environmental Matters

9.9 In order to promote environment friendly sustainable development, the following objectives have been set out for the Fourth Five Year Plan:

(a) To contain mass poverty which directly and indirectly leads to environmental pollution;

(b) To improve human quality through expansion of literacy, education, health and overall status of women which will have a direct impact on preserving the environment;

(c) To rationalise the population growth to reduce the burden on natural resources;

(d) To protect the biodiversity of the country by taking effective steps against salinity and desertification;

(e) To promote more environment efficient technology in different sectors of the economy; and

(f) To strengthen the capabilities of public and private sectors to manage environmental problems as sine qua non for sustainable development.

The Fourth Five Year Plan Strategies for Environmental Protection

9.10 In order to realize the above objectives, the following major strategies will be pursued:

(a) Carring out research, field studies and public debates on various environmental issues, formulation of appropriate legislation and preparation of an environment action plan after delineation of the existing ecological resource zones in the country;

(b) Involving institutions, mass-media, NGO's and private sector in dissemination of formal and non-formal environment education, and to encourage them to support and complement national environment action plan;

(c) Strengthening public sector institutions and organisations with appropriate manpower and logistic facilities for effective formulation and implementation of environment action programmes;

(d) Evolving an appropriate environment friendly technology locally, specially for rural energy saving to ensure sustainable development;

(e) Government will try to reach agreements with the regional countries regarding the water flows of the common rivers through Bangladesh to check salinity and desertification in the south-western and north-western regions of the country, and would promote regional efforts to contain deforestation and unplanned logging in the Himalayan foothills;

(f) Pursuing the industrial nations collectively along with other developing countries to implement agreements of the Earth Summit 1992, under which industrial nations would help poor countries develop their economies without ruining their/planet's environment, and would arrest global warming;

(g) Improvement of rural life through rural employment creation and improved rural infrastructure to reduce migration to cities and thus reduce environment pollution in the cities specially in the capital city Dhaka;

(h) Establishment of pollution monitoring system and monitoring network in order to scientifically obtain and analyse relevant data on a continuous basis;

(i) Incorporation of Environment Impact Assessment and cost benefit analysis in decision making on development projects and programmes;

(j) Promotion of an environmentally acceptable sanitation and water use management;

(k) Introduction of industrial waste permit system and inspection procedures and their effective enforcement;

(l) Undertaking massive afforestation programme all over the country as a major component of environment protection plan;

(m) Strengthening the Ministry of Environment and Forests the focal point for consultation and guidance to ensure coordination between and within sectors having environmental bearing; and so on.

Fourth Five Year Plan Programmes

9.11 The environment and sustainable development programme are spread over across the different sectors such as Agriculture, Rural Development, Water Resources, Physical Planning, Education, Health, Family Welfare, Social Welfare, Labour and Manpower etc. The environmental issues, policies aid programmes pertaining to various sectors have been discussed in respective sectoral chapters. Besides, around Tk. 700.00 crore would be invested for environment improvement activities directly under the Department of Environment and Forest Department during the Fourth Five Year Plan period.

CHAPTER - X

FOOD, AGRICULTURE, WATER RESOURCES AND RURAL DEVELOPMENT

X.1. FOOD AND CROP AGRICULTURE

10.1.1 The economy of Bangladesh is predominantly agrarian. Despite the decline in relative importance of the agriculture sector in the national economy since independence, the sector still produces about half of the economy's output and employs nearly three-fifths of the civilian labour force. The crop agriculture alone accounts for about two-fifths and rice almost a quarter of the national output. This reveals the direct impact of agricultural performance on output and income in other sectors and the close link between the government's macro-economic objectives and strategies and its goals and policies for development of agriculture.

10.1.2 Agricultural performance has a major direct impact on important macro-economic objectives like employment generation, poverty alleviation, human resources development and food security. Meeting the nation's growing food requirements remains a central objective of public policy and there has been substantial progress in terms of increasing foodgrain (rice and wheat) production. However, loss of food and cash crops due to floods and other natural calamities has become a common phenomena seriously disrupting the entire economy. The experiences during the past have revealed the basic nature and vulnerability of the agriculture sector, and the economy itself, to the exogenous dependence on factors with adverse impact on steady growth.

10.1.3 The pace of technological transformation has accelerated over the years with progressive adoption of modern techniques, inputs and equipments. Yet the modernization process is far from complete with only about one-third of the cultivated area under irrigation. Many traditional and inefficient practices still persist with considerable scope for research to extend modern technologies under field conditions. In fact, many of the constraints to agricultural growth and development persist because of farmers' lack of resources for investment and deficient input delivery and supportive infrastructures. In general, there persists under-investment in agriculture.

10.1.4 Accelerating agricultural growth in order to maximize the beneficial interactions between such growth and overall expansion of the economy through the adoption of an agriculture-led development strategy is important for Bangladesh. Since agriculture is the major source of income and employment, the linkages between agriculture and non-agricultural sectors in the economy are such that a given increase in agricultural value added usually leads to a more than proportionate increase in non-agricultural value added. Moreover, the sector must continue to supply the necessary foodstuffs for a balanced nutritional diet and provide more jobs to ensure sufficient rural incomes. Other sectors are unlikely to grow sufficiently in the medium run to absorb the growing labour force, especially in rural areas. At the same time, for the majority in agriculture who live in poverty, the only escape from poverty is also through much increased agriculture and related activities. The agricultural growth rate has to significantly exceed the population growth rate in order to break out of the presently deepening poverty trap. Fortunately, the scope of achieving high growth rates in agriculture in Bangladesh exists through the adoption of appropriate strategies and policies and, in some areas, the potential gains could be substantial.

II. REVIEW OF PAST DEVELOPMENT

10.1.5 The primary emphasis of development efforts in agriculture since independence has been to replace the traditional and greatly unstable agriculture by a modern agriculture capable of sustained growth. The poor production performance of agriculture was identified with low level of technology characterizing traditional agriculture and overwhelming dependence on weather. Therefore, a breakthrough in agriculture was considered primarily dependent on the strategy of rapid expansion of irrigation- fertilizer-seed technology. This was sought to be achieved not only by exploiting all the available opportunities for increasing agricultural production within the existing agricultural structure but also by gradual structural transformation permitting realization of growth potentials of each region of the country.

10.1.6 Recent growth performance in agriculture has been influenced by two major factors - natural phenomena (floods, draughts, cyclones, etc.) and policy changes (particularly in the area of input distribution and pricing). While the country has made considerable strides in foodgrains production, self-sufficiency in foodgrains has been elusive goal especially due to rapid population growth. The average annual growth rate in the agriculture sector declined from about 3.5 percent over the 1972/73 - 1979/80 period to about 2.7

percent during the 1980/81 - 1990/91 period. Since food crops contribute more than two-thirds of agricultural value-added, the poor sector performance is largely attributable to the performance of the food crop sub-sector. Although the trend rate of growth of foodgrain output averaged about 3 percent during the mid-seventies, it declined to around 2.2 percent for the eighties. More specifically, over the last decade the major aman crop, reflecting its susceptibility to floods and droughts, tended to fluctuate and exhibited only a very modest upward trend while aus production actually tended to decline. The upward growth in foodgrain output, especially during the first half of the last decade was almost due to increases in boro and wheat production as a result of expansion of area under irrigated winter season cropping. Total production of rice increased from about 9.9 million tons in 1972/73 to 14.4 million tons in 1984/85 and the share of boro rice increased from 21 percent to 27 percent during the same period. Wheat production over the same period increased rapidly from less than 0.1 million tons to nearly 1.5 million tons. In case of cereals, despite periodic set-backs, the share of domestic production as percentage of total requirements increased from about 85 percent in 1973/74 to 87.5 percent in 1984/85.

10.1.7 However, the situation with respect to other key nutritional foods has been disappointing. For example, pulses which are a significant source of protein especially for the poor, have exhibited a downward trend in production revealing decline in daily per capita availability from about 8 gms. in 1973/74 to about 5.5 gms. in 1984/85. The per capita availability of vegetables has also dropped from about 58 gms. per day in 1969 to about 36 gms. in 1983. The picture is similar with regard to oilseeds. While these crops are less significant in terms of their contributions to GDP, they are important for providing a balanced nutritional diet for the people. This suggests the direction of emphasis that has to be provided in future development of the sector for the promotion of a nutrition-based agriculture in the country.

III. ACHIEVEMENT DURING THE THIRD FIVE YEAR PLAN

10.1.8 The strategies for the agriculture sector during the Third Five Year Plan emphasized the expansion of HYV technology alongwith rain-fed crop development and appropriate crop diversification programmes. The plan envisaged improvement of rural technologies and skill in both farm and non-farm sectors with emphasis on cash and minor crops, livestock, fishery and forestry for accelerating employment generation and raising rural incomes. The production programme was designed to be backed by appropriate input package, extension work, incentive prices and agricultural support institutions. In case of inputs, water and fertilizer were identified to be the critical elements. Other inputs and supportive service development programmes included provision of improved seeds, fertilizer supply, plant protection services, agricultural extension, research and education, credit, food and fertilizer storage facilities and marketing.

10.1.9 Agricultural programmes during the Plan targeted for self-sufficiency in foodgrains by 1989-90 along with increased output of other crops. In order to implement the programmes, in the public sector, Tk.14100 million at 1984-85 prices was allocated for the crop sub-sector. Foodgrain production target was set at 20.7 million metric tons in 1989-90 at an annual growth rate of 5.2 percent over the plan period.

10.1.10 This Third Five Year Plan target for production of rice and wheat during 1989-90 was 20.60 million tons. This represents an increase of about 4.51 million tons from a base of 16.09 million tons (Rice 14.63 million tons and Wheat 1.46 million tons) in 1984-85. The average percentage increase during the five years of the Plan has been about 1.5 percent while achieving the plan target required an average growth rate of about 4.5 percent. The production of foodgrain (Rice and Wheat) during the plan is shown in Table 10.1.1.

Table-10.1.1 Production of Rice and Wheat during the Third Five Year Plan

Crops	Units	1984-85 Actual	1985-86 Actual	1986-87 Actual	1987-88 Actual	1988-89 Actual	1989-90 Actual	1989-90 Target
Aus	Lakh Tons	27.80	28.27	21.29	29.93	28.56	24.88	34.20
Aman	" "	79.31	85.40	82.67	76.89	68.57	92.02	91.80
Boro	" "	39.90	38.70	40.10	47.31	58.31	61.67	54.00
Rice	" "	146.23	150.37	154.06	154.13	155.44	178.57	180.00
Wheat	" "	14.64	10.42	10.91	10.48	10.22	8.90	26.00
Total :		160.87	160.79	164.97	164.61	165.66	187.47	206.00

10.1.11 Incremental production during the period has come largely from expansion of HYV acreage under rice and wheat which has increased from 8.44 million acres in 1984-85 to 11.57 million acres in 1989-90

showing an annual increase of 6.50 percent. On the other hand, the production of high yielding varieties of rice and wheat increased by 6.4 percent during the same period. The output, area targets and, achievements during 1989-90 are presented in Table 10.1.2.

10.1.12 The failure to achieve the production targets reflects shortfalls in both area and yield. Yield levels continued to reflect past trends rather than the accelerated improvements envisaged in the Plan. While the production of both aus and aman rice fell short of targets, the production of boro rice exceeded the target for 1989-90. Wheat area did not increase and, with decline in yields, caused production to fall far short of the target.

Table - 10.1.2 Foodgrain Production Targets and Achievements During the Third Five Year Plan

(Area in million acres and production in million metric tons)

Crop	Base Year 1984-85		Terminal Year 1989-90 Plan Target (1989-90)		Achievement	
	Area	Production	Area	Production	Area	Production
Aus :	7.26	2.78	7.20	3.42	5.69	2.49
HYV Aus	1.15	0.86	1.50	1.26	0.89	0.61
Local Aus	6.11	1.92	5.70	2.11	4.80	1.88
Aman :	14.11	7.93	14.40	9.18	14.10	9.02
B. Aman	3.05	1.24	3.00	1.20	2.33	1.10
Local T. Aman	8.39	4.49	8.40	4.78	7.41	4.33
HYV Aman	2.67	2.20	3.00	3.20	4.36	3.77
Boro :	3.80	3.91	4.80	5.40	5.42	6.17
Local Boro	0.80	0.41	1.00	0.60	0.70	0.46
HYV Boro	3.00	3.50	3.80	4.80	4.72	5.71
Total Rice :	25.17	14.62	26.40	18.00	25.21	17.86
Wheat :	1.67	1.46	2.40	2.60	1.60	0.89
Local what	0.05	0.02	0.05	0.02	—	—
HYV wheat	1.62	1.44	2.35	2.58	1.60	0.89
Total Rice & Wheat	26.84	16.08	28.80	20.60	26.81	18.75
Other Cereals	0.04	0.03	0.06	0.10	0.25	NA
Total Foodgrains	26.88	16.11	28.86	20.70	27.06	18.75

10.1.13 The growth of the agriculture sector during the Third Plan period was below the rate envisaged in the Plan. The estimated annual growth rate is about 2.5 percent compared to the target of 4 percent set in the Plan. The slow growth of foodgrain production is associated with a number of factors : floods and other natural calamities, drought in early aus and late aman seasons, decreases in aus and wheat area and yields, declining rate of growth of HYV yields and stagnating cropping intensity. There was also a temporary slowdown in the use of irrigation facilities. HYV rice and wheat contributed about 50 percent of total production of foodgrain compared to the Plan target of 57 percent. The slow growth rate also appears to be due to deficiencies in certain soil nutrients, especially sulphur and Zinc. There is also evidence of decreasing seed quality for some high yielding varieties.

10.1.14 There has also been a number of factors contributing to the slower diffusion of the technologies associated with the HYVs; the most significant appears to be the declining rate of profitability, particularly of the winter cereals. Profitability of boro rice is not increasing either, but still remains more attractive than pulses, oilseeds and many other non-cereal crops.

10.1.15 Although crop diversification was a goal of the Third Plan, the crop base did not expand to achieve the goal to improve dietary quality and food security. Pulses and oilseeds, the crops selected for first major diversification efforts, continued to lose out to cereals, particularly boro rice. As a result, about 78 percent of the protein are derived from cereals and is not complemented by sufficient quantities of higher quality protein from legumes and animal sources, to ensure efficient metabolic consumption.

10.1.16 The overall percapita food situation that emerges out of the review of domestic production is disturbing. The contribution of domestic production to calorie availability, which had increased from the low values of the early seventies, has shown signs of decline in the eighties. Among non-cereal crops only potato registered a rising trend of per capita production while most other crops e.g. pulses, oilseeds, sugarcane and fruits shows declining trends.

First Two Year's of Fourth Plan Achievement

10.1.17 Production of different crops during the first two years of the Fourth Five Year Plan showed increasing trend during 1990-91 and 1991-92 and the total foodgrain production were 189.36 lakh tons and 193.17 lakh tons respectively against the bench-mark production (1989-90) of 187.50 lakh tons. Other crops production also increased during the two years compared to bench-mark production of 1989-90. However, the actual production of different crops during the first two years compared to bench-mark production (1989-90) were as follows:

Table 10.1.3 Achievement during the first two year of the Fourth Five Year Plan

Crop		1989-90		1990-91		1991-92	
		Target	Achieve-ment	Target	Achieve-ment	Target	Achieve-ment
1		2	3	4	5	6	7
Aus	(Lakh Tons)	30.70	24.88	24.00	23.28	25.00	21.79
Aman	"	83.00	92.02	92.00	91.67	98.00	92.69
Boro	"	60.10	61.67	68.00	63.57	70.00	68.04
Total Rice	"	173.80	178.57	184.00	178.52	193.00	182.52
Wheat	"	11.00	8.90	11.00	10.04	12.00	10.65
Other Cereal	"	1.00	-	0.80	0.80	-	-
Total Foodgrain	"	185.80	187.50	195.80	189.36	205.00	193.17
Jute	(Lakh Bales)	45.00	46.40	50.00	53.02	50.00	52.73
Tea	(Million Kg.)	52.00	44.00	45.00	46.00	48.00	45.00
Sugarcane	(Lakh tons)	78.00	74.20	80.00	76.82	80.00	77.50
Cotton	('000' Bales)	64.00	77.00	80.00	90.00	107.00	92.00
Pulse	(Lakh tons)	2.50	5.12	5.60	5.23	6.00	5.50
Oilseeds (Edible)	"	3.00	4.37	3.30	5.23	5.00	5.50
Potato	"	13.00	10.66	13.00	12.37	16.00	13.50
Tobacco	"	70.00	38.00	40.00	33.80	40.00	38.00

10.1.18 The actual fertilizer distribution upto June 1992 was 22.51 lakh tons as against the target of 24.57 lakh while distribution of Rice, Wheat and Potato seeds was 13.8, 18.88 and 8.97 thousand tons respectively.

Recent Policy Incentives

10.1.19 During 1988-89, the Government made a number of important policy and programme changes in order to stimulate agricultural growth. Most of the changes involved the unleashing of competitive market forces.

10.1.20 The biggest and most immediate impact on agricultural growth resulted from policy and programme changes that led to increased sales of minor irrigation equipment. These policy changes opened the door to genuine private sales of minor irrigation equipment. Private traders were allowed to import diesel engines without taxes, couple these engines with domestic pumps and pipes, and sell the equipment to farmers. In addition, promotion of private trade in minor irrigation equipment was accompanied by an energetic and aggressive programme to boost sales of STWs, LLPs and DTWs. This policy approach was most encouraging resulting that the price for an installed STW at the farm level in 1988-89 was lower in nominal terms than in 1992-83, despite a roughly 75 percent increase in general prices over this period.

10.1.21 Other policy changes included : removal of all import duties and standardization restrictions from power tillers resulting in the importation of over 10,000 machines in 1989; elimination of restrictions on pesticide importation; and decontrolling of fertilizar distribution and sales by allowing dealers to purchase directly from all factories and approval of national seed policy wherein best quality seeds of improved varieties of crops conveniently and efficiently has to be made available to the farmers with a view to increasing crop production, farmer's productivity and per capita farm income and export earning. These policies have expected to stimulate private traders and farmers to invest and have also given a big boost to local industries.

10.1.22 While these policy changes stimulated private investment, changes in government programmes also boosted public investment in agriculture. For example, government lowered the downpayment for DTWs and arranged to sell DTWs to NGOs, Grameen Bank and a number of informal groups. With these policies, BADC sold a record number of DTWs in 1988-89.

10.1.23 In addition, the Government took steps to encourage more intensive and productive crop agriculture with programmes like demonstration plots (about 1000) to show farmers the benefits of applying gypsum to replenish sulphur deficiency, which is widespread in Bangladesh.

IV. FINANCIAL PERFORMANCE

10.1.24 The crop agriculture sub-sector was allocated a total of Tk.12620 million in the public sector during the Third Plan. Out of this allocation, Tk.9182.10 million (including project aid of Tk.3752.90 million) was provided through the Annual Development Programmes for the implementation of 60 projects during the Plan period which is about 73 percent of plan allocation. The actual/ estimated expenditures during the period, however, stood at Tk.8575.50 million which is about 93 percent of allocations through ADPs. During the period, 31 projects were completed and 29 projects will be spilled-over to the Fourth Plan. During the first two years of Fourth Five Year Plan an amount of Tk. 426.43 crore was allocated for implementing different projects of sub-sector through ADP's.

V. MAJOR CONSTRAINTS FACING CROP AGRICULTURE

10.1.25 The major problem of crop agriculture relates to increasing the productivity of the scarce land and other resources along with significant increases in employment and incomes of the rural people. The low productivity in agriculture results from the existence of a variety of factors - economic, technological and institutional - as well as gross dependence of the sector on nature. Moreover,efforts to effectively remove the constraints are seriously hampered by overall scarcity of resources -physical, financial and human- and have therefore, to be directed to carefully selected areas in the short/medium run while the long run efforts must continue to remove these constraints to achieve planned strategy.

10.1.26 The growth performance of the agriculture sector reveals weaknesses in the quality and extent of technological as well as institutional support for accelerating growth. These weaknesses are mostly reflected in the relatively poor yield rates for most crops and lack of desirable changes in cropping patterns especially slow growth in the expansion of HYV cultivation relative to potentially available area for such expansion.

10.1.27 The slow rate of growth in agriculture, primarily, due to the fall in the growth rate in the crop subsector, may be largely attributed to inadequate diffusion of modern technology due mainly to :

1. Low proportion of cultivated area under effective irrigation and water control,
2. Deficiencies in certain soil nutrients, deterioration in seed quality and increased pest infestations,
3. Lack of right technology and low level of investment,
4. Lack of incentives including effective incentive prices, and declining profitability.
5. Inadequate physical and institutional infrastructures,
6. Variable weather conditions,
7. Inadequate availability of credit,

8. Inappropriate implementation strategies for development programmes,

9. Slow absorption of high productivity inputs.

10. Ineffective implementation of development programmes,

11. Decline in public expenditures on agriculture.

VI. GENERAL OBJECTIVES DURING THE FOURTH PLAN

10.1.28 The broad objectives of agriculture development would be to facilitate and accelerate technological transformation with a view to becoming self-sufficient in food production and thereby improve nutritional status of the population. Under the circumstances prevailing in the agriculture sector, the following major objectives would be pursued during the Fourth Plan:

1. Attain self-sufficiency in food along with increased production of other nutritional crops.

2. Ensure sustained agricultural growth through more efficient and balanced utilization of country's land, water and other natural resources,

3. Promote rapid and appropriate technological transformation,

4 Diversify agricultural production especially along nutritional lines,

5. Contain areas under cereals (especially rice) within limits of soil and ecological balance in order to progressively release land for other crops, especially legumes and fodder crops, and achieve cereal production targets through increases in yield of output per acre.

6. Contribute to increased foreign exchange earnings through agricultural exports,

7. Reduce rural poverty and promote income equality over socio-economic groups/regions.

8. Promote economic and employment opportunities and access to resources such as credit for landless and small farmers, women and other disadvantaged groups especially in backward regions.

VII. MAJOR STRATEGIES OF DEVELOPMENT

10.1.29 The agriculture sector needs to follow a labour-intensive development strategy based on both rapid and sustained growth and expansion of employment and income opportunities especially for the poor. While the development strategy in the agriculture sector during the Fourth Plan would, in many ways, be similar to that pursued in earlier plans, important basic changes of emphasis and direction in policy will be emphasized.

10.1.30 In view of the serious resource constraints, major emphasis in strategy will be put on increased efficiency in resource use so that higher growth rates could be achieved with a relatively lower incremental capital value added ratio. Achieving higher growth rate with lower capital investment, as envisaged, calls for not only selection of projects according to suitable criterion based on contributions to production and productivity but also presumes effective elimination/ reduction of wastages and inefficiencies. Cost-efficiency and implementation capacity will ultimately determine the level of efficiency that would be achieved in resource allocation. In this respect the following issues will be emphasized:

- Appropriate rehabilitation and maintenance/management of existing/ongoing projects/programmes.

- Efficient planning, effective implementation and appropriate O & M of schemes according to planned schedules,

- Effective elimination/reduction of wastages/inefficiencies,

- Selection of appropriate projects/programmes.

10.1.31 For achieving the objectives, the strategy would focus on the following five major areas considered to be crucial for a decisive movement towards bringing the desired changes in agriculture :

1. Maximization of yields,

2. Development of less risky areas,

3. Improvement in farming practices taking into consideration agro-ecological conditions of the country,

4. Proper diversification with less dependence on cereal crops,

5. Achieving sustained growth.

10.1.32 In order to build a sound agricultural economy, emphasis will be placed on three basic foundations : a productive technology package, efficient delivery services, and remunerative and stable market prices. Emphasis would be placed on policies for maintaining adequate terms of trade for agriculture to ensure profitability of agricultural production in order to reduce unnecessary migration of rural people to the cities and promote establishment of production relations needed to sustain development impetus, ecological balance and social justice. The production strategy would emphasize identification of priority areas and subsectors on the basis of balanced nutritional requirements of the people and fix targets and policies needed to direct investment and other efforts to such areas. Production planning on the basis of such nutritional requirements reveals that deficiencies are acute in areas like pulses, oilseeds, vegetables compared to cereals. While it would be possible to meet the cereal requirements on the basis of balanced diet for the population from domestic production, in most other areas the likely production would be insufficient to meet requirements during the Fourth Plan period. The proposed strategy would, therefore, be to meet the cereal requirements fully from domestic production and maximize production in other areas to minimize import requirements.

10.1.33 In the case of the major crop, rice, the strategy would encompass increasing production largely through improvement in yields by substitution of local varieties with HYVs, wherever possible, and other measures rather than increasing the area under rice cultivation. In this respect wider adaptability of the HYVs would be promoted by considering location specific characteristics (eg. soil characteristics, input requirements, sowing time etc.) for achieving desired results, such strategies would focus on ecological rather than administrative zones.

10.1.34 Stabilization of soil fertility would be vigorously pursued through recycling of organic matters, supplying balanced dose of fertilizer especially zinc and other micro-nutrients to increase fertilizer use efficiency. In addition to input considerations, improved farming practices would be promoted for desired yield incareases. Planting and harvesting of crops at the right time is not only crucial for deriving optimum yields but also important for crop rotation according to desired schedules. This is particularly important for T. Aman crop since any deley in the plantation of this crop not only adversely affects its own yield but also the area under rabi crops especially wheat and rabi field crop. Special efforts would be made for transplanting/harvesting of crops at right time through appropriate measures e.g. supplementary irrigation, use of power tillers, transplanting machines, common services for threshing etc. to overcome programme would emphasize specially wheat, maize, barley, millets, oilseeds (including oil palm plantation), pulses, vegetables and fruits along with required post harvest facilities like marketing, processing and storing facilities. This would also focus on appropriate combinations for high and low water requirement crops for better water management.

10.1.35 The agriculture development strategy during the Fourth Plan would emphasize the following :

1. Changing the nature of Bangladesh agriculture from one of high risk, monsoon-dependence to one with a lower risk, irrigated agriculture .

2. Stimulating crop diversification and the soil would be benefitted because crop rotation is a proven management technique. (It is imperative to begin serious crop diversification programming immediately. As the nation is nearing foodgrain self-sufficiency, the price of rice relative to other foods will likely to fall stimulating farmers to produce other crops).

3. Relying more on competitive markets to ensure an efficient allocation of national, sectoral and farm resources. Monopolistic power has to be guarded against, it is no better in the private sector than in the public sector.

4. Greater resilience to climatic adversities in the face of continuing dominant impact of floods, drainage congestions and drought on sector performance.

5. Strengthening of the agricultural research and extension systems in order to develop new technologies and diffusion of the proven technologies to the farmers.

6. Increased investment in the development of rural transport infrastructures to support agriculture development and non-farm enterprises in rural areas and improved integration of rural markets and production centres.

7. Evaluation of appropriate and balanced institutional framework to support both public and private sectors in sector development activities with public sector investment mostly directed to create and sustain adequate incentives through the market for the private sector to realize production targets and stipulated objectives,

8. Expansion in sectoral investment absorptive capacity and effective increase in public and private sector investment reflecting development needs and priority of the sector will be made effective and kept limited to key areas as required to supplement private initiatives. Efforts would be made to consolidate and optimize the use of manpower and other facilities already created for sectoral development along with the establishment of a system accountable and responsible enough to accomplish the stipulated objectives.

9. Improved access of rural households, especially small/landless farmers, to resources, inputs, extension services and employment,

10. Evolution of appropriate rural institutions and strengthening of existing ones to support and cater to the varied needs and problems of different farmer classes, especially the initiatives of small/marginal farmers and other target groups, in order to ensure their dynamic involvement and effective participation in sector development activities,

11. Removal of economic inefficiencies and distortion and creation of macro-economic environment necessary for efficient resource allocation and optimal realization of sectoral objectives with government intervention limited only to judiciously selected areas emphasizing on maximization of returns from public investment.

10.1.36 For the successful planning and implementation of the above strategies, an appropriate framework incorporating macro-economic and other strategic planning would be developed for creating proper policy environment. The basic tenet of such policies would be to make best possible use of the private initiative of the farmers by providing them with necessary resources and services. This would be achieved through proper identification of the potentials of various groups of farmers and specific policy measures directed to them. The major thrust of such policies will be the promotion of efficient market forces to direct private initiatives along with desired directions through planning, research, extension and regulatory measures of the public sector.

VIII. THE LAND RESOURCE AND ITS UTILIZATION

10.1.37 Land is the constraining resource of the country. Success in the crop production targets would depend on the interaction of desirable production technologies with the agro-ecological and socio-economic factors in various regions of the country. In general, interactions of various factors e.g. topography in relation to flooding, soil types and agro-climatic factors with relevant socio-economic factors determine the adaptation of technology as well as the productivity of the cropping patterns in different regions. The number of farms with less than 1 acre increased from under 2 million in 1977 to over 4 million in 1984. Of the more than 10 million farms in the country in 1984, one quarter had less than one-half acre. Average farm size declined from 3.5 acres in 1977 to below 2.3 acres in 1984.

10.1.38 Land is also the significant resource contributing to agricultural subsistence and constituting the basis for access to additional resources such as credit. The distribution of land ownership is highly skewed and the situation appears to have deteriorated, with the share of land owned by the botton 60% of rural

households have dropping from 25% in 1960 to only 9% in 1978, the top 10 % of rural household have increased their share of land from 36% in 1960 to 52 % in 1978. The mark deterioration took place between 1974 and 1978, probably due to famine and natural calamities like flood which resulted in many small farmers having to sell their most previous assets, including land and cattle, in order to subsist in a deteriorating economic environment. The situation appears to have further deteriorated by increasing fragmentation of land holdings and operation patterns with mini-farming and uneconomic size of land holding, as well as the current system of land tenure. Despite some recent measures by the government in this respect, very little improvement is evident which is contributing to low productivity in agriculture.

10.1.39 According to 1983/84 Agricultural Census, 63% of rural households owning less than 0.04 acres are agricultural labour households; that is, their main source of income was obtained from agricultural labour. The increasingly unfavourable land to rural households ratio is obviously throwing many additional households into the agricultural labour market through landlessness and miniaturization of farm size; since smaller farms tend to use less hired labour and thus contributing to unemployment and under employment.

10.1.40 Furthermore, the soil of Bangladesh have been misused and needs to be managed carefully to preserve it in a healthy, fertile state. Like most of the tropical soils, the nutrient status of Bangladesh soils are also poor because of low fertilizer and organic matter replenishment which is the key element in productive agriculture. The soils are also deficient in organic matter and important micro-nutrients. There is an urgent need for adopting integrated nutrient supply systems-legumes in rotation, crop residue management, biological and chemical fertilizer use for profitable and sustaining crop production in the country.

10.1.41 During the Fourth Plan period, efforts would be made to further increase cropping intensity by growing more crops during the rabi season by bringing additional land under irrigation, provision of better crop management under rain-fed conditions and the growing of stress to known varieties. The present cropping patterns with three rice components or two rice components and wheat would be modified with at least one component of a legume crop or a tap-rooted crop to increase the productivity of the soil, in the sugarcane based cropping pattern, introduction of legumes and potato as strip winter crops would be attempted to increase farmers income. It should be emphasized here that allocation of land to particular crops is the resultant of individual decisions of farmers and the success of the indicative land allocation during the Fourth Plan period would largely be determined by the provision of an appropriate menu of choices to the farmers consistent with such land allocations. This requires adequate policy support and changes and extension of the knowledge of the relative profitability and desirability of such a pattern of land allocation in the country. In general, the observed cropping patterns in the country has the characteristics of growing two to three crops in the highlands and one or two crops in the lowlands. While single cropped area declined in recent years, total cropped area will increase from 34.75 million acres in 1989-90 to 36.00 million acres during the Fourth Five Year Plan. Research and efforts would be focused on developing suitable cropping and farming system to convey the period from November to April as the most intensive farming and cropping months of the year. Expanded irrigated agriculture during winter season, along with supplementary irrigation during the rest of the year, will be the main vehicle of agricultrual production programme under the Fourth Plan for a rational cropping pattern and efficient use of land. It is expected that cropping intensity would increase from the present level of 168 percent to 180 percent during 1994-95 (Table 10.1.4).

Table 10.1.4: National Land Budget for Cropping Intensity in Bangladesh during Fourth Five Year Plan

(in thousand acres)

Season	Bench mark (1989-90)	1990-91 (Actual)	Targetted (1994-95)
Total Cropped Area	34750	34660	36000
Net Cropped Area	20633	20198	20000
Cropping Intensity (%)	168	172	180
1. Round the Year Cropped	873	888	935
2. Aus Season Cropped (April to July)	9263	8975	8050
3. Aman Season Cropped (August to November)	11960	12162	12740
4. Boro Season Cropped (December to March)	12654	12655	14275
Grand Total (Cropped Area)	34750	34680	36000

IX. PHYSICAL OUTPUT TARGETS DURING THE FOURTH PLAN

10.1.42 In order to achieve the objectives during the Fourth Five Year Plan, targets for the crop production during the Plan have been set as given in Table 10.1.5.

Table 10.1.5 Production Targets for Important Crops during the Fourth Plan

Crops	Units	Bench-mark Production 1989-90	Target 1994-95	Percentage increase over bench-mark
1. Rice	'000' Tons	17857	20620	15.5
2. Wheat	'000' Tons	890	1200	34.8
Sub-total (Rice & Wheat)	'000' Tons	18747	21820	16.4
3. Maize	'000' Tons	22	75	240.9
4. Other Coarsegrains	'000' Tons	76	80	5.3
Total (Foodgrain)	'000' Tons	18845	21975	16.6
5. Potato	'000' Tons	1066	1550	45.4
6. Sweet Patoto	'000' Tons	512	650	26.9
7. Oil Seeds (edible)	'000' Tons	438	640	46.1
8. Pulses	'000' Tons	511	675	32.1
9. Sugarcane	'000' Tons	7310	10000	36.8
10. Jute	'000' Bales	4930	6413	30.0
11. Cotton	'000' Bales	40	180	350.0
12. Tea	'000' Tons	43	55	27.9
13. Tobacco	'000' Tons	38	40	5.2
14. Fruits	'000' Tons	1449	1600	10.4
15. Vegetables	'000' Tons	1019	1300	27.6
16. Spices	'000' Tons	325	450	38.5

10.1.43 Production possibilities, agronomic considerations, availability of production inputs and farmer's accessibility to resources and willingness to increase production within the prevailing agro-economic condition were kept in view while setting the targets for the Fourth Five Year Plan. Bench-Mark production relates to expected production in 1989-90 and may differ from actual production for the year.

10.1.44 The general strategy for achieving the crop production targets will be to put emphasis on increasing yield per acre rather than increasing cropped acreage by the introduction of high yielding varieties of seed, increased application of chemical fertilizers and manures, adoption of plant protection measures, and improved inter-cultural practices and efficient use of irrigation waters. This intensive and integrated agricultural production approach will be adopted in different regions of the country where growth potential exists for increased production.

Food Grain

10.1.45 One of the prime goals of the Fourth Five Year Plan is to reach food self-sufficiency as early as possible in order to save scarce foreign exchange and avoid people's suffering and discomfort. The terminal year (1994-95) food production target has accordingly been set at 21.98 million tons as against an estimated production of 18.85 million tons in 1989-90. The strategy for attaining this goal is based on the modern bio-chemical technology consisting of irrigation water, seeds and fertilizer. To accelerate the rate of technological diffusion the farmers will be organised into groups and provided with complete package of inputs and credit. As the backbone of the technology, the extension services will be restructured in line with the Training & Visit (T&V) System. For maximum inpact, efforts will be concentrated in areas of high potential, particularly in irrigated blocks, and at the same time minimum basic facilities like irrigation will be ensured to the rest of the country in order to maintain regional equity. The Plan envisages increasing of irrigated area from about 3.1 million hectares or 76.55 lakh acres in 1989-90 to about 4.8 million hectares or 118.55 lakh acres in 1994-95 and fertilizer use from 20.43 lakh tons to 30.60 lakh tons over the same period. Most of the planned expansion in food grain output will come from high yielding varieties (HYVs) and local improved varieties (LIVs)

of rice and wheat. The acreage under HYV rice and wheat will be 15.55 million acres in 1994-95 implying HYV coverage of 59.0% of the total rice and wheat acreage by the terminal year of Fourth Plan. Since the cornerstone of the proposed output is irrigation, additional output will mainly be achieved through rapid expansion of winter (boro) rice and wheat.

Rice and Wheat

10.1.46 Food grain (rice and wheat) production is planned to increase from the bench-mark level of 187.7 lakh tons to 218.20 lakh ton by 1994-95. This indicates an increase of 16.4% over the plan period. The target production is planned to ensure self-sufficiency in food grain by 1994-95 thereby making costly imports unnecessary in the terminal year of the Plan.

10.1.47 Although there are many other cereals grown in Bangladesh such as maize, barley, kaon, cheena, joar and bajra, two cereals, e.g. rice and wheat dominate. Rice accounts for over 93% and wheat for over 6% of the total foodgrain produced in the country.

10.1.48 Rice production steadily increased, from 11.8 million tons in 1976-77 to 17.8 million ton in 1989-90, showing 50.8% output increase. Over the period the share of the biggest rice crop, aman,decreased from almost 60% to under 52 %. The other two crops switched in overall share, boro growing from 14% to 33% and aus falling from 26% to 15%. These results are not surprising considering the increases in HYV area planted from 7.0 % to almost 15.0 % for aman, from 11.0 % to 15.3 % for aus and from 58.0% to over 78.3% for boro during 1988-89.

10.1.49 In case of wheat there was a rapid increase in production from 1976-77 to 1980-81 from 0.1 million ton to 1.10 million ton an eleven fold rise, then a leveling off and finally to a decline from 1984-85. While the initial increase was reflected in both rapid area and yield increases, the recent stagnation and decline appears to be due to falling yields declining by about 15% from its highest level in 1983-84.

10.1.50 Most of the increase in foodgrain production is projected to come from HYV and LIV rice and wheat. The acreage under HYV rice will increase from 105.69 lakh acres in the base year to 139.40 lakh acres in 1994-95. In view of the recent trend, HYV wheat acreage will increase very little from 14.63 lakh acres to 15.00 lakh acres. Most of the increased production will be through diversion of acreage from the local rice varieties to HYV and LIV rice, the scope of increasing cereal acreage being limited and will adversely affect the acreage under other crops like pulses, oilseeds, vegetables etc.

10.1.51 Expected acreage and production of various categories of rice, wheat and coarse grains in the terminal year (1994-95) of the Fourth Five Year Plan is given in Table 10.1.6

Table 10.1.6 Expected Acreage and Production of Cereals during the Fourth Plan

(Area in '000' acres, yield in ton and Production in '000' ton)

Crop	Bench Mark (1989-90)			1994-95		
	Area	Yield/Acre	Production	Area	Yield/Acre	Production
Rice :	25893	0.69	17857	26200	0.79	20620
	(10709)	(0.96)	(10283)	(14050)	(1.02)	(14305)
I. Aus : HYV	892	0.70	622	1200	0.75	900
Local	4701	0.40	1866	3800	0.40	1520
Sub-Total (Aus)	5593	0.44	2488	5000	0.48	2420
II. T. Aman: HYV	4354	0.88	3856	6500	1.00	6500
Local	7410	0.58	4306	6000	0.61	3650
Broadcast Aman (Local)	2331	0.45	1040	1700	0.50	850
Sub Total (Aman)	14095	0.65	9202	14200	0.78	11000
III. Boro : HYV	5323	1.06	5672	6240	1.09	6800
LIV	140	0.95	133	110	0.95	105
Local	742	0.49	362	650	0.45	295
Sub Total (Boro)	6205	0.99	6167	7000	1.03	7200
Wheat : HYV	1463	0.60	890	1500	0.80	1200
Rice and Wheat :	27356	0.69	18747	27700	0.79	21820
Maize :	58	0.38	22	75	1.00	75
Others Coarse grains	272	0.28	76	280	0.29	80
Total Food Grains	27686	0.68	18845	28055	0.78	21975
HYV Rice and Wheat	12172	0.92	11173	15550 (59.0)	1.00	15550 (71.1)

NB. : Figures in bracket represent HYV percent in total acreage and production.

Maize and Other Coarse grains

10.1.52 Maize is now considered as a substitute for both rice and wheat since it can be grown in all seasons. From maize one may get food, oil and fuel or fodder. The present yield potential is too low. It can be increased very easily to the level of HYV wheat provided adequate demand and fair prices to the growers can be assured. Maize can be used as human and poultry food. The genetic yield potential of maize is very high. BARI has already developed five high yield medium duration maize varieties with grain yield potential of 5-7 ton/hectare and is suitable for flood prone areas. The maize production is planned to increase by 240.9% in 1994-95 from the bench mark production of about 22,000 tons. Besides maize, other coarse grains consisting of barley, sorghum, bajra, and millets have considerable importance from the point of use of water resource and development of agro-industries. These crops are generally grown in marginal and less fertile lands with minimum investment. Considering the increased importance of these minor crops as supplementary food, cattle feed and industrial raw materials, increased production programme for these crops will be taken up during the Fourth Plan period.

Minor/other crops

10.1.53 Bangladesh in endowed with favourable climate and soils for the production of a variety of crops throughout the year. The winter crops are greater in number than the summer monsoon crops. The production of major and minor crops is not balanced in recent years due to greater emphasis given on cereals, especially rice and wheat. The situation needs to be improved for balanced daily diet of the people.

10.1.54 The pulses, oilseeds, maize, vegetable crops including potato, sweet potato etc. are classed under so-called minor crops in terms of their contribution of GDP and in the context of the nation's staple food-rice and wheat, the minor crops did not get attention until recently as much preferred treatment as major crops.

10.1.55 The production of minor crops such as pulses, oilseeds, vegetables, fruits, spices etc. is currently too imbalances to supply adequate nutrition in the daily diet of the people. Such alarming situation should not be allowed to continue any more. Accelerate production of minor crops complementary but not competitive with major food crops production as per requirement in order to reduce pressure on cereals will be pursued during the Fourth Plan period. This will improve the daily diet of the people: to generate rural employment by intensive cropping with improved technologies: to increase farm income and thereby to increase the purchasing power of rural mass. It will also improve the balance of payments by promoting import substitution and export oriented crops.

10.1.56 Vegetables are important sources of minerals and vitamins and provide considerable amount of calorie requirement in the daily diet of the people. Besides, vegetable proteins appear to be superior to animal protein. The nutrition status of the Bangladeshi diet is deteriorating day by day with low intake of vegetable, fruits and spices. The increased production and intake of vegetables by people would help to compensate for debilitating nutritional deficiencies.

10.1.57 The main reasons for the reduction of fruits and vegetable production appear to be the following:

i) Pest and diseases on the principal fruit crops, particularly mangoes, citrus and coconuts.

ii) Reduction in pure-stand orchard areas by encroachment and conversion to other crops and reduction in standards of orchard maintenance, principally by large absentee landowners.

iii) Intensive competition for land in small-holding areas.

iv) A strong demand for wood, both for timber and fuel, which has been partially satisfied by felling fruit trees.

v) Coconut trees in coastal areas have suffered occassionally from cyclones.

10.1.58 Land use planning will be encouraged to maintain ecological balance. In this regard, efforts will be made to integrate agriculture, livestock and pasture, forest and fruit crops, and soil and water-conservation measures for sustaining the productivity of the farming systems. Suitable technological intervention to arrest environmental degradation will be identified, especially for hill and mountain ecosystems.

10.1.59 Priority is given to foodgrain production and intensive cultivation is promoted for industrial crops such as sugarcane, jute, tobacco, and tea etc. In hilly areas that have less access to roads, the priority is cultivating high-value, low-volume crops. In remote hilly areas, the emphasis is on producing special crops and livestock products.

10.1.60 Small farms are encouraged to adopt labor-intensive farming, large farms are encouraged to adopt commercial farming with emphasis on producing export promoting and import-substituting commodities. Emphasis is placed on diversifying agriculture into cash crops, horticulture crops, livestock, and intensified cereal grain production in irrigated areas that have full agricultural support services.

10.1.61 A self-reliant and sound cooperative system is being developed, with the government acting as a facilitator only. In addition, the active participation of the private sector in producing and distributing agricultural inputs, crop-protection services, veterinary services, and so on, will be promoted. The development of marketing facilities, agroindustries, and coldstorage facilities will be encouraged in the private and cooperative sectors, with government acting again, as a facilitator only. Commercial agriculture is to be enhanced to support export promotion and import substitution.

X. POLICY ISSUES AND PROGRAMMES

10.1.62 Some of the specific policies to be pursued/initiated during the Fourth Plan are outlined below.

Land-Use and Ownership

10.1.63 In order to ensure more intensive use of land and other resources, control/prevention of dogradation is critical. In this respect, policies would include :

- Systematic and comprehensive analysis of agriculture and land resources for their optimal use,

- Enforce zoning laws and regulations to limit damage to agricultural land through proper urban planning,

- Possibility of further reduction in land ownership ceilings,

- Enforcement of effective laws enabling the share croppers to exercise pre-exemptive right for purchase through provision of long-term loans,

- Effective implementation of khas land distribution programme. Improvement of land use by its reallocation over crops based on optimal cropping pattern on the basis of physical characteristics and objective criterion (economic/financial profitability, domestic resources cost, employment effect etc).

- Use of marginal and homestead lands for intensive cultivation of orchards, horticulture, fodder and other minor value-added crops.

Crop Diversification Programme

10.1.64 Crop diversification would, on valid agronomic and nutritional grounds, be an important feature of the Fourth Plan. Cropping of more labour intensive and higher value added crops would have a salutory impact on agricultural income and employment. Supportive interventions, including research, extension, input supply and marketing assistance can only be effective to the extent that target crops are actually specified. The essential task of crop diversification will be to select appropriate crops and to assist farmers to adopt them through adequate incentives in terms of cost effectiveness and relative cost advantages and financial returns to farmers through adequate price, marketing and other policy supports. The emphasis would be to promote gradual diversification of agriculture through changes in the cropping system to move away from the present mono-culture in rice with due considerations to soil management and income generation. Important considerations in this respect would be :

- introduction of appropriate cash and commercial crops with adequate policies for existing ones like jute, tobacco, cotton, sugarcane etc.

- expansion of cultivation of horticultural crops, vegetables, lagume crops, fruits, fodder crop.

- adequate policy support for indigenous flood/drought and other stress resistant crops in order to enable them to play important role in crop cycle.

Small Farmer Development

10.1.65 Agricultural policies during the Fourth Plan will be viewed in the context of differential impacts on various farmer classes especially in view of the fact that, on the basis of operated land, more than two-thirds of rural households are fully or functionally landless. Since there exists substantial differences in physical and socio-economic conditions under which various farm classes operate, it will be important to assist the marginal/small households to exploit their land as efficiently as possible. It is recognized that many techno-economic opportunities which have been opened up remain only partly realized because of lack of resources in the hands of these farmers and failure of the institutions/agencies responsible for providing supportive incentives and inputs to them. Progress in this respect during the Fourth Plan will be vital if land productivity and returns to labour inputs are to be increased. This would be achieved through formulation of appropriate policies in order to provide the required policy supports and incentives to different farmer classes and to sustain the landless/small farmers through their wider coverage in terms of provision and access to inputs, marketing and institutional and other services.

10.1.66 Small farmers are found to be highly productive and better users of agricultural inputs and have higher propensities to invest in agriculture, compared to other farmers' groups. Moreover, small farmers development is a necessary pre-requisite for agricultural development, alleviation of poverty, prevention of further rural socio-economic deterioration and overall economic growth. To improve the situation, credit can play a critically important role and accordingly a specific programme will be formulated and implemented to mobilize and channel credit to the small farmers for investment in farm and non-farm activities.

Certain Demand Management Policies

10.1.67 In addition to dealing with supply-side problems, sustained agricultural growth during the Fourth Plan calls for the adoption of appropriate demand management policies to ensure not only food security and

price stability but also adequate incentives to the producers. While food security will be largely ensured through price stability in conjunction with appropriate use of the Public Food Distribution System, domestic procurement policy in order to provide growers with a guaranteed support price will have a major role to play in maintaining adequate profitability and incentives.

10.1.68 On the output side, the Fourth Plan would make a beginning to move away from a cereal-based self-sufficiency programme not only to achieve nutritional balance but also to retain soil fertility for higher productivity of different crops through proper diversification. This calls for adequate measures and incentives for change in food habits through increased intake of protein and carbohydrates from sources like pulses, vegetables, fish, fruits, potato, etc. The production programmes will be designed to meet such desirable changes in domestic demand as well as contribute to export earnings and import substitution. Supportive import and export policies consistant with such a diversified production and marketing programme will be devised. In the face of deficient domestic demand due to low-income, these imposing constraint on supply for such a diversification programme will be effectively relaxed by exploiting the demand in the international markets through appropriate export policy. Therefore, in addition to diversifying domestic demand, demand for traditional and non-traditional export items would receive adequate consideration. Knowledge and information on export potentials for each product would be explored and appropriate policies adopted for potential product lines.

10.1.69 Food aid and imports, at present, are important elements in maintaining consumption levels, development activities in rural areas, production activities with imported inputs as well as level of supply of certain consumer goods. The issue of substitution of food aid by increased domestic food production requires adequate analysis and proper measures would be initiated especially in view of the likely downward pressure on prices unless the large non-price distribution of foodgrains continue to be financed domestically out of increased production.

AGRICULTURAL INPUTS

Fertilizer and Manures

10.1.70 The emphasis on expansion of HYVs and increase in yields would require promotion of judicious use of agricultural inputs especially fertilizer, seeds and pesticides with irrigation within better crop management practices. Use of optimum doses of fertilizer would be treated as a key input.

10.1.71 Measures with respect to fertilizer during Fourth Five Year Plan would include :

- Improved efficiency and flexibility of fertilizer distribution system.
- Review of pricing policy in keeping with stipulated objectives.
- Along with increased application of balanced doses, emphasis on location and situation specific recommendations for different soil tracts with priority to areas of concentration, yield deficiency and micro-nutrient deficiencies specially sulphur and zinc.

10.1.72 Success in this respect will crucially depend on the efficiency of extension agents to demonstrate the use of optimum doses and proper method of application. In this context the question of balanced doses would address two important aspects-supply of balanced nutrients of plants and maintaining the nutrient balance of the soil. Even though the present fertilizer use in the country is dominated by nitrogenous fertilizer which is different from the dose recommended by the experts, it is observed that land becomes poorer in nitrogen nutrient after plant intake. The reason lies in the fact that the overall level of fertilizer use is low relative to both soil nutrient and plant intake. Therefore, the question of balanced dose would be considered as not just a problem of proportion of NPK but also of the level of application and policies would aim to tackle both of them.

10.1.73 The fertilizer trade is in a state of rapid transition, characterized by increased farm consumption and domestic production, declining prices and an increased marketing role for the private sector. Government policies promoting competition have played a major role in these developments.

10.1.74 Growth in fertilizer consumption has been growing at over 9 percent per year since independence from 282,000 mt in 1969/70 to 1,704,000 mt in 1988/89. In 1988/89, average fertilizer use was 131 kg (61 kg of nutrient) per hectare of foodgrain crops. Despite continued growth in fertilizer use average consumption remains low in comparison with other Asian countries.

10.1.75 Micro-nutrient Deficiencies: Bangladesh soil, in many areas, suffers from shortage of sulphur and zinc. In addition, many areas suffer from deficiencies of other micro-nutrients, such as magnesium, calcium, manganese, boron, copper and molybdenum. The rectification of these problems involves a complex set of activities, primarily related to better management of the organic content of the soils, supplemented by direct application of small amounts of the minor chemical elements.

10.1.76 Privatization in Distribution: Largely due to the government concerns about supply availabilities and prices, retail market and prices were deregulated under a New Marketing System, introduced in phases from 1982. BADC's distribution monopoly was reduced from the Thana level to 75 wholesale, permitting an expanded role for private wholesalers and retailers.

10.1.77 Subsidy: Fertilizer subsidy has been an important component of agricultural policy in Bangladesh, to encourage farmer use of NPK nutrients and to protect domestic production of fertilizer, notably TSP. There is a sizeable price subsidy for MP, and an indirect subsidy to BADC for distribution and storage cost over its fertilizer sales revenue. While there has not been a price subsidy on urea since the early 1980s, the total subsidy to BADC has grown over time, parimarily due to increasing total sales. The large TSP price subsidy has ensured farmers a price about 30 percent below landed world prices. Despite this subsidy, growth in TSP consumption has been no higher than for urea, and the NPK use ratio has remained fairly constant.

10.1.78 With the expected expansion of irrigated area during the Fourth Plan period and further diffusion of modern technologies, fertilizer consumption is projected to increase to 3.06 million mt. in 1994/95 as given in Table 10.1.7.

Table 10.1.7 : Projection of Fertilizer Distribution Programme, 1994/95

(in thousand mt)

Type	1989/90	1994/95
Urea	1275	1800
TSP	470	760
MP and others	255	500
Total :	2000	3060

10.1.79 The application of organic manures and composts has received very little attention so far. Manures and composts not only maintain the physical properties and fertility of the soil but also ensure better performance of chemical fertilizer when used in conjunction. Use of bio-fertilizer will, therefore, be promoted to improve the natural fertility of the soil. Research and development programmes will be undertaken to determine the nature and extent of the micro-nutrients deficiency problem and appropriate measures will be taken.

Improved Seeds

10.1.80 High-yielding variety seeds, a critical input for increased production programmes, have primarily been introduced for rice, wheat, potatoes, jute and very limited amounts for pulses, oilseeds, selected vegetables and maize. Agricultural Research Institutes of the country are responsible for the development of improved and high yielding varieties, getting them released through the National Seed Board and making the seeds/planting materials available to multipliers. BADC, SRTI, CDB and others are responsible for producing foundation seeds/planting materials in their own farms and "Certified" seeds/planting materials both in their own farms and through contract growers. Seed Certification Agency provides necessary technical guidance to the contract growers, in the public and private sector, for production of quality seeds and issues certificates for sale following due testing. It is estimated that HYVs account for about 46 percent of aggregate rice, almost 100 percent for both rain-fed and irrigated wheat, about 63 percent of potato, 73 percent of the jute and almost 60 percent of the sugarcane area. No certified seeds are available for other major crops. The bulk of improved seeds/planting materials used by the farmers is produced, processed, stored and exchanged among themselves. BADC and CDB procure the certified seeds from contract growers preserve and store them for distribution among farmers during the next sowing season. During the Fourth Five Year Plan, the private sector will be encouraged to play an expanded role in all spheres of seed development programmes including certified seeds.

10.1.81 Ministry of Agriculture has developed a new and comprehensive seeds policy which will work toward creating a favourable climate for private sector participation in the seeds industry. BADC's role will, therefore, have to change more to a focus on open pollinated crops (rice, wheat, jute, potato and pulses) and will have to reorient itself to providing training and information to the private sector.

10.1.82 The role of the public sector agencies in the seed sector during the Fourth Five Year Plan period will, among others, be :

(i) research and development of new seed varieties and if needed withdrawal of discarded ones;

(ii) multiplication and distribution of foundation seeds;

(iii) transfer of technology to contract grower and private sector;

(iv) quality control and monitoring of improved seeds produced in the public and private sector; and

(v) formulation and enforcement of a comprehensive Seed policy, Market and Price policy.

Plant Protection Measures

10.1.83 Field control of crop pests and diseases is an important area in which farmers need help and technical support. Crop losses due to field and storage pests and diseases have been estimated to be as high as 5-15 percent of total production. The research approach to the problem has been toward development of insect and disease resistant strains. Integrated pests management has not yet been practised in the country. Uses of pesticides, herbicides, and similar farm chemicals is not widespread in the sector and with few exceptions, is not incorporated into the production sequence as a regular management practice. Applications most often are made when infestations become significant and are well advanced. Levels of chemicals applied are often less than recommended for effective control. In most cases, pesticides are used in rice, wheat, mustard, tobacco and tea production particularly on the HYVs of rice and wheat. The present level of pesticide use by farmers in the country is around 3-4 thousand metric tons.

10.1.84 Procurement, movement, storage and distribution of pesticide and plant protection equipment have been in the private sector since 1979. The objective of the plant protection service in public sector during the Fourth Five Year Plan period would be to ensure effective and efficient pests management without heavy dependence on application of pesticide which is not only causing environmental and ecological hazards but is also a costly element in the farmers' production programmes. The public sector activities will be limited to qualitative and quantitative aspects of plant protection : pests surveillance, monitoring and early warning against pests outbreaks, advisory service to farmers, traders and others dealing with pesticides and quality control of pesticides marketed by the private sector. Research and extension efforts for the introduction of the concept of integrated pests management will be strengthened and pursued during the Fourth Plan period.

10.1.85 Integrated Pest Management (IPM) will be developed beyond the conceptual phase and a sound research programme based on agro-ecological analysis and crop-specific needs. Licensing of pesticide dealers must be based on specified objective criteria in order to provide clear signals to private traders, encourage competition and punish those who violate regulations on sale of toxic and adulterated products. The quarantine and laboratory analysis capacities of PPW will be strengthened to better evaluate new seed varieties and pesticides.

10.1.86 Quarantine and inspection activities will be expanded at airports, and borders in relation to trade movements of pesticides, seeds and other agricultural commodities. DAE will also be responsible for spraying of pesticides whenever the situation so demands, maintenance of a buffer stock for emergencies and enforcement of plant quarantine regulations, etc. The need for increasing efficiency of the existing quality control laboratories by expansion of its physical facilities, scientific equipment and skilled man-power is strongly felt in order to enable such laboratories to test the quality of chemicals for standardization and the efficacy of marketed pesticides by private sector.

Farm Implements and Drought Power

10.1.87 The development programme for crop agriculture as envisaged in the Fourth Plan will create additional demand for various agricultural implements in the country. Research and development efforts will be made for improved indigenous and new farm implements like plough, weeder, seed drill, tillers, thresher,

sprayer, tubewells, etc., for large scale use in the intensive cultivated areas. Local manufacturers will be given necessary supports and encouragement to produce and sale their products in local markets to farmers and government agencies. Integration of small/cottage industries for local manufacture of such equipments will be one of the important strategies of the Fourth Plan in this respect.

10.1.88 Draught animals supply most of the supplementary power available to farmers for ploughing, harrowing, leveling, making drainage ditches, threshing and transportation. However, there are two severe problems with the current draught power stock :

— there is a significant shortage of animals; and
— the current stock of animal is of decided inferior quality.

10.1.89 The situation severely limits the nation's overall productivity and encourages poor farm management practices. With an average draught power energy requirement of 0.373 kw/ha, and available draught power of 0.272 kw/ha, the current deficit is estimated at 0.101 kw/ha. This represents a deficiency of approximately 5.8 million animals, or approximately 132,000 mechanical tillers.

10.1.90 Responding to the country's draught power shortage, government eliminated duties and sales taxes on power tillers in 1988 and also abolished standardization restrictions, enabling the import of all kinds of power tillers. As a result, the sales of power tillers increased from 3,000 in 1988/89 to over 15,000 in 1989/90 and significant growth in powertiller sales is expected to continue throughout the FFYP period.

Agricultural Extension

10.1.91 According to available information the Training and Visit (T&V) extension system does not seem to be functioning satisfactorily due to various agro-ecological and socio-economic factors. Several studies indicate that the majority of farmers have never been in receipt of the messages of agricultural extension workers delivered through contact farmers and that the Block Supervisors (BSs) show a bias in their work in favour of educated and larger farmers. It is now necessary to re-structure the extension service to adopt it better to local needs and prevailing situations. The present T&V system has a mechanically well-structured system, with planned linkages and feed backs in order to reach the majority of farmers. The system comprises the formulation of location specific impact points, the dissemination of information through contract farmers and farmers' groups, regular fortnightly or monthly training of all Block Supervisors, subject matter specialists and subject mattrer officers, and the monitoring of the field extension activities. It reaches about 0.9 million contract farmers and approximately 4 million other farmers directly out of the 10 million farm households in the country.

10.1.92 One goal of extension services during the Fourth Plan period would be to shift extension services from larger and more affluent farmers to "resource-poor" farmers. Since the poor small farmers, who form the majority is too weak to benefit from the services, it is necessary that the extension services be linked with organised groups of farmers both formal and informal. These groups will act as "receiving mechanism" for extension service as opposed to individuals and will provide the feed back needed for improving performance necessary for modernizing agriculture. So "target group" approach with particular attention to the specific needs of women and youth would be introduced in organising extension services in agriculture. It would also make the BSs more accountable to their clientale, creating demand for their services at lower cost. The team leader of each groups (target growers) would be well-trained so that they, in turn, can provide necessary extension services to the organized groups. The qualifications for the Block Supervisors should be upgraded to the 'graduate' level in agriculture.

10.1.93 In case of extension the following priority areas will be stressed during the Fourth Plan :

- Strengthen research-extension/farmer linkages.
- Emphasis on extension through groups and women on the basis of an integrated farm approach.
- Improved knowledge on repair of soil micro-nutrient deficiencies, better crop management practices and field control of pest/diseases.
- Development of an effective field level services system with required central/local coordination.

10.1.94 The extension service will address three targets :

(i) to demonstrably improve the T&V system for information and knowledge transfer;

(ii) to decisively upgrade the quality and quantity of demonstration efforts to an average of 10-20 demonstrations per Block Supervisor per year; and

(iii) to develop a broad range of supportive relationships with other agricultural information delivery agencies (i.e., the Grameen Bank and NGOs).

10.1.95 Strategic thrusts are envisaged along the following lines:

(a) Improving the effectiveness of the extension service (through improved management and staff training, the introduction of an irrigation extension capability, and by better utilizing the radio and other mass media to communicate with farmers);

(b) considerably upgrading the role of demonstration as an instrument of technology transfer;

(c) extending the extension network by establishing formal working relationships with the Grameen Bank and NGOs.

Agricultural and Rural Training

10.1.96 In addition to higher education at agricultural colleges and the University that impart and train high-level agricultural professionals, several other training institutions teach and train personnel who serve the agricultural sector. These institutions are Central Extension Reseources Development Institutes (CERDI) at Joydebpur, Graduate Training Institutes (GTI) attached to Agricultural University at Mymensingh and 12 Agricultural Training Institutes (ATIs) located throughout the country although the training facilities vary considerably among institutes, they are generally inadequate and needs support for overall improvement. The curriculum should equally emphasise both academic and field training. There is no formal apprentice field training. During the Fourth Five Year Plan period two ATIs would be established to meet the growing needs of extension personnel including women extension agents. Besides, Academy for Rural Development at Comilla and Bogra train agricultural co-operatives and local rural government officers and staffs in addition to their training programme for model farmers and managers of village co-operatives societies on various aspects of agriculture development. To make the agricultural extension service efficient and effective, the training and communication support of extension system needs to be re-organized, strengthened and improved. The Agricultural Training Institute (ATIs) and CERDI should emphasise on the qualitative aspects of training which includes training in agricultural management, instruction in the production of training materials, training of trainers and extension agents. It is felt that training institutes be given responsibilities for extension work in near by villages, with the objective of achieving better organized extension work in the rural communities which will in turn result in an improvement in the quality of training at these institutes. In support of the agricultural extension service, Agricultural Information Service should concentrate on the systematic planning of multi-media communication activities to assist crop production and on taking the initiative in other suitable activities.

Agricultural Education

10.1.97 The objective of agricultural development can be realised only through the effective application of science and technology to the problems faced by the farming communities in their production programmes by developing high quality educational system for agricultural science. The improvement in the prevailing educational system is essential if progress and development are to occur in agriculture. This is because increased levels of literacy and education among rural people are important factors conditioning the rate of adoption for improved technologies.

10.1.98 Recognizing the need for development of scientific base for modernizing agriculture, the country requires a continuing flow of efficient and qualified human capital to upgrade, maintain and implement development programme and projects in a wide variety of public and private institutions serving agriculture. The responsibility of training this people lies mainly with the system of higher agricultural education. There is already a base of physical facilities at Bangladesh Agriculture University (BAU) at Mymensingh, Bangladesh Institute of Post Graduate Studies (IPSA) at Joydebpur and in Agriculture College at Dhaka, Patuakhali and Dinajpur. The existing infra-structural base for higher agricultural education at Mymensingh and Joydebpur is under utilized though broad enough to meet the requirement of the country for various levels of agricultural

experts and extension personnel. More infra-structural facilities like class rooms, laboratories, libraries, equipment, student dormitories and other facilities will be extended to these institutions in order to pay their roles as centres of learning, discovering and imparting knowledge to students and the society at large.

10.1.99 Agricultural education system will be re-organized and strengthened and would be brought in line with the country's agricultural needs. Teaching would be linked to actual farming practices in specific farming conditions. Syllabus for agricultural education will be suitably modified as to contribute effectively to the requirement of a dynamic agricultural sector. The major attention would be given to improve the quality of the teaching and training and related student output so that the overall response of the system of agricultural education is sufficient to underpin the development of human capital and the science base for agricultural modernization.

Agricultural Research

10.1.100 A large number of research institutes, agencies, academies and universities are engaged in agricultural research. Most of the agronomic and related agricultural research is carried on by several major research institutes, which have mainly monocrop orientation. Individual research institutes are devoted to Rice, Jute, Sugarcane and Tea. Only one research institute, BARI, has a reasonably integrated crop research focus with multi-crop research programmes.

10.1.101 Despite notable contribution made by agricultural research institutes engaged in rice, wheat, pulses and oilseed for increased production, there are obvious variations in performance within the research system and achievements of some research organizations are irregular and those of individual research stations are rated from good to very poor and essentially unproductive. Research on tea and sugarcane show some improvement but still is lagging. The output of Jute Research Institute is perhaps the most disappointing and needs to be improved greatly.

10.1.102 Considerable progress has been made to develop the physical infra-structure and manpower required to strengthen research capabilities of agricultural research organizations which are scattered in several ministries with different funding sources, national and international. Efforts are needed to consolidate the research activities, with increasing investment in actual scientific work in order to seek solution to the physical, biological, technical and socio-economic problems that are faced by farmers, agricultural businesses, national agencies and regional and national planners for increasing agricultural production. Research extension and farmer linkages are still weak and it needs to be strengthened to a feed-in/feed-back cycle concerning farmers' needs and acceptance of research output. There is also a need to develop and refine farming systems research taking into consideration the agro ecological and agro-climatic conditions in order to increase its practical use and to develop closer links between research, extension and farming communities.

10.1.103 Research efforts during the Fourth Plan will be directed to develop new mechanism to increase yield/ha of all food crops. There exists a higher degree of variation of yield per hectare in rice, wheat, maize, pulses, oilseeds including palm oil and potatoes. Simultaneously problem to palm oil production and cultivation will be looked into and efforts be made to take at edible oil in our country. These variations indicate a possibility of improving the yield either by removing the constraints or by genetic manipulation of the yield components in general and protein content in particular. The total protein content can be decreased without reducing the digestible protein contents of the food crops. By chemical and genetic manipulation of the protein contents of a crop it is possible to increase the yield of food crops. Similarly by reducing the protein content of the oilseed crop one can increase the oil content of the crop which will help to increase the edible oil production of the country. Needing of sweet potato as a substitute to table potato will be desirable as potato production is costly due to its seed production and storage problems. Sweet potato because of its carotene and vitamin-A content may be more useful than similar starchy crops.

10.1.104 During the Fourth Five Year Plan period, the agricultural research efforts would emphasise on :

Undertaking basic as well as applied research, effective diffusion of existing technology, exploitation of potential for diversification and intensification of land use to meet social and economic goals, developing technical messages suitable to the needs and constraints of small and marginal farmers in different agro-ecological and climatic zones, developing suitable integrated farming systems, and improvement of the quality and efficiency of human resources in research and extension through training. BARC, as an apex agency of the national agricultural research system, would be responsible to strengthen the agricultural research capabilities through planning and integration of available resources for more effective and better integrated research system essential for modernizing country's agriculture. The working Scientists'

capabilities in the research organizations will be continuously evaluated and their performances judged against set criteria. Incentive or otherwise would be offered to them based on their performance evaluation.

10.1.105 The Fourth Five Year Plan research strategy is composed of five strategic thrusts:

(i) Focusing short term efforts on rapid transfer of technology. Research organization will have the following as their priorities:

(a) the rapid transfer of existing technologies already available in the research institutes;

(b) participation in implementation of the crop diversification strategies; and

(c) development of capabilities with new, more powerful, research methodologies and approaches, particularly bio-technology.

Accordingly, the research system will transfer its focus to irrigated, continuous cropping within discrete agro-ecological zones, including the development of high yielding varieties of cereals and non-cereals and integrated soil fertility maintenance. The emphasis will be on diversified crop technology for integrated soil fertility maintenance.

In addition, scientists will work with innovative farmers to identify and evaluate the potential wealth of indigenous technologies and the opportunities for change perceived by the farmers. Special workshops and review sessions with biological and social scientists will be held to screen the most appropriate indigenous technologies for immediate transfer. Similarly, known technologies with proven results which are also simple and low-cost, will be exchanged and introduced from external sources with similar agro-climatic and socio-economic environments.

(ii) Re-directing Research to Programmes with sustainability and profitability : there are significant opportunities for developing under exploited indigenous crops. To this end, for example, jute research will be upgraded for development of new high yielding varieties and high nutrition, unconventional food sources will be explored.

10.1.106 Considerable research effort will be extended to the conservation and management of natural resources (soil, water and renewable resources) to develop more efficient and sustainable agricultural practices and to the reduction of production costs to make technology more economically attractive for resource-poor farmers.

Market and Price Policy

10.1.107 The need for appropriate price and marketing policies would assume greater importance during the Fourth Plan especially in view of policies of withdrawal of subsidies on inputs. Marketing patterns and prices of inputs and outputs would determine the allocation of resources among different crops and provide signals on the quantity of modern inputs used. What would be important in this context is the adequate protection of profitability of crop cultivation - both absolutely (indicated by benefit-cost ratios) and relatively (compared to other crops).

10.1.108 In this respect, the Fourth Plan would require more efficient price policy interventions with emphasis on the following :

- Effective domestic procurement policy in providing the growers with guaranteed support prices,
- Determination of appropriate procurement prices consistent with objectives,
- Removal of unnecessary restrictions on private trade in agricultural products-both domestic and external,
- Appropriate pricing of agricultural inputs especially fertilizer and irrigation equipments without any implicit taxes to pay for domestic manufactures and macro-economic adjustment,

- Setting up of an effective Agricultural Prices Commission to provide internally consistent set of price policy recommendations to the government in keeping with major development objectives.

10.1.109 In case of marketing, policies would cover :

- Creation of primary market infrastructures with appropriate planning and development of markets along with setting up of Market Committees consisting of representatives of all groups,

- Encouragement to cooperative marketing to lower high transaction costs associated with small sales by small farmers to get fair prices,

- Adequate development of marketing facilities to ensure access to inputs relating to availability, adequacy and timeliness of input supplies and appropriate prices of such inputs especially fertilizer and HYV seeds.

10.1.110 There are five targets for agricultural marketing:

- to improve functioning of the rural markets;

- to develop efficient wholesale marketing of agricultural produce, especially fruits and vegetables,

- to encourage agro-processing, storage and businesses;

- to promote exports of agricultural products;

- to provide post harvest supports and services to increase agricultural value added with a view to ensuring remunerative prices to the producers.

10.1.111 In general, agricultural price policy during the Fourth Plan would be made consistent and compatible with overall government development objectives and specific crop development plans. A growth oriented agricultural price policy will be promoted within the overall constraints of limited resources, weak market infrastructure and low supply response. In addition, price stablization for specific crops like jute and price fixation at levels competitive with alternative crops/uses would continue to be pursued to promote crops diversification, multiple cropping and efficient use of resources during the plan period.

10.1.112 While adequate information on costs of production for agricultural commodities are lacking, the information presented in Table 10.1.8 suggests declining trends of profitability for major rice crops in Bangladesh.

Table 10.1.8 Ratio of Harvest Price to Total Cost of Production for Some Major Crops in Bangladesh

Crop		1984-85	1988-89
Aman	HYV	1.46	1.15
Aman	Local	1.05	0.85
Aus	HYV	-	0.93
Aus	Local trans.	-	0.68
Aus	Local br.	-	0.65
Boro	HYV	1.11	0.96
Boro	Local	0.98	0.94

The trends in profitability for other crops are also likely to be similar. This calls for the formulation of adequate price policy for the farmers to ensure reasonable profitability to crop cultivation. Likewise, the overall macro economic policies will be structured to remove the present explicit and implicit bias against the agricultural sector especially with respect to depressed agricultural incentives through price, fiscal, financial and other policies. In particular, credit and financial policies will be emphasized during the Fourth Plan.

Agricultural Information Service

10.1.113 To achieve the production targets in agriculture sector, it is necessary to minimize the knowledge gap now exists between the farming communities and the modern practices. Since literacy rate in

the rural areas is very low, it would be necessary to depend on the mass media to minimize the knowledge gap. The Agricultural Information Services will be re-organized and assigned the vastly expanded activities to cater to the need for motivating farmers towards modern agriculture. Adequate physical and logistic facilities will be provided to this agency for field coverage througout the country.

Agricultural Statistics

10.1.114 During the Fourth Five Year Plan, a country-wide Agricultural Census will be conducted. This will cover all aspects of agriculture. Sample surveys will be conducted in details in order to provide basic upto date data for the use of planners and administrators. Studies on the use of inputs, costs of production and other aspects for agricultural crops would be continued. A projects has already been undertaken to study current uses of agricultural inputs for major crops in Bangladesh and the report will be available in 1991. General statistics relating to agriculture is regularly collected, compiled and published by the Agriculture Wing of the BBS. This will be continued and further strengthened in coverage and scope during the Fourth Five Year Plan period.

Agricultural Credit

10.1.115 Agricultural credit has a significant impact on the growth of agricultural output especially in view of the emphasis on adoption of high productivity farming and policies of withdrawal of subsidies. The recent trend of liberalizing regulatory policies for modern inputs are opening up further opportunities for the private sector especially to farmers to invest in modern inputs; dealers to invest in input procurement and sales; processors to invest in drying, storage, processing, transport and marketing ; and manufacturers to invest in supplying goods and services to farmers, dealers and processors. Without increases in financial support for such productive investment, credit could become the limiting factor to achieve the goals and targets of the agriculture sector during the Fourth Plan period. The existing rural credit institutions and programmes, in most cases, have proved ineffective to remove the constraints on small farmer development because they lack many features and characteristics which small farmer credit programmes require such as collateral-free loan, simple lending procedures, target-group approach, supervised credit, formation of appropriate groups etc.

10.1.116 During the Fourth Five Year Plan period, emphasis would be placed on restructuring of the formal credit system to better serve the needs of the farmers. This would require the development of a broader financial intermediation system, including the possibility of establishment of a Small Farmers Development Bank, more NGO participation along Grameen Bank lines and initiation of changes in the regulatory framework to encourage private commercial banks to involve in agricultural credit activities. Special emphasis would be given on the following :

- Adequate expansion of agricultural credit facilities especially to meet the requirements of small and marginal farmers,
- Increase in area coverage under credit under a phased programme with emphasis on poorer farmers,
- Strengthening of the lending institutions, project appraisal and monitoring capabilities,
- Measures to institutionalize the dadan system for forward selling by the loanees,
- Effective methods to deal with the problem of loan recovery,
- Increase in financial viability of loan disbursing institutions to restore the required growth in agricultural credit.

10.1.117 Based on recent performance and the targets of the Fourth Plan, the total credit needed to be disbursed during 1994/95 is estimated to be TK.2000 crore compared to Tk.945 crore in 1989/90 giving an annual growth rate of 16 percent. The details of the proposed credit programme is given in Table 10.1.9

Table 10.1.9 Agricultural Credit Programme, 1994/95

(In crore Tk.)

Loan Category	1989/90		1994/95	
	Amount	P.C.	Amount	P.C.
Crops	414.6	43.9	1100.0	55.0
Tea	81.2	8.6	150.0	7.5
Irrigation Equipment	49.0	5.2	150.0	7.5
Others	400.2	42.3	600.0	30.0
Total	945.0	100.0	2000.0	100.0
Short-term	700.0	74.1	1500.0	75.0
Long-term	245.0	25.9	500.0	25.0

Crop Insurance and Contingency Plan for Floods & Natural hazards

10.1.118 Farmers' risk in crop production substantially increases with floods, droughts and other natural calamities which saps the vitality of the rural economy. Due to recurrence of such natural calamities, it is essential to enhance the farmers' risk taking ability along with credit to meet cash inputs. It is, therefore, critical to develop a Crop Insurance System alongwith the credit programme. A pilot scheme for Crop Insurance was introduced in 1977 by the Sadharan Bima Corporation on a Voluntary basis but it has not proved to be effective. The spread of risk is so limited that the scheme has sustained continuous losses since its inception. Some concrete measures need to be undertaken in this area in the interest of accelerated adoption of agricultural technology and increased production. The measures should cover all areas of the programme such as, the level of premium, various policy options, inter-agency co-ordination and promotion. A lowering of the premium rate may encourage farmers to undertake crop insurance policies in large numbers. In place of single-year crop specific insurance policy, the possibility of multi-year and multiple crop or even area-wise policy may be considered for compensating farmers in the event of crop failure due to natural calamities.

10.1.119 In view of the unexpected losses to agricultural projects due to floods and other natural calamities, agricultural development projects need special protection against such unforeseen situations. So, provision of block allocations in the agricultural sector schemes during the Fourth Five Year Plan would be made in the public sector.

Area Development and Targeted Programmes

10.1.120 During the last two decades, the government has initiated a number of area development projects, focusing on regional agricultural and infrastructure development. Increased understanding about the nature of underdevelopment in the rural areas and concern for balanced and regional development has led to the enhanced emphasis upon undertaking regionally based agricultural development projects. Also, the need for target programmes at disadvantaged groups, such as, landless, marginal and small farmers and women is widely recognized. Therefore, programmes targeted at less developed regions and, disadvantaged groups have been developed with assistance from various donor agencies and by governments own initiatives during the Third Plan period. Their impact upon reducing rural poverty and accelerating socio-economic development of the lagging areas has been moderate, and vast numbers of the target group population and many lagging areas are without effective programme support.

10.1.121 There will be three strategic thrusts in such programmes during the Fourth Plan :

- an integrated farming and resource systems approach to area development;
- special consideration to the major disadvantaged groups in all programmes; and
- increased co-ordination with and contracting out to the Grameen Bank and NGOs.

Agro-Business Development

10.1.122 The agriculture sector cannot provide employment for the entire rural population entering the labour force. For the people, jobs would have to be created in other sectors. A rapidly expanding agriculture sector in Bangladesh would generate demand for a wide range of goods and services presenting two distinct types of agro-business opportunities - those providing inputs to the sectors and those processing, distributing and selling its outputs.

10.1.123 On the input side modernizing agriculture requires ever-increasing volumes of irrigation equipment, fertilizer, seeds, pesticides, power tillers and other mechanical equipment. Each of these creates business opportunities and employment in the rural areas.

10.1.124 On the output side, as the nation nears foodgrain self-sufficiency and the output of other crops increases, additional opportunities will be created in distribution, warehousing and storage; and in food processing.

The Role of the NGOs

10.1.125 Besides, Non-Government Organization's (NGOs) involvement for the development of agriculture would be approached within the comprehensive frame of agricultural development strategies. NGOs experience with private individuals and groups for organizating them to participate in productive activities will be further explored. NGOs will be involved in the formation of voluntary co-operatives, distribution of credit and agricultural inputs, imparting training, expansion of homestead farming, exploring off-farm avenues of employment and income generating activities and similar other activities necessary for agricultural development. In this respect, the role of the public sector would be to encourage and co-ordinate the activities in various agricultural development programmes and supplement such initiatives wherever needed.

Women in Agriculture

10.1.126 Women involvement in agriculture, particularly in food production, is much more significant than is widely known or acknowledged. While in recent years, field workers and researchers coming in contact with the rural poor have been witnessing women's increased participation in agriculture, these trends have remained invisible in official statistics and in the planning and implementation of mainstream agricultural programmes. This invisibility of women farmers is primarily due to traditional socio-cultural values and attitudes according to which, it is not socially acceptable for women to be involved in field agriculture.

10.1.127 In view of the increasing role of rural women in development and the need to integrate women within the main stream of development, it is necessary to strengthen all existing rural institutions, government institutions and NGOs and to render those more effective in reaching poor women and become more sensitive to their needs, realities and demands. Policy changes that are needed in rural institution building and in a rural credit delivery during the Fourth Five Year Plan, in this respect, are:

(i) All credit programmes should be made equally accessible to men and women members and the size of loans to women needs to be sufficiently large so that they are able to utilize loan for the most profitable self-employment rather than for stereotyped, traditional activities.

(ii) Credit disbursement are needed to be accompanied by agricultural and related technological skills training.

(iii) Collective enterprises undertaken by landless men's and women's groups, such as joint farming and leased land, leased pond fisheries and joint ownership and management of modern irrigation equipment (DTW, STWs) should be encouraged.

(iv) Staff members of institutions mandated to work with and for rural women should be motivated to live and work in the rural areas.

10.1.128 The appropriate strategy for reaching and assisting the majority of rural women is the integration of women in all types of agricultural programme. Such integration requires a number of crucial policy changes in the Fourth Five Year Plan including : clear statement for the objective of reaching men and women small holders with all types of agricultural services and resources, the mandate for male and female extension workers to select women's formal and informal groups engaged in agriculture (in livestock and/or poultry and homestead production and not only in rice production) as contact farmers, policy of women's integration in agricultural programmes that all types agricultural programme should include women as a target population for all programme components (unless there is evidence that in the area of operation women are not interested to participate in these activities), in building up of the implementation capability of decision makers, managers, programme directors and field workers, the availability of additional and specifically yearmarked financial resources; and the availability of sex-segregated data.

Environmental Impact

10.1.129 In Bangladesh because of limitations in physical expansion in arable land, major interventions for the development of agricultural sector include : development of irrigation facilities, application of chemical fertilizer, insecticides and pesticides, and introduction of HYV seeds. Cultivation of HYV crops require chemical fertilizer but not all the fertilizers are used up by the crops. A typical crop response to fertilizer application indicates that the rate of utilization of fertilizer falls with increases in fertilizer application. As a result, large quantity of nitrogen and mineral fertilizer are drained out to surface waters or leached into ground waters or tied into the soils in chemically unusable form. The excess nitrogen and phosphorus in the body of water disrupts the aquatic food chain, deteriorates water quality and affects aquatic life. Due to reduction of organic recycling and unbalanced use of chemical fertilizer, the organic matter content of soils in Bangladesh have reduced below the critical level of 2 percent. Pest control is also an integral part of modern agriculture. Unfortunately, it has the biggest impact on environment. In Bangladesh although the use of pesticides is still limited, they are being used indiscriminately. Moreover, regular monitoring and evaluation of the impact of pesticide use are not carried out. The Fourth Plan, in this respect, would emphasize integrated pest control specially through biological control of pests.

10.1.130 High Yield Variety (HYV) seeds are the crop of the modern agricultural technology. The environment concern for the introduction of HYV seeds is replacement of mutually re-inforcing complex biological communities by monoculture: thereby replacing a suitable eco-system with over simplified systems that are vulnerable to pests; weeds, diseases, soil erosion, drought, etc. It increases the danger of permanent genetic erosion due to artificial imposition of mono-culture. Crop diversification under irrigated conditions will, therefore, be an important thrust of the Fourth Plan.

10.1.131 In Bangladesh, there is very limited opportunity to solve the bio-mass problem by physical expansion of land area. Therefore, intensive and efficient use of available land is the most important option to solve such problems. Besides, special measures are to be taken to conserve the resources of the country for sustainable agricultural production. Special development projects have been undertaken to improve the conditions of bio-mass productivity in degraded areas e.g. Barind Development Project, Crop Diversification Programme to maintain the sustainability for bio-mass production.

10.1.132 The productive environment of renewable natural resources has been affected due to improper management of these resources. There is an urgent need to undertake an integrated action programme to ameliorate the conditions of productive environment. Indigenous research experience is necessary of environmentally sound planning. Necessary arrangement would be made during the Fourth Five Year Plan to strengthen/develop indigenous research capabilities to provide continuing professional support to policy planners and decision makers on the basis of cumulative research experience. Considering the importance of cumulative experience for environmentally sound planning, ad-hoc arrangmeent so far made between the researchers and the planning and development system would be institutionalized.

Integration of Sector-Based with Group-Based Planning

10.1.133 Of the ten socio-economic groups distinguished in the macro-framework, six are related to land and agriculture and are directly involved with agricultural production activities and the rest are formal and informal rural and urban groups. These four non-agricultural groups are linked with agriculture through off-farm activities. Efforts will be made to formulate projects and schemes during the Fourth Five Year Plan to integrate these socio-economic groups specially landless, small and marginal farmers, as far as possible, in order to achieve the primary objectives of poverty alleviation and self-reliance. In this respect, emphasis would be placed on the formulation and execution of local-level projects, in various agricultural fields and their integration with macro-level planning.

Linkages and Sectoral Inter-dependence

10.1.134 There is close forward and backward linkages and inter-dependence between agricultural development and industrialization as each one of them depends upon the other either for supply of inputs or raw materials required for production. One sector's progress generates multiplier effects on the other. With development of agriculture, production and income of farmers increase which leads to increased demand for inputs and services for carrying out agricultural activities. It creates additional employment opportunities and sells growth momentum in motion in both the sectors. In addition to supplying foodgrain for the people; agriculture is also the primary source of various raw materials and inputs required for agro-based industries like cotton, jute, sugarcane, rice milling etc. So the development of agriculture means increased availability of raw materials and foodgrain for the country.

10.1.135 The agricultural sector also depends on industries for wages and consumption. Lack of adequate investment in agriculture hinders the use of the potentials for absorption of the increased labour force in agriculture. Expansion of rural industries could absorb a part of the surplus labour force in agriculture. Therefore, comprehensive development of agriculture and industries would be promoted so that they reinforce each other by enhancing mutual supply and demand.

10.1.136 Policies would be persued to develop agro-based industries in rural areas to create employment opportunities close to their market and labour supply. They would be encouraged to use locally available raw materials and indigenous resources so that maximum benefit is derived through multiplier effects. Such developments would be pursued along two specific lines, agro-support and agro-processed industries and consumer good industries to satisfy rural demand. To derive maximum benefit from such development, industries in the rural areas would be given priority so that increased rural income is largely spent on goods produced in the rural areas. To achieve balanced growth in agriculture and industries, the development of transport, communication, rural electrification, manpower training, credit and marketing activities would be emphasized. Furthermore, emphasis would be placed on effective co-ordination between the development programmes of agriculture, industries and rural development both at the national and grass root levels. Moreover projects to be formulated during the Fourth Five Year Plan would address such basic issues as technology choice, employment impact, environmental effect and social profitability in order to maximize their effectiveness and linkages.

Institutions Development and Strengthening of the Ministries

10.1.137 The Fourth Plan would specifically focus on institutional development in rural areas with special attention on :

- Improved access of rural households, especially small landless farmers to resources, inputs, extension services and employment,

- Appropriate institutions at grass root level to mediate supply of resources to the landless/poor without much leakages to increase their income, employment and self-reliance through preferential and adequate allocation of resources for the purpose,

- Wider organisation of landless /small farmers into informal groups for self employment, wider participation of women/ target groups in wage employment schemes for creation of rural infrastructures and incorporation of successful aspects and positive lessons of Grameen Bank Model/NGO experiences in programmes for the rural poor.

.10.1.138 Institutional strengthening will focus on agricultural planning towards a greater policy and programme orientation. The programme approach will provide policy leverage to meet requirements of critical agricultural inputs. For the purpose, the Ministry has to:

- revise its policies and regulations which conflict with the FFYP sector objectives,

- identify areas where policy reforms are needed,

- stimulate and enforce the development of competitive markets,

- improve existing programmes,

- promote the initiatives contained in the Plan,

- extend its capabilities by establishing linkages with other organizations engaged in similar or related works,

- encourage group or community efforts,

- promote lagging areas and disadvantaged groups, and

- support local level agricultural development efforts.

10.1.139 The new orientation requires : a considerably upgraded planning, policy development and monitoring capacity in the Ministry; and re-orientation and re-organization of Departments and Agencies.

Private Investment in Agriculture

10.1.140 During recent years, privatization in the agriculture sector has assumed two major dimensions, firstly the policy of privatization in terms of ownership of irrigation equipments has been vigorously pursued for implementation. Secondly, there has been expanded private sector involvement in trading of agricultural, like minor irrigation equipments and fertilizer.

10.1.141 In view of the above and the changing agrarian structure dominated by landless/small farmers, it would be imperative to provide appropriate policy support to sustain these classes as productive force in agriculture. Wider private sector involvement in agriculture would mean not only the traders in agricultural inputs and products but growers as well. Several studies suggest that farmers investment- about 15 percent of their expenditures and usually small and medium farmers have higher average - to invest than either marginal or large farmers. Accordingly, the private sector will be encouraged to play increasingly dominant role in agriculture development. Farmers' investment efforts would be encouraged - increased flow of credit for purchase of inputs such as fertilizer, pesticides, improved seeds, irrigation - capital equipments and draft animals. The private sector would continue to dominate in marketing of pesticides, fertilizer, seeds and irrigation equipments and hence private sector investment in agriculture is expected to rise significantly during the Fourth Plan.

XI. DEVELOPMENT PROGRAMMES AND INVESTMENT OUTLAY IN THE PUBLIC SECTOR

10.1.142 The public sector development programmes during the Fourth Five Year Plan period have been targeted to create a favourable atmosphere for the realization of a sustained annual growth rate of 3.20 percent for crop agriculture within the integrated macro-economic framework set for the Fourth Plan. The public sector efforts are designed for maximum exploitation of the major potentials of the present agricultural situation along with addressing the major weaknesses within a planned strategy for long-term sustained and accelerated growth.

10.1.143 The Fourth Five Year Plan, therefore, aims to implement some broad-based and comprehensive public sector development schemes with primary emphasis on maximizing returns from the proposed financial investments. While the number of proposed schemes is small, including some appropriate spilled-over projects from the Third Five year Plan, it is expected that successful completion of these projects would create the necessary dynamism in the crop sub-sector in order to achieve the stipulated targets.

10.1.144 The Fourth Five Year Plan allocation for crop agriculture is Tk.11090 million at 1989-90 prices. The programme-wise allocation of the crop agriculture public sector investment outlay is presented in Table 10.1.10.

Table 10.1.10 Programme-wise Financial Outlay in the Public Sector 1990-95 (At 1989/90 prices)

(In Crore Taka)

Programme	Spill-over project	New project	Total	Percent
1. Fertilizer	-	20.00	20.00	1.80
2. Seeds	34.26	200.00	234.26	21.13
3. Agriculture Extension and Management	226.74	88.00	314.74	28.34
4. Plant Protection Services	7.25	10.00	17.25	1.56
5. Agriculture Education and Training	94.20	3.00	97.20	8.76
6. Agricultural Research	90.60	95.47	186.07	16.78
7. Agricultural Marketing, Information & Census	0.82	12.00	12.82	1.16
8. Area Development Programme & others	99.12	14.00	113.12	10.20
9. Block Provision	-	25.00	25.00	2.25
Total ADP	552.99	467.47	1020.46	92.02
TAPP	51.41	37.13	88.54	7.98
Total	604.40	504.40	1109.00	100.00

PROGRESS IN FINANCIAL OUTLAY

10.1.145 Year-wise financial outlay of the crop sub-sector in the Annual Development Programme may be seen in Table 10.1.11

Table 10.1.11 Financial Outlay for 1990-94

Year	Allocation in crore taka (at current prices)
Revised ADP	
1990-91	205.04
1991-92	221.39
1992-93	229.18
ADP	
1993-94	345.45

FOOD MANAGEMENT

10.1.146 Foodgrains play a dominant role in the country's economy with the growth and stability largely depending on the behaviour of the food sector. The major consumption items of food in the national diet are foodgrains (rice and wheat) which provide more than 83 percent of calorie intake and about 70 percent of total protein intake. The availability and consumption of foodgrains has long been less than requirement. Thus food security continues to be one of the most critical issues in economic development and social stability in the country. Food security encompasses problems of both production and management. While the production of food is concerned of the Ministry of Agriculture, the management of food lies with the Ministry of Food. In the context of food shortage, widespread poverty, hunger, malnutrition and massive unemployment, the management of food has always been a difficult task.

10.1.147 The national food policy is committed to improve the overall management of food operation system in the country. The Government's involvement in the food management extends over a number of fields including:

(i) domestic procurement and import of foodgrains, sugar, edible oil, salt, and other essential items (as and when necessary);

(ii) storage, preservation, distribution and sale;

(iii) transportation and movement and

(iv) price/market stabilization.

10.1.148 The primary sources of inflows of the above food items to public supplies are domestic procurement and import; while the outflows are the different channels like Essential Priority (EP), Statutory Rationing (SR), Palli Rationing (PR), Food for Works Programme (FFWP), Vulnerable Group Development (VGD), Open Market Sales (OMS), etc. of the Public Food Distribution System (PFDS). The extensive network of foodgrains storage facilities, developed throughout the country, consisting of 5 Silos, 13 Central Storage Depots (CSDs), over 600 Local Supply Depots (LSD) and a few Temporary Purchasing Centres (TPCs) along with the transport facilities has vital role in the operation of PFDS.

II. REVIEW OF PAST DEVELOPMENT

10.1.149 During the Second Five Year Plan (1980-85), the target was fixed for expansion of foodgrains storage capacity at 2.25 million metric tons (MT) from a level of about 1.1 million MT in 1979-80. Against this, capacity raised to about 1.8 million MT. The Third Five Year Plan (TFYP, 1985-90) envisaged a comprehensive programme of storage repair and rehabilitation rather than construction of new facilities except in Thanas and strategic locations having no such facilities. The plan also placed emphasis on the improvement of the management capability of the Directorate General of Food (DGF). As such, an FAO financed project undertaken on the reorganisation of DGF has been completed.

10.1.150 Storage capacity did not increase significantly during the Third Plan period. But substantial renovation of some of the existing storage has been completed and the same for some others are under implementation. The total storage capacity available by the end of TFYP is estimated to be about 1.9 million MT as shown in Table 10.1.12.

Table 10.1.12 Type-wise Storage Position at the end of TFYP Period

Type of Centre	No. of centres	No. of units (Godowns)	Capacity (in '000' MT)
LSD	622	1,975	1,128
CSD	13	554	475
Silos	5	353*	227
TPC	159	159	40
Total:	799	3,041	1,870

*Indicates number of bins.

10.1.151 Since the late 1970s, the major changes made in the PFDS deserve mention. The structure of rationing has significantly been changed through reduction of the gap between ration price and market price

and channelling increasing amount of foodgrains in the rural areas. The PFDS is now strongly oriented towards markets and the process has been strengthened with the expansion of the Open Market Sales. Both the frequency and severity of seasonal price hikes is now greatly reduced. Public procurement has been changed from being primarily a source of chief supplies for the PFDS to being a system designed to provide support prices to producers. The annual food budget is prepared to match the supply of and demand for foodgrains in the country. The estimates of total demand is based on foodgrains requirement assessed on the basis of the estimated total population and per capita consumption. However, the population is composed of the various ages, sex, racial and ethnic groups, life styles and geographic locations and thus, their calorie and protein requirements vary. Accordingly food balance sheet should take into account the food needs of the people based on these considerations. A new Management Information System (MIS) introduced for improved invoicing and accounting system now allows faster, more professional control of public food operations. The staff restructuring at DG Food under Golden Hand Shake Programme of the Government is under implementation.

III. OBJECTIVES AND STRATEGIES OF THE FOURTH FIVE YEAR PLAN

10.1.152 The Fourth Plan would emphasize the integration of production planning, maintaining adequate supply of food ensuring stability in food prices, improvement in food management and building up of security reserves on the basis of nutritional needs of the people.

Storage: To maintain stock and to build up a national food security reserve procurement and storage efforts would be greatly improved. The storage capacities will be maintained at an existing level of 19 lakh M. tons.

Least-cost movement programme: One of the major activities of food operation is the movement of foodgrains and food-stuff. The present movement plan for food operation needs further strengthening. A Least-Cost Movement Plan will be drawn up and put into operation during the plan period.

Reduction of storage loss: The food operation system has provision of certain admissible losses during movement, handling, storage etc. This was calculated during the late sixties. In the meantime, the logistic supports to food management have increased substantially. Efforts would be made to eliminate the admissible losses and establish a system to calculate actual losses.

Food balance sheet: The requirements based on nutritional needs specified by the National Nutrition Council would be given further consideration during the Plan period. The production of rice would be gradually adjusted through appropriate policies with increase in the production of wheat, maize and other starch-rich food crops.

Food security: Food should connote a basket of nutritionally balanced food items. As such, food security should cover other food crops besides cereals. However, food security will mainly focus on cereals for the time being.

Changes in food habits: There should be a gradual reduction of consumption of cereals (rice and wheat) in favour of non-cereal foods in the national diet. Attempts should be made to reduce the intake of starchy food and supplement the same by food rich in digestible proteins of both plant and animal origin. Vegetables and fruits will play a significant role in the supply of essential vitamins and other requirements.

IV. POLICIES DURING THE FOURTH FIVE YEAR PLAN

10.1.153 For proper management of the food situation, the policies would emphasize:

i) to achieve self-sufficiency in cereals for human consumption keeping in view the balanced nutritional need;

ii) to provide reasonable incentive prices to the producers with a view to accelerate production;

iii) to achieve food security by ensuring adequate and steady supply of food grains at relatively stable prices;

iv) to phase out gradually subsidy on food distribution with provision for government intervention for generally inaccessible areas;

v) to increase coverage of vulnerable population in rural and urban areas under PFDS and Food for work and Food for Education Programmes;

vi) to increase private sector participation in the national food management.

V. PROGRAMMES FOR FFYP

10.1.154 Given the production targets during the Fourth Plan, domestic procurement of foodgrain is expected to increase to a level of 10 lakh M.tons. In view of the above, the main programmes during the Fourth Five Year Plan will be:

(a) to maintain the existing level of stroage capacity,
(b) development and maintenance of food infrastructure facilities,
(c) strengthening and streamlining the food management capability and
(d) formulation of a logical food balance sheet.

10.1.155 To achieve the objectives, foodgrain storage capacity will be maintained at the existing level of 19 lakh M.tons. According to the latest estimate as well as the World Bank recommendation, about 7 to 8 lakh M.tons of foodgrains in stock may be justified as security reserve for two to three months to meet any emergency requirements. Moreover, due to stoppage of several PFDS channels and low off-take under the existing channels and allowing of private sector import of wheat, the average annual off-take under PFDS is not envisaged beyond 1.5 million M.tons. The rapidly growing private food grain stock offer prospect for a corresponding decrease in public security stocks. Further, the BADC's fertilizer godowns tranferred to the Ministry of Food are, at present, under rehabilitation for storing food grains. These godowns may cater to the needs of procurement in the surplus producing areas of North Bangladesh. However, if sometimes congestion occurs, this could be alleviated by proper movement of food grains to other areas having storage remaining underutilized or unutilized. On the basis of all these, expansion of storage capacity above the existing level of 19 lakh M.tons is not warrnated. However, it is envisaged to rehabilitate 4 lakh M.tons storage capacity of LSDs, CSDs and Silos during the Plan period. However, the target for repair and rehabilitation of the storage by type for the Fourth Five Year Plan is given in table 10.1.13.

Table 10.1.13 Repair and Rehabilitation of Food Storages during the Fourth Five Year Plan

Type of storage	Capacity to be reapired and Rehabilitated (in '000' M.t.)
LSD	200
CSD	100
Silo	100
Total	400

10.1.156 Besides, the Directorate General of Food will be restructured and the food balance sheet will be formulated incorporating the nutritional need and incorporating all essential food items.

Financial Outlay

10.1.157 The total outlay for implementing the programmes as envisaged for the food sub-sector during the Plan period is estimated to be Taka 130.00 crores at 1989-90 prices. Yearwise break-up of the total allocation is given in Table 10.1.14.

Table 10.1.14 Annual Phasing of Plan Allocation

(In crore taka)

	1990-91	1991-92	1992-93	1993-94	1994-95
At current prices	36	33	33	57	50

X.2

FLOOD CONTROL AND WATER RESOURCES

Introduction

10.2.1 The economy of Bangladesh is predominantly agrarian. Since Agriculture and Water Resources are interlinked foodgrain production can not be increased to desired level without water management through flood control, drainage and irrigation. About two third of the cultivable area of our country is prone to flood damage almost every year and so it is obvious that flood control and drainage improvement are very crucial to national economy for preventing or reducting flood damage to crops and infrastructure and improving agriculture.

10.2.2 Compounded with the flood damage is the damage caused to human lives, agriculture, cattle heads and infrastructure by the tidal surges in the coastal belt south of country which also occurs frequently. Embankments and ancillary water management structures in this area provide the most vital infrastructure for improved agriculture. Erosion control at many places along river banks and at some islands has become important to prevent huge economic losses from eroding away of valuable business centres, agricultural lands and other infrastructure.

10.2.3 According to the Fourth Five Year Plan document, the agricultural growth rate was targeted at 3.6 percent annually to achieve the macro-economic growth of 5 percent annually during the Plan period. That would necessiate cereal production of 22 million metric tons for food self sufficiency. Irrigation target set by water resources sector at 4.8 million ha for the Plan period conforms to national requirement.

Water Resources Potentials and Irrigation Possibilities

10.2.4 The net area of cultivated land in the country is estimated at 9.03 million ha of which 7.56 million ha are suitable for irrigation. However, it is estimated that about 6.90 million ha could be developed for irrigation and 5.76 million ha of land would ultimately require some flood control and drainage measures under the present hydrological conditions. Irrigation would, therefore, be considered as the leading factor for agricultural development during the Fourth Plan since increasing the proportion of farm land under irrigation offers the only effective way to substantially raising aggregate crop output and yields. First priority in irrigation development would be the expansion of minor irrigation. Such expansion will primarily increase the area of winter season high productivity cropping which avoids the risks associated with monsoon vagaries of flooding and water logging. Moreover, the use of minor irrigation on supplimentary basis in combination with effective Flood Control and Drainage will play a vital role in extending the low risk modern technology cropping into both ends of the traditional high risk monsoon season cropping period (late monsoon /early winter and late winter/early monsoon seasons). With such a strategy, through the provision of relatively modest FCD to complement minor irrigation development, a large part of the country can eventually be made to support at least two risk high productivity crops.

10.2.5 Despite the decline in relative importance of the agriculture sector in the national economy since independence, the sector still produces almost 40 percent of the economy's output and employs nearly three-fifth of the civilian labour force.

10.2.6 Agricultural performance, food sector performance in particular, has a major direct impact on important macro-economic objectives like employment generation, poverty alleviation, resources development and food security. Meeting the nation's growing food requirements remains a central objective of public policy and there has been substantial progress in terms of increasing foodgrain production. The experience during the past have revealed the basic nature and vulnerability of the agriculture sector, and the economy itself, to the exogenous dependence on factors with adverse impact on steady growth. In general, past expenience suggests that the growth potentials of the economy remain largely unrealized due to instability in the agriculture sector.

10.2.7 In order to achieve the objectives of the agriculture sector of achieving a sustained annual growth rate, the estimated area likely to be irrigated during the terminal year of the Fourth Plan would, therefore, be about 53 percent of total cultivable area and about 70 percent of the potential area for irrigation. By the end of the Third Five Year Plan 3.1 million ha area was irrigated which is about 34 percent of cultivable area and 45 percent of area potentially suitable for irrigation.

Objectives of the Fourth Five Year Plan

10.2.8 In order to achieve the objectives of the agriculture sector of achieving a sustained annual growth rate of 3.6 percent, it has been planned to bring 4.8 million ha under irrigation by the terminal year of the Fourth Five Year Plan.

10.2.9 The specific objectives during the Fourth Five Year Plan would be the following :

1. Rapid increase of irrigated area to sustain technological transformation.

2. Provision of supplementary irrigation facilities along with complementary FCD facilities in consonance with other resources to bring improvements in crop yields and production during the kharif season.

3. Provision of timely and dependable supply of irrigation water in order to achieve crop production targets.

4. Regulation and control of floods and drainage, salinity, tidal water inundation, river erosion and other physical damages and human sufferings.

5. Promotion of efficient use of water resources in respect of time and spatial location through emphasis on interbasin water balances and optimal cropping patterns and without causing harmful environmental effects.

6. Generation of productive employment opportunities for rural people in order to ensure equitable distribution of benefits of development.

MAJOR POLICIES FOR THE FOURTH FIVE YEAR PLAN
Water Control and Drainage

10.2.10 In respect to Water Control and Drainage, the policies would aim broadly to :

a. Bring shallow and medium flooded land under controlled flooding to permit environmentally desirable integrated agriculture and aquaculture development through construction of dyke and polders with regulators and structures.

b. Introduce comprehensive analysis of FCD/FCDI projects with social costs and full accounting of externalities and linkages and improve quality and implementation speed of schemes in order to provide stipulated modification of land/water environment according to the planned schedules.

c. Create appropriate institutional framework for operation and maintenance of schemes on a self-sustaining basis and assign local bodies at Union/Thana levels the responsibility of maintenance/ management of small schemes within their jurisdiction and correct institutional/management deficiencies at the field level.

d. Emphasize rehabilitation of existing projects, in the light of past experience, in order to increase their effectiveness and in case of new projects focus on short gestation, cost effective projects.

Minor Irrigation Development

10.2.11 Minor irrigation, composed of traditional and modern manual technology, motorised low lift pumps (LLPs), shallow tubewells (STWs) and deep tubewells (DTWs), has become the prime mover of growth for the agriculture sector in Bangladesh. The history of post-independence minor irrigation development can be divided into four phases. In the first phase, until 1979, public sector LLPs and then DTWs provided most of the increase in irrigated area. In the second phase, 1979 to 1984, there was a liberalised expansion of minor irrigation mainly with STWs in the private sector. In the third phase, 1984 to 1987, the rate of minor irrigation development slowed because of several reasons; private sector STW sales were limited; there was official concern over reported declines in groundwater levels where STWs operated; an embargo on all diesel engines was imposed. The latest phase began in 1987 with removal of the import ban on diessel engines leading to the rapid increase in private sector sales of STWs and LLPs. From 1988/89 new policies to remove duties and standardization restrictions on imports of small diesel engines encouraged further rapid expansion of private sales of STWs and LLPs.

Complementarity of Minor Irrigation Development with Flood Control and Drainage

10.2.12 Flood control and drainage (FCD) and minor irrigation are not necessarily mutually exclusive. While flood control impact improves wet season rice production, minor irrigation can facilitate timely aus plantation and provide needed water during the grain-filling stage of aman. Similarly, small-scale FCDI (SSFCDI) can complement minor irrigation of boro by protecting its harvest from early flooding. This complementarity of technology is especially suitable for Haor development in the Sylhet region and in many other areas.

10.2.13 Expansion of minor irrigation will be increasingly constrained by the scarcity of areas protected from damage due to early floods (late April to June) to boro and aus crops. Although flood control facilities have been provided for about three million hectares, most of the area remains subject to early flooding. According to the National Water Plan, growth of minor irrigation in the order of 250,000 hectares planning area requires parallel investment in flood control to cover about 200,000 ha. This represents a rapid rise in the area covered by FCD. The faster expansion of FCD will also have to be accompanied by a change in flood control to reflect the requirements of dry season irrigation development.

10.2.14 Because FCD programmes have often been planned and implemented independently of minor irrigation development programmes, there are many areas with FCD facilities where minor irrigation remains undeveloped and restricted. There are also areas where minor irrigation has spread, but which continue to be handicapped by early floods. This situation results from a lack of coordination, and greater coordination will be effected during the Fourth Plan so that FCD efforts can be better focused in areas with recognized minor irrigation potential.

Flood Control Measures during the Fourth Plan

10.2.15 Bangladesh, more than any other country, is vulnerable to frequent and desruptive flooding due to its physical and hydrological characteristics. The country, therefore, needs to protect its population centres, road and rail links, industries commerce and most importantly its agriculture from recurrent flood and other natural disasters. On the basis of flood records of 1974, the flood vulnerable area in the country was estimated at about 82.18 lakh ha which is about 57 percent of the total area of the country. However, the floods of 1987 and 1988 affected about two-thirds of the total area inflicting severe damages. In 1988, out of the 64 districts, 53 were inundated to varying degrees and almost half of the total population were directly affected by floods. Schools, houses, livestock, tele-communications, roads, railways, bridges were damaged or destroyed. Standing crops and raw materials were lost and works-in progress interrupted. Capital stock losses were well over US $ 1.00 billion which seriously affected the growth and performance of the economy. By and large, it is now accepted that Bangladesh has to live with flood and effective measures are needed to control floods for sustained development.

10.2.16 Therefore, the major objectives with respect to Flood Plan are to :

— Safeguard lives and livelihoods;

— Minimize potential flood damages;

— Create flood free land to accommodate the increasing population;

— Enhance agro-ecological conditions to increase food production;

— Enhance urban land use for effective development of public, commercial and industrial enterprises;

— Meet the requirements of fisheries, navigation, communications and public health.

Achievement and Future Programme (Physical and Financial)

10.2.17 Target for irrigation coverage in FFYP has been set at 48.00 lakh ha. of which the flood control target is 36.44 lakh ha. The detailed physical programme is showned in table-10.2.1

10.2.18 In respect of financial programme an allocation of Tk. 5774 crore (at 1989/90 prices) was provided for water resources sector in the FFYP of which about Tk.1671 crore has already been spent during 1990/91 and 1991/92. An amount of Tk. 881 crore for 1992/93 and Tk. 912 crore for 1993/94 ADP were allocated and according to TYRP (1992/95) Tk. 1186 crore would be available for 1994/95 ADP. It may be

noted here that in the previous two Plans i.e. SFYP and TFYP Tk. 1850 crore (at 1979/80 prices) and Tk. 2703 crore (at 1984/85 prices) respectively were allocated to the Water Resources Sector.

Major Strategies during the Fourth Five Year Plan

10.2.19 In order to achieve the objectives and targets of the FFYP, two sets of strategies will be pursued short term and long term.

Short-term Strategies

i. High priority will be accorded to the maximum utilization of the existing facilities and improvement of productivity in the area already covered by irrigation facilities. Command area development, efficient water distribution, improvement of crop-soil-water management will be encouraged.

ii. Speedy completion of incomplete projects will be stressed. The on-going projects will be adequately funded to achieve the stipulated physical targets in the shortest possible time.

iii. In developing new projects focus will be given on short gestation, cost effective and labour intensive water projects, except where large projects are needed for conservation of water to feed small projects in the dry season. Thus small and medium flood protection, drainage and gravity irrigation and minor irrigation projects (LLP, STW and DTW) will get priority for implementation. The study of MPO now Water Resources Planning Organisation (WARPO) continues to be the main basis for the development of water sector.

iv. Participation of local people as beneficiaries of drainage and irrigation programmes will be encouraged from their planning to implementation and management. The local government authorities will have a more significant role to play in this respect.

Long-term Strategies

i. **Use of Main Rivers :** Augmentation of small river flows from big rivers will be pursued during the Fourth Five Year Plan. The case in point is augmentation of Baral, Bangali, Dhaleshwari, Old Brahmaputra and various other rivers from the rivers, the Ganges, the Brahmaputra and the Meghna through use of large capacity floating/berge-mounted pumps.

ii. **Basin-wise Development :** The ultimate development of water resources will require basin-wise development of surface and underground water in an integrated framework for water balance with time (season) and space (area) variants. In addition to the MPO study, thorough investigation of total potential water resources, particularly in respect of underground ones will be made. Some river basins are already covered by on-going project e.g. Chalan Beel, Pabna and Bogra projects in Atrai-Hurasagar basin, Noakhali project in the Dakatia basin, Dhaka South West project in Kaliganga-Dhaleshwari basin, etc. Development of Meghna basin and Hoar areas revealed complex problems while Muhuri involves a major study of Meghna-Muhuri water transfer scheme. Once a comprehensive framework is available, development will be carried out in phases with continuous monitoring of their effects on the up and down stream regions.

iii. Work on long-term projects like Teesta Barrage will be continued.

Soil Conservation and Afforestation

10.2.20 Measures will be necessary in the catchment area of all rivers which accentuate floods. Water shed management besides retarding the run-off will lead to control of silt inflow into the river which create unstable conditions in the regimes of the rivers. Implementation of the programmes will involve multidisciplinary approach involving soil conservation, engineering, forestry, environment and agronomy.

10.2.21 An early warning system to protect the environment from deterioration along with afforestation and soil conservation would be developed. This can be in the form of water sampling and analysis with respect to its chemical properties, heat and temperature, foreign bodies, silt, etc. It must be carried out with regularity, accuracy and speed so that counteraction can be initiated in time. With the assistance of SPARSSO, ground relay platforms can be set up in different basin regimes for monitoring surface stratosphere condition in a co-ordinated way.

10.2.22 Re-excavation of small rivers and canals would be pursued to increase navigation and irrigation. Proper land use, water shed management for soil conservation along with afforestation to prevent soil erosion would help to prevent siltation of river beds/canal beds within the country. Such soil conservation work would be initiated during the Fourth Plan especially in Garro and Sylhet hill areas, Chittagong, Chittagong Hill Tracts where soil erosion is very high.

Flood Control

10.2.23 Flooding is a normal phenomenon for Bangladesh with different degrees of severity. Some degree of flooding is beneficial for agriculture and fisheries. Major floods however play havoc with crops, property and human lives undermining national confidence in development. The impact of floods on communication and urban and industrial centres is invariably destructive and slows down economic growth. During recent years the opportunity for accelerating growth was temporarily quashed by the floods of 1987 and 1988. The 1988 flood was the most severe affecting nearly half of the 110 million population. Further, the repple effects on human capital formation (education, health, family planning), investor's confidence and the pace of project implementation have additional economic consequences which would become apparent over time. The perpetual threat and recurrence of floods are serious curbs on the social and economic development of the country. Flood control measures under an Action Plan would therefore, be implemented during the Fourth Plan. It will demand significant resources and careful planning and implementation in a phased manner. Benefits accruing from flood protection schemes/projects however may not be visible instantly.

Fourth Five Year Plan Programmes

10.2.24 Total irrigated acreage, as already mentioned, will be increased to about 48.05 lakh hectares in 1994/95 from the estimated benchmark coverage of 31.00 lakh hectares in 1989/90 and the area under flood control and drainage facilities will be expanded to 36.44 lakh hectares from 32.39 lakh hactares over the same period. Programmes to attain these targets are briefly discussed below:

Gravity Flow Irrigation

10.2.25 BWDB will cover an additional 2.88 lakh hectares to bring 5.00 lakh hectares under gravity flow irrigation. In 1989/90, the area under gravity flow irrigation was 2.12 lakh hectares. In addition to expansion of gravity flow irrigation, BWDB would provide additional flood protection and drainage facilities. Unlike in the past, planning, implementation and management of such facilities will be carried at both national and local level.

10.2.26 Under the gravity flow irrigation the following programmes will be undetaken :

i. Very small projects covering maximum 1,000 acres for drainage and flood control will be initiated, proposed, planned and implemented by the Union Parishads. Detailed estimates including the engineering aspects of these projects will be prepared by the Thana Engineer, whereas necessary technical assistance for this purpose will be provided by BWDB. An area of 2.00 lakh hectares will be irrigated by the Thana Parishads.

ii. Under each Thana, there will be one small project covering maximum of 5,000 acres for irrigation and 10,000 acres for drainage and flood control. Detailed engineering and technical appraisal of the small projects may be made by BWDB in consultation with local people. Thana Parishad may be entrusted with the responsiblity of their execution.

iii. It is now evident that the original command area of G.K. Project, Phase-I & II can not be operated with available water. Therefore, area under tartiary canals area may be abandoned and brought under STWs and DTWs wherever needed. There is need to re-examine and re-schedule the existing bigger projects, so that more efficient management system can be developed to get maximum benefit.

iv. Important projects to increase gravity flow irrigation would be studied during the Plan period.

v. Lifting of water through existing dredgers/floating pumps in the Ganges and Brahmaputra for diverting water to the existing rivers would be strengthened.

vi. Improvement would be made in major and minor drainage schemes all over the country to conserve the monsoon flows in all the channels for water use in the winter season.

vii. Protection of important cities, towns, bazars, and other important structures from river erosion would be adequately planned and implemented.

viii. Water conservancy projects at feasible locations of the country will be taken up.

LLP

10.2.27 It is envisaged that the capacity of LLPs (including floating pumps) will be in operation for irrigating 10.88 lakh ha by 1994/95 against actual area 5.27 lakh ha in 1987/88 and benchmark area 7.83 lakh ha in 1989/90.

STW

10.2.28 A total of 500,000 STWs are expected to be under operation to irrigate 22.00 lakh ha by 1994/95 against the operation of 2,78,000 STWs irrigating 12.51 lakh ha in 1989/90. Irrigation will be required during the dry as well as the wet seasons. It might be necessary to operate STWs only in the wet season in some areas due to unfavourable ground water condition. Continuous monitoring of ground water situation will be necessary during the implementation of the STW programme.

DTW

10.2.29 It has been planned to bring an additional 2.00 lakh ha under irrigation through increasing the number of DTWs in operation to 35,000 by 1994/95. This will irrigate 7.00 lakh ha of land as against an actual area of 5.00 lakh ha in 1989/90 through operation of 25,000 DTWs.

HTW

10.2.30 This is envisaged to irrigate 0.54 lakh ha during 1994/95 against actual irrigated area 0.44 lakh ha in 1987/88. It may be noted that there will be no change in area irrigated over the benchmark level during the FFYP for HTW.

Traditional Methods

10.2.31 It has been estimated that a total of 2.00 lakh ha of cultivated land will be irrigated by traditional methods in 1994/95, compared to the actual area of 2.38 lakh ha in 1987/88. It may be stated here that the area under this methods were 3.96 lakh ha from 1980/81 to 1986/87 which decreased significantly afterwards due to increases of LLPs, drying up of water bodies, non-availability of water area, etc.

Food for Works (FFW) Programme

10.2.32 BWDB plays a very important role in FFW Programme. Wheat from FFW is used by BWDB primarily for two purposes :

(i) Maintenance of completed projects, and

(ii) Construction of earth work component (embankment and canal) of approved on-going projects.

Flood Action Plan (FAP):

10.2.33 After the devastating floods of 1987 and 1988 Flood Action Plan (FAP) has been set up for a wide range of investigations into the technical, social and environmental issues required to be addressed in formulating long term flood control, drainage and river management programme. There are 26 studies under FAP of which 11 are regional studies and 15 are supporting studies. The reports after the study will recommend implementation projects for flood control and drainage improvement. Some studies have already been completed (FAP 1.2, 3. 1, 8A, 9A, 9B) and recommended about 6 projects of which river bank protection project, costing about US$ 230 million and Coastal Embankment Rehabilitation Project have been appraised. IDA agreed to provide a fund of US$ 110 million for river bank protection project, for the remaining fund KFW (from Germany) and EEC are being persued.

Impact on the Environment

10.2.34 Flood Control, Drainage and Irrigation Programmes affect the environment of the counry in many ways. The construction of embankments along the major rivers, and the control of flood levels within adjoining floodplain compartments, undoubtedly have socio-economic as well as environmental implications. The major benefit of these projects emanates from the progressive reduction or elimination of flood damage to crops,

livestock, habitation and development infrastructures and also from overall improved water management, including the opportunities offered by flood protection for additional development and employment. On the other hand, such programmes may also create adverse impacts through changes in : river morphology, the habitability of rivers and estuary chars, closure of certain minor navigation channels including fish breeding and feeding habitats, reduced employment prospects in fishery and navigation, adverse changes in soil physical and chemical properties, rural health and sanitation, seasonal and perennial wild-life habitats, etc. Similarly, the installation and operation of LLPs, DTWs and STWs for irrigation affect the availability of surface water for other users and lower down the ground water table having its effect on ecological balance.

10.2.35 In the past, the planning and construction of embankments have sometimes proceeded without adequate consideration towards agriculture, fishery, land use and other environmental and socio-economic considerations. The Fourth Five Year Plan would focus attention to these aspects in planning and implementation of future embankments and other flood control and drainage programmes through integrated planning by involving all concerned agencies of the Government as well as the local people. The identification, analysis, assessment and monitoring of such evironmental and other impacts and, inclusion of adequate corrective and compensatory measures, therefore, would form an essential component of the Flood Control, Drainage and Irrigation project during the Plan. To achieve this, comprehensive socio-economic surveys and environmental impact studies would be undertaken at the initial stage of the projects with emphasis on proper understanding of local agricultural and fishery practices, employment patterns, land loss/reclamation implications, inland waterway needs, dietary preferences and prevailing ecology. Sufficient on-going inputs in these areas would be allowed for as implementation proceeds along with continous monitoring of the impacts. During the operational stages, a suitable monitoring mechanism would be devised to ensure that any impact threatening to become serious can be quickly identified and acted upon.

Participation of Women

10.2.36 Women's participation in the development of infrastructure including the water sector is not very visible in official statistics and in planning and implementation of development activities. This invisibility of women workers is primarily due to socio-cultural-religious values and attitudes. Thus, the women folk as a whole, has been deprived of its due share of employment opportunities generated as a result of implementation of water resources sector projects.

10.2.37 During the Fourth Plan period attempts will be made to increase participation of women in execution and maintenance of the projects in water resources sector. Women are now working along with men as construction workers in the Food for Works and other projects implemented by the Water Development Board. Steps have already been taken to attract distressed women to grow community forests and other plantation along the embankments as a part of the O & M programme. During the Fourth Plan period, these steps will be further strengthened along with other measures to integrate women with development activities in the water sector.

Private Investment

10.2.38 In addition to the public sector, considerable investment in irrigation will be undertaken in the private sector, particularly through the credit machanisms of the BKB, BRDB and the commercial banks. Private sector investment gained considerable momentum during the Third Plan as a result of rapid expansion of agricultural credit which blunted the effect of reduction of subsidies on minor equipment. Low recovery rate of agricultural credit is likely to inhibit as fast an expansion of credit over the Fourth Plan as in the Third Plan. Recycling of credit resources is undoubtedly a healthy sign of investment but its failure is not peculiar to agriculture nor is its explanation far to seek. The ability of the farmer to repay was sapped through repeated floods and droughts during the Third Plan; it is also a fair gamble against nature to reinvest, rather at an accelerated pace to reach the threshold of security. Fourth Plan will consciously pursue the course. But what will be insisted on credit administration is to plug leakage of resources away from the desired goal. Irrigation equipments will have the lion's share of this amount.

Privatization of Minor Irrigation:

10.2.39 In the present situation a farmer has freedom to purchase any minor irrigation equipment from the open market and can install it in the field. There is no any restriction from the government level in this respect.

10.2.40 Measures to be taken for implementation of programmes:

(a) Achievement made so far in the development of irrigation must be kept sustainable. Major share of irrigation acreage is from minor irrigation programmes. Minor irrigation development is now in private sector. Government agencies may have to arrange training for the technical personnel (i.e. for mechanics & operators) of irrigation machines and promotional activities have to be continued.

(b) Impact of private sector involvement and withdrawal of subsidy in the development of minor irrigation have to be carefully looked into. Two studies are being done by the Ministry of Agriculture where impact assessment of present policy of minor irrigation development will be fully known. Ministry of Agriculture may examine and suggest the present policy of minor irrigation development after the on-going studies are completed.

(c) Huge investments are being made in large scale Flood Control Irrigation and Drainage Projects of Bangladesh Water Development Board(BWDB). The collection of water charges from these projects are far from satisfactory. Appropriate measures are to be taken and revenue collection machineries are to be set up so that operation and maintenance of those projects can be done out of revenue of the same projects. The annual revenue collection must be reviewed before money is allocated to revenue budget for operation and maintenance of completed irrigation projects of BWDB.

Table 10.2.1 Irrigation and Flood Control Target during the FFYP

(Area in lakh hectare)

Name of programme	Bench mark of FFYP Actual 1989/90	Achieve-ment 1990/91	Achieve-ment 1991/92	Exptected achievement 1992/93	Target for 1993/94	Target for 1994/95
1	2	3	4	5	6	7
1. Irrigation						
A. Surface Water Irrigation						
i) Gravity flow	2.12	2.20	2.50	3.50	4.00	5.00
ii) LLP (including floating pump)	7.83	7.85	8.00	9.00	10.00	10.88
iii) Traditional Method	3.00	3.00	2.90	2.70	2.50	2.00
Sub-total (A):	12.95	13.05	13.40	15.20	16.50	17.88
B. Ground Water Irrigation						
i) STW	12.51	12.55	13.50	14.90	18.50	22.00
ii) DTW	5.00	5.20	5.50	6.20	6.50	7.00
iii) HTW	0.54	0.54	0.54	0.54	0.54	0.54
iv) FMTW	-	-	-	0.25	0.50	0.63
Sub-total (B):	18.05	18.29	19.54	21.89	26.04	30.17
C. Others						
Total (A+B+C) :	31.00	31.34	32.94	37.09	42.54	48.05
2. Flood Control and Drainage	32.39	33.00	33.75	34.25	35.25	36.44

Table 10.2.2 Financial Allocation during the FFYP (at 1989/90 prices)

(Taka in Crore)

Agency/ Programme	Original Allocation for FFYP	Revised Allocation* for FFYP
1	2	3
A. Investment		
i) BWDB	3865	2830
ii) BADC	905	420
iii) BARIND	330	160
Sub-total (A):	5100	3410
B. TAPP		
i) BWDB	150	125
ii) Flood Action Plan	480	250
iii) BADC & Others	44	44
Sub-total (B):	674	419
Grand total (A+B):	5774	3829

X.3. FISHERIES

I. Introduction

10.3.1 Fisheries, one of the major subsectors of agriculture, play a dominant role in nutrition, employment, foreign exchange earning and other areas of the economy. The subsector contributes about 80% to the nation's animal protein intake, nearly 6% to the GDP and more than 12% to the export earning of the country.

II. Fish Resources in Bangladesh

10.3.2 Bangladesh has extensive water resources within her boundaries and the territorial and economic zones in the Bay of Bengal. The water resources are broadly divided into inland and marine resources. The inland water resources of Bangladesh is considered to be very rich both in area and in potential for fisheries development. The total area of perennial waters is estimated at 1.45 million ha while the inundated crop fields and other low lying areas that retain monsoon water for 4-6 months are estimated at 2.83 million ha of water surface. Inland fisheries contribute more than 72 percent to the total catch of fish in Bangladesh.

10.3.3 Inland fisheries resources are generated mainly from three sources - impounded waters, inundated crop fields and open waters. Impounded water bodies in the form of ponds, dighis and tanks are scattered all over the country. There are an estimated 1.28 million ponds in the country covering an area of 0.15 million ha out of which about 55 percent of the area is under cultivation, 30 percent is cultivable and 15 percent is derelict. The inundated low-lying crop fields provide temporary feeding and breeding grounds for various species of fresh water fish and shrimp. Moreover, the baors covering an area of about 5.5 thousand ha and the Kaptai lake are also important sources of fisheries in Bangladesh. Open waters include rivers and their tributaries, beels and baors and estuaries. The total area of inland open waters is estimated to be 4.05 million ha of which about 25 percent is rivers. In case of marine fisheries, Bangladesh has a coastal belt of 480 km. Various exploratory surveys conducted in the continental shelf upto 100 meter depth charted four major fishing grounds, namely south patches, south of south patches, middle ground and swatch of no ground. Besides, the artisanal fishery extends upto a depth of 40 meters in the Bay and harvests about 95 percent of the total marine landings.

III. Review of Past Development

10.3.4 Over the last decades, fish output has increased at a slow rate with the value added from fisheries growing at a rate less than 2 percent over the period. The Third Five Year Plan envisaged a fish production target of 10 lakh tons during 1989/90 compared to 7.74 lakh tons during 1984/85. The performance of the sub-sector during the period revealed that there were some shortfalls in the above production target. While the output performance of marine fisheries had been satisfactory, the major shortfall was in the inland capture fisheries. However, substantial headway had been made in culture fishery.

10.3.5 The Third Five Year Plan also envisaged additional employment of about 10 lakh people in the fisheries sector by 1989/90. As against this an additional employment of 8.80 lakh people were created during this period which is 88 percent of the target.

10.3.6 Over the Third Plan period, export earnings from fisheries sub-sector experienced sharp increases in value terms due to favourable export prices. However, quantity targets had not been achieved. The Third Five Year Plan envisaged an export earnings of Tk.532.40 crore from 38 thousand metric tons of shrimp, froglegs, fish and fish products. The actual total earning from fisheries sector during 1989/90 was Tk.478.77 crore from 32.5 thousand metric tons of exports. The Third Five Year Plan physical targets and actual achievements are shown in Table 10.3.1.

Table 10.3.1: Physical Target and Export Achievement during the Third Five Year Plan

Programmes	Target	1989-90 Actual achievement	1989-90 Percent of target achieved
1. Fish Production (in thousand metric tons)			
A. Inland Fisheries	772.4	612.5	79
Ponds	192.0	161.0	84
Baors	2.8	1.5	57
Coastal Aquaculture	34.2	27.0	79
Rivers and estuaries	250.4	190.0	76
Beels and Haors	75.0	50.0	67
Kaptai lake	8.0	5.0	63
Floodplains	210.0	178.0	85
B. Marine Fisheries	228.0	234.5	103
Total (A+B)	1000.4	847.0	85

Items	Target Quantity	Target Value	Actual Achievement Quantity	Actual Achievement Value
2. Fish Export (quantity in thousand metric tons and value in crore taka)				
Shrimp	30.0	500.0	26.5	414.31
Fish and Fish Products	6.0	30.0	5.0	50.42
Other Aquatic Organisms	2.0	2.4	1.0	14.04
Total	38.0	532.4	32.5	478.77

10.3.7 The Third Five Year Plan earmarked a total of Tk. 350.00 crore in the public sector for the development of fisheries. However, the actual allocation through RADPs amounted to Tk. 231.36 crore over the period of which actual expenditure incurred amounted to Tk. 116.93 crore only which is 50.54 percent of total RADP allocations. In addition to sectoral problems, limited financial power of Project Directors and lack of delegation of financial authority to appropriate levels are major factors in delays in project implementation and lower utilization of allocated funds in the sub-sector.

10.3.8 With increasing demand and high price of shrimp in the international markets, shrimp farming expanded in the coastal regions after independence of Bangladesh. However, it is mostly done in the traditional way by trapping the shrimp larvae and juveniles coming with incoming tides and rearing them for about six months in low-lying areas inside and outside the polders.

10.3.9 Favourable climatic conditions enable quite a few species of fish and fisheries organisms to thrive well in the different types of water bodies in Bangladesh. A total of about 675 species - 475 from marine and 200 from fresh water - are recorded. The distribution of different species/categories varies not only with the type of water bodies but also with the season and the method of cultivation.

IV. Constraints to Fisheries Development

10.3.10 Inspite of tremendous potential to development, fish production has failed to keep pace with its ever increasing demand due to population increase. As a consequence, per capita availability of fish has declined over the years causing serious nutritional and other problems. There are various impediments to fisheries development some of which are particular to the sources of fisheries. In case of capture fishery, inadequate knowledge and know-how,over fishing and indiscriminate killing of juveniles and destruction of spawning grounds, obstruction of migration routes due to unplanned construction of dams and

embankments, degradation of water quality, lack of proper management policy and credit facilities, defective fish conservation laws and inadequacy of proper processing, marketing and other facilities are some of the major factors affecting proper development. The major constraints to the development of closed water culture fishery in Bangladesh relate to problems of property rights, competing water uses and related conflicts, lack of trained manpower and quality fish seed and lack of finance. The problems are diversified in nature and vary not only with the type of water bodies but also from place to place. In case of marine fishery, inadequate knowledge and information on fisheries resources, lack of proper management policy and modern fishing know-how, use of inefficient fishing equipments, inadequacy of harbour and related processing, marketing and other facilities as well as credit are some of the major constraints to development.

V. Objectives, Strategies and Policies for Fisheries during the Fourth Five Year Plan

10.3.11 Increased production and export and creation of employment opportunities have been the main focus of development activities in the sub-sector over the years. However, a number of problems related to water body management, allocation of exploitation rights, fish biology and conservation technology development and dissemination are needed to be solved in order to permit both immediate output gains and long-term preservation of fish resources. An important constraint faced by the sub-sector relates to the lack of institutional strength in planning and implementing fisheries development programmes.

Objectives during the Fourth Five Year Plan

10.3.12 In view of the importance and long-term potential of fisheries development to meet the national development objectives, the Fourth Plan would emphasize the following :

(a) To increase fish production for domestic consumption,

(b) To improve the socio-economic conditions of the fishing community and others engaged in fisheries and create additional employment opportunities for poverty alleviation,

(c) To enhance the fisheries resource base through extension of commercially important fisheries in unexplored and under exploited areas,

(d) To enhance fish production and management technology,

(e) To train required manpower at all levels for facilitating the transfer of technology,

(f) To increase foreign exchange earnings through export of fish and fish products.

(g) To improve general environment and public health.

Major Strategies and Policies during the Fourth Plan

10.3.13 In order to achieve the objectives of fisheries development, the following strategies and policies will be emphasized during the Fourth Plan :

(i) Development of skilled manpower, appropriate research and technologies, expanded institutional/ organizational capabilities to plan and implement development activities,

(ii) Biological management of Jalmahals by providing fishing rights to the genuine fishermen and gradual replacement of existing leasing system,

(iii) Large-scale stocking of inland open waters, inundating flood lands with rigid enforcement of fish and fish habitat conservation practices,

(iv) Community-based integrated development approach for artisanal fisheries with improvements in technology, processing, marketing and distribution facilities,

(v) Provision of technical inputs, credit and training,

(vi) Continuation of the marine fishery resources survey for its development and management to achieve MSY (Maximum Sustainable Yield) level, identification of new fishing grounds and preparation of extension materials on resource position, more effective fishing and resource conservation,

(vii) Gradual intensification of aquaculture practices to obtain increased production per unit area,

(viii) Policy supports for and development of complementary processing facilities for development of fishery products,

(ix) Policy support for improving quality of fish and fish products,

(x) Adequate infrastructure to support planned expansion of fish culture in the private sector,

(xi) Formulation and implementation of a well-defined land/water use policy to avoid wasteful resource conflicts, along with effective measures against dumping of industrial and other wastes into the open water system and use of agricultural biocides of long residual effects,

(xii) Adequate policies and measures to harness the export potentials of fisheries.

PROGRAMMES DURING THE FOURTH FIVE YEAR PLAN

Inland Fisheries Development

10.3.14 Inland open water fisheries will be developed through effective management and conservation measures of riverine fisheries and floodplains. Massive artificial stocking of open waters, such as, rivers, flood lands, beels, baors, lakes etc. with fish fingerlings will be done and biological management and fish habitat conservation practices would be strictly observed. Selected species to be stocked will include Chinese and Indian carps as well as Magur, Koi, Punti, Golda shrimp etc. Short time stocking with miscellaneous species of small fish in the sluices, dykes, floodplains, reservoirs etc. will also be encouraged during the monsoon seasons. For development of floodplain fisheries the selected areas would be Rajshahi, Khulna and Dhaka Divisions including Sylhet and Mymensingh floodplains. More floodplain areas will be taken up for development during Fourth Five Year Plan period through improved management and conservation practices. The protection and conservation measures will include :

(i) rigorous implementation of fish protection and conservation act,

(ii) establishment of fish sanctuaries,

(iii) exploitation of non-sanctuary perennial beels,

(iv) strict enforcement of the ban on Jhatka (Hilsa Fingerling) catch during February-April,

(v) heavy penalisation to the users of 'Current Jal',

(vi) imposition of penalty on the industrial dumping of untreated and harmful industrial wastes into any open water system,

(vii) fisheries development and conservation in the flood control, drainage and irrigation projects etc.

10.3.15 With a view to ensure benefit to the fishing community and the licensed fishermen, two systems of management, such as, licensing system as per New Fisheries Management Policy (NFMP) and modified leasing system will function simultaneously. The existing yearly lease system will be replaced by a longer term of at least 4 year period to encourage appropriate investment, better management and higher production and to allow the fish sufficient time to grow to maturity and breed. Subject to successful implementation, the NFMP will gradually replace the leasing system.

Aquaculture Development

10.3.16 Aquaculture will be given high priority for development as an industry with a view to create new or alternative employment opportunities for rural people, increase export earnings and facilitate the rural and urban environment and also to compensate the loss of open water fisheries due to adverse effect of flood control, drainage and irrigation projects. For development of aquaculture, private sector will be further stimulated with the production responsiblities including hatchery and nursery operations. Government will provide necessary support services in the form of technical advice, adequate credit, extension, infrastructure facilities, production incentives etc.

Freshwater Aquaculture

10.3.17 Besides 146,890 ha. of ponds and 5,488 ha. baors, planned aquaculture will be introduced into a new area of 40,000 ha consisting of irrigation canals, road-side ditches, low-lying paddy fields enclosed within flood control dykes or rural roads, and the low lying areas in and around the cities and towns.

10.3.18 Culture of fish species that feed on plankton, macro-vegetation and detritus will receive the most attention. Quick growing species that easily breed in closed waters, e.g., nilotica, punties, etc. will be given due consideration for seasonal waters. Because of high local demand and export potential, abundance of suitable culture areas and availability of culture technologies, Macrobrachium shrimp, Magur and Koi will also receive adequate attention.

10.3.19 Wherever feasible, integration of aquaculture with agriculture and animal husbandry will be practised as a general farming system. Steps will be taken to selectively utilize the municipality wastes for fish production purpose.

10.3.20 Subject to successful experimentation, pen and cage culture technologies will be employed on large scales in various types of suitable water bodies, largely through the landless or marginal farmers.

10.3.21 An inventory of all the culture water areas, their present status and measures to develop them will urgently be made with the help of Thana Fishery Officials. In each union, the Government/NGO will actively cooperate with a selected private fish farm and develop it into an effective demonstration fish farm for the union. Each union will produce adequate number of large size fingerlings for all the village ponds under the union. The Thana level Fishery Officials may create mass awareness to help bring the derelict ponds for productive uses. The khas ponds in the Thana may be managed by the Thana level Fishery Officials with a view to create employment opportunities for the marginal and landless farmers.

10.3.22 All large low-lying areas, lakes and canals in and around cities and towns, that retain or can be easily made to retain by simple development works, at least 1 meter of monsoon water for more than 3 months, will be urgently developed for production of fish simultaneously with the improvements of the urban environment and public health and beautification of the city areas. The baors will be used primarily for fish production. The utilisation of the baor land and water for agricultural purpose must adjust with the fisheries needs.

Brackishwater Aquaculture

10.3.23 Brackishwater aquaculture production will be increased both by expanding the culture area as well as further improving the existing culture technologies.

10.3.24 About 35,000 ha of new tidal area will be brought under culture of shrimp and brackishwater fish. Common facilities in the form of water distribution and drainage canals, will be excavated to bring as much of the potentially suitable land under shrimp and fish farming as needed. The large unmanageable farms will be divided into manageable units with the provision of adequate supply and drainage canals. Year-round and semi-intensive shrimp culture will be stressed in areas where river salinity remains suitably high throughout the year.

10.3.25 Giving due consideration to the fall of shrimp price in the world market, improved traditional or semi-intensive culture will be emphasised carefully keeping the production cost as low as possible. Intensive culture system requiring high investment, costly feed and highly sophisticated water management, will be avoided.

SEED PRODUCTION :

Fish Seed

10.3.26 In order to support the massive open water stocking programme and the greatly expanded aquaculture plan as proposed, an extremely well-concerted system of large scale hatchling production, and nursery rearing of adequate carp fingerlings of preplanned species combinations, will be given serious attention. Besides carps, seed production of Magur, Koi, Punti, etc. will also be encouraged.

10.3.27 Urgent measures will be taken to replace the presently practised crude collecting and handling methods of the wild carp seed with modern and scientific collection and handling method to prevent undue mortality of the valuable seed resources. The extra care will be well justified since the wild seed still comprises over 85 percent of the total quantity of the carp seed used for aquaculture purpose.

10.3.28 Broodstock of high quality and improved genetic strain will be locally developed, or imported under strict quarantine. A strict quality control system for broodstock selection at the local hatcheries will be stressed. Broodstock rearing and hatchling production of catla, grasscarp, bighead carp,mirror carp, black carp, and other species which are relatively difficult to successfully handle, will be the main responsibilities of the public sector hatcheries and fish seed farms.

10.3.29 A critical assessment of the time bound need of fingerling of appropriate species combinations for each union, will be made by the local administration in collaboration with the fishery officers. Each district will produce hatchlings adequate for all the waters under its command, or a deficit district will import hatchlings from a surplus zone. Matching with the fingerling need of a union, suitable waterbodies in the form of ponds, road-side ditches, irrigation canals, etc. will be promptly identified and clearly assigned to the task of fingerling production.

10.3.30 Strictly supervised credit projects for fingerling production will be introduced.

Shrimp Seed

10.3.31 Shrimp farming in Bangladesh being entirely dependent on the wild seed, attention will be given to prevent colossal loss of the seed due to inappropriate handling and transportation and later, post stocking loss due to inappropriate culture management. Exploration and spotting of resourceful new seed grounds, mass collection of the seed and their temporary holding at collection sites and later their transportation to the farming areas, will receive high priority. The landless rural community will be involved at various stages of fry industry development.

10.3.32 Giving cognigence to the need of gradually reducing the dependence on wild seed, importance will be laid on hatchery development. Hatchery technology will be established through the joint collaboration of the public sector with selected private entrepreneurs. The private entrepreneurship will be supported by the public sector in the form of technical advice, feed and brood shrimp supply and bank credit support.

10.3.33 Because of high salinity requirements, marine shrimp hatcheries will be established in the Cox's Bazar region and freshwater shrimp hatcheries in the coastal districts of the country. The public sector will have to develop essential infrastructure and basic amenities to promote development of hatcheries for which suitable sites are located in isolated and remote areas.

Feed

10.3.34 Commercial formulation and production of shrimp and fish feed to support the greatly expanded culture fisheries programme, will receive high priority. Efforts will be made to make the best utilisation of the indigenous ingredients. Any shortfall in the raw materials, particularly fishmeal, will be imported.

Marine Fisheries Development

10.3.35 Giving due consideration to the known marine resource situation and the present level of exploitation, further capitalization of marine fishing will be done very cautiously.

10.3.36 The small scale fishing sector with its present 95% contribution to total marine fish landing, much better rate of economic return, higher employment opportunities and its potential capacity for further vertical and horizontal expansion, will receive more attention than industrial fishing. Introduction of diversified and more effective fishing gears and equipping selected types of boats with appropriate engines, will receive priority so as to enable the small scale sector to more effectively exploit the fish and shrimp within the 40 m depth zone. In this respect regional experience will be taken advantage of.

10.3.37 The industrial shrimp trawler operators will be induced to save the low priced by-catch of the shrimp trawls by offering them an incentive price for the by-catch. Steps will be taken to process the 'trash fish' items into nutritious and high priced human food. Measure will be taken to exploit the shark populations for vitamin rich oil and exportable fins.

10.3.38 Results of the pelagic fishery resources surveys conducted in the past on national and regional basis, in the Bay of Bengal, will be promptly interpreted in relation to Bangladesh. Test gill-netting and longlining for tuna, spanish mackerel and sharks will be expeditiously conducted through a TCP or TCDC project. Successful test results will lead to development of a fleet of mechanized boats for pelagic fishing in the distant waters.

10.3.39 Large volumes of unutilized raw data generated as a result of expensive exploratory surveys conducted in the past, will be analysed and interpreted without further delay. In order to maintain a continuity in the past surveys and to regularly monitor the fisheries resources situation, a low cost but well planned survey system will be introduced. Under this system, practical information from BFDC and private sector trawlers, sail boats, motorized boats and various types of other fishing units, will be regularly collected and analysed. Based on the survey results, practical extension materials on the dynamics of the fisheries resources, more effective fishing, necessity and means for resource conservation, etc. will be prepared and made available to the fishermen.

Fish Landing, Postharvest Technology and Marketing:

10.3.40 Reasonably good access to all the baors, beels, haors, shrimp farms and other big fish landing centres, including those along the coast, will be established or improved; this will ensure quick transportation and encourage healthy competition amongst the local monopolizers and the distant buyers, creating opportunities for the producers to get a better deal for their fish and shrimp. New fish landing and marketing facilities will be created or improved at selected points. Improvements in the traditional drying and salting methods will be introduced.

Fisherfolks Welfare and Community Development

10.3.41 Welfare and community development to uplift the socio-economic conditions of the fishing community and fish farmers will receive special attention.

10.3.42 Granting the openwater fishing right to the licensed fisherfolks, introduction of supervised credit in place of compulsory requirement of collateral, identification of the fishing community as an important target group for allotment of khas waters and lands for aquaculture, etc. will be some of the measures for supporting the fishing community development.

10.3.43 Fishing and fish farming materials and equipment will be imported and distributed through the fisherfolks societies so that the users get the necessary items at the lowest costs.

10.3.44 Measures will also be taken to provide security of marine fishing boats, equipment, gear and fish of the fisherfolks by introducing a special insurance project at a reasonable premium. Each boat will compulsorily keep the standard life saving equipment. Sea piracy will be handled sternly. Training to fishing techniques, better handling of fish, improve traditional fish drying and salting technologies, will be stressed.

Women's Role In Fisheries Development

10.3.45 Special emphasis will be given to ensure participation of women in fishery development activities so as to raise the family income to have a better standard of living. The suitable profession for the women in fishery sector will be net making, fry collection and rearing, fish processing, drying, salting, feed preparation, pond preparation etc. The womenfolk to be involved in this profession will be trained so as to motivate them in fisheries development activities. The technical assistance projects having such components for development of womenfolks and fisher women will be implemented during the plan period.

Fisheries Credit

10.3.46 Lack of coherent lending policy and collateral requirements for processing of applications have left the disadvantaged sections of the community in numerous problems to get access into the institutional credit programme. As a result the fish farmers and the landless community are compelled to borrow from the Mohajans and the money lenders. To give greater emphasis for development of this sector, a separate Fisheries Bank may be created or the Krishi Bank may open separate windows for disbursing fisheries credit in selected places. Soft term loans would be made available to the fish farmers and marginal farmers without collateral.

10.3.47 Credit allocation in the fisheries sector is shrinking both in number and in amount as a result of poor loan disbursement and recovery. This is a very unhealthy sign in the rural development efforts. Consistent with the approach to stimulate the small scale private sector which in Bangladesh, comprises entrepreneurs mostly of limited financial means and without mortgageable assets, the credit institutions will have to liberalize credit policy and introduce a supervised credit system not essentially requiring a collateral for loan. This system will ensure appropriate utilisation of the loan, application of the correct technology and management, ensure production and loan recovery.

10.3.48 Khas waters taken on lease for 5 years or a longer period, should be acceptable as a collateral to the Bank for sanctioning loan. Shrimp, carp, magur and koi farming will be recognized as an export oriented industry and will be entitled to bank loan on a reduced interest rate, moratorium and other concessions allowed to the export industries.

Fisheries Research

10.3.49 The main research thrust will be given on semi-intensive fish and shrimp culture integrated with livestock farming and agriculture, development of effective fish and shrimp feed, intensive nursery rearing, fish disease control, new fish product development and open water fisheries management.

10.3.50 Fisheries Research Institute established in 1984/85 will undertake problem oriented and adaptive research. The Institute would also undertake research on other aquatic species which have economic importance in the country. For example, the freshwater mussels which produce valuable pink pearls have export potentials. Pink pearls may be produced by artificial inseminations as is commercially done in Japan. The Institute may undertake research on this to develop suitable technology for dissemination to the farmers level.

10.3.51 Frog, on the other hand, is one of the important sources of foreign exchange earnings. The frog species which have commercial importance are Rana tigrina, Rana hexadactyla and Rana limnocharies etc. It is believed that frog population is sharply declining due to large scale harvesting and lack of proper conservation and management of the resource. The decline in the frog population may cause imbalance in the crop field eco-system. Scientific conservation and management of this resources is, therefore, urgently needed. As such appropriate technology for management and conservation and culture practices would be developed through research for replication in the field.

Survey/Studies and Establishment of Data Bank

10.3.52 For broadening the data-base and for project identification and detailed project preparation, a number of surveys will be made. Socio-economic and pilot studies will be conducted to support welfare of the fishing communities, form sound bases for expanded development projects and adopt measures for resource conservation and management.

10.3.53 Definite actions will be taken to substantially improve and broaden the fisheries data-base and establish a well-organised Fisheries Information System for collection, publication, analysis, storage and retrieval of information.

Fisheries Training and Extension

10.3.54 The main objectives of training and extension would be to augment fish production, exploit resources at a sustainable basis, appropriate utilisation of the fisheries resources and resource conservation.

10.3.55 The fish farmers, fishermen and others directly dependent on fisheries will be the main target groups for receiving fisheries training. Inservice training for the fishery officials and staffs would be organised to increase efficiency and capabilities of the relevant Departments. If necessary, facilities may be expanded in the existing Fisheries Training Institute. Farmers' training will also be organised in each Thana to provide training in fish culture, rearing, fry handling and distribution etc. with the initiative of Thana Fishery Officials. Vocational training in shrimp and fish seed collection, transportation, nursery rearing, aquaculture, net weaving, improved fish salting and drying, etc. will also be organised. Existing hatcheries, nurseries, grow out farms, fish salting and drying yards, etc. will be used as training centres.

10.3.56 A foundation training course for the newly recruited officers of the Fisheries Cadre will be introduced. Refreshers courses will also be organised periodically. Appropriate utilisation of the persons trained within the country or abroad, in any specific disciplines, will be ensured. Emphasis will also be given on higher education and training in specialised areas during the Plan period.

10.3.57 For extension and motivaion activities, demonstration centres will be established at the Thana and Union levels for practical demonstration to the target groups. Fish farming activities would be widely popularised through TV, Radio and Cinema programmes.

Fisheries Education

10.3.58 Fisheries education in Bangladesh at the University levels will be made as relevant to the present need as possible. The courses and curricula will be urgently revised to make them directly relevant to the long-

term national fisheries development policies and programmes. The fisheries students will, as an essential requirement for Degree, devote at least 20% of the academic year, to practical work with public or private sector fisheries projects.

10.3.59 Education, research and extension will have to be mutually reinforced and integrated with each other by establishing effective and obligatory institutional linkages amongst the Universities, research institutes and fisheries development organisations.

Strengthening, Planning, Implementation, Monitoring and Evaluation

10.3.60 The planning, evaluation and monitoring capacities of the Ministry of Fisheries and Livestock, Department of Fisheries, Fisheries Research Institute, Bangladesh Fisheries Development Corporation and Fisheries Wing in the Planning Commission would be strengthened by employing adequate manpower, arranging training and providing logistic supports.

10.3.61 The Department of Fisheries, the chief executing agency in the fisheries sector, will be urgently restructured and reorganised to substantially strengthen the fisheries data-base and the planning, operational and evaluation capacities of the Department of Fisheries. A strong separate cell will be created in the Department of Fisheries to develop fisheries in the Bangladesh Water Development Board Projects.

10.3.62 The responsibility of overall development, management and control of fisheries resources and fish habitats will centrally lie with the Ministry of Fisheries and Livestock.

Impact on the Environment

10.3.63 The process of flood control and drainage development has been changing the aquatic environment of inland waterbodies affecting inland water natural fish production both in quantity as well as in species diversity. Flood control inhibits access of fish to breeding and feeding areas thereby reducing or eleminating fish reproduction. The industrial establishments, on the other hand, discharge their liquid and solid wastes into the rivers without any regard to the damages that affluent discharges can cause to the aquatic environment and living resources within the environment. Another source of inland water chemical pollution is the use of chemical insecticides and pesticides. These chemicals also destroy micro-organisms, planktons and invertibrates altering the food chains in the aquatic habitats. To protect aquatic environment and fish population, impact of flood control and irrigation projects should be carefully studied and regulatory measures taken to help redress the environmental problems. Legal measures or imposition of penalty on industrial dumping of untreated and harmful industrial wastes into the open water system should also be strictly followed.

Private Sector Investment

10.3.64 Private sector investment has been increasing in fishing industry and commercial fish culture. During the Fourth Five Year Plan, private sector is expected to invest more in hatchery construction both for carp and shrimp breeding, fish processing plants, acquisition of fishing vessels, fish and shrimp culture activities etc. Adequate policy supports would be provided to sustain the private sector initiatives in the fisheries sector.

10.3.65 It may be pointed out that for ensuring greater participation of the private sector, specific programmes/components are being implemented with credit funds provided under some public sector projects. These funds are being provided by various donor agencies/govts. for implementation of the package programmes under public sector projects for integrated fisheries development activities. Besides, Krishi Bank and other Commercial Banks are also providing credit to the private sector as a part of their normal credit programme for fisheries development. Such programmes include shrimp culture in coastal areas, hatchery construction, fish processing, manufacturing of fishing equipments etc. Apart from the institutional credit provided by various commercial banks and financial institutions, hatchery owners, nursery operators, fishing equipment manufacturers, fish processing plant owners etc. make sizeable investment in various fishery development activities.

10.3.66 Various policy measures are also being implemented by the Govt. to encourage greater participation in the private sector. For example, khas lands/ponds by the side of the railway lines, roads, highways including canals, boropits of the irrigation projects would be developed for licensing/leasing to the fish farmers and co-operatives for undertaking fish culture operation. While leasing out such waterbodies to the fish farmers/private bodies a minimum production target would be determined in respect of each category

of water bodies. If a leasee or licensees fail to achieve the anticipated production target, such waterbodies would be leased/licensed out to new parties.

Inter-sectoral Linkage

10.3.67 Fishery sector provides employment to a vast segment of the population in fish culture activities and ancillary industries. The development of fishery sector will not only create employment opportunities in the rural areas in fish culture, fry and fingerlings production activities but will also create jobs for development/establishment of subsidiary industries like fish processing, ice making, net making, fish canning, boat building etc. The constructions of shrimp/fish hatcheries, fish seed multiplication farms, pond complex, dykes, sluice gates etc. through implementation of various fishery projects will also contribute to the development of rural roads and electrification of remote village areas. The development/re-excavation of derelict tanks/ponds/canals for fish culture operations may lead to incremental food production as these waterbodies may be used as reservoirs for irrigation and other uses. Integrated farming practices, such as, fish-cum-poultry farming, fish-cum-duck farming, backyard poultry rearing, fish-cum-paddy farming, improvement of horticulture etc. may also be introduced in and around the fishery projects for better utilization of land and water resources and to derive optimum benefits. Implementation of fishery projects will also help improve the general environment and public health.

Role of NGOs

10.3.68 NGOs are increasingly active for development of fisheries in the rural areas. They normally involve themselves in rural development and target group formation activities in the fishery sector which focus on income generation among the poor through development of waterbodies, improved aquaculture practices and other related activities. NGOs may also be involved in socio-economic surveys, extension work, credit disbursement and recovery, group formation, training, motivation and organisational development in the rural areas. But selection and involvement of NGOs in fisheries projects should be done carefully keeping in view their expertise and experience in specific projects and areas.

Major Policy Issues during the Fourth Five Year Plan

10.3.69 For accelerating the development of fisheries sector some of the major policy issues which would be given attention are as follows :

10.3.70 Fisheries will be considered as a priority sector to generate additional employment opportunities and alleviate poverty of the rural community.

10.3.71 A well-defined land and water utilisation policy will be framed on the basis of land topography, monsoon and tidal inundations, water salinity, soil quality and other environmental and economic factors for optimum utilisation of resources. Guided by this policy the low-lying areas, riverine and coastal areas, sweet and brackishwater areas including khas lands will be optimally used for culture of shrimp and suitable fish species.

10.3.72 The yearly leasing of inland open-waters will be replaced with the licensing system under the New Fisheries Management Policy. On the other hand an investment and management oriented leasing system covering atleast 4 years or more would to be adopted to ensure higher production and resource conservation.

10.3.73 All khas ponds, suitable irrigation and drainage canals, road side ditches and similar other public waterbodies will be earmarked for aquaculture for distribution on long-term basis to local fisherfolk, landless and marginal farmers, unemployed youths and professionally trained fisheries people.

10.3.74 The credit institutions will be reorganised and strengthened and credit policy would be re-oriented and streamlined to quickly respond to the needs for fisheries development. To encourage fish farming activities in the rural areas, fishermen community would get the preference of collateral free loan for healthy growth of fishery sector.

VI. Production and Export Targets during the Fourth Five Year Plan

10.3.75 The value added in the fisheries sector has been projected to grow at the rate of 4.8 percent per annum during the Fourth Plan period. During 1994/95, the population of the country has been estimated to be about 12.52 crore. The current level of per capita per day consumption of fish is 20.5 gm. In order to raise the level of consumption to 24.55 gm. per capita per day at the end of the Plan period, the required production of fish should be 11.26 lakh tons. It is assumed that during 1994/95 the export of fish and shrimp

will be about 64,000 tons and another 10,000 tons of fish will be required for industrial and other uses. In view of this demand, the fish production target during the terminal year of the Fourth Five Year Plan has been set at 12.0 lakh tons.

10.3.76 The major thrust for fisheries development will be on both culture and capture fisheries, conservation and management along with institutional and man-power development activities to further gearup the fisheries sector. The FFYP, therefore, envisages the following targets for 1994-95:

(i) To increase the level of production of fish from 8.47 lakh tons in 1989/90 to 12.0 lakh tons of which inland production will be 9.38 lakh tons (inland capture fisheries - 5.23 lakh tons and inland culture fisheries - 4.15 lakh tons) and marine production 2.62 lakh tons.

(ii) To export about 45,000 tons of head on shrimp, 17,000 tons of fish and fish products and 2,000 tons of other aquatic organisms.

(iii) To generate full time and part time employment opportunities of about 10 lakh people by 1994-95.

10.3.77 In order to achieve the growth target, the terminal year production level is presented in Table 10.3.2.

Table 10.3.2: Fish Production Target during the Fourth Five Year Plan

(In '000' metric tons)

Source of Production		1989-90	1994-95
1.	**Inland Fisheries :**	**612.50**	**938.00**
i)	Ponds	161.00	308.90
ii)	Baors	1.50	5.50
iii)	Coastal Aquaculture	27.00	81.00
iv)	Rivers and estuaries	190.00	210.00
v)	Beels and Haors	50.00	67.60
vi)	Kaptai Lake	5.00	7.50
vii)	Floodplains	178.00	237.50
viii)	Irrigation canals, road-side ditches, fresh-water polders and enclosures etc.	-	20.00
2.	**Marine Fisheries**	**234.50**	**262.00**
	Total :	**847.00**	**1200.00**

10.3.78 Export earnings from shrimp, fish and fish products and other aquatic organisms during 1989/90 were Tk.478.77 crore. During the Fourth Five Year Plan export earnings from fisheries have been projected to increase to Tk.971.50 crore in 1994/95. The targets set for 1994/95 are shown in Table 10.3.3.

Table 10.3.3: Projection of Export of Fishery Products, 1994/95 (Quantity in thousand metric ton and value in Crore Taka)

	Items	1989-90		1994-95	
		Qty.	Value	Qty.	Value
1.	Shrimp (head on)	26.5	414.31	45.0	720.0
2.	Fish and Fish products	5.0	50.42	17.0	221.00
3.	Other aquatic organisms	1.0	14.04	2.0	30.50
	Total :	32.5	478.77	64.0	971.50

VII. Financial Outlay during the Fourth Five Year Plan

10.3.79 In order to implement the fisheries development programmes in public sector the original allocation for the Fisheries Sector was Tk. 749.00 core. The revised Fourth Five Year Plan size of the Fisheries Sector at current price stands at Tk. 507.94 crore. On the basis of 1989-90 price the plan size has been estimated at Tk. 420.00 crore. The detailed break-down of the programme-wise allocation is shown in Table 10.3.4.

Table 10.3.4: Programme-wise Allocation for the Public Sector during the Fourth Five Year Plan (at 1989-90 prices)

(Taka in Crore)

	Name of programme	Total Allocation
1.	Survey, investigation, feasibility study, research etc.	20.00
2.	Fisheries education, training, extension and community development	90.00
3.	Culture and capture fisheries development (including production inputs and waterbodies development)	250.00
4.	Fish landing, storage, processing, marketing, transportation, distribution facilities etc.	50.00
5.	Block provision for new projects	10.00
	Total :	420.00

10.3.80 In addition to the public sector allocation as shown above an estimated amount of Tk. 372.00 crore is expected to be invested in private sector for implementation of the fisheries development programmes. Necessary inputs including technical and support services from the public sector would be provided for implementation of the private sector programmes.

4. LIVESTOCK

10.4.1 In the agrarian and largely subsistence economy of Bangladesh, livestock plays a crucial role. In addition to providing the necessary draught power for various agricultural operations and transport, livestock is one of major sources of animal protein for the people. Moreover, livestock is an important source of cash income of the rural people through the sale of animals and various products and also is a "storage" for accumulated savings. The subsector's contribution to the GDP has been estimated at around 6.5% of the total and about 10% of the agricultural GDP. Moreover, livestock products namely leather and leather products, hides and skins are important export items of the country and contributes about 13% to the total foreign exchange earnings of the country.

II. PAST PERFORMANCES

10.4.2 The livestock subsector's annual growth rate during the 1970's was estimated at around 5% which is higher than the agricultural sector as a whole. The growth rate has averaged at about 3% during the 1980s. However, the subsector's contribution to the economy is believed to have been consistently underestimated since many important items of value added e.g. draught power for crop cultivation and other agricultural operations, dung for fuel and manure and similar other items are not attri- buted to the subsector in the GDP calculation.

10.4.3 At present, there is a growing concern on the increasing shortfall of draught power to meet the increased crop production need. With increased cropping intensity and adaptation to modern varieties of crops, shortfall in draught power for performing essential operations is becoming an effective constraint to agricultural development.

10.4.4 The supply of animal protein, another important contribution of livestock, has not kept pace with the population growth over the years. Per capita availability of animal protein from domestic livestock sources has declined from an estimated 2.03 gm per day to 1.82 gm per day over the 1977-1987 period.

10.4.5 Major policies and programmes for livestock development over the previous plan periods encompassed reduction of mortality in animals and poultry, infrastructure development for improvement of breeds and biological products and increased output. The Third Five Year Plan aimed at increasing the supply of draft power and animal proteins particularly milk along with increased employment for women and the landless. The strategies emphasized expansion of disease control, improvements in feed supply, genetic upgrading, and similar other measures.

10.4.6 Achievements during the Third Five Year Plan period are shown in Table 10.4.1.

Table 10.4.1 Targets and Achievements During the Third Five Year Plan

Item	Unit	1984-85	1989-90	
		Revised Bench Mark	Revised Target	Achievement
Milk	'000' M. tons	1218	1390	1326
Meat	'000' M. tons	388.80	480	435
Eggs	Crore No.	145	220	191
Vaccines	Crore Doses	9.3	30	22
Artificial Insemination	Lakh Cases	4.00	9	8.00
Improved Breed Chicks	Lakh No.	2.00	11	30.00

10.4.7 Production of milk, meat and eggs increased at the annual rates of 1.77, 2.38 and 6.34 per cent respectively during the TFYP period. The reasons for slow growth of milk production are genetically poor constitution of local breed, non-availability of feeds and green fodder, deterioration in quality and quantity of straw, etc. Import of powdered milk and high cost of feeds also affected the local production. Average growth rate of meat production was lower as mortality of animals and birds could not be reduced as envisaged in the Plan and due to lack of adequate programmes includding fattening programmes and absence of research results on quick yielding economically viable species. Production of eggs was also affected by high mortality and worm infestation, high cost of balanced feed, nonavailability of breed stock and poor gainful participation of farmers.

10.4.8 Despite such shortcomings, considerable progress was achieved in employment and income generation activities, expansion of physical infrastructure facilities along with new concepts in service delivery and input production methods.

10.4.9 The TFYP allocation was Tk. 245.00 crore for 7 ongoing and 17 new projects. However, during the Plan period a total amount of Tk. 205.79 crore including Project Aid of Tk. 126.75 crore was allocated through the revised ADPs. Actual disbursement was Tk. 151.11 crore including project aid of Tk. 97.79 crore. In addition, Tk. 1.85 crore was allocated for 2 TA projects.

10.4.10 During the Third Plan period, alongwith the predominant traditional modes of production, some distinct stratifications of the subsector has emerged. This trend has been most pronounced in poultry, where intensive and semi-intensive production forms are becoming popular with significant income employment generations. With cattle, such stratification has been centred locally, with dairy enterprises being established in the vicinity of urban centres and in selected high potential rural areas. Despite these successes, livestock development needs in the past in general have usually been underestimated, inappropriately targeted and poorly implemented.

III. LIVESTOCK POPULATION AND PRESENT STATUS

10.4.11 The most imprtant domestic animals, in terms of both working animals and sources of various livestock products, are cattle and buffaloes. Goats and sheep provide meat, skins and some wool. Chickens and ducks contribute eggs and meat. Some horses, mules and donkeys serve as draught and pack animals, especially in the upland region. Other animals - pigs, geese, pigeons etc. are also kept in small numbers.

10.4.12 There has been a long and serious dearth of reliable statistics on livestock resources, their production and utilization for appropriate planning in Bangladesh. According to the Agriculture Census 1983-84, there are 21.50 million heads of cattle, 0.57 million buffaloes, 13.56 million goats, 0.67 million sheep, 61.09 million chickens and 12.62 million ducks in the country.

10.4.13 The number of young stock of both cattle and buffaloes are relatively small, only 32 and 17 percent respectively. The cattle and buffalo populations are dominated by the adult animals which may lead to the decline in their populations in the future due to inability to provide adult replacement stock at the desired rate. Therefore, the herd dynamics of cattle and buffalo need detailed study to establish the pattern of such populations for future planning.

10.4.14 Most of the cattle are kept the farm households in small numbers as opposed to commercial or more especialized operations. According to 1983/84 Agricultural Census, 95% of all cattle are on farms which are fed on residues of crop cultivation. Virtually all cattle in Bangladesh are Bos indicus (Zebu) which are genetically small in size, slow growers and poor milk producers. Birth weight of the animals is very low along with milk yeilds. The health condition of the stock is extremely poor and veterinary coverage is inadequate. The animals are usually underfed and overworked, infested with parasites, weak and generally of poor quality both as working animals and as milk and meat producers, mortality rates are very high, estimated at 25% during the first year and about 10% for mature animals.

10.4.15 Buffaloes are used mainly as draught animals and essentially subsist on a greater volume of the same diet as cattle but are able to better utilize low grade roughage. In addition, buffeloes are more resistant to diseases than cattle. The rural households account for 98% of the goats which subsist by scavenging. The Black Bengal Goats are well adapted and they are one of the most productive animals under local conditions. Goat skins are one of the major export items of the country. The local sheep are reported to be as fertile as the Black Bengal Goats, but are smaller in size. They subsist on scavenging and the farmer pays little attention to their management.

10.4.16 Chickens are widely distributed among rural households and nearly all are kept as scavenging birds. The flock size is generally small in order to provide enough feed from crop residues, homestead picking and household waste. Indigenous chickens are small and poor layers. The survival rate of hatchlings is no more than 80 percent and the overall loss rate is estimated at about 15 percent of the entire poultry flock annually. During recent years, some success has been achieved in the poultry sector through improvement of programmes and larger participation of the private sector in commercial poultry production.

IV. CONSTRAINTS TO THE DEVELOPMENT OF LIVESTOCK SUB-SECTOR

10.4.17 In order to accelerate growth in the subsector, the removal of major constraints and revision of appropriate policies issues are to be emphasized which would constitute the essential core elements of livestock development efforts.

10.4.18 The most important constraint to livestock development is the acute shortage of feeds and fodder. The shortage of feeds and nutrients has been intensified over the past decades mainly due to

(i) conversion of traditional grazing lands into cereal crop lands,
(ii) introduction of HYV, the short stemed paddy to replace the traditional varieties causing serious reduction in the quantity & quality and

(iii) increasing use of straw for domestic fuel and housing material. While there are shortages of dry matter (DM), total digestible nutrient (TDN) and digestible crude protein (DCP) of varying degrees, shortages of DCP are the most important constraint of livestock development both for cattle and poultry.

10.4.19 Another important constraint to livestock development is the high incidence of livestock diseases. Foot and mouth disease (FMD) is endemic in Bangladesh. Newcastle disease causes heavy mortality to chicks and losses from all diseases are estimated at 15% annually.

10.4.20 The low productivity of the local breeds of animals is another important constraint to future development. Local animals and birds are not entirely suitable for commercial production of milk, meat or eggs due to poor efficiency in feed conversion. Therefore, farmers and entrepreneurs are not adequately interested in investing capital for livestock farming. However, potentials exist for improving the productivity of these animals through selection, cross breeding, upgrading and better management.

10.4.21 The present livestock management system is a major constraint to its development. Small number of livestock are kept by majority of the rural households rather than intensive commercial production. Livestock is needed to be treated as a primary activity of its own for the supply of livestock products rather than as a supportive activity for crop production or as a subsidiary activity for improving family income. Moreover, there has been very little research effort locally to develop and introduce appropriate technology for improving livestock production. Adequate support services, including input and technical advisory service, are also lacking due to lack of sufficient manpower and facilities to meet the requirements of the country.

V. OBJECTIVES OF THE FOURTH FIVE YEAR PLAN

10.4.22 The Fourth Five Year Plan objectives for the sub-sector are based on a realistic assesment of the present situation in terms of problems and potentials and are supported by adequate policies and programmes within the available constraints of financial resources and the time frame. The Fourth Plan programmes and policies are designed to take into account the emerging diversity of the sub-sector.

10.4.23 The major objectives of the Fourth Five Year Plan are :

(i) Increased supply of livestock products, through increases in productivity.
(ii) Expansion of employment opportunities, both full time as well as in the form of supplementary activity, for poverty alleviation.
(iii) Increased supply of draught power to support the planned crop production activities.

VI. STRATEGIES DURING THE FOURTH FIVE YEAR PLAN

10.4.24 In view of the serious constraint of draught power shortages and declining per capita availability of various livestock products, improvements in the quality and quantity of draught animals and increases in the supply of animal proteins would form the major objectives of development programmes during the Fourth Plan. Livestock production would be viewed as a crop production activity with adequate cash and income generating potentials. The problem of shortage of draught power would be partially resolved through promotion of appropriate mechanization with emphasis on multiple use of such machineries.

10.4.25 Obviously a wide range of development activities would be needed to be undertaken to improve the situation and increase productivity, and they encampass all areas of livestock management : research, extension, training, village economics, feed requirement supply, veterinary care, animal husbandry, linkages

with other subsectors, input services and others. However, under the present constraints and lack of institutional capability efforts would be concentrated during the Fourth Plan on high priority areas with potentials of quick and significant payoffs. Efforts will be directed for the integration of all areas of livestock development into a consistent set of policy measures and programmes on the basis of identification of such priority areas. Programmes of cattle breeding, fodder supply and animal health will be considered as priority areas where dev. activities would focus.

10.4.26 The poultry sector would be identified as the one holding the best promise for increasing the supply of animal meat and protein most rapidly in the short run along with improving the equity of access to animal protein among the poor. The cost of poulty production is lower and much less lumpy than that of cattle farming and this places small scale poultry production within the reach of the poor households.

10.4.27 During the Fourth Plan period, two broad aspects of policies will be emphasized -- ensuring supply of draught power of adequate quality and increased supply of livestock products. Within the purview, the strategies and policies in the livestock sector during the Fourth Five Year Plan would focus on the following major areas :

(i) Increased livestock husbandry with genetic upgrading and avoiding genetic erosion,

(ii) Improved animal health with provision of prophylactic and routine farmer-administered treatment for infectious diseases and parasitic infestations of livestock,

(iii) Adequate emphasis on non-ruminants which subsist on a more concentrated intake with advantages of better feed conversions and fewer locational constraints on production,

(iv) Special emphasis on poultry husbandry as a value added activity capable of operating in small units with significant labour absorption and poverty alleviation potentials. In this respect, adequate focus would be placed on medicine, feed, marketing and other problems alongwith the development of proper breeds.

(v) Increased fodder supply,

(vi) Emphasis on the development of dairy cattle at farmers' level for increased supply of milk and dairy products.

(vii) Generation of employment opportunities in the rural areas through dairy farming, cattle and poultry rearing and further development of animal husbandry practices for distressed women and unemployed youth.

(viii) Adequate policy supports by providing proper marketing facilities, price incentives, organization and extension systems, education and manpower training in relevant activities, appropriate technology transfer and information system and realization of export potentials.

(ix) Proper review and necessary changes in the import policy for livestock products.

(x) Strengthening of the organizational and institutional framework of the livestock subsector for undertaking effective research, manpower training and developmental activities.

VII. MAJOR POLICIES OF THE LIVESTOCK SUB-SECTOR UNDER THE FOURTH FIVE YEAR PLAN

Milk

10.4.28 The major share of milk produced in the country is from cattle, and the supply of buffalo and goat milk is small. The policies for increased milk supply includes development of all the three sources but emphasizes on cattle. The strategy relies on further development of specialized dairy enterprises in the country's `milk pockets' as well as improvement of yields in the average herd. The strategy is based on the availability of cross bred animals and will be implemented through : breeding i.e. artificial insemination; feed and fodder development; improved veterinary care; and improved animal husbandry methods. In other areas, the focus is on improving the yield potential of the `deshi' breeds, through feed and fodder development, improved veterinary care, and improved animal husbandry methods; with upgrading where appropriate.

10.4.29 Except baby food, import of milk powder would be gradually reduced and market forces would be allowed to play its due role for switching over to the production of dairy within the country.

Meat

10.4.30 The largest share of meat supply is from cattle, followed by goat and fowl. Ducks, buffaloes and sheep are of minor improtance. Strategies for increased meat supply would differ according to the development potential of the species. Major attention will be on the development of poultry, which offers a very high potential for expansion. In the case of fowls, the strategy will focus on breeding and apart from expansion of the existing dual purpose cross-breeds, single purpose, high yielding breeds will be introduced on a large scale. Feed development will receive priority, and both production of maize as well as preparation of concentrate feed will be addressed. The strategy acknowledges that significant increase in numbers in the scavenging system are no longer possible and intensive production systems need to be further expanded. For ducks, the strategy relies on propagation of cross breds; because of the lesser space constraint, increase in the flock size will be encouraged. For cattle, buffaloes and sheep, emphasis will be on increase in productivity, rather than increases in numbers and important components are: reduction in morbidity and mortality; increase in fodder supply; improved husbandry techniques; and improvements in the genetic base.

10.4.31 In the case of goats, increase in numbers as well as in productivity will be pursued; increase in herd are possible because of the animals' capacity to digest inferior type feed.

Eggs

10.4.32 The strategies to be followed are identical to those described above for the development of meat from poultry.

Skins

10.4.33 The Black Bengal Goats produce some of the highest quality leather in the world. Improvements in quantity and quality will be pursued through a selective breeding programme and expanded veterinary care.

Input Pricing :

10.4.34 Price levels for inputs will be initially set at a level that allows for private sector participation. Prices for concentrate feed will be at cost level where the product is introduced as integral part of intensive poultry development and supply is foreseen to come from the public sector. The public sector supply will be gradually withdrawn, once the market grows and the private sector assumes its role.

Output Pricing

10.4.35 Price for meat and poultry products will continue to be regulated by the forces of supply and demand. However, because of the specific international milk market, appropriate policy measures would be adopted to ensure milk producers prices commensurate with production costs.

Emphasis on Small Producers

10.4.36 While medium and large scale egg production will be encouraged to meet the production targets, emphasis will be on maintaining and enlarging the market share of the small producers. To this end, licenses for large scale production of eggs and poultry meat enterprises will be issued restrictively. However, the establishment of multiplication farms for the supply of commercial breed chicks will be encouraged. Such policies will be promoted for adequate employment and income generation for the poor and small farmers and other groups.

Service Delivery

10.4.37 During the Third Plan Period, better service delivery system was introduced by involving private livestock workers. In the case of poultry, village women, after having received training, undertake vaccination programmes in villages and their services are financed through the levying of a modest fee from producers. For cattle, the services is mostly performed by men, but is organized along the same lines. Both services allow for the earning of significant supplementary incomes.

10.4.38 Income and employment generation strategies will continue to focus on the involvement of the economically most vulnerable groups and priority will remain with women. With the development of poultry production there will also be significant scope for medium scale commercial production, creating full time employment in semi-urban and urban areas.

VIII. MAJOR PROGRAMMES DURING THE FOURTH FIVE YEAR PLAN

Feed and Fodder Development.

10.4.39 Feed and fodder development will receive special attention during the plan period. Because of their involvement in fodder production, the Ministries of Agriculture, Forestry and Environment will be actively involved in programme planning and implementation. In the area of feed supply, specifically supply of fish meal, the cooperation of the Department of Fisheries will be important.

Poultry Feed

10.4.40 In support of chicken production, a maize production campaign for grain will be undertaken. Preparation of balanced feed in the small scale commercial sector will be encouraged. However for reasons of market stability a critical public sector feed production capacity will be established. In order to increase the availability of feed protein supplements, pilot programmes for the collection of slaughter wastes and the processing into bone and blood meal will be undertaken. To ensure quality of feed, feed analytical laboratories will be installed in central locations of the most important poultry production areas.

Cattle Feed

10.4.41 Fodder development programmes will be pursued intensively in "intensive milk production areas", and on a more extensive scale in the remaining part of the country. The Programme will consist of fodder cultivation, as well as activities for the improved utilization of existing feed resources including by-products. Emphasis will be on introducing appropriate legumes into the crop rotations. In the "intensive milk production areas" there is scope for the production of maize for green fodder and fodder grasses such as napier (Pennisetum purpureum) and para (Brachiaria mutica). The planting of fodder trees will be continued with the assistance of the Ministry of Forestry and Environment and others. Planting of Ipil-Ipil will be extended, but other trees will also be introduced in selected areas of the Chittagong Hill Tracts and Sylhet. Programmes of over sowing with appropriate grasses and legumes will be undertaken. The main effort of the programme will be directed towards fodder production in farmers fields as past experience has shown that the potential to increase fodder production from public lands is relatively limited due to issues of organization and access. For the production of seeds and seedlings three additional fodder development farms will be established; in addition the involvement of contract farmers and the modalities of such programmes will be tested in the early stages of the plan period. Programmes for the improved utilization of existing feed resources will comprise production of the molasses block and propagation of the use of urea treated straw. Fodder development will be supported by a comprehensive research program, addressing both issues of fodder cultivation and animal nutrition.

Table 10.4.2 Fodder: Input Production Achievement and Targets

Item	Achievement 1989-90	Target 1994-95
Supply from Governmental Farms :		
Fodder Seed (MT)	40	50
Fodder Grass Cuttings (Million)	1.7	3.0
Maize Seed (MT)	45	90
Legume Seed (MT)	5	20
Supply from contract Farmers :		
Fodder Seed (MT)	-	50
Fodder Grass Cuttings (Million)	-	12
Maize Seed (MT)	50	800
Legume Seed (MT)	0	20

10.4.42 The supply of concentrate feed for poultry from government mills will reach 23 thousand MT. by the end of the Fourth Plan. In addition, supply from private sector sources is expected to be 70,000 MT. To facilitate increased availability, the government will continue the present restrictions on the export of feed ingredients like wheat bran, rice polish and oilcake and, at the same time, would allow duty free import of maize, fish meal, minerals and feed additives.

Animal Health and Disease Control

10.4.43 The comprehensive programme during the Fourth Plan would consist of the following components: disease diagnosis; prevention and treatment; and vaccine and medicine production and distribution.

Disease Diagnosis

10.4.44 The programme will strengthen disease diagnostic services through the expansion of the established disease diagnostic network providing the scope for more targeted prevention and treatment. The programme will include conducting of regular surveys from which the progress made in the improvement of the animal health situation can be measured.

Treatment and Prevention

10.4.45 Programmes will include an expanded mobile service through increase in the numbers of government field personnel as well as trained cattle and poultry workers. During the FFYP, greater emphasis will be placed on reduction of morbidity through control of parasitic diseases. The access to treatment facilities will be further increased through the establishment of 290 TLDC's and placing one additional itinerant Veterinary Surgeon and one compounder in each 460 thanas. A network of Veterinary hospitals will be established.

Vaccine and Medicine Production and Distribution

10.4.46 The programme includes measures to increase the production capacity of vaccines in the public sector and to further strengthen the distribution system in the thana level. Production of Marek's Disease vaccine will be taken up on large scale. The research programme for the development of Foot and Mouth Disease vacceine will be strengthened and research will also continue for Goat Pox vaccine. Production of medicines will remain with the private sector and programmes to encourage increased production and distribution will include the setting of appropriate prices.

Table 10.4.3 Animal Health : Input Production Achievement and Targets

	Achievement 1989/90	Target 1994/95
Vaccine Production (Mill Doses)	222	300
Purchase of Medicines (Mill Tk.)	28.2	50.0

ANIMAL BREEDING AND BREED MULTIPLICATION

Cattle Breeding

10.4.47 Programmes would be directed to upgrade cows in the "intensive livestock development areas" to 50 percent exotic blood and in the remaining areas to 25 percent. In remote areas, the programme will be implemented through placing of breeding bulls, and in all other areas through artificial insemination (AI.). The breeding herd will be expanded and upgraded and to increase the outreach capacity of the service, the number of AI. stations will be increased. Embryo transfer technology will be introduced on a limited, experimental basis. Frozen semen will be used extensively in artificial insemination. In this respect, adequate programmes will be implemented to increase efficiency and coverage.

10.4.48 Multiplication of crossbred heifers and breeding bulls will be on government farms and at the same time, supply possibilities from contract farmers will also be tested.

Buffalo Breeding

10.4.49 The buffalo herd will be upgraded through crossbreeding with Murrah & Nili buffaloes. As artificial insemination works less well with buffaloes, emphasis will be on the placing of Bulls in villages and the distribution of cross bred heifers.

Goat and Sheep Breeding

10.4.50 Programmes for goats will be through selective breeding of the "Black Bengal Goat", and the placement of good quality bucks with villages. The supply of rams will be increased and for this purpose additional breeding farms will be established. For sheep, cross breeding programme will be undertaken and the physical infrastructure will be expanded including establishment of more farms in the public sector.

Fowl Breeding

10.4.51 Programmes will continue with the development of improved scavenging birds. In addition, programmes will be directed to maintain commercial breed layers and broilers. Also, the feasibility of rearing those birds in small-scale systems has been proven in Bangladesh. For birds of the scavenging variety, government farms will continue to maintain breeding stock and to produce day old chicks cockerels and pullets. Emphasis will be on the targeted distribution of day old chicks to support the build up of small and medium sized multiplication flocks in the small scale private sector. Hatcheries will be established in strategic places throughout the country and the required supply of hatching eggs will be produced by contract farmers.

10.4.52 For commercial breeds multiplication farms will continue to remain in the large scale private sector. However, government will maintain a critical flock size to ensure regularity of supply and to test appropriate breeds.

Duck Breeding

10.4.53 Programmes will continue with the crossbreeding of deshi birds with Khaki Campbell. The output of improved breed ducklings will be substantially increased; to this end two more hatcheries will be established and rearing facilities will be expanded. For multiplication, government will also maintain breeding stock and through the targeted distribution of ducklings will work towards the establishment of small-scale multiplication flocks in the private sector.

Table 10.4.4 Animal Breeding : Input Production Achievement and Targets

		Achievement 1989/90	Target 1994/95
1.	**Cattle**		
	Artificial seminations (in million)	0.80	1.50
	- Distribution of Breeding Bulls (No.)	60	100
	- Distribution of Cattle Heifer (No.)	200	400
2.	**Buffalo**		
	Disstribution of breeding Bulls(No.)		30
	Distribution of Cattle Heifer (No.)		80
3.	**Goats**		
	Distribution of Bucks (No.)		100
	Distribution of does (No.)		500
4.	**Sheep**		
	Distribution of Rams (No.)		100
	Distribution of Ewes (No.)		500
5.	**Poultry**		
	Governmental Farms:		
	Day old Chicks (million)	2.00	4.00
	Ducklings (million)	0.20	0.60
	Fowl Eggs (million)	5.50	7.50
	Duck Eggs (million)	0.51	1.20
	Cockerel Exchange (million)	0.03	0.15
	Pullet Distribution (million)	0.07	0.15
	Private Sector		
	Day old Chicks (million)	1.0	6.00

Marketing

10.4.54 With the exception of a limited network of public sector organized milk marketing facilities, all marketing activities are with the private sector. Analysis of regional price data suggests however that the system is less than fully competitive and production is in many instances constrained by the resulting low producer prices. This has important equity implications, as a significant part of the producers belonging to the very poor segments of the population. To remedy the situation, marketing programmes will be implemented

for milk, eggs and poultry meat, where market inefficiencies are most pronounced. Programmes will consist of price information services, as well as purchasing programmes that would guarantee fair producer prices.

Credit

10.4.55 Non-availability of sufficient funds continues to be a major impediment to the participation of lower income groups in livestock activities. While various credit sources have been created during the last few years, there is an obvious need to widen the scope of these programmes. To this end, a programme for the distribution of improved breed heifers to members of the low income groups will be implemented. Supply of heifers will be from government farms as well as from contract farmers, rearing these under the guidance of the extension services. Credit would be channelized through BKB, Grameen Bank, BRDB, NGOs and other specific projects for credit disbursement through financial institutions. Emphasis will be given on special credit disbursement for establishment of mini dairy and poultry famrs.

EXTENSION, TRAINING AND EDUCATION

Extension

10.4.56 The livestock extension service is severely hampered by staff shortages at the thana level. Because of these constraints, extension work in the past had to be confined to a few selective activities. However, in order to increase livestock productivity improved production technologies have to be spread through far reaching changes in the structure of the service. These changes would result in a reorientation and rationalization of the various classes of field assistants positioned at the Thana level and service delivery would be expanded through an increase of departmental staff to the union level. Self employed cattle and poultry workers will complement the system. In addition, a network of contact farmers will be trained to assist in the delivery of extension messages at village level.

Training and Education

10.4.57 Because of the increasing importance of the subsector for employment and income generation, an expanded manpower development programme will be implemented. The existing physical infrastructural base is now largely sufficient and only relatively minor additions in the form of training facilities attached to the major farms will be established. At the farmers level programmes will emphasize the training of contact and contact farmers, cattle and poultry workers and intensive livestock production techniques. For departmental extension staff a major reorientation training programme will be organized, geared towards enabling part of the staff to work in production oriented extension rather than vaccination and treatment only. An expanded officers training program both foundation and refresher will be implemented in those areas where programe emphasis has been set, i.e. administration, extension and training and fodder production and animal nutrition. Emphasis will also be given on higher training in specialised areas during the Plan period.

Table 10.4.5 Training : Achievement and Targets

	1989-90	1994-95
Field Staff	940	1,000
Farmers, Unemployed Youths (Thousand)	130	130

Research :

10.4.58 Adaptive research on breeding, feeding, disease control etc. will be taken up in BLRI and results thus obtained will be quickly disseminated to the farmers. Linkage between production, research, training and extension would be established. Efforts will be made for development of suitable breed/breeds for livestock and poultry. In addition, survey on potentialities of local varieties of cattle and poultry will be done.

Environmental Impact

10.4.59 Plants generally help to improve the environment. A massive programme for plantation of Ipil-Ipil and other fodder plants will be taken up in 460 Thanas. Fodder crops will also be cultivated on embankments, roadsides, khas and fallow lands which will help improve the environmental balance. Indiscriminate throwing of dead animals in rivers, canals and open fields causing spread of diseases and environmental pollution will be checked through proper legislation.

Inter-Sectoral Linkages

10.4.60 Livestock provides about 90 percent of the available draught power requirement for crop production and other agricultural operations. In addition, it contributes substantially to rural transportation

activities. Production of cow dung, which is estimated to be 85 m.tons annually, also substantially contribute to meet the demand for rural fuel and manure for crop production. Besides the sector is closely linked to a chain of industries based on livestock and poultry, such as, milk powder, butter, cheese, ghee, broiler, bone meal, hides and skins, shoes, leather products etc. which also generate wide-range of employment opportunities for both skilled and unskilled workers. Integrated farming of poultry and fish is increasingly becoming popular. Savings of land from rice cultivation may be made available for animal fodder cultivation.

Role of NGO's

10.4.61 In the livestock sub-sector the NGO activities may concentrate on target group formation, training, extension, credit disbursement, supervision and recovery and conducting socio-economic studies relating to development projects. Public sector projects which have any such components might be implemented through the involvement of NGOs. They can also finance mini livestock and poultry projects, develop feed and fodder supplies through the provision of credit and other necessary inputs especially for the target groups in the rural areas.

Private Sector

10.4.62 One of the major thrusts of the public sector programmes will be to support the private sector activities in the livestock sub-sector. For the purpose, adequate material and financial support, training and required services in terms of breed, feed, technology, credit etc. will be arranged along with organization of groups for undertaking various livestock activities especially by the poor and disadvantage groups including women.To stimulate the Private Sector in livestock and dairy development, government has a launched a programme to provide financial assistance to the privately owned small dairy farms. Under this programme the enlisted dairy farms would get cash subsidy through Bangladesh Krishi Bank and Rajshahi Krishi Unnayan Bank for 5-20 improved breed of cows. The farms having 5-10 cows would get cash subsidy of 25% per cow assuming its price of Tk. 25,000/-. Similarly farms having 11-20 cows will get cash subsidy of 20% per cow assuming its price of Tk. 25,000/-. The improved breed to be selected should have a minimum milk yield of 5 litres per day. This programme is just a modest beginning to create awareness among the farmers for setting up small dairy farms in the country in view of the growing demand of the livestock sector. Private sector investment in livestock goat and poultry rearing, dairy development, feed manufacturing etc is expected to be about 500.00 crore during FFYP.

10.4.63 As estimated there are about 6,500 mini dairy farms in the country each having cows numbering 5 and above and 40,000 poultry farms each having poultry birds numbering 50 and above. During the end of Fourth Five Year Plan the number of these farms will increase manifold as the Deptt of Livestock Services has taken up implementation of necessary supportive programmes, such as, farmers' training, vaccine production, supply of feeds and fodder and providing credit & animal health care facilities upto thana/union level.

Income Generation and Employment

10.4.64 Emphasis of the programmes in the livestock subsector will be on creating additional incomes in rural areas. Employment will be in the area of both service delivery and production. The scope of most of the interventions to be propagated, will be in most instances lead to additional full time employment and income, especially for women. Employment opportunities and income generation expected during the Fourth Five Year Plan period are given in Table 10.4.6.

Table 10.4.6 Expected Income Generation and Employment During FFYP

Item		Number	Monthly Income (Tk)
1.	Poultry Vaccinators	20,000 (20,000)	80 (80)
2.	Livestock Workers	1,600 (400)	400 (400)
3.	Producer of Improved hatching Eggs	2,900 (-)	300 (-)
4.	Intensive Chicks Raising (Unit 200)	6,000 (1,000)	700 (500)
5.	Rearer of Improved Scavenging Poultry (Unit 10)	430,000 (200,000)	120 (110)
6.	Pullet Rearer (Unit 50)	4,000 (2,000)	550 (500)
7.	Rearer of Commercial Breeds (Unit 500 nos.)	4,000 (1,000)	6,000 (5,000)
8.	Rearer of Improved Dairy Cattle (Unit 3 & above)	6,000 (3,000)	9,000 (8,000)
	Total :	4,74,500 (2,27,400)	

(Figures in the parenthesis indicate achievement for TFYP)

Administration

10.4.65 The administration is organized into four divisions and there are 64 District Offices. At the thana level, administration and service delivery is organized through the Thana Livestock Development Centers (TLDC) and 132 of these have been established. TLDC's will be constructed in the remaining Thanas along with expansion to the Union level. Together with these structural changes, there will be commensurate changes in organisation, leading to greater decentralisation and improving capability.

IX. MAJOR TARGETS OF THE FOURTH FIVE YEAR PLAN

10.4.66 Targets are set in consideration of the overall constraints of the livestock sector and potentials for increased output. The output targets set for the Fourth Five Year Plan are shown in Table 10.4.7.

Table 10.4.7 Output Targets for FFYP

Output		Unit	Estimated Production 1989-90	Target Production 1994-95
1.	Milk	'000' ton	1,326	1,480
2.	Meat	'000' ton	435	510
3.	Eggs	Crore No.	191	260

X. FINANCIAL OUTLAY DURING THE FOURTH FIVE YEAR PLAN

10.4.67 In order to implement the Livestock Development Programmes in Public Sector the original allocation for the Livestock Sector was Tk. 581.00 crore. The Revised Fourth Five Year Plan size for the Livestock Sub-sector at1989-90 price has been estimated at Tk. 331.00 crore. Programme-wise allocation at constant price is given in Table 10.4.8.

Table 10.4.8 Programme-wise Allocation of Fund During FFYP

Items		Allocation at constant price (Tk. in Crore) (1989-90)
1.	Nutrition	21.00
2.	Conservation:	
	a) Prevention	12.00
	b) Treatment	43.00
3.	Breeding:	
	a) Poultry	38.00
	b) Large animals	53.00
	c) Small animals	10.00
4.	Institute Building	63.00
5.	Training & Research	21.00
6.	Special production oriented projects for milk, meat & eggs	8.00
7.	Miscellaneous	62.00
	Total	331.00

X.5. FORESTRY

I. INTRODUCTION

10.5.1 Forest plays an important role in the economy of Bangladesh. It is one of the principal renewable natural resources of the country and has a vital role in the sustenance of the poor, especially in rural areas. The forestry activities contribute nearly 3 percent to the GDP and about 2 percent of the total labour force is employed in the sub-sector. Bangladesh exports small quantities of forest products like newsprints and handicrafts while imports include pulp, paper and other manufactured wood products.

II. FOREST RESOURCES OF BANGLADESH

10.5.2 The forest land resource base of the country is very limited with only 0.02 ha of such land per capita. An estimated 2.45 million ha or 17% of the total land of the country is either forest or potential forests land. Out of this 2.18 million ha is government owned and the rest 0.27 million ha is privately controlled homestead forest land scattered all over the country. Again, out of the 2.18 million ha of government forest land, 1.46 million ha is the national forests under the control of Forest Department and the rest is virtually barren and is under the control of three Hill Local Government Councils in Chittagong Hill Tracts. More than 90% of the state owned forest land is concentrated in 12 districts in the east and south-eastern region of the country. Out of 64 districts, 28 districts have no public forests at all. Presently, only 61 percent of the Forest Department controlled forests is productive and the rest is either encroached, barren, scrub or grass land. It is estimated that the crown cover of the existing type of forests varies from only 30 to 70 percent.

10.5.3 The homestead forests are developed as part of the total farming system adopted by the farmers within the limits of socio-economic and environmental conditions to maximize earnings from the system. Trees are planted around homestead to produce or support food production and other household needs including fuel. The homestead forestry is thus not only an agro-forestry system but also reflects the subsistence character of the rural society. These homestead forests are also shrinking due to over exploitation and covering of new areas under housing and agricultural purposes.

10.5.4 The reduction of tree covered area not only reduces forest product availability, it also has strong environmental implications; as the destruction of trees is accompanied by drought, erosion, flooding and siltation. These natural calamities have a serious bearing on food and agricultural production for the country. The natural disasters which have struck the country frequently during recent times have heightened public awareness about forestry's importance in the protection and preservation of the environment. In addition, the expansion of tree coverage and maintenance of current forest areas are considered essential to combat the 'Green House' effect which is said to be threatening a sea-level rise and environmental degradation of many developing countries including Bangladesh.

III. REVIEW OF PAST PERFORMANCE

10.5.5 Since independence efforts have been directed to develop the forest resource base of the country through expansion and qualitative improvements of the existing forest lands. However, for the meagre forest resources of the country usually the removal rates far exceed the sustainable yield limit. During 1980, it was estimated that the annual per capita consumption of fuelwood and timber was 0.065m and 0.028m respectively. During the same year, about 80% of fuelwood and 60% of timber supply came from village forests and the rest from Government owned forests. Since then, production from government forests have further declined. The TFYP bench-mark (1984-85) production of fuelwood and timber from government forests was 0.84 million cu.m and 0.48 million cu.m respectively. By the end of the plan period, production of fuelwood and timber from government forests will be 0.74 million cu.m and 0.40 million cu.m respectively. Target production from the government forests had to be lowered because of the decline in the growing stock of all the major forests over the past years. As a consequence, a ban on extraction from all government forests as a measure to conserve the existing resource was introduced. However, the ban was relaxed subsequently and extraction was allowed on a limited scale.

10.5.6 There is inadequacy of reliable statistics on production and growing stock of village forests. But it is generally agreed that present production and growing stock levels are lower than those of 19980s. This information, combined with a concomitant high rise in prices suggests that per capita availability of the major forest products in the country has dropped further during the TFYP.

TFYP PERFORMANCE OF DEVELOPMENT PROGRAMMES

10.5.7 The major forestry development efforts during previous plans have been geared to :

(i) converting the existing natural low yielding forests into high yielding ones by reafforestation and in the process making timber and fuelwood available for consumption;

(ii) afforesting degraded and denuded forest lands and also newly accreted lands in the coastal areas;

(iii) replenishing and increasing the rural forest wealth by supplying seedlings for planting in the homesteads, and also by planting vacant common access public lands like roads, railways and embankment side; and

(iv) mounting goal-oriented applied research to support the various development programmes.

Plantation

10.5.8 During the Third Five Year Plan period, a total of 62,236 ha of plantations were raised by the Forest Department, which was only 46% of the targeted 151,236 ha. This area was even lower than that achieved during SFYP. Table-10.5.1 shows the amount of plantations raised in different areas during the earlier plan periods as well as the targets and achievement under the public sector during the TFYP.

Table 10.5.1 : Achievements in Plantations in Different Areas (1973-90)

Plantation Type	FFYP (inc. TYP) (1973-80) ha	SFYP (1980-85) ha	TFYP (1985-90) Target ha	TFYP (1985-90) Achievement ha	TFYP (1985-90) Achievement %
1. Replanting of exploited natural hill forests	21,723	26,883	30,360	18,173	60
2. Afforestation of Degraded and Denuded Reserve Forest Area	6,761	11,886	36,000	2,376	7
3. Afforestation of Unclassed State Forests of C.H.T.	8,446	17,996	29,150	10,721	37
4. Afforestation of Newly Accreted Lands in Coastal Areas	36,930	40,415	40,485	32,553	80
5. Woodlot and Agroforestry Plantations	-	2,932	15,628	5,413	35
6. Strip Plantations (km)	-	3,410	4,980	4,241	85
7. Rubber Plantations (ha)	474	4569	9,140	2,468	27
8. Seedling Distribution (mln.)	26.7	21	76	42	55

Exploited Natural Forest Plantation

10.5.9 During the Third Five Year Plan, only about 60% of the targeted exploited natural forest plantations were established; an area less than that achieved during the Second Five Year Plan. The main reasons for the shortfall are :

- the poor law and order situation in the C.H.T;
- delayed availability of failed areas needed for plantation due to administrative bottlenecks; and
- a reduction of exploited area.

10.5.10 During earlier Plans, the exploited natural forest area was planted mainly with teak without regard to species-site suitability. During the TFYP, the share of teak planted was reduced to less than 30% and other indigenous hardwood as well as indigenous and exotic fast growing species were planted. According to the

latest inventory, the rate of stocking in teak and other plantations, raised prior to the FFYP is rather low and consequently the yield from the plantations will be much lower than anticipated at the time of the planting. The poor condition of past plantations are due mainly to :

(i) lack of post establishment weeding and tending;
(ii) planting of incompatible mixtures;
(iii) diseases and pests;
(iv) inappropriate site-species matching; and
(v) low genetic quality of planted seedlings.

10.5.11 During the early part of the TFYP, monoculture of fast growing species have been practised in poor degraded sites. Considering the high vulnerability of such plantations to widespread pest attacks, monocultural plantations have been discontinued during the latter part of the plan period.

Degraded and Denuded Forest Plantations

10.5.12 This program suffered due to lack of resources, non-availability of land, inability on the part of the concerned agencies to draw up appropriate projects. The achievement was only 7% compared to the target envisaged for the Plan period.

Unclassed State Forest (USF) Plantations

10.5.13 Plantations in USF have been raised with a view to expand the forest resource base of the country and species have been determined to cater to the raw material needs of industry. Against the target of 29,150 ha only about 10,721 ha were raised during the Plan period. In addition, about 10,000 ha of plantations have been raised under Chittagong Hill Tracts Special Development Plan (1984-89). The two main reasons for the shortfall are the poor law and order situation in the Chittagong Hill Tracts and the lack of funds.

Coastal Afforestation

10.5.14 Afforestation of the newly accreted lands in the coastal areas was started as a pioneering effort during early 1970s. During the Second Plan period an average of about 8,100 ha was planted annually. During the first two years of the TFYP, the Second Plan average was maintained. However, from the third year onwards, the plantation area has been reduced to about 4,050 ha annaually due to non-availability of suitable land for planting. A significant research effort will be needed to determine the reasons for this reduction in the availability of the plantable areas.

10.5.15 A recent review of coastal plantations suggests that plantations in about 70% of the area planted have survived. A major concern for tree survival is the stem-borer whose attacks have infected as many as 50% of the trees planted. This is quite alarming and major doubts are now cast on the suitability of the present plantation system in the area and points to the fact that coastal plantations which have been raised with only two species i.e., Keora (80%) and Baen (20%) may not have been very prudent. A major research effort will be necessary to identify a better mixture of species than that used at present. A further point about coastal plantations which needs serious consideration is that the areas where plantations have matured or areas which are not regularly inundated leading to slower growth and pest attack should be cut and planted once more with other long rotation species.

Rural Forestry

10.5.16 While rural forests suffered a great deal to meet the growing demands of timber and fuelwood during the TFYP period, the rural forestry program lagged much behind its target. Only 35% and 55% of the target for raising woodlot and agro-forestry plantations and seedling distribution respectively were achieved. The promotion of rural forestry activities through training of village leaders also lagged. The main reason for this shortfall was due to the long debate that took place about involving local government institutions, particularly the Thana Parishads, in the rural forestry program. Ultimately, the issue was settled and a project with a completely new strategy was taken up with Asian Development Bank assistance. It is expected that the impact of the project will become visible during the Fourth Five Year Plan period.

Rubber Plantation

10.5.17 It was envisaged that rubber plantation area be increased from 9,300 ha to about 27,000 ha during the Third Plan Period. About 16,000 ha was supposed to be under the public sector and the rest under private ownership. By the end of the plan period, the total area under rubber plantation stood at about 11,768 ha under the public sector and 4,000 ha in private hands. Prior to the TFYP, rubber plantations in the

country were confined to Chittagong, Cox's Bazar, Sylhet and the Chittagong Hill Tracts but during the TFYP about 1,500 ha of new plantations were raised in the central region of the country.

10.5.18 Non-fulfilment of rubber plantation targets is attributed to :

(i) delayed release of land for rubber plantations ;

(ii) non-finalisation of foreign assistance for the public sector project;

(iii) failure on the part of the government to build up necessary infrastructural facilities for private sector rubber plantation development; and

(iv) lack of private sector interest.

10.5.19 All of the plantations raised during TFYP were with high yielding varieties and the quality and stocking of the plantations are reported to be good.

Forest Research

10.5.20 Forestry research activities were not sufficiently well organized to support the overall forestry developmental programs. Research priorities were still too diverse and most research efforts were not field oriented and geared to user's needs. The TFYP prescription for establishment of a centralised seed bank was not realised.

10.5.21 The Forest Research Institute, responsible for forest research in the country, continued to work in isolation with virtually no coordination between the institute and its clientele (i.e., the user agencies). This was evident from the fact that FRI established large scale seed orchards for gamar seeds, when the Forest Department discontinued raising gamar plantations. Further, FRI was not made an autonomous organisation in line with other biological research institutes of the country as per the TFYP prescription. In fact, though the institute operated as an independent agency, it remained "officially" under the Forest Department.

Education and Training

10.5.22 The development of professional forestry education at Chittagong University proceeded well and a good curriculum, suiting the developmental needs of the country were developed. The academic and other buildings of the Institute of Forestry at Chittagong University were not completed due to administrative lapses on the part of donors and the agency concerned. The sub-professional level ranger's course has been discontinued as per TFYP prescription. The forester's course was redesigned but not put into practice. The new academic and other buildings of the Forester's School was not completed due to administrative and other lapses on the part of both donors and the agency concerned. Consequently, the school's target of enroling 100 students per annum against the present strength of 70 was not attained. This would create adverse impact on the overall development programmes of the Forest Department. In addition, the Forest Academy, which was supposed to be established by converting the Ranger's College to meet training needs of the newly recruited Forest Officers and also refresher's training for inservice officers was not started.

Wildlife Conservation and Recreation

10.5.23 The wildlife conservation and recreation programme suffered most during the Third Plan period due mainly to resource constraints and administrative weaknesses. The wildlife-conservation laws were not enforced properly due to shortage of personnel resulting in indiscriminate killing of brids. New game sanctuaries could not be developed for lack of resources.

CONSTRAINTS EXPERIENCED DURING THE THIRD PLAN PERIOD

Financial Resources

10.5.24 The Third Five Year Plan allocation for the sub-sector was Tk. 392,00 crore in 1984-85 prices. By the end of the Plan period an estimated Tk. 230.46 crore or 59% of the Plan allocation at current prices was provided through the ADPs for implementing the various programs of the sub-sector. Out of this allocation, an estimated Tk. 203.29 crore or 52% of the Plan allocation at current prices was spent over the five year period. At 1984-85 prices the actual expenditure would be only 29% of the Plan allocation of Tk. 392.00 crore.

Project Implementation

10.5.25 To implement the different programs included in the TFYP, 24 projects were envisaged. Of the 24 projects, 11 were spilled-over from the SFYP and 13 were new. Out of the above, 18 projects (including all 11 spill-over projects) were actually taken up for implementation during the TFYP. The reason for this shortfall was :

(i) non-availability of funds;
(ii) failure in designing appropriate projects; and
(iii) non-availability of foreign assistance, etc.

10.5.26 Out of the 18 projects implemented, 14 were completed by the end of the Plan period and only 4 projects are scheduled for spill-over to the Fourth Plan.

Institutional

10.5.27 Since 1980s the management objective of the national forests have changed quite dramatically when Forest Department was given the responsibility of supporting the rural/village forests-the source for the bulk of the country's forest products. The need thus arose for a complete restructuring of the Forest Department and of re-orienting its officers and staff to the new role. This has not happened. The TFYP recommendation on rationalising the Department's administrative system by elimnating the sub-professional level Ranger's tier were not implemented; though the Ranger's training course was discontinued. In view of the closure of ranger training, there will be serious implications on future forest development programs if the two tier administrative system is not introduced soon.

10.5.28 The Forest Department and Forest Research Institute have not had a regular head for the last few years and there was very little co-ordination between the different agencies operating in this sector. This situation has had a bearing on the over-all performance of the sector.

10.5.29 The Forest Department's plantation management system is not adequate. No technical review of the plantation and other development programs are done centrally by the department. Only administrative reviews are done once a year.

10.5.30 The Forest Department established a Forestry Development and Training Centre during the mid 1970s with Swedish assistance to train the field level workers of different agencies. It developed and operated a good training course for workers engaged in different forestry operations. However the Centre remained virtually inoperative during the TFYP for want of necessary operational funds and Forest Department's lack of interest and leadership.

Conservation Measures

10.5.31 To reduce pressure on existing forest resources, an objective of the Third Plan was to adopt different wood conserving measures like use of preservatives, treatment, seasoning and standardization. However, almost no effort was made towards realizing this objective. Even standardization of products for government agencies, which could have been taken up as a first step, received no attention.

IV. OBJECTIVES OF THE FFYP

10.5.32 Given the continued depletion of tree resources and consequent environmental degradation, the main objective of the forestry sub-sector during the Fourth Five Year Plan will be:

to expand the tree cover area of the country with a view to increasing the supply of forest products and also to improve the over-all environmental condition of the country.

10.5.33 The seven broad objectives of forestry development will be:

(i) to rehabilitate or reafforest the denuded and degraded national forest lands;
(ii) to bring all possible vacant public and private lands under tree cover;

(iii) to meet basic needs of all forest products by integrating trees with farming and traditional land-use;

(iv) to establish and maintain a green-belt of trees along the coastal areas for protection of the main land from the onslaught of cyclones & tidal surges;

(v) to improve the general environment for supporting agricultural and other biological production;

(vi) to create employment opportunities for the landless poor, marginal farmers and women; and

(vii) to introduce effective demand management practices.

VII. DEVELOPMENT PROGRAMMES AND POLICIES DURING THE FOURTH PLAN

Rural Forests

10.5.34 The village/rural forests are the most important forest resources of the country supplying the bulk of the forest produce from a relatively small area of land. The main features of this type of forest are the wide variety of species, most of them multi purposes, planted around homesteads as part of the total farming system to produce or to support food production and other household materials, including production of cooking fuel.

10.5.35 The main problem of homestead and farm forestry development is the availability of land for tree planting. Increasingly, land is being but to other uses like housing, crop intensification, etc. The homestead agro-forestry extension and management programs during the fourth plan would aim at increasing productivity and optimal use of available land through suitable combination of tree and field crops with emphasis on replicable silvi-horticulture and silvi-agriculture models acceptable to farmers. An appropriate mix of high-yielding & quick growing tree species will be selected in an effort to increase production and to support agricultural & other biological production. Moreover emphasis will be laid on use of homestead with appropriate varieties and composite planting on the slopes of ponds and other water bodies. The programmes in the area, would emphasise motivation of farmers along with extension of knowledge and service delivery system. For achieveing desired results in the area emphasis will be put on development of Thana level nurseries within a farming system concept.

10.5.36 The technology will be disseminated through Forest Department and thana forest nurseries. In support of homestead and farm forestry development, 60 million seedlings will be distributed to the public and a program for development of homestead resources.

10.5.37 The sustainability of rural forestry resources is in jeopardy due to over exploitation. The poor and the landless however have very little of this resource to consume. The major constraint in this regard is the availability of land on which to grow trees. The allocation of rights to cultivate trees and also for intercropping on underutilized government lands by the landless and marginal farmers will give this group of the population an opportunity to have access to tree resources. This messure in itself has the potential of enhancing the income and employment generation possibilities and also the probability of successful protection and hence production of tree crops.

10.5.38 Landless and marginal farmer groups will be organized under social forestry development program for tree cultivation on presently underutilized government lands-like roadsides, railway & flood protection embankment sides, and degraded government forest and other lands. Thana Parishads will have overall responsibility for organizing groups and raising plantations on all lands except degraded forest lands. The Forest Department will have the responsibility for raising plantations on degraded forest lands with the involvement of the people. NGOs will also be involved in the group formation process and planting. A total of 20,000 km of strip plantations will be raised during the FFYP. Vacant premises of 10,000 educational and religious institutions will also be planted. Besides, 20,000 ha of wood lot and agro-forestry plantations will be raised in the degraded forest lands under the social forestry programme.

10.5.39 Hencoforth, rural forestry programs will be implemented as an integral part of the rural development process. As such, plantation and seedling distribution programs will be arranged so that they not only support domestic consumption but also fuel existing rural industries, inducing the establishment of further small and cottage industries based on tree, bamboo and cane as raw material thereby enhancing employment and income. Extensive mass motivation campaign will be carried out to arouse public awareness about tree planting. In order to use public interest in tree planting, national awards will be introduced for tree plantations.

Forest Plantation

10.5.40 The state forest lands under the control of Forest Department is composed mainly of the natural hill forests of Chittagong, Cox's Bazar, Sylhet, the Chittagong Hill Tracts and the Sundarban's mangrove forests. In order to preserve and protect the ecological balance (including wildlife, genetic diversity, soil quality

and natural water catchments), clear felling of natural hill forests will be kept to a minimum. The present system of extraction in these forests is clearfelling and artificial regeneration. Selection-cum-improvement system of extraction will be indroduced on a pilot basis. Extraction from the sundarbans will be reduced from the present level.

10.5.41 A considerable area of natural hill forest has been denuded or degraded due to the illegal removal of trees. Such areas will be planted on a priority basis. In additon, large areas of plantations, which were raised in these forests, at present have very little significance from both economic & ecological point of view. Such plantatios will be clear felled and replanted.

10.5.42 About 30,000 ha of the above-mentioned areas will be planted during the FFYP. Henceforth, such plantations will be managed as forest estates, like tree-farming enterprises for specific enduses. Plantations will be raised in large continuous blocks. Both long and end-use specific short rotation plantations will be raised. The long rotation plantation will be confined to remote areas while short rotation species will be planted in more accessible areas. Cane & medicinal plants will be grown as understorey crops in both short and long rotation plantations. Fuelwood plantation will be raised in the periphery of all the above plantations. Pepole will be actively involved in raising these plantations and they will be given a share of the product when the plantations mature. Thinning and silvicultural operations of the remaining old plantation will be continued.

10.5.43 The degraded 'Sal' forests of the central and north-western region will be rehabilitated through selection of appropriate species and introducing social and agro-forestry practicies.

10.5.44 The Sundarban forests which are managed under a selection-cum-improvement felling system have been seriously depleted. A study for integrated, overall development of the Sundarban forests will be undertaken during the period. A major problem for the forest has been the "top-dying" of sundri, the most important species in the Sundarbans. An estimated 20 million trees are reported to be severely damaged. As an interim measure, dead and affected sundri trees of 21 cm dia and above will be removed from the severely affected compartments over a five year period and the resulting vacant areas will be planted with suitable species.

10.5.45 The coastal afforestation programme on newly accreted lands will be continued with the main objective of land consolidation and protection of the environment as well as protection from the onslaught of cyclones and tidal bores. Accreted lands become suitable for planting only after deposition of silts on their surface. However, availability of such areas have reduced in recent years and only about 22,000 ha are targeted for planting during the FFYP. Necessary investigation will be carried out to find out the causes of reduction of silt deposited area. In addition, the present coastal plantation management system will be thoroughly reviewed and species other than keora and baen will be tried. When existing plantations will mature or no more remain suitable for the area due to non inundation and other factors, will be cut and replantated with other suitable species instead of releasing the land for traditional agricultural practices. A detailed land-use study of the coastal areas as well as its resources will be carried out during the plan period. A green belt of coconut palm, other palm and suitable tree species will be established all along the coast for protection of the area from the onslaught of tidal surges. The plantations will help increase production, create employment improve the general environment of the area.

10.5.46 Plantation in the unclassed state forests (USF) of the Chittagong Hill Tracts will be continued mainly with a view to establish a tree over in the area for improvement of the environment and reduce soil erosion. A total of 15,000 ha of such areas will be planted and also improved silvicultural operations will be carried on older plantations.

Rubber Plantations

10.5.47 The rubber plantation area will be raised to 25,000 ha by the end of the FFYP from the present 19,800 ha. Out of this, 14,000 ha will be under the public sector and 11,000 ha under the private sector. During the FFYP, about 2300 ha of plantations will be raised under the public sector. Establishment of rubber plantations in the private sector will be encouraged. Besides steps will be taken to improve the productivity of existing public sector rubber estates through replanting. Bangladesh Forest Industries Development Corporation, the agency responsible for raising rubber plantations in the public sector, will be reoriented to commercially operate its rubber holdings. Total raw rubber production during the terminal year of FFYP is targeted at 7,000 mt. up from the present production of 1,200 mt representing a 500% increase during the Plan period. This will be sufficient to meet about 40 percent of the nation's annual raw rubber demand.

10.5.48 The private rubber planters were given land leases during the early 1980s, but the progress of planting has been dismal. During the FFYP, appropriate steps will be taken including credit for private rubber planters will be arranged. Necessary infrastructural facilities will be developed in the vicinity of the plantations through local government and relevant national agencies.

Bamboo, Cane and Murta Plantations

10.5.49 Bamboo, cane and murta play a very important role in the rural economy of Bangladesh. Besides being the most important construction material, bamboo is also an important raw material for many cottage industries. Cane and murta are also important raw materials for handicrafts. Potential for establishment of large number of cottage industries based on these raw materials, which may help enhance employment and income of the rural people, exist. Handicrafts made of cane, bamboo and murta have very good export potential. But the production of these important resources are on the decline. One of the most important bottlenecks for increasing production so far has been the lack of appropriate propagating techniques. However, the problem can be largely overcome through research carried out at FRI. During the FFYP, a strengthened program for raising bamboo, cane and murta plantations will be undertaken on both government forest lands and also private homestead and farmlands. Bamboo plantations will be raised in about 5,000 ha of suitable government forest lands. A similar program for murta plantation in government forest lands in Sylhet will be undertaken. Appropriate bamboo, cane and murta propagating materials will be distributed to the public through Forest Department extension nurseries.

Forest Inventory and Management

10.5.50 Management plans, based on the latest inventories, for Chittagong, Cox's Bazar, Sylhet and the Chittagong Hill Tracts forests have already been completed. The computer based forest resource information management system (RIMS) will be completed and made operational during the Plan period. A cell for operating RIMS will be created in the Forest Department. Preparation of an integrated action plan for development of the Sundarbans forest will be completed during the Plan period. An integrated land-use plan of the sal forest area will be completed and based on recommendations of the study, appropriate actions will be taken. The present data base of the sector is very weak and inadequate. Necessary socio-economic studies and surveys will be carried out to improve the data base of the sector. A Forestry Master Plan for overall forest development in the country will be finalised during the plan period.

Forest Research

10.5.51 The Forest Research Institute will be reorganized based on field needs and functions to lay more emphasis on applied and adaptive research. Mechanisms will be developed to improve the coordination between FRI and its client agencies. The FRI field research stations will be further strengthened and the national seed centre will be made fully operational during the period. Henceforth, Forest Department will use FRI produced certified seeds for its plantations to the maximum extent available. FRI will increase its focus towards social forestry research. An appropriate mechanism will be developed to integrate activities of research, extension and management. Steps will be taken to make the FRI an autonomous organization in line with other agricultural research institutes of the country. The contribution of FRI towards forests development will be evaluated annually.

Education and Training

10.5.52 For successful implementation of the FFYP forestry programmes, substantial manpower development will be necessary, not only in terms of number, but also in updating the knowledge of existing personnel. With the completion of the Institute of Forestry's own building, its laboratory, library and classroom facilities will be considerably improved. During the Plan period about 150-175 students are expected to graduate from the institute. Forest school will be shifted to Chittagong from Sylhet. A two-year diploma course is offered at the school, as in-service training to foresters. The school will be located in the campus of the Forestry Academy. The Academy & Dormitory Building of the school will be completed during the plan period and about 100 students will be enroled annually. In addition, the facilities at the Rajshahi Forester's School will be further improved. The annual intake of students at the school is 25.

10.5.53 The Forest Academy will commence training on administrative and financial aspects for the newly recruited forestry graduates of the forest cadre. Refresher in-service training courses will also be arranged for existing officers. Conversion courses for upgrading about 150 Rangers to Assistant Conservators will be arranged. A new dormitory will be constructed and physical facilities will be improved. The Forestry Development and Training Centre at Kaptai will be re-oriented to impart inservice training to the subordinate staff of the Forest Department.

10.5.54 During the Plan period, about 7000 village leaders and 11,000 DAE supervisors will be given extension training at the Forest Department Extension Nurseries. As well, 435 Thana Plantation Assistants and an equal number of Thana Malis will be given trained on basic forestry extension techniques.

Nature Conservation, National Parks and Wildlife

10.5.55 To preserve the national heritage, a network of protected areas characterising different types of terrestrial life and ecosystems will be established to help maintain biodiversity, and preserve genepools and critical habitats of rare and endemic plants and animals. The national botanical gardens and the national herbarium will be further developed. Measures will be taken to preserve and protect the national parks system in its existing form. Particular emphasis will be given to wildlife protection and preservation through strict enforcement of existing laws and establishment of game sanctuaries. A seperate wildlife circle will be created in Forest Department for this purpose.

Conservation Measures

10.5.56 The increasing gap between wood demand and supply calls for immediate adoption of stringent conservation measures. Adoption of preservative treatments for all timber used in exposed conditions will be encouraged. Steps will be taken to fully utilise the existing wood treating facilities and new facilities will be created in the private sector. Standardization of wood products (e.g., door and window frames, furniture) will be encouraged through development of effective design and their dissemination through mass media and other means. In addition, the use of engineered products like hollow flash doors and plywood furniture will be encouraged. Initially, it will be made mandatory for all public enterprises to adopt such wood conservation measures. In addition, considerable volume of wood currently wasted at the time of conversion will be avoided through more efficient sawmilling practices. Sawmill workers will be trained and two mobile saw-doctoring units will be used for imparting on-the-job training on saw-doctoring in different parts of the country. Use of substitute timber products like metallic doors and windows, plastic and metal furniture, etc. will be encouraged. Besides, use of fuelwood in brick burning will be effectively eliminated by making coal easily available at competitive prices. Use of improved chullas will be encouraged to improve woodfuel burning efficiency.

Women In Forestry

10.5.57 Women have a very special role in the forest development program in the FFYP. Women will continue to play the central role in the management and production of homestead forest resources, e.g., timber, fruit, fuelwood, bamboo and cane. Destitute women's groups will be trained in nursery raising techniques, so that they can raise seedlings for sale. These groups will be given appropriate support from the thana forest nurseries. Women's groups will also be involved in raising plantations along side roads, railways and canals and on the premises of educational institutions.

Target Groups

10.5.58 A number of rural and national forestry plantation programs will be targeted to improve the lot of the landless and of small farmers. These groups will be organized to participate in the agro-forestry and woodlot plantations on state forest lands and also in the strip plantation program. In addition, fuelwood plantations in the periphery of national forest plantations will be raised with the active involvement of these two segments of population. By participating in the programs, the people will earn wages while raising and maintatining plantations and will receive a share of the produce when the plantations are matured. These groups will also be allowed to intercrop the land while the plantations mature.

Employment

10.5.59 Because of the nature of forestry activities, the sub-sector has a tremendous potential for creating millions of person-days of employment and for making a positive impact on rural poverty alleviation. Private individuals will be encouraged to set up nurseries for raising seedlings for sale. For the purpose they would be provided with necessary technical back-up support and credit. Tree species for rural forestry plantations will be selected to induce the setting up of small and cottage industries based on these as raw materials. This will also help to generate further employment opportunities.

Environmental Impact

10.5.60 Trees, along with other biota, generally help to improve the environment. One of the results of the forestry sub-sector during the Plan will therefore be an improvement of the environmental balance through extensive tree planting. Appropriate nature conservation programs will be taken up alongside extensive tree planting activities to improve the general standard of environment. Increase planting activity will help to minimise soil erosion and stabilize the newly accreted charland and slopes of lands. Strip plantations will also improve the land scape and increase awareness for maintenance of ecological balance. Forest

management practices on the basis of site-specific multiple land-use concept will lead to environmental stability along with high productivity. For environmental improvement, henceforth all development projects will include tree plantation component wherever possible.

Institutional

10.5.61 Forestry practices have remained almost unchanged for a long period of time. The main objective of management in the past has been the protection of the forests and production of wood from them. Little attention was paid either to other components of the forest eco-system or to the socio-economic aspects of management. The Forest Department was created and operated on a "custodial" type of approach to serve the above objective. In keeping with the present day developmental needs of the country, a seperate wing for forestry extension and social forestry will be created in the Forest Department to emphasize rural forestry development. A high powered committee has been formed to suggest measures for re-organizing the various agencies of the sector. Attempts will be made to use other Ministries, Departments, local government, local bodies for the development of forestry.

10.5.62 The planning, evaluation & monitoring capacities of the Ministry of Environment & Forests, Forest Department, Bangladesh Forest Industries Development Corporation, Forest Research Institute and Forestry wing of the Planning Commission will be appropriately strengthened employing adequate manpower, arranging training and providing logistic support. Higher training for officers of the above mentioned agencies will be arranged. Besides, promotion prospects for all categories of officers will be broadened as an incentive measure to improve efficiency.

VIII. FINANCIAL OUTLAY DURING THE FOURTH PLAN

10.5.63 In order to implement the programs in the public sector, Tk. 336.00 crore in 1989-90 prices has been earmarked for forestry development during the Fourth Five Year Plan.

Inter-Sectoral Linkages

10.5.64 On the one hand forests are important for maintaining environmental balance and on the other forest products are used as raw materials and fuel in industries and as fuel for domestic cooking. Due to low resource base and over-exploitation, existing resources are no longer sufficient to meet the requirements of both raw materials and fuel on a sustainable basis. Forestry practices are relatively long term in nature. As a result, present developmental efforts cannot help to substantially improve the situation during the medium term. As such, it will be necessary to use substitute raw materials for forest industries especially for pulp and paper industries.

Role of NGOs

10.5.65 Non-Government organizations (NGOs) could play a very important role in the implementation of the forestry sector programs. NGOs could organize groups for participating in the strip as well as community forestry plantations in degraded government forest lands. NGOs can play an even more important role in imparting training and providing credit to groups of marginal and landless farmers and in particular to women destitute groups in seedling production activities. These groups after receiving training and with the support of the NGOs could produce seedlings on a commercial basis.

Role of Private Sector

10.5.66 Except the national forests, trees grown all over the country are on private lands. The major supply of forest produce presently comes from this source and will continue during the Fourth Plan period. Private individuals groups will be encouraged to plant more trees to help improve the environment and also to meet other requirements. Private sector will bear the responsibility to meet the increasing demand of seedlings. For the purpose, appropriate incentive measures and support services would be provided. An estimated amount of Tk. 330.00 crore will be spent in the private sector.

X.6

RURAL DEVELOPMENT AND INSTITUTIONS

10.6.1 Rural Development is the most essential component of the development strategy in Bangladesh where more than fourth-fifths of her population live in the rural areas and where agriculture is the mainstay of the economy. The rural sector is characterised by a number of major problems: the vast majority of the rural people are unemployed or underemployed and around half of the rural households have incomes below the poverty line. The prime needs for rural development in Bangladesh are productive employment and income generating programmes in both farm and non-farm sectors for the rural poor along with the development of agriculture and basic physical infrastructure in the rural areas.

OBJECTIVES, POLICY AND STRATEGY

10.6.2 A rural development plan, to be meaningful, must continue to effectively address the problem of poverty. For this, the plan has to pursue an employment-led development policy. The focus of the policy would be to promote greater opportunities for the rural poor for productive employment in both farm and non-farm sectors of the economy.

10.6.3 Keeping alleviation of rural poverty as the end in view, the objectives of the Plan of the RD and I sector are to :

(1) Reduce rural poverty by means of increasing gainful income generating activities and employment opportunities for the rural poor on a sustained basis;

(2) Develop rural institutions;

(3) Improve technology and skills as significant elements of human resource development for productive activities of rural poor and providing them with better access to the means of production;

(4) Improve basic physical infrastructure (roads, growth centres etc.) in the rural areas;

(5) Facilitate agricultural development through institutional support and expansion of irrigation;

(6) Promote participation of women in rural development.

10.6.4 For the development of rural economy, priority to agricultural development must remain. Development of physical infrastructure like transport and communication links, growth centres, etc. are required to support agricultural and other economic activities which, in turn, would generate substantial employment opportunities through construction and maintenance work. They form important components of the rural development programme. But they are not enough to meet the existing and growing needs of employment and income generating opportunities. Expansion of both farm and non-farm sectors in the rural areas for increasing employment and income opportunities for the rural poor is needed. The rural poor who need to be particularly reached with programmes for increasing employment and income opportunities primarily comprise three socio-economic groups: (i) landless agricultural labour (ii) small farmers and (iii) rural informal (households, mainly poor, engaged in the non-agriculture sector).

10.6.5 An important prerequisite to bring about a transformation in their status from a claimant of residual consumption to a sustained source of growth and thus place them into the focus of rural development is to increase productivity of the rural labour force. This requires improvement of both technology and capital base of rural economy as well as effective investment in programme for human resources development.

10.6.6 In view of the above, rural development in the RD and I sector envisages a strategy in which a rural development project (RD project) has one or more of the following components:

(a) Production and Employment Programme for the rural poor (PEP);

(b) Development of physical infrastructure, including roads and markets identified as growth centres;

(c) Irrigated agriculture and small scale water resources development (drainage and minor flood control works).

10.6.7 Each individual RD project is to cover a minimum of one full district with the component or components taken up.

Production and Employment Programme for the rural poor (PEP):

10.6.8 Production and employment programme for the rural poor (PEP) is conceived as a package consisting of (i) institution (BSS/MBSS/pre-cooperatives/informal groups) (ii) technology and training (iii) credit (iv) other input, and (v) marketing.

10.6.9 The landless/ assetless men and women and marginal farmers having land up to 0.50 acre constitute the target group under PEP. The programme aims to provide the above mentioned package support to the target groups to enable them to take up productive income generating activities in the farm and non-farm sectors. Bangladesh Rural Development Board (BRDB) mainly implements PEP. NGOs may also be involved in the programme, specially in technology supply and training of the target group members.

10.6.10 Regarding the institutional and marketing development components of the package, special attention will be given on the development of self-reliant sustainable cooperatives/groups and profitable marketing of their products.

10.6.11 Choice of production activities should be appropriate to the potentials and needs of the target groups and the market. Initially, traditional type of activities may be taken up. But gradually activities which have better financial returns will receive priority and in this respect non-conventional innovative activities need special attention.

Development of Physical Infrastructure

10.6.12 RD projects on the development of physical infrastructure include development of rural hats and bazars identified as growth centres and feeder roads, Type-B (with necessary bridges & culverts on them and tree plantation) linking the growth centres with the Thana Headquarters or the arterial road system. Besides, bridges and culverts at key sites on other important rural roads will also to be constructed. Planning Commission has identified 1400 rural hats/bazars as growth centres throughout the country. The present phase of growth centre development is limited to most needed basic physical facilities in the identified growth centre markets such as long sheds, internal hat lane and drain, slaughter slab, public toilet, tubewell for drinking water, garbage pit, hat offices, etc. Development of physical infrastructure is expected to facilitate agricultural development and expansion of employment, economic and commercial activities in rural areas. In the long run, the growth centres would serve as the base for regional development. For the riverine areas the planned efforts will, in addition to the development of roads, take into consideration development of waterways and water transports depending on feasibility and cost-effectiveness.

Irrigated Agriculture and Small Scale Water Resources Development (drainage and minor flood control works)

10.6.13 RD projects on irrigated agriculture and small scale water resource development are designed as a support to agricultural development with micro level schemes of quick yielding nature.

10.6.14 The activities on irrigated agriculture envisage organization of farmers' cooperatives and groups, implementation of Irrigation Management Programme (IMP) and arrangement of credit for the farmers belonging to cooperatives/groups for purchase of minor irrigation equipment and other production input. The objectives of IMP are to maximise command area of irrigation equipment, promote efficient use of irrigation water, reduce irrigation cost, ensure proper distribution of water to the farmers, increase agricultural production, reduce the frequency of mechanical disorders of equipment through timely repair and maintenance.

10.6.15 The activities on the development of small scale water resources encompass micro-level schemes on drainage and minor flood control such as excavation/re-excavation of irrigation and drainage canals, construction/development of embankments and different water control structures.

10.6.16 The activities on irrigated agriculture and small scale water resources development in the RD & I sector are in addition to those taken up under other sectoral programme.

PERFORMANCE, 1990-92

10.6.17 The sectoral programme during 1990-92 mainly contained projects carried over from the previous Plan and projects in line with the above mentioned sectoral strategy. However, implementation of the

sectoral strategy during 1990-92 had some limitations in that some of the major carried over projects were multi sectoral in nature which contained activities of PEP/physical infrastructural development along with other components with the consequent lack in the intensity of their focus and thrust on PEP/physical infrastructural development viewed from that expected for them in the application of the sectoral strategy.

10.6.18 There were 33 projects in ADP 1990-91. Most of these projects, 24 out of 33, were carried over projects from the Third Five Year Plan. By the end of 1991-92, as many as 9 carried over projects were completed (including 1 dropped). During the period 1990-92, as many as 15 new projects were included. The physical performance of the major sectoral activities during 1990-92 is summed up below:

		Target	Achievement
1	Production and Employment Programme (PEP)		
	- Formation of primary cooperatives/societies/groups (Nos.)	13978	8384
	- Enrolment of members (Nos.)	321561	176621
	- Skill training (Nos.)	103556	55695
	- Shares/savings (Tk. in lakh)	747	702
	- Credit (Tk. in lakh)	5035	3303
2	Development of Physical Infrastructure		
	Development of growth centres (Nos.)	133	133 (127 completed and 6 partially complete)
	- Development of Feeder Roads, Type-B (km)	885	584
	- Construction of bridges and culverts (m)	7796	5562
	- Rehabilitation of flood/cyclone damaged pucca roads (km)	2381	2307
	- Rehabilitation of flood/cyclone damaged bridge and culverts (m)	12362	11842
	- Employment Generated (Estimated) through infrastructural development and rehabilitation		255.55 (lakh mandays)
3.	Irrigated Agriculture and IMP		
	- IMP coverage, DTW (Nos.)	1556	1499
	- LLP (Nos.)	207	156
	- IMP Training (persons)	8555	6215
4.	Settlement of families (Nos.) in Adarsha Gram	18760	12659

10.6.19 For the period spanning 1990-92 the total sectoral ADP allocation was Tk. 674.58 crore out of which Tk. 650.72 crore was allocated for the investment programme and Tk. 23.86 crore for the T.A. programme. The total expenditure against the investment programme amounted to Tk. 549.00 crore representing 84 percent of the allocation for the investment programme.

PROGRAMME, 1992-95

10.6.20 The sectoral programme for the remaining three years, 1992-93 to 1994-95, has been drawn up in the Three-year Rolling Programme and within its framework the ADP for 1992-93 has been formulated. Basically, the programme for the said three years conforms to the objectives and strategy of the Plan.

10.6.21 Providing employment opportunities to the vast pool of unemployed and underemployed rural people as well as for the large number of prospective entrants to the labour market continues to be a major socio-economic challenge facing the country. It is, therefore, imperative to accord higher priority to investments on sectoral programmes/projects which will contribute to rural development as well enhancing employment and income generating opportunities for the rural poor. PEP fits well with this as its basic objective is to create self employment opportunities mostly in productive income generating activities in both farm and non-farm sectors and thus raise their income. PEP, designed as a targetted programme for the rural poor, envisages expansion as well as consolidation during 1992-95. The programme on the development of physical infrastructure also fits well with the employment-led development policy as it generates substantial

wage employment for the poor rural labour force including poor women (the poor women are employed in tree plantation, earthwork, activities of labour contracting societies) through construction and maintenance activities in addition to facilitating rural development through lower transport cost for agricultural input and output, quicker and cheaper access to market centres (growth centres) and support services, improved physical facilities in the markets identified as growth centres leading to increased economic and commercial activities in these centres, diminished remoteness of remote areas, etc. Since there are other major sectors for the development of irrigated agriculture and water resources, efforts of RD and I sectors in the field of irrigated agriculture and small scale water resources development (at the micro level) will continue in addition to those of the major sectors. The priority and major thrust of RD and I sector henceforth will be on employment-led rural development through PEP and physical infrastructural development programme and this would basically constitute the restructured focus in the sectoral strategy which is expected to provide greater impetus to poverty alleviation. In addition, there will be other important rural development projects on development of small farmers, establishment of self-reliant ideal villages for rootless-landless families as an effort for settlement of landless rural poor on government khas land and their socio-economic development, comprehensive village development as an experiment to evolve a broader village-based rural institutional framework for local level planning and development, community development in Chittagong Hill Tracts, etc. Besides, a number of projects for rehabilitation of cyclone damages will also constitute an important component of the sectoral programme for the three year period. These projects would aim at the rehabilitation of the affected farmers, poor fishermen and salt producers through cooperatives and rehabilitation of physical infrastructures (road, bridge, culverts, markets, cyclone shelters, etc) in the affected areas.

10.6.22 The estimated targets of main activities under the two priority programmes (PEP and physical infrastructure development), cyclone damage rehabilitation programme and two other important projects during the three-year period (1992-93 to 1994-95) are as follows:

1. Production and Employment Programme (PEP)

- Formation of new primary cooperative societies/groups and consolidation of those formed previously (Nos.)	15,200
- Enrolment of members in the new societies/ groups and the members existing in the societies/groups to be taken up under consolidation activities (Nos.)	353,000
- Skill Training (Nos.)	111,000
- Shares/saving (Tk. in lakh)	894.00

2. Development of Physical Infrastructure

- Development of Growth Centres (Nos.)	183 *(177 for full completion and 6 for partial completion)*
- Development of Feeder Roads, Type-B (km)	1815
- Construction of bridges and culverts (m)	9477

3. Cyclone Damage Rehabilitation

- Rehabilitation of cyclone damaged pucca roads (km)	622
- Rehabilitation of cyclone damaged bridges and culverts (m)	3215

4.	Establishment of ideal villages project	
	- Settlement of families (Nos.)	22481
5.	Small farmers development project	
	- Formation of groups (Nos.)	1982
	- Enrolment of members (Nos.)	12145
	- Share/Savings (In lakh Taka)	73.00
	- Disbursement of credit (In lakh Taka)	607.00

Sectoral Allocation for FFYP (1990-95)

10.6.23 The total sectoral allocation was Tk. 1581 crore as per the original FFYP. Based on the ADP allocations during 1990-92 and the allocations in the Three Year Rolling Programme for 1992-95 the original FFYP allocation is insufficient and needs to be enhanced. The revised sectoral allocation for the investment programme during the plan period thus stands at Tk. 1650.00 crore. The programme-wise break-down is given below:

		(Tk. in crore) (At 1989-90 prices)
i)	Production and Employment Programme and Irrigated agriculture	280.00
ii)	Development of Physical Infrastructure	850.00
iii)	Cyclone rehabilitation	330.00
iv)	Establishment of ideal villages	50.00
v)	Small farmers development	10.00
vi)	Others (Comprehensive village development, Chittagong Hill Tracts Development, Land Administration Training, projects of BARD, RDA, etc.)	60.00
vii)	Technical Assistance Projects	70.00
		1650.00

Employment Generation

10.6.24 Under the two priority programmes i.e., PEP and physical infrastructure development, both self and wage employment opportunities will be created for the rural poor. The employment to be generated under them during FFYP period (1990-95) is estimated as below:

	Programme	Employment
i)	PEP	5.30 lakh members of the cooperatives (BSS and MBSS)/ Groups by the end of 1995. These are self-employment mostly in the productive income generating activities.
ii)	Physical Infrastructure Development programme including rehabilitation of cyclone damaged physical infrastructure.	1331.00 lakh mandays of employment.

CHAPTER - XI

INDUSTRY

11.1 Land and labour are the two major resources in Bangladesh. As irrigated acreages cannot be expanded beyond a certain limit, the acceleration of growth of Gross Domestic Product (GDP) in the long run depends critically on the growth of the industrial sector. The supporting role of industrial sector is absolutely essential even in the Agriculture sector led growth scenario in the medium run as envisaged in the Fourth Five Year Plan. The support of industrial sector in such a scenario is essential not only for supplying of inputs to agriculture and for processing of its production but also for absorbing surplus labour in the agricultural sector.

As such, the Fourth Plan envisages a harmonious growth of Agriculture and Industrial sector mutually reinforcing each others growth.

STRUCTURE OF THE INDUSTRIAL SECTOR:

11.2 A thorough evaluation of the structure and the performance of industry is very difficult due to lack of reliable and comprehensive industrial statistics, particularly for private sector industries. Again, whatever limited data is available it relates mostly to large and medium scale industries, and little information is available on small and cottage industries. Based on such partial data, the industrial structure of Bangladesh can be described in the following way:

(i) The share of manufacturing sector in total GDP is 8.80 percent in 1989-90.

(ii) The industrial sector provides direct employment to about 3.09 million people representing about 11 percent of total employment.

(iii) The large, medium and small industries account for one third of this employment, while cottage industries employ one-third and the rest one-third is in Handloom sub sector.

11.3 Apart from its low weightage in the national economy, the structure of the manufacturing industry is relatively undiversified and also characterized by structural dualism. While the lion's share of the total manufacturing value-added originates from the large and medium industries, bulk of employment is in the small and cottage industries. Again, the dominance of higher share of value-addition (over 50%) from consumer goods is indicative of negligible progress achieved in import-substitution and overall slow progress towards the path of self-sustained growth.

REVIEW OF PAST PERFORMANCE:

11.4 The growth rates of real gross output exhibit such large fluctuations that it is difficult to interpret the underlying long run trend of growth rate. The growth rates of manufacturing sector value added during the First Five Year (FFYP), the Two Year (TYP), the Second Five Year (SFYP) and the Third Five Year Plans (TFYP) were 9.24, 2.26, 4.76 and 4.32 percent per year respectively. Infact, the rates of growth of industrial production is significantly lower in the 1980s (about 2.5 percent per year since 1980-81) than in the 1970s (4.3 percent per year during 1975-76 through 1979-80).

11.5 Development policies and programmes in the initial years after independence concentrated on repairs, rehabilitation and consolidation to restore the health of the sector at pre-independence level and also on some new investments in priority areas. The First Plan was mainly aimed at better utilization of the existing capital stock resulting in a continuous decline in capital-output ratio during the plan period. In both the Second and Third plan the primary objectives of industrialization were to support the agricultural sector, meet basic needs of people and strengthen the balance of payments position. In addition, while the Second Plan laid emphasis on basic industries, the Third Plan emphasized the need to build a viable industrial structure through resource development and to promote development of sound indigenous technology base. Third Plan also focussed on improving the efficiency on both existing capital and labour through elimination of wastages, improvement of labour productivity, etc.

11.6 The Two Year Plan and Second Five Year Plan were characterized by falling capital productivity. In fact, the average incremental capital value-added ratio increased from around seven and a half in Two Year Plan to about eight and a half in Second Five Year Plan. According to the findings of an HIID project, the total factor productivity or output per unit of input had probably declined to 64 percent of the four digit industries accounting roughly for about 2/3rds of manufacturing output. The rate of growth of manufacturing output has

decelarated in 1980s, whereas the rate of growth of manufacturing employment has accelerated implying a decline in productivity per worker.

PERFORMANCE DURING THIRD FIVE YEAR PLAN (1985-90):

11.7 In order to achieve the broad objectives of the Industrial sector and the Third plan, namely (a) build a viable industrial structure, (b) support accelerated development of agriculture, (c) adequate supply of basic needs, (d) create productive employment opportunities for the rural population, (e) improve balance of payment position through development of import competing and export oriented industries, (f) development of sound indigenous technology base through R & D, etc. several policy measures have been taken during the Plan period. Apart from the implementation of New Industrial Policy (NIP) of 1982 which is primarily aimed at stimulating industrial development through the private sector, promotion of foreign private investment and export-oriented industries were given greater emphasis and a one-stop investment service agency the Board of Investment (BOI) was set up.

11.8 The Industrial Policy of 1982 was revised in 1986 providing further relaxation and changes in which all industries except seven strategic industries of the reserve list were open for private investment. No approval for investment was then required if the investors import machinery and equipment using their own resources and/or through Secondary Exchange Market (SEM) and if, imported raw-materials constitute less than 50 percent of total requirement. The public sector enterprises were intended to be converted into public limited companies in order to make upto 49 percent of their shares available for public subscriptions and to facilitate their operation in competitive market. They were given operational autonomy in pricing, procurement, etc. Under this Revised Industrial Policy (RIP) a large number of fiscal and other incentives were also introduced/expanded in order to promote rapid industrial development of the country. A number of import bans and quota restrictions were relaxed to promote industrial efficiency.

11.9 Since the introduction of the NIP in 1982, the RIP in 1986 and the accompanying and subsequent rationality measures in policy framework, the export performance of Bangladesh manufacturing industries showed an improving trend. Export earning rose from a level of Tk. 1597.00 crore in 1984-85 to Tk. 3143.00 crore in 1988-89 giving an annual growth rate of 18.4% in the 1st four years of the TFYP. The share of export of non-traditional items increased from 59.5% in 1986-87 to 67.7% in 1988-89.

Production Performance of Selected Major Industries during Third Five Year Plan:

11.10 The poor performance of Agricultural sector in three out of the five years of the Third Five Year Plan affected the performance of the whole economy. Due to the depressed internal demand condition and adverse international circumstances the industrial sector grew at an average rate of 4.32 percent compared with the target growth rate of 10.1 percent per year. This growth rate was marginally lower than the Second Plan performance of 4.8 percent per year.

11.11 Production of jute goods grew at an average rate of 1.48 percent per year during TFYP compared to a rate of 1.33 percent during SFYP. This industry continued to be afflicted by adverse international market condition. The annual average growth rate of cotton yarn production during TFYP was 1.81 percent per year which was much below the SFYP performance of 6.53 percent per year. The growth rate of mill-made cloth during TFYP was only 0.72 percent per year compared to (-) 3.37 percent per year during SFYP. The substantial increase in fertilizer production during TFYP was mainly due to the commissioning of Chittagong Urea Fertilizer Factory and Polash Urea Fertilizer Factory. Cement and sugar production had positive growth of 7.83 percent and 16.02 percent respectively during the Five Year Plan. The growth of paper and newsprint production, which grew at the rate of 4.59 percent per year during SFYP, slowed down considerably to a rate of 0.87 percent per year during TFYP due to scarcity of raw materials. The steel ingot production declined, as in SFYP during the Third Five Year Plan.

Table-11.1
Production Target and Achievement of selected Manufactures during Second and Third Five Year Plan (1980-90)

Items	1979-80	1984-85	1989-90	Growth Rate (%) SFYP	Growth Rate (%) TFYP	Shortfall of Production SFYP	Shortfall of Production TFYP
1. Jute goods ((000 MT)	525.0A (650T)	561.0A (650T)	604.00 (650T)	1.33	1.48	13.7	7.08
2. Cotton Yarn	43.2A (83.2T)	59.4A (83.2T)	65.00 (95.0T)	6.53	1.81	28.7	31.58
3. Millmade Cloth (ml. metre)	85.9A	72.37A (138.2T)	75.00 (1215T)	(-)3.37	0.72	47.63	57.14
4. Fertilizer (000MT)	442.0A	806.0A (1037.0T)	1634.00 (2150.0T)	12.76	15.18	22.3	24.00
5. Cement (000MT)	343.0A	240.0A (450.0T)	350.00 (850.0T)	(-)0.89	7.83	46.7	58.87
6. Paper & News Print (000MT)	71.9A	90.0A (93.0T)	94.00 (105.0T)	4.59	0.87	3.7	10.48
7. Sugar (000MT)	93.2A	88.0A (200.0T)	185.00 (225.0T)	(-)1.15	16.02	56.0	17.78
8. Steel Ingot (000MT)	113.0A	101.0A (225.0T)	80.00 (230.0T)	(-)0.22	(-)4.5	55.1	65.22

A = Actual, T=Target, MT=Metric Ton.

Employment generation :

11.12 The main focus of the Third Five Year Plan was to alleviate poverty through generation of productive employment in both farm and non farm sectors. The total industrial employment was targetted to be 5.30 lakh during TFYP and against this about 4.00 lakh employment was generated.

Financial Performance of the Public sector Corporation and their Contribution to NationalExchequer during the Third Plan:

11.13 The major public sector corporations such as BJMC, BTMC, BSFIC are continuously incurring losses during TFYP. Corporation-wise financial perstormance may be seen in Table-11.2. The loss sustained by most of the sector corporations may be attributed to lack of proper management and skills, labour absenteeism, power failure, market constraints, cost price squeeze, poor maintenance, shortage of imported industrial inputs, shortage of working capital low labour productivity, dearth of foreign exchange and lack of improvement in capacity utilization, etc.

Table-11.2
Financial Performance of Sector Corporations

(Figure in Crore Taka)

Name of the Agency	Total (1985-90) Profit/ (Loss)	Total (1985-90) Contribution to National Exchequer
1. BJMC	(722.58)	80.30
2. BTMC	(94.19)	5.44
3. BCIC	(128.06)	552.18
4. BSEC	7.56	475.35
5. BSFIC	(35.00)	373.24
6. BSB	(3.89)	-
7. BITAC	-	14.43
8. BFDC	0.44	0.30
	(649.60)	1501.24

Investment Programme During TFYP:
Allocation provided in the Plan:

11.14 In order to realise the broad objectives of the Industries sector set for the Third Five Year Plan and to achieve an average growth rate of 10.1 per cent per annum during the period an amount of Tk. 5800.00 crore at 1984-85 prices was allocated for investment in the industries sector during TFYP. Out of this public sector investment allocation was Tk.2600.00 crore, and the projection for private sector was Tk. 3200.00 crore (55 percent of the total outlay) of private sector allocation. Tk. 2200.00 crore was earmarked for large and medium industries and Tk. 1000.00 crore for small and cottage industries.

Public sector Investment Programme:

11.15 Out of the total public sector allocation of Tk. Tk. 2600.00 crore in 1984-85 prices an amount of Tk. 2587.00 crore at current prices was spent during the plan period. Expenditure during the plan period was quite high (about 80%) compared to the number of projects taken up for implementation and completed mainly because of the implementation of a number of capital intensive projects in Chemical Sector.

Private Sector Investment Programmes:
Large and Medium Industries:

11.16 During the period July'85 to June'89, 11903 units were sanctioned in the large and medium industries sector by different sanctioning agencies with total investment of Tk. 4285.22 crore in order to create employment opportunities for about 4.00 lakh people. Against this sanction, actual disbursement of fund was about 40 percent (Taka 1700.00 crore) and actual investment was much lower than the disbursed amount. This indicates that private sector investment in large and medium scale industries was not encouraging.

Small & Cottage Industries :

11.17 During the TFYP investment programmes for small and cotage industries were made under two investment schedules one for small industries with estimates of Tk. 850.00 crore and other for cottage industries with estimates of Tk. 150.00 crore. Against the planned investment of Tk. 1000.00 crore in constant prices, a total Tk. 1262.00 crore were invested in current prices (Index) and employment for 3.21 lakh persons were generated.

11.18 The government extended necessary incentives and provided credit facilities through commercial banks to achieve the above investment targets. A Bank entitled 'Bank for Small Industries and Commerce' (BASIC) was established for providing credit facilities to SCI sector. As a result of investment, the SCI sector maintained an average growth rate of about 5.7 per cent per annum during the TFYP and helped in changing its share in GDP for around 3.5 percent in 1984/85 to 4.5 percent by the end of TFYP.

11.19 Despite the liberal industrial policy of 1986 and comprehensive programme for the private sector the desired level of development and target set for SCI sector during TFYP could not be achieved. Investment provision, sanctioned and actual disbursement for large and medium, small and cottage industries under private sector during TFYP may be seen in the Table-11.3.

Table-11.3
Industry groupwise provision, sanctioned and actual disbursement in the private sector industries during the TFYP (1985-90)

(Taka in crore)

Sl No.	Industry Group	Investment Provision in TFYP at 1984-/85 prices	Actual Disbursement during 1985-90	
			No. of Units	Amount at current prices
1.	Agro-based Industry	308.00	659	23.05
2.	Food & Allied Industries	100.00	195	132.49
3.	Textile Industries	525.00	1242	307.55
4.	Paper Board, Printing & Publishing	100.00	129	29.00
5.	Tannery, Leather & Rubber Products	100.00	1891	32.71
6.	Chemicals, Pharmaceuticals, and Allied Industries	1050.00	1916	236.64
7.	Glass, Ceramic & other non-metal Mineral Products	50.00	81	6.58
8.	Metal & Engineering Ind.	975.00	4647	466.84
9.	Misc. Industries	—	151	16.64
10.	Service Industries	—	18	12.51
11.	Industries NEC	—	114	21.79
	Total :	3200.00	11043	1285.80

Disinvestment of public sector Enterprises :

11.20 During the TFYP a total of 39 public enterprises were disinvested and transferred to private sector in order to create more confidence among private entrepreneurs for boosting private investment in this sector.

Acceleration of Industrial Growth :

11.21 From production trend of major industrial products it is evident that although a few industries such as sugar, fertilizer, cement, etc. have made some improvement compared to the bench mark position, the overall production level of the industries sector and its share to GDP have continued to remain low. On the whole, the production and capacity utilization have deteriorated during the plan period. The rate of capacity utilization in certain key industries during the plan period are given in Table-11.4.

Table-11.4
Capacity utilization of the major industries during the Third Five Year Plan (1985-90)

Sl. No.	Industrial products	Capacity Utilisation in 1984/85 (%)	Capacity Utilisation in 1989/90 (%)
1.	Jute goods	48.80	58.00
2.	Cotton yarn	66.00	79.00
3.	Sugar	45.00	95.34
4.	Cement	56.00	59.00
5.	Fertilizer	47.50	91.00
6.	Steel Ingot	40.00	50.00
7.	Paper & Newsprint	97.00	104.00
8.	Chemicals	68.00	75.00

Development of Export Oriented and Import Substituting Industries :
Import Substitution :

11.22 During the early phase of industrialization before independence, the focus was on import substitution in consumer goods industries (e.g. sugar, paper, etc.) though the growth of typical leading sector i.e. cotton textile, was lagging behind domestic demand. The period was also characterised by development of export oriented industries such as jute and jute goods. In the post-independence period import substitution in intermediate and capital goods was emphasized.

11.23 The import substitution strategy with the use of various assistance measures, overvalued exchange, licenses, high levels of effective protection and subsidized loans have resulted in the production of import substitutes by capital intensive, labour saving methods and have resulted in industrial profit in sheltered sector. At the same time as policies have subsidized import replacement they have initiated export expansion in some cases (as explained later) but there has not been a net saving of imports since the replacement of finished import commodities has required heavy imports of fuel, industrial materials and capital goods etc.

Export Oriented Industries :

11.24 The export oriented traditional industries have suffered from the state of external demand. The primary reasons are that export of Bangladesh is still dominated by primary goods like raw jute, jute goocs (Table-11.5), leather etc.; while world wide stagnation in 1970s as well as technological development (e.g. synthetic fibre) depressed the demand for such commodities.

Table-11.5
% Share of Raw Jute & Jute Goods Exports

	(In percent)
1972/73	90.0
1977/78	70.0
1984/85	58.4
1989/90	31.01

Diversification requires increase export of manufactured goods. In the first half of 80's non-traditional export begun to grow first led by Frozen-Food and then by Ready-made-Garments. Also some import substitution industries set up in 60s have started to work in export market e.g. paper and urea. However, due to a number of constraints particularly the inability to identify, products with firm international demand growth potentital; lack of aggressive sales manship; imperfect working out of the export promotion measures, anti-export bias in the thrift structure; lack of backward linkage; weak institutional support etc. the efforts could not make any significant headway.

Development of Basic Industries :

11.25 The growth in such industries in terms of capacity creation has been quite substantial. However, further creation of capacity in basic steel products, having high domestic resource cost needs to be carefully considered. However, most of these industries have been suffering from lack of working capital, appropriate technological knowledge and development and Research and Development (R & D) support.

CONSTRAINTS TO INDUSTRIAL GROWTH DURING PAST PLAN :

11.26 In all the previous plans, acceleration of industrial growth was aimed at through improved productivity and capacity utilization of existing industries and setting up of new industries. However, the desired target could not be achieved due to the following constraints :

i. Inheritance of a weak industrial infra-structure at the time of independence (in Dec. 1971);

ii. Significant increase in oil price and unfavourable terms of trades;

iii. Scarcity of foreign exchange;

iv. Traditional technology, tools and equipment;

v. Low level of trade and managerial efficiency;

vi. Shortage of adequate fund for investment;

vii. Low productivity due to over staffing, dearth of trained manpower, shortage of working capital, labour unrest, etc.

viii. Lack of appropriate skills, training and technical know-how;

ix. Low level of effective demand of the local industrial product both within the country and abroad;

x. Non-availability of raw materials;

xi. Inadequate credit facilities;

xii. Unfavourable socio-political environment;

xiii. Lack of adequate security for the investors;

xiv. Frequent occurance of natural calamities, such as, flood, cyclone, tidalbore, etc.;

xv. High cost of production due to rising cost of capital goods, imported inputs, rising wages, salaries, etc.

xvi. Low capacity utilization due to power failure, non-availability of raw materials in time, obsolete technology, etc.

xvii. Inadequate BMRE programme for industrial enterprises;

xviii. Inadequate research and development (R&D) activities;

xix. Absence of adequate linkage with other economic sectors particularly agriculture sector.

xx. Lack of proper policies for exchange rate, tariff, investment, credit, etc.;

xxi. Imperfect export promotion measures;

xxii. Lack of the backward linkage for export oriented industries resulting in low value addition to domestic products;

xxiii. Inadequate institutional support for promoting investment (both local and foreign);

xxiv. Adhoc, frequent and abrupt policy modifications, and changes raised operation cost and affected private sector investment in industries and its growth.

FOURTH FIVE YEAR PLAN

Objectives :

11.27 In keeping with the macro objectives of the Fourth Plan, industrial sector aims at achiving the following broad objectives during the plan period :

(1) Maximization of the contribution of the industrial sector to the growth of GDP. It is expected that industrial value-added with increase at an average annual rate of 9.1% during the plan period.

(2) Maximization of the contribution of the industrial sector to total employment generation in the country.

(3) Improvement in the balance of payment to achieve self-reliance.

(4) Development of a sound technology base through research and adaptation.

Strategies and Policies :

11.28 In order to achieve the above objectives, the following strategies and policies will be adopted during the plan period.

a) **Development of Export-oriented Industries :**

11.29 The policy considerations with respect to the development of export oriented industries are :

(1) product diversification, horizontal market expansion, upgrading of the export unit value.

(2) rationalization of monetary and fiscal incentives such as reduced interest rates, tariff and non-tariff measures, easy access to imported inputs such as DEDO bonded warehouse, tax-holiday etc.

(3) removal of anti-export bias through proper export and import policies, exchange rate policy.

(4) adoption of measures for improvement of backward linkage of export oriented industries.

(5) development of the existing EPZ and appropriate incentives for foreign investment and joint ventures.

(6) strengthening of Export promotion Bureau.

(7) training of the Exporters especially in the art of effective communication.

(8) aggresive salesmanship abroad.

b) **Development of Import-substituting Industries :**

11.30 Policies to be followed for import substituting industries are :

(1) Reduction of inefficiency,

(2) Gradual removal of undue protection,

(3) Rationalization of tariff anomalies.

c) **Improvement in Productivity and Capacity-utilization :**

11.31 The following policy measures will be undertaken for this strategy :

(1) Improvement of labour productivity through enforcement of industrial discipline, training and ensuring participation of labour in production through profit sharing and management;

(2) increasing emphasis on production planning, product development, quality control and market research;

(3) technical adjustment through greater attention to research and development to solve plan-level problems;

(4) strengthening efforts to reduce wastage;

(5) ensuring regular and adequate supply of electricity, gas fuel and other energy;

(6) reducing and removing imbalance in trade, tariff and fiscal policies and various incentives and subsidies provided to different industries;

(7) Ensuring adequate and timely supply of raw materials (both foreign and local);

(8) Necessary rehabilitation programme for the enterprises.

d) **Privatization and other policy interactions:**

11.32 Implementation of the privatization programme for manufacturing public enterprises (MPE) during 1981/82 to 1986/87 reduced the size of public sector significantly. In addition to disinvestment, measures were also introduced to deregulate private investment sanctioning procedures, relax import control and provide export incentives. These reforms contributed to improving the policy environment with beneficial effects on private sector industrial activities.

11.33 Under the Denationalization Amendment Ordinance of June, 1987, financially profitable enterprises of the public sector corporations are being divested retaining 51% share for the government 34% for the general public and remaining 15% to the PE employees; and these are being managed as companies giving more managerial autonomy through the company Board, where, five out of nine Board members are nominated by the Government and maintaining their manpower by the general public (share-holders). This divesture process will be continued and possibility of further improving it allowing improvement in the formation of strong capital market through this process will also be attempted. Total disinvestment of some other public entrerprises are also in process.

11.34 Possibility for involving the private sector in MPE management will also be explored. For large-scale public enterprises, private sector will be involved through management contracts with a view to improving the performance of such PE's. Privatization policy will further be geared up through promotion of joint ventures.

11.35 During the FFYP, GOB will explore to provide all possible incentives and further policy deregularization inorder to encourage both local and foreign investors for private investment in Bangladesh including joint-venture investment and for which a new Industrial policy 1991 has already been formulated in the early stage of FFYP period. For accelerating privatization programme a Privatization Board has been set up in early 1993.

e) Reforming of Industrial Policy and Incentives:

11.36 To enable growth of efficient industries reforms of the trade and industries policy framework will be continued during the FFYP period. The reforms so far undertaken in these areas will further be strengthened and consolidated and greater reliance on market and price signals will be placed for development. The various measures envisaged during the Fourth Plan shall include, among others :

(1) Phasing out of quantitative restrictions on imports in a phased manners with the objective of narrowing down of such restrictions on goods which will be justified on special grounds such as health, security, religious and social reasons only.

(2) Gradual reduction of existing high level tariff on imports including those which replaced ORs except in cases where high tariffs would be justified to exclude imports on luxury commodities only. Similarly, the tariffs which are now very low will be raised. Thus dispersion of tariffs will be reduced.

(3) Direct quantitative restrictions on business activity through sanctioning procedure, import licensing and credit allocation by sectoral norm will be greatly relaxed. The present system of direct controls will be eliminated and replaced by more adequate investment incentives and disincentives. However, excessive incentives will also be avoided.

(4) Collection and dissemination of market information to both resource allocating agencies and to investors will be strengthened.

f) Promotion of Small, Cottage and Rural Industries :

11.37 With a view to realizing the employment generation and poverty alleviation objectives, the Fourth Plan shall provide high priority to the investment programmes in the small, cottage and rural industries. The public sector programme for these category of industries will concentrate on promotional measures such as development of infrastructure facilities (e.g. industrial estates), training, extension and research, market promotion and availability of institutional credit and equity support. Development of sericulture, handloom and various other types of rural industries will receive special attention in the public sector programme for industrial development. The implementation of programmes in these sub-sectors will extensively benefit people in the lower income groups including the poor and disadvantaged. In order to facilitate such a patterns of industrialization during the Fourth Plan attempt would be made to develop at the thana level the mechanism for delivery of the services, such as, repair maintenance of industries, marketing and credit facilities.

11.38 To facilitate the development of small industries the following steps would be undertaken:

(1) Appropriate reform in exchange rate and tariff policies to remove the bias against small industries

(2) Changing of the licensing system so that small scale enterprises can benefit from the system

(3) Proper identification of socio economic groups with true need of capital. Some sort of supervised

credit, without overwhelming concern with security of loans, may be instituted country wide for SCIs. Training content may be added to the programme

(4) BSCIC has to be strengthened to reduce the practice of spreading limited financial and managerial resources over too many projects.

g) Growth of Linkage Industries :

11.39 Adequate support will be provided during the Fourth Plan to the growth of linkage industries and sub-contracting among big, medium, small and cottage industries. Measures to strengthen backward and forward linkages will be undertaken through rationalization and improvement in the incentives and policy structures. It is expected that substantial gains in value-addition will accrue in the readymade garments industry through its backward integration to the weaving, dyeing, printing, finishing and spinning sub-sectors of the textile industry and in the wet-blue leather industry through its forward integration to the leather finishing and leather products industries. In order to facilitate such linkages, incentives and industrial assistance measures shall further be strengthened. Establishment of agro-based industries will be encouraged. Such industries would be appropriately located near the centres of agricultural growth. At the same time external market for agro-based industrial product will be sought.

h) Development of Industrial Zones and Estates:

11.40 In order to remove snags in industrial project implementation such as difficulties in availability and acquisition of suitable land and availability of infrastructure and utility facilities such as approach roads, electricity, gas, water, telecommunication, etc. industrial zones and estates will be developed at suitable place.

i) Development of Trained Manpower :

11.41 Exising training facilities in different organizations for development of trained manpower for industries viz. BMDC, BITAC, SCITI, TIDC, Weaving Schools, etc. will be strengthened and utilized properly.

j) Development of National Technological Capabilities:

11.42 For the Fourth Five Year Plan "technology" would be regarded as an important strategic variable. The basic strategy to be adopted for the introduction of technology-led-development process would be the "make-some-and buy-some" arrangement. Such a strategy would involve a two pronged thrust to generate some technologies within the country as well as import whatever technology is deemed essential for meeting demand and maintaining competitiveness in the world market. For imported technology it would be necessary to have institutional arrangement for assessment, acquisition, assimilation, adaptation and improvement of such technologies.

11.43 An attempt would be made for clear identification of technological gaps and opportunities as well as prioritization of remedial measures based on overall development goals. During the plan period there would be a need for introduction of dynamic governmental intervention mechanisms in the form of legal and organizational policy instruments in order to bridge the gaps, explore the potential and promote technologies. For this purpose existing R & D institutions would be evaluated and strengthened where necessary.

k) Development and Co-ordination of NGOs :

11.44 NGO's have emerged as a new force for development in the rural areas. Till 1990, total 712 number (Roreign-129 & local-583) of NGO's have been registered with NGO Bureau and a large number of them are involved in the development of rural and cottage industries. It is recognised that the NGO's constitute a very effective method of reaching the poor and disadvantaged groups for income generating activities including rural and cottage industries. In addition to the public sector programmes under the Small and Cottage Industries Corporation, Bangladesh Handloom Board and the Sericulture Board which are largely addressed to the poor and disadvantaged, NGO activities will be encouraged, and co-ordinated and integrated with the public sector programmes for cottage & rural industries. The NGOs are expected to play an effective role in areas such as hand-spinning and weavings, tailoring and garments making, knitting & embroidery, silk worm rearing and cocoon production reeling and weaving of silk fabrics, pottery & earthen wares, carpentery & wood works, imitation jewellery, household decoration products, black smithy & simple tools-making, etc. NGOs will also play a significant role in the skill development of the poor and disadvantaged groups through motivation and training.

l) Participation through local level Planning:

11.45 Local level planning under the Thana administration does not have much scope for planning for industrial development. With the introduction of the erstwhile upazila system, small and cottage industrial planning is also included in the functions of the then upazila administration. During the FFYP, BSCIC will make serious attempt for providing all necessary services for industrial development at thana level and will maintain an effective liason with thana development programmes. This processes of interaction between the BSCIC and the thana administration will ensure effective local level participation in industrial planning and development.

m) Participation of Women in Industrial Development:

11.46 The major source of women employment in the manufacturing sector are rural industries comprising large number of cottage industries. Such industries are mainly family-based where female workers constitute a large share of total workforce. However, most of the female constitute unpaid family workers who allocate time between domestic work and such industries. Experiences have shown that the poorer women can play pioneering role in getting themselves organized in functional groups and undertake effective income generating activities as exemplified in the case of NGO's like Grameen Bank, Swanirvar Credit Programme, BRAC, BRDB etc. It is, therefore, envisaged that under decentralized participatory plan in the Fourth Plan, women particularly the poor and the disadvantaged would be able to organize themselves into functional groups and undertake income generating non-farm activities. Further in order to improve the access of women to credit facilities, steps would be taken to set up a bank for the Female Entrepreneurs. Besides rural industries, female employment has been increasing in other large medium and small industries such as: Garments, electronics, leather products, fish processing, etc. Efforts will be made to involve more female workers in the industrial activities.

n) Environmental Protection:

11.47 The process of industralization may lead to wasteful use and depletion of scarce natural resources due to improper design and monitoring of industrial planning. In order to reduce/eliminate any adverse environmental effects, the following measures would be undertaken:

(1) Assist industries to reduce wasteful use of natural resources and make the transition to cleaner technologies.

(2) Built-in environmental aspects in the procedure for processing and approval of industrial projects.

(3) Industries which are purportedly based on conversion of hazardous and toxic materials/wastes should not be allowed unless there are adequate provision for neutralising and/or treatment of pollution effects in the projects.

(4) Provision for fiscal or other incentives will be made for retrofitting of equipment for pollution control.

(5) Necessary measures will be taken to reduce/eliminate industrial processes which lead to the emission of "greenhouse" gases.

(6) Impact on environment should be one of the major factors to be taken into consideration while selecting sites/location of industries. Measures will be undertaken to shift obnoxious industries like tanneries which are located in densely populated areas.

o) Development of private sector:

11.48 Though private sector industries have been playing a vital role in the industrial development of the country, yet necessary emphasis has not been given to this sector in the past. Of late, Govt. started to accord recognition to the private sector as the lead agent in the process of industrialisation and the economic development of the country and now desires that the private sector should come more vigorously in performing this important task leading to the development of human resources, generation of productive employment and poverty alleviation. Private sector industries need the evolvement of appropriate policies and institutional environment. In the past industrial policies were not considered to be helpful for the efficient development of industries in the private sector. Adhoc, frequent and abrupt policy modification and changes raised operation cost and affected private sector investment in industries and its growth. Mobilization of both domestic and foreign resources are essential for the growth of private sector industries in the country. However, it is felt that foreign development investment should be targetted mainly towards export and hightech oriented production activities. Besides, regulatory framework needs some modifications.

modernisation and simplifications and creation of infra-structural facilities are considered as the primary necessity for encouraging and helping private sector.

11.49 The present Govt. laid emphasis on the expansion of competitive market economy and increased investment in private sector. In this connection steps are being taken for financial sector reforms, trade liberalization, rehabilitation of sick industries, reform of fiscal & monetary and industrial policies. Board of Investment (BOI) is mainly responsible for promoting industries in the private sector. It has been restructured and shifted from the Ministry of Industries to the Prime Minister's office to facilitate and augment investment in private sector. Export Processing Zones for establishment of industries both by foreign collaboration and local investment have been set up. Export oriented units located outside EPZ would also be provided with equal facilities as those within the EPZ areas. The role of the private sector for the development of Small & Cottage Industries has been considered to be very significant and vital. During FFYP main thrust of the private sector will be to develop agro-support, agro-based/processing, export-oriented and import substitution industries under BSCIC.

Financial Outlay for FFYP:

11.50 In order to achieve the objectives and targets of FFYP for industries sector, an investment outlay of TK.6178.00 crore at 1989/90 prices has been provided for this sector in the FFYP which is about 9.96 percent of total plan allocation. Out of this allocation Tk. 1684.00 crore has been provided for public sector and Tk. 4494.00 crore for private sector. In the Third plan, the share of public sector allocation was 45 percent.

Public Sector Investment Outlay:

11.51 Out of the total public-sector outlay of Tk. 1684.00 crore which constitutes about 4.85 percent of the total public sector outlay, Tk. 1290.33 crore (76.62 percent) will be spent for on-going programmes i.e. the projects spilled over from TFYP, and the remaining Tk. 393.67 crore (23.38 percent) is proposed for new programmes. Number of total spill-over projects in the public sector is 42 and out of this 19 projects are production oriented, 23 projects are promotional/services oriented. Since much emphasis has been given for private sector participation in the industrialisation of the country, the new programmes in the public sector during the FFYP will mostly be confined to industrial promotional activities, which will help in consolidation and optimal utilization of the existing capacities and augmentation of private sector investment in the industrialization process. Agency-wise allocations of public sector industrial outlay for spill-over and new projects are given in Table 11.6.

Table-11.6
Agency-wise Allocation of Public Sector Investment Outlay for Fourth Five Year Plan 1990-95 (At 1989/90 Prices)

(In Crore Taka)

Agency/Subsector	Spill-over Projects Amount	%	New Projects Amount	%	Total Investment Amount	%
Chamical & Mineral Industries						
1. Bangladesh Chemical Ind. Corpn.	1090.07	84.48	33.07	8.39	1123.14	66.69
2. BOGMC (Petro-Bangla)	2.33	0.18	25.00	6.35	27.33	2.73
3. Board of Investment (BOI)	-	-	5.09	1.29	5.09	0.30
4. BFFWT	-	-	-	-	-	-
E&E (Steel & Engineering)						
5. Bangladesh Steel & Engg. Ind. Corpn.	10.00	0.77	15.79	4.01	25.79	1.53
6. Patent, Design & Trademark	0.46	0.04	-	-	0.46	0.03
7. National Productivity Organisation (NPO)	-	-	4.17	1.06	4.17	0.25
8. Export Promotion Bureau (EPB)	-	-	2.18	0.55	2.18	0.13
Sugar & Food						
9. Bangladesh Sugar & Food Ind. Corpn.	23.22	1.81	85.47	21.71	108.69	6.45
10. BEPZA	52.36	4.06	15.93	4.00	68.29	4.13
11. BFIDC	-	-	0.23	0.06	0.23	0.01
Small & Cottage Industries						
12. Bangladesh Small & Cottage Ind. Corpn.	87.40	6.77	85.91	21.82	173.31	10.29
13. BITAC	4.21	0.33	-	-	4.21	0.25
14. BFDC (Bangladesh Film Dev. Corpn.)	2.47	0.19	-	-	2.47	0.15
15. BMDC	-	-	1.92	0.49	1.92	0.11
16. Development of Printing & Stationery	-	-	15.19	3.86	15.19	0.90
17. Shadharan Bima	1.48	0.11	-	-	1.48	0.09
Jute & Textile Wing						
18. BJMC	4.57	0.35	9.87	2.51	14.44	0.85
19. BTMC	-	-	22.58	5.73	22.58	1.34
20. BHB (Bangladesh Handloom Board)	10.75	0.83	11.67	2.97	22.42	1.32
21. Bangladesh Sericulture Board	-	-	40.21	10.21	40.21	2.38
22. Department of Textile	-	-	3.09	0.78	3.09	0.18
23. Ministry of Textile	-	-	4.47	1.13	4.47	0.26
24. Bangladesh Bureau of Statistics	0.55	0.04	-	-	0.55	0.03
25. TIP	0.46	0.04	-	-	0.46	0.03
26. Ministry of Industry	-	-	7.29	1.86	7.29	0.43
27. Tariff Commission	-	-	3.58	0.91	3.58	0.21
28. Ministry of Jute	-	-	0.96	0.24	0.96	0.06
Total:	1290.33 (76.62%)	100.00	393.67 (23.38%)	100.00	1684.00	100

Private Sector Investment Outlay:

11.52 As public sector investment programmes will primarily be limited to promotional and supportive activities apart from completion of spill-over projects, the realization of 9.1 percent industrial growth as envisaged in the FFYP will depend, to a large extent, on private sector involvement. Keeping this in view an allocation of Tk. 4494.00 crore (at 1989-90) price has been earmarked for the private sector investment in the revised Fourth Plan against the original allocation of Tk. 4360.00 crore, and allocation of Tk. 3200.00 crore (at 1984-85 prices) during Third Five Year Plan. This is about 16.2 percent of the total private sector allocation. Sub-sector/groupwise allocation for large & medium small and cottage industries under private sector are shown in Table 11.7.

Table-11.7

Sub-sector/Group wise allocation for large and medium scale and small and cottage industries under the private sector investment programme during FFYP (1990-95).

(Taka in crore in 1989/90 prices)

Sl. No.	Sub-Sector/Group	Allocation							
		Large & Medium		Small		Cottage		Total	
		Allocation	%	Allocation	%	Allocation	%	Allocation	%
1.	Food & Allied Industries	180	6.64	259	15.40	15	14.71	454	10.10
2.	Textile Products	800	29.52	634	37.69	29	28.43	1463	32.55
3.	Jute Products and Allied Ind.	30	1.10	10	0.60	1	0.98	41	0.91
4.	Forest Products and other Agro-based Ind.	60	2.21	45	2.68	15	14.71	120	2.67
5.	Paper,Board,Printing & Publishing and Paper Converting & Packaging	120	4.43	66	3.92	2	1.96	188	4.18
6.	Tannery, Leathers and Rubber Products	150	5.54	54	3.21	5	4.90	209	4.65
7.	Chemical,Pharmaceutical & Allied Ins.	630	23.25	207	12.31	3	2.94	840	18.69
8.	Glass,Ceramic & other Non-metalic Mineral Products	80	2.95	16	0.95	4	3.92	100	2.23
9.	Engineering,Electrical & Electronics Industries	225	8.30	250	14.86	25	24.51	500	11.13
10.	Service Industries (Ware housing,Transportation, Construction, etc.)	240	8.86	30	1.78	-	-	270	6.01
11.	Misc.Ins./NEC	195	7.20	111	6.60	3	2.94	309	6.88
	Total:	2710	100.00	1682	100.00	102	100.00	4494	100.00

11.53 The potential areas of import substitution and export-led industies for private sector investment are given in Table-11.8.

Table-11.8
List of Industries Identified as Having Good Investment Prospects in Bangladesh

I. Textile and Garments

1. Cotton textile fabrics
2. Specialised textile fabrics : Household linen
3. Cotton and other knitwear fabrics (cotton vests and underwear, nylon socks etc.)
4. Readymade garments not affected by quotas
5. High value garments in quota-affected categories
6. Cotton yarn of low counts (up to 32 counts)
7. Silk fabrics woven with imported silk
8. Miscellaneous textile products : Umbrella cloth, canvas cloth, tarpaulin, etc.
9. Silk & Art silk.

II. Agro Industries

1. Frozen shrimp, fish and froglegs
2. Fruit juices
3. Spices and dehydrated vegetables
4. Fish meal and other fish products
5. Tea (especially packet tea)
6. Mushrooms for canning
7. Cassava starch

III. Leather and Leather Products

1. Wet blue leather, crust and finished leather
2. Footwear: Shoe uppers initially
3. Other leather products

IV. Engineering products

1. Electronic components
2. Electrical goods & accessories
3. Electric Motors
4. Telephone cables
5. Hand cutting tools
6. Heating equipment (Kerosene cookers)

V. Miscellaneous

1. Ceramic tableware
2. Stainless steel cutlery & crockeries
3. Plastic Products : PVC pipes, tubes, footwear etc.
4. Medical pharmaceutical products
5. Handicraft
6. Wood products
7. Iron castings
8. Paint & Varnishes
9. Boot polish
10. Articles of pulp & paper
11. Acid & Alkalides
12. Manufactures of glass
13. Disinfectants
14. Cigarettes (for exports)
15. Perfumes, cosmetic soap
16. Rubber footwear

Fourth Five Year Programmes and Production Targets of Major Industries:

11.54 Projected output for selected industries in both public and private sector resulting from the proposed strategies and programmes of the Fourth Five Year Plan are given in Table-11.9. The proposed expansion in output is, however, subject to:

(1) Fuller utilization of installed capacities,

(2) Improvement in factors productivity,

(3) Timely completion/commission of the spilled-over projects, and

(4) Extent of private sector participation in the proposed investment; etc.

Besides, these are also dependent on the absorptive capacity of the markets, both domestic and international, which should be carefully assessed to ensure effective utilisation of scarce resources.

Table-11.9
Benchmark and production targets for selected Manufactures

Products/ Products Group	Unit	Actual Production (1989-90)			Production Targets (1994-95)		
		Public	Private	Total	Public	Private	Total
1. Jute goods	000 M.T.	350.00	230.00	580.00	410.00	305.00	715.00
2. Cotton Yarn	Million K.G.	42.40	34.00	76.40	61.00	143.00	204.00
3. Cloth	Million Metres	51.90	998.00	1049.90	85.00	1840.00	1925.00
4. Sugar	000 M.T.	184.00	-	184.00	209.00	-	209.00
5. Cement	000 M.T.	341.00	-	341.00	267.00	685.00	952.00
6. Fertilizer	000 M.T.	1621.00	-	1621.00	2338.00	561.00	2899.00
7. Paper & Newsprint	000 M.T.	118.00	4.00	122.00	124.00	69.00	193.00
8. Security paper	000 M.T.	4.00	-	4.00	-	-	-
9. Chemicals	Million Tk.	849.09	5.00	854.09	227.20	623.88	851.08
10. Pharmaceuticals	Million Tk.	6.00	5000.00	5006.00	10.00	7000.00	7010.00
11. Basic Metal (Steel Ingot)	000 M.T.	75.00	25.00	100.00	61.88	80.00	141.00
12. Metal Products	Million Taka	119.20	6320.00	6439.20	174.00	1184.00	1358.00
13. Machinery	Million Taka	182.00	2118.00	2300.00	130.00	3778.00	3908.00
14. Transport Equipment	Million Taka	322.00	1796.00	2118.00	255.00	3424.00	3679.00
15. Leather & Leather Prod.	Million Taka	-	5000.00	5000.00	-	7000.00	7000.00
16. Electronic goods	Million Taka	273.00	1000.00	1273.00	246.00	2000.00	2246.00
17. Bus, Truck etc.	Number	2388.00	600.00	2988.00	1200.00	1000.00	2200.00
18. Transformer	Number	4713.00	1500.00	6213.00	1500.00	500.00	2000.00
19. M.S/G.I. pipe	000 M.T.	7.11	4.00	11.11	6.00	5.00	11.00
20. Electric cable	000 M.T.	4.30	6.00	10.30	3.00	10.00	13.00
21. Diesel Engins (BPD)	Number	1172.00	200.00	1372.00	4000.00	4000.00	8000.00
22. Water vessels	M.T.	4635.00	10000.00	14635.00	5000.00	20000.00	25000.00

11.55 The Fourth Five Year Programmes for the major Industries are discussed in the following paragraphs:

Chemical and Mineral Industries (CMI) (Public Sector):

11.56 Major large scale industries fall under the chemical and mineral sub-sector are fertilizer, cement, chemicals, paper and newsprints, sheet glass, ceramics, insulator, leather, mining of rocks and minerals, etc. The enterprises are treated as production oriented, import-substitution, and export-oriented industries of the country. The investment programme of the sub-sector are mostly related to agro-based and agro-support industries. To increase efficiency of this sub-sector appropriate policy measures in the form of price rationalisation, improvement in the operational management through BMR & BMRE of the existing plants and factories including autonomy, strengthening of R&D, rationalisation of the existing industrial policies in response to changing situation, etc. will be undertaken during the plan period. Besides, some of the govt.

owned chemical industries will be declared as the Public Ltd. Co. and Holding corporations, and if required, some will be operated by Management Contractors. The industrial enterprises under the sector corporation will be operated as per rules & regulation of the company by the Board of Directors of the concerned enterprises.

CMI (Private Sector):

11.57 Like wise public sector, the private sector with the help of public sector agencies (BCIC, BOI, etc.) services, and in collaboration with foreign participants, will undertake major projects under the sub-sector.On the basis of the latest industrial policy of 1991, Government adopted some of the strategies for modification and simplification of the regulatory framework which are essential required for encouraging private investors for establishing chemical and mineral industries in the country. As the Government adopted some monetary and fiscal reforms, it is expected that private investors will be encouraged to set up more industries particularly for fertilizer, cement, paper & paper board, etc. in the country.

11.58 It terms of financial outlay, this sub-sector will receive the major share (Tk. 2135.56 crore) of the total industrial outlay during the FFYP. Out of the total public sector allocation of Tk. 1684.00 crore for the industries sector, this sub-sector will receive Tk. 1155.56 crore (68.62%) to implement 25 public sector projects (including some joint-venture). On the other side, a total sum of Tk. 980.00 crore (about 22 percent of the total private sector outlay for industries) has been allocated for the private investors of large & medium chemical industries during the plan period. In implementation of the aforementioned programmes/projects of the sub-sector, direct employment for 557 and in direct employment for 1000 people will be generated in the public sector against employment for 209 (direct) and 500 (indirect) in 1989-90: while additional employment for about 6000 people is expected to be generated under private sector.

Engineering and Electronics (Public Sector):

11.59 The steel and engineering sub-sector is very important in the process of industrialisation. The present steel and engineering base consists of a small steel mill, a machine tools factory, a general electric manufacturing plant a diesel plant, a drydock, two large shipyards, and a number of light engineering units in the public and private sector. One of the major problems of this group of industries is the persistant under-utilization of capacities for a long time. The FFYP, emphasises on the production of import substitutions capital and intermediate goods like machineries, accessories and spares for agriculture, energy, transport and communication, physical infrastructure sectors, and also on export oriented products like electrical and electronic goods, etc. With a view to improving capacity management and skill and to undertake appropriate design and engineering, adequate R&D BMR programmes under the public sector development activities, Joint-venture and foreign collaboration will be encouraged. This will include installation of black plain steel sheet plant with 3.00 lakh M.T. installed capacity, sponge iron plant with 6.00 lakh M.T. capacity copper rod plant with 500 M.T. capacity etc. As a result of above development programme this sub-sector will generate employment for about 900 people. Further policy adjustments will be made, if necessary, for implementation of above programmes during the FFYP.

Engineering and Electronics (Private Sector):

11.60 A number of existing public sector industries have been opened for private participation, retaining 51 percent share for public sector, and many others are on the way of being offered for private participation. Setting up of new industries in the private sector during the plan period will be encouraged. Besides, joint ventures and foreign collaboration will also be welcome in this respect.

11.61 In order to achieve the objectives and implement these programmes of the sub-sector during the FFYP an allocation of total Tk. 257.60 crore (at 1989-90 prices) has been proposed to be provided in the plan document. Out of this Tk. 32.60 crore have been earmarked for the public sector and Tk. 225.00 crore for large & medium private sector industries.

Sugar Industry

11.62 Sugar industry, in the public sector has 16 mills with a total production capacity of around 2.00 lakh M.T. per year. Due to low per acre yield of sugarcane, low sugar recovery rate, inadequate infrastructure and extension services, poor industrial management, the sugar industry could not make substantial improvement in the past. One of the objectives of this sub-sector during FFYP is to rationalize sugar policy including sugarcane pricing to produce 2.78 lakh M.T. of sugar by raising the daily cane crusing capacity from 19,791 TCD in 1989-90 to 25,774 TCD in 1994-95. This will necessitate increase in the per acre yield of sugarcane to 22 tonnes and sugar recovery rate to 9 percent by the end of FFYP from the present level of 19.50 tonnes and 8.5 percent respectively. Besides, possibilities of transferring some of the sugar mills to the private sector

will also be explored. In order to realise the above targets, BMR programmes for some of the existing sugar mills, necessary R&D and extension services will be undertaken and for the purpose, total Tk. k296.69 (public-116.69 & private-180) crore has been provided for the plan period. It is expected that with the implementation of the above development programmes, this sub-sector will create direct additional employment for 3500 people by the end of the FFYP.

Export Processing Zone

11.63 The Export Processing Zone was set-up in Chittagong in 1978 in order to attract foreign capital and technical know-how for boosting up industrial exports. By now it has developed 238 industrial plots of which 204 have already been alloted to the investors. So far, Export Processing Zone Authority (EPZA) has sanctioned 81 industries for setting up various industries investing US $ 137.304 million (Tk. 546.47 crore) of which 46 industries with an investment of US $ 86.69 million (Tk. 345.86 crore) have gone into production and employed about 16115 Bangladeshi Nationals. It is also expected that another 13 industrial units with an investment of US $ 28.587 million and employing 3369 people will go for operation very soon. From these industries goods worth US $ 322.388 million (Tk. 1184.22 crore) have already been exported from Chittagong EPZ. It has already undertaken further programme for developing plots for 94 plots for setting up industrial units in order to have more foreign investment and creating further employment opportunity for 7000 people. 90 industrial plots are expected to be set up for various industries in Dhaka Export Processing Zone. These industries will make an investment of 200.00 crore taka (approx.) and will create job opportunities for about 800 Bangladeshi Nationals.

11.64 During the FFY an amount of Tk. 68.29 crore including Tk. 52.36 crore for on going project has been provided for expansion of the existing EPZ and setting up new EPZ in order to attract more investment for increasing industrial exports. It is, therefore, expected that EPZ will play a significant role in bringing foreign capital and technical know-how for setting up export oriented industries making transfer of advanced technology, creating job opportunity for the unemployed people, reducing deficit in balance of payment by increasing exports, etc.

Small and Cottage Industry:

11.65 Small and Cottage Industries have been playing a significant and vital role for the industrial development of the country. The contribution of this sub-sector to GDP at present is about 4.8 percent and small and cottage industries employ about 5 million persons directly and indirectly which accounts for 82 percent of the total industrial labour forces. The public sector programmes of BSCIC were also tailored in such a way as to provide a package of services for accelerating the pace of development of SCI in the private sector. In the light of socio-economic development policy of the Government, the major objectives of the SCI sub-sector during the FFYP will be as follows:

a) Creation of employment opportunities, for the rural peopel;

b) Development of enterprenurship and manpower;

c) Promotion of sub-contracting linkages among small, medium and large industries;

d) Production of export-oriented goods, by utilizing indigenous resources.

11.66 To achieve the above objectives of the SCI, the following major strategies will be followed:

(a) Establishment of small industries through anciliary units specially in the rural areas;

(b) Promotion of sub-contracting arrangement alongwith marketing facilities;

(c) Special credit programmes and simplification of procedure for SCI credit;

(c) Overall development of technological and industrial framework for adoptation and diffusiion of appropriate technologies;

(d) Assistance to SCI enterpreneurs through rendering pre-and post-investment promotion and extension services.

Target of the SCI during FFYP:

11.67 In view of the objectives and programmes the following target have been set up for SCI during the FFYP:

(a) To increase the SCI sector contribution to GDP from 4.5% in 1989-90 to 7.5% in 1994-95;

(b) To create additional gainfull employment of 4 lakh persons.

Development of the SCI under Private Sector:

11.68 The role of the private sector for the development of SCI is very significant and vital. The main thrust of the private sector is to develop agro-support and agro-based/processing, export oriented and import substituting industries. The important areas of investment are agricultural tools and equipments, irrigation pumps, meters and other equipment, dyes and chemical, leather and rubber products, rural transport and transportation equipment, sports goods and toys, food, fruits and vegetables preservation and processing, cotton spinning, hosiery and silk products, machine tools, electrical goods spares and accessories, instruments products supplies and services.

Financial Outlay of SCI during FFYP:

11.69 An allocation of Tk. 1956.58 crore has been provided for implementation of the programmes of the SCI Sub-sector during the plan period. Out of the total allocation Tk. 201.58 crore and Tk. 1755.00 crore (at 1989-90 prices) have been earmarked for the public and private sector respectively.

Jute and Textile Industries:

Jute Industries:

11.70 The jute industries are the most important sub-sector for the economy of the country. Because of the unfavourable international trade, this sub-sector has been declining for the last few decades and as a result, the jute industries are continuously incurring losses and facing serious liquidity crises. Total outstanding debt of the sub-sector increased from Tk. 700.00 crore in 1982 to Tk. 3200.00 crore in December, 1990, i.e. in eight years the debt increased by Tk. 2500.00 crore.

11.71 The main objectives of the jute sub-sector during FFYP would be to diversify the jute products & improve its quality by adopting appropriate R&D measures, reduce the operational cost by rationalising/down-sizing and deregulating industries, improving the productivity of labour and establishing a market mechanism through which financial discipline and accountability in the sector are attained and sustained. Measures will also be taken to eliminate the difference between the export price and the unit cost which amounted to 42% in FY '91. This could be achieved with a combination of sector specific measures and economy wide adjustment which are mentioned below:

(a) A reduction in loom capacity by closing the worst performing mills and down-sizing the unmanageable inefficient large mills;

(b) The remaining excess capacity would require improvement in loom efficiency which could be achieved by reconditioning of equipment, training managers and workers, and improvement in labour discipline;

(c) Phasing out excess manpower and eliminate excess employment;

(d) 10% reduction in raw jute cost by a reduction in fund diversions in raw jute purchase. This could be realised by imposing financial discipline in the mills, and stricter legal measures;

(e) A reduction of interest payments to the banking sector to 3% of sales from the current 10% by substantial debt restructuring and better stock management;

(f) Phasing out export subsidies which currently amount to 12% of export revenue;

(g) The policy of privatization will continue. Privatisation will preferably follow restructuring subsequently.

11.72 Programmes for rehabilitation of some public & private sector jute mills will be undertaken alongwith the programmes for close monitoring of the performance & efficiency of jute mills to facilitate gradual

elimination of the sick ones from the public sector. To implement the programmes/projects of the jute sub-sector total Tk. 56.40 (public sector-15.40+private-41.00) crore has been earmarked in the plan period. On implementation of the above policy measures, it is expected that the total production of jute goods will rise from 5.80 lakh M.T. in 1989-90 to 6.00 lakh M.T. and the export will rise from 5.45 lakh M.T. in 1989-90 to 5.80 lakh M.T. by the end of the plan period.

Cotton Textile:

11.73 Textile industry holds a prominent position in the industrialisation process of Bangladesh. It generates about 7% of the total employment and 50% of the total industrial employment of the country. It accounts for one third of the manufacturing value added and 60% of the total foreign exchange earnings. Of late, Readymade Garments Industry (RMGI) has opened up a new horizon for employment and export earning. Development of appropriate backward linkage of export-oriented RMGI with local spinning, weaving, printing, finishing dyeing, knitting and hosiery units, will substantially contribute to the value addition, employment generation export earning and other multiplier effects in the economy.

11.74 By the end of FFYP textile industry is expected to produce20.4 crore kg of yarn and 192.5 crore metre of fabrics. The newly created capacity for both fabrics and yarn has been earmarked entirely for private sector. The main focus of Textile sub-sector during FFYP is to ensure (a) harmonious development of the modern textile sector alongwith handloom sector keeping in view the objectives of attaining self-sufficiency in fabrics by ensuring optimum utilisation of the existing capacities (b) increasing foreign exchange earning by manufacturing and supplying high quality fabrics to export oriented RMGI and by exporting the products of composite mills, handlooms and power looms (c) generating substantial employment opportunities for women and the rural and urban poor. In order to achieve the above objectives of the sub-sector, the private sector will play the major roles and in its role, private sector will be assisted in all possible ways. Moreover, there will be no new capacity expansion in the public sector and the public sector development programmes will be limited mostly to R&D and promotional activities. To achieve the above objectives & targets the following strategies will be followed during FFYP for the development of the sub-sector.

(a) Increasing the capacity utilization from present 67% to 80% through revitalising the existing capacity of mills, powerlooms and handlooms by BMR/BMRE;

(b) The fabric deficit of 87.5 crore meter will be met by creation of additional capacity;

(c) Privatisation of all public sector mills in phases by December, 1998;

(d) Increasing production of handloom sub-sector substantially by upgrading skill, streamlining supply of inputs including credit and by other necessary measures;

(e) Strengthening the training programme, evolving high yielding variety of silk worms and plantation of improved variety of mulberry trees to increase the production of silk yarn and fabrics;

(f) Formation of separate occupational group for the weavers at the village level where applicable for the purpose of participations in local level planning;

(g) Establishment of common service centre for provision of processing at finishing facilities in areas of handloom concentration.

Textile Industries (Private Sector):

11.75 GOB laid more emphasis on private sector for development of textile industries. With this end in view, a number of incentives and facilities will be provided during the plan period for its development. These mainly include liberal policy measures, deregulations, concessionary rate of import duty on the capital machinery, tax holiday, credit and marketing facilities etc.

11.76 In order to implement the above programmes of the textile industry sub-sector, a total amount of Tk. 1555.77 (public sector 92.77 and private sector 1463.00) crore has been allocated in the revised FFYP.

CHAPTER-XII

ENERGY

12.1 The supply of adequate energy in right form is essential and crucial to any socio-economic development. Bangladesh's thrust towards fast growth through enhanced activities in the agriculture, industry and the services sector, calls for an increasing demand for energy particularly the commercial energy, as it is the key production factor in the productive sectors. Its importance in the domestic sector is no less, since it satisfies basic human needs such as cooking and lighting. On the external sector its importance as an export-import commodity underlines its overall influence in the economy of Bangladesh.

PROJECTED ENERGY GROWTH IN THE FOURTH PLAN

12.2 Bangladesh has one of the lowest per capita energy consumption. In the FY-85, the total per capita energy consumption was only 145 KgOE of which 25 percent or 37 KgOE was commercial energy and the balance 75 percent or 108 KgOE was biomass energy. In FY 1990 the per capita energy consumption was in the order of 164 KgOE of which 56 KgOE or 34.2 percent was the commercial energy and the balance 65.8 percent or 108 KgOE is the traditional biomass fuel. In the FY-92 the per capita energy consumption stood at 170 KgOE, of which commercial energy was 33.3 percent and the balance 66.7 percent was biomass energy. Total energy consumption growth during the FY-92 is around 2.53 percent and the commercial energy growth is little more than 1 percent. This slow growth in commercial energy is mainly due to less POL consumption in thermal power plants, as well as in domestic, transport and non energy use sectors. And also due to declination of natural gas and coal consumption in domestic, commercial, non-energy use sectors, and industrial and transport sectors respectively. For the terminal year of the FFYP, the total per capita consumption has been projected at 185 KgOE, with growth of 4.8 percent annually. The share of the commercial energy would be 41.5 percent having per capita consumption of about 79 KgOE and an annual growth of 8.89 percent. This slow growth of commercial energy may be increased to the target level in the terminal year of FFYP by the following measures: (i) Restoration of Capacity of Power Plants through rehabilitation & repair, maintenance (ii) increase of natural gas in different consuming sectors by expansion of gas distribution network and sharp increase in non-energy use due to commissioning of new fertilizer factory. (iii) increase of POL due to consumption in transport and agriculture sectors. (iv) increase of coal consumption in industries. The share of the traditional biomass fuel would come down to 59 percent having per capita consumption of 107 KgOE against the backdrop of dwindling resources and concern for sustainable supply of biomass and environmental consequences. The Energy Balance for the FY 90, 91 and 92 and the projected energy balance for Fy 95 and the Energy Indicators in the revised plan are shown in Table 12.1, 12.2, 12.3, 12.4 and 12.5 respectively.

ENERGY RESOURCES SUPPLY OPTION

12.3 Natural Gas and Coal are the only two commercially exploitable energy resources in the country. To-date, there are 17 (seventeen) gas fields, 16 (sixteen) onshore and 1 (one) offshore with a proven plus probable reserve of 21.38 TCF of which 12.41 is considered recoverable. Till June, 1992 nearly 1.8 TCF have already been consumed. These gas fields also contain about 30-40 million barrels of condensate. 27 (twenty seven) prodution wells are now in operation in 6 (six) gas fields producing about 600 MMCFD of natural gas and 1000 BBL of condensate. There is only one small oil field in the country at Haripur, Sylhet. The total Haripur oil reserve is about 30 million BBL of which 25 percent is thought to be recoverable. Average production in FY 92 is about 250 BBL per day.

12.4 Three coal fields have been discovered in the north-western part of the country. The coal deposit at Jamalganj, the largest of all fields lies at considerable depth of about 1000 meters and has an estimated in-site reserve of over one billion tonne. Barapukuria and Peerganj coal field which are at much shallower depths (175-400 meters) have an estimated reserve of 300 million and 450 million tonne respectively with much brighter prospects for exploitation. Feasibility study on the Barapukuria coal has been completed, foreign exchange requirement for the project has been lined-up, and implementation of the project is underway. Prospects of peat exploration in the southern region is also bright and a pilot/demonstration project for developing 20,000 tonnes of peat has been under implementation. It is estimated that the total reserve of peat in the country is over 600 million tonne and there has been only some small scale use of it in the domestic and brick burning industries.

12.5 Bangladesh has a limited economically viable hydro power potential of 1500 Gwh per annum. Total hydro generation capacity at Kaptai is of 230 MW, that is generating energy roughly equivalent to 900 Gwh per year. There are other two good sites at rivers Matamuhuri and Sangu in the Chittagong Hill Tracts area which

could be harnessed economically. In addition, prospects of pumped storage hydro at the Kaptai are under consideration for study.

12.6 The main supply of biomass fuels are derived from the crops production is around 26 million tonne and the biomass from animal dung is roughly 7 million tonne. Total supply of woodfuels from the reserve forest and village woodlots is about 4 million tonne. In addition, tree droppings, plant residues and old building materials that are salvaged for use as cooking fuels amount to 4.5 million tonne. Therefore, possible total biomass fuel supply is around 40 million tonne.

12.7 As for the supply options of alternative fuels, such as LPG, CNG, solar, geothermal, tide and river current and wind energy etc., LPG seems to be the most promising. Presently about 10,000 tonnes of LPG is produced annually in the Refinary. Recent study suggested a potential capacity of over 120 thousand tonne per annum that can be extracted from the four gas fields viz. Kailashtila, Beanibazar, Titas and Bakhrabad. A project for extracting 40,000 tonnes of LPG from Kailashtilla gas field has been undertaken. Solar energy potential although promising has never been explored deeply. A Pilot project has been planned to generate 35 KW of electricity through PV cell. Similarly is the case with wind energy, whose potential in the coastal region cannot be over emphasised. In recent times GOB is showing interest for exploration of geothermal, tidal energy, river current etc. through generation of electricity by small turbines. Studies on other alternative energy sources like CNG, micro-hydro, recovery of methane gas from the coal fields and recovery of energy at the gas well head for production of electricity are being undertaken.

ENERGY DEMAND ANALYSIS

12.8 The overriding issue in Bangladesh is the need to accelerate economic growth and employment opportunities to subside the widespread incidence of poverty. For the above growth Bangladesh has to increase its energy intensity nearly 2-3 folds in the next 10-15 years.

12.9 The recent sectoral developments are not very encouraging other than in the agriculture. The average GDP Growth during the period 1990-92 was around 4 percent indicating shortfall in the growth forecast during the FFYP, which was 5 percent annually.

12.10 Agriculture is still the dominant sector although its share in the GDP has come down presently to 37 percent on account of the rapid expansion of the services sector. Agriculture growth is at present around 4 percent. The energy demand in the agriculture is expected to rise since the government is implementing its policy of liberalization of agriculture inputs, effecting expanded use of irrigational equipment and fertilizer. The use of numbers of shallow tubewells and low lift pumps have reported to have increased nearly 20 percent in recent times, and it is felt that this trend is to continue for quite some time. This will create demand for more commercial energy. Commercially energy growth in the sector is expected to be around 11 percent during the FFYP. Industry sector is contributing around 10 percent in the GDP for over a decade and a half. This sector in recent times have registered a growth of little over 7 percent. Stagnation in growth was registered in the consumer domestic goods industry, but then the export based industries showed significant growth. Since the export led industry would be the mainstay of the future economy, this would call for a faster rate of development of infrastructural services of which electricity would be the priority sector having growth of over 10 percent. Total commercial energy consumption growth of this sector is expected to be around 10 percent annually during FFYP. Services sector contributing nearly 40 percent of the GDP and creating most of the employment, grew at nearly 5 percent per annum during 1990-92 period is expected to have nearly 17 percent growth in the commercial energy consumption during the FFYP, but in the FYs 91 and 92 the growth was around 2 percent only. Transport sector having GDP contribution of 10 percent and growing at the rate of 7 percent during the FYs 91 and 92, would require commercial energy at the rate of 6 percent per annum during the plan period. In FY 92 it has a figure of 30.1 PJ which is down from 34.9 PJ registered in FY 90. Domestic sector requirement for commercial energy which is expected to grow at 5 percent during the FFYP had practically no growth during the FYs 91 and 92 and the bio-energy which accounts for nearly 90 percent of the total domestic sector energy use, which is expected to grow at nearly 2 percent i.e. nearly at per with the population rate during the FFYP had perhaps held true during the first two years of FFYP. (For details of the analysis, please see the Energy Balance).

CONSTRAINTS IN DEVELOPMENT

12.11 Energy sector development often suffers from fund constraints both foreign and local. The suspension of the World Bank credit due to non-compliance of covenants such as reduction of system loss has resulted in serious repercussion in the power sector. The urgent rehabilitation works of a number of power stations could not be implemented. It may be mentioned that the above suspension has been withdrawn in

early 1993. The Power sector's deplorable situation further aggravated due to the poor maintenance planning, inefficient execution of maintenance work, non-availability of funds and spares in time etc. During the FY-92, BPDB resorted to load shedding to the magnitude of nearly 400 MW a day, due to lower firm available capacity of 1400 MW against a peak demand of little over 1800 MW. It may be noted that the installed capacity is around 2398 MW. In the Power Systems other existing constraints include inadequate grid sub-station capacity, bottlenecks in transmission and distribution networks and inadequate allocation of local currency in the ADP. The power sector also suffers from already stated high system losses, both technical and non-technical, to the tune of 36-40%; and as such seriously affects its financial viability. Similarly in the Oil, Gas and Mineral Resource (OGNR) sub-sector is also plagued by the system losses in the gas and coal distribution systems. Gas sector system loss is as high as 6-7 percent annually and the coal sector system loss is reported to be higher. The sub-sector is also having constraints similar to the power sector such as shortages of local fund, administrative and technical bottlenecks, non-implementation of policy decisions, improper manpower development, donor conditionalities etc. Rural and Renewable Energy Sector has in addition to financial and institutional constraints, such physical constraints like lack of seriousness of the implementing Ministry/Agency in pursuing R&RE programs, lack of awareness of the population to understand the usefulness of using energy efficient stoves, absence of appropriate technology suitable to the local environment and culture etc. The Revised FFYP of the sub-sector concerned have formulated strategies and programmes to do away with above constraints as much as possible, the details of which are given in later sections.

INVESTMENT

12.12 Energy as an important sector of the economy in the last two Five-Year Plans had a macro investment allocation of 18-22 percent of the total public sector outlay. In the TFYP, a total allocation (at 1984-85 price) of Tk. 5675 crore was allocated to the sector of which power received Tk. 4360 crore and OGNR sector was allocated Tk. 1315 crore. But at current prices. Power sector's real investment was Tk. 4875 crore and OGNR sector spent Tk. 1200 crore or only 70 percent of the original allocation. The Sectoral allocation given in the draft and the revised FFYP are as follows:

(at 1989/90 price Tk. in crore)

Sub-sector	Original (draft)	Revised
Public		
Power	6450	4536
OGNR	2400	2398
Total Public sector:	8850	6934
Private		
Power	200	200
OGNR	300	300
Total(Public + Private sector)	9350	7434

12.13 The private sector allocation for Energy in revised public sector out lay in the Fourth Plan is about 20% which was 21% in the draft plan. During the first two years of the FFYP, the power sector's expenditure was Tk. 1720.00 crore at current prices and the OGNR sub-sector received Tk. 850 crore at current prices.

PRIVATE SECTOR

12.14 Prospect of public resource mobilization as well as donors' aid to finance the development projects of the energy sector being lumped, financing of the energy development in the next perspective has to be from sources other than from the present official project aid/grant or from the internal resources. It is also known that this financial crisis is further aggravated due to inefficiency, distorted prices of energy, mismanagement and other undue influence over technical and financial decision making. A number of developing economy such as China, Pakistan, Chile etc. are exploring ways to increase involvement of the private sector to reduce the aforementioned problems and recent experiences in these countries give strength to the connection that private participation in the sector may be the only answar to do away with these ills. To establish confidence among potential investors at home and abroad, the Government of Bangladesh has already deregularised the power sector by bringing it out from the reserve list of investment Schedule and encouraging private investors to invest liberally in this sector. Besides, GOB is also initiating new policies regarding private participation in the petroleum sector. It may be borne in mind that petroleum exploration activities and distribution of the finished POL was always open for private investors and at present government is contemplating to open up the whole petroleum sector (i.e. development of oil and gas fields, setting up of refinery etc.) for private investment. In this regard an integrated Petroleum Policy is in the drafting stage. To

back up its open market economy and to give further encouragement to the private sector, government has kept an allocation of Tk. 500 crore in the revised FFYP.

ENERGY IMPORT AND PRICING

12.15 Total Commercial energy import during the FY-90 was around 92 PJ or 2.17 MTOE. In the FY-92, commercial energy import was 80.8 PJ or 1.89 MTOE. The reduction in import of commercial energy was mostly accounted for coal import. In the FY 90, around 12.3 PJ of coal was imported, that fell to only 2.1 PJ in Fy-92. Lower requirement of refined POL also accounted for some of the fall in commercial energy import as 35.4 PJ was imported during the FY-92, as against 41.8 PJ in FY-90. The import prices of energy products especially, of crude, POL and coal were stable during the FYs-91 and 92 except for a short period during the Gulf war. The falling in energy import has improving further helped in arresting the gap in balance of payment situation of the country. As to the domestic energy price-hike during the FYs 91 and 92, POL products saw some sharp rise during the Gulf War period. Natural gas and the electricity rose 10-15 percent during that period i.e. very modest in comparison to the past years. In fact the average electricity price (at the PDB end) has come down to Tk. 2.02 Kwh from Tk. 2.32 in FY-91.

12.16 The following innovative strategies have been suggested in the Energy Sector Plan during Fourth Five Year Plan period:

(i) Area based planning with local participation;
(ii) Meeting the energy needs of different socio-economic groups;
(iii) Energy development and women's participation;
(iv) Energy conservation measures;
(v) Energy pricing;
(vi) Energy development and environmental considerations;
(vii) Human resources development;
(viii) Research and development.

AREA BASED PLANNING WITH LOCAL PARTICIPATION

12.16.1 National energy plan prepared under the conventional energy planning approach consists of a number of sectoral/sub-sectoral development programme of commercial energy sources. The limitations of the conventional energy planning methodology and its consequences in meeting the energy needs of different areas of the country are presented below.

The conventional energy planning approach being commercial energy biased, attention has been given for the development of commercial energy resources only. Very little attention has been paid for the planned development of biomass fuels. As a result, some locations of the country is suffering from environmental degradation due to over exploitation of biomass fuels. On the other hand, in some locations available land suitable for biomass fuels production remains unutilised and or under utilised due to lack of proper planning.

The conventional methodology being energy sub-sector biased, limited attention has been paid to meet the energy needs of different regions of the country. As a result, development programmes of some regions of the country and their productive environment have been affected due to shortage of commercial energy resources.

The conventional methodology being urban biased, limited attention has been given to meet the total energy requirement of rural areas, which has affected sustainable development of rural areas.

The conventional methodology is supply side biased; very little attention has been given to demand management and energy conservation, resulting to undue pressure on the limited supply of energy sources.

With the above context in view, it is essential and necessary to modify the conventional energy planning approach to achieve the following objectives: to develop biomass fuels and other renewable energy sources, to support equitable energy development programmes for different regions of the country, to meet the total energy needs of the rural areas and to ensure rational use of available energy resources through demand management and energy conservation.

Introduction of area based energy planning methodology would help in achieving the above mentioned objectives. National energy plan of the country under area based planning approach would consist the energy plans of different geographical areas, a particular area may be a thana or a district or a division. The selection of a particular area would depend on the availability of reliable data base specific to the area and viable local level organization to participate in planning, implementation, management, monitoring and evaluation of energy development programmes.

In addition to different advantages mentioned above, modified approach of energy planning would ensure optimum use of locally available resources in meeting the energy needs, support employment generation, help in improving degraded productive environment in seriously affected areas and support sustainable development.

At the national level, area based energy planning concept will be considered as complimentary to the existing sector based energy planning approach. The demand/supply balances of the sector based approach and the areas based approach would be used to check the consistency of one system with the other. In the former approach the demand of energy for different end use sectors (e.g. domestic, industry, commercial, transport, agriculture etc.) will be matched with different energy sources (e.g. natural gas, oil, coal, electricity, biomass fuels etc.) at the national level. Whereas under the area based approach such balances of end use sectors and energy resources will be established at local level (e.g. thana/district/division), and national level balances would consist of demand/supply balances of all the areas (e.g. thana/district/division) of the country.

Under the area based approach, at the initial stage energy demand at local level will be estimated to meet the basic minimum energy needs (BMEN) of the total population living in a particular area. In considering the supply strategies; the part of the basic minimum energy need that can be met from local resources on a sustainable basis will be considered first. Then the balance quantity of energy will be met by commercial energy sources. At the national level, different sub-sectoral energy programme/projects will have to be adjusted from the present supply driven approach to meet the demand of balance energy supply for different areas.

In Bangladesh from energy planning point of view, urban and rural areas located within a particular administrative/geographical area, are mutually inter-dependent. Rural areas depend on nearest urban centres for the supply of commercial energy sources, and urban areas depend on rural areas for the supply of biomass fuels. Meeting the energy needs for both rural and urban areas have been duly considered under the area based energy planning concept.

The functional responsibilities for planning, implementation and management of area based energy plan are presented as follows:

(1) Along with conventional national energy balance tables, the Planning Commission would prepare area based energy balance tables and identify appropriate energy mix for different areas (e.g. districts/thanas).

(2) Different energy agencies would prepare and implement commercial energy development programmes/projects according to area based energy balance tables to meet the commercial energy needs for different areas (e.g. districts/thanas).

(3) Local level institutions to be established identified to prepare, implement and manage decentralized energy development project (e.g. tree plantation, improved stove, biogas, solar PV, wind power etc.) with active participation of local level institutions (e.g. public, private, community and non-government organization.

(4) Local level institutions will be involved to monitor and evaluate the impacts of commercial energy development projects implemented by national energy agencies and by themselves; and send the status report to the Planning Commission for subsequent actions.

Basic works on the initiate on the area based energy planning will be undertaking implementation without any bottleneck in the smooth growth in the energy during the Fourth Five Year Plan. Different energy agencies will be advised to adjust their respective programmes/projects according to the guidelines prepared by the Planning Commission. During Fourth Five Year Plan local level institutions will be established in some selected areas to undertake pilot studies. It is intended to implement the area based energy planning

programmes for the whole country during Fifth Five Year Plan on the basis of the experiences of the pilot projects.

It may be noted that area based energy planning methodology is already in operation under rural electrification programme. Each Palli Biddut Samity (PBS) is an autonomous entity managed by the beneficiaries, with the guidance and supervision of Rural Electrification Board. However, PBS is responsible for the management of electrical energy systems within the area brought under rural electrification programme. On the other hand, the area based energy planning approach would consider the planned development of total energy resources including electricity and it would cover the total geographical areas of the country.

Under area coverage rural electirfication (ACRE) programme a particular rural area to be electrified is selected on the basis of techno-economic criteria. It means that a developed area gets preference over a less developed areas. Due to availability of limited financial resources for electrification techno-economic criteria are followed to electrify different areas in phases. Electricity is the superior form of energy, it should not be considered for all purpose use (e.g. cooking). Moreover it cannot be used in transport and tillage. **As electricity should not and cannot be used to meet all types of energy needs, there is a need to pay attention for the planned development of all types of energy sources for both rural and urban areas and energy should be considered as one of the basic needs.** In this context planned development of all types of energy sources for all areas of the country (whole country) will be considered under area based energy planning approach.

MEETING THE ENERGY NEEDS OF DIFFERENT SOCIO-ECONOMIC GROUPS

12.16.2 In Bangladesh traditionally the price of kerosene used to be fixed at lower level in order to help the poorer sector of the community. But this also benefited the rich. In order to discourage adulteration, the price of diesel was fixed at per with kerosene. Cheaper diesel price in comparison to gasoline encouraged the import of diesel transport, causing excessive demand on diesel and low demand on gasoline for petrol engines. This action ultimately caused loss of revenue due to re-export of excess gasoline at a lower price than the price of imported crude and extra cost to import additional quantity of diesel than that is produced by the Eastern Refinery Ltd. In order to reduce the loss to the exchequer, the price of gasoline has been fixed at a lower level than diesel and the price of diesel kerosene has been fixed at per as before. Low electricity tariff has been fixed at the initial slab to benefit the low income group. But this facility is also enjoyed by rich consumers. The above examples indicates the difficulties of providing special benefit to low income groups.

The Government has given priority attention to provide electricity to garment industries to boost export earning. This action has benefited more than half of million women laborer coming from low income groups. Provision of electricity to small and medium scale industries have also benefited the low income group in terms of employment.

It is planned to undertake special projects during Fourth Five Year Plan targeted to low-in-come settlements under area based plan. Low income households may also be involved in tree plantation and improved stove projects as participators as well as beneficiaries. It is envisaged that with active participation of local population and the beneficiaries, it may be easier to develop target oriented energy projects for the poor under area based approach than in comparison to sector based approach.

ENERGY DEVELOPMENT AND WOMEN'S PARTICIPATION

12.16.3 It has been metioned above that it is a difficult task to develop target oriented energy development projects to benefit the poor. Similar is the case with the development of project directly to benefit the women. Electricity supply to garment industries has indirectly benefited a large number of women population. It has been observed that women are more benefited from tree plantation and improved stove projects as participants as well as the beneficiaries. During Fourth Five Year Plan priority attention will be given in project selection to benefit the women.

Now a days a large number of rural women are participating in food for works programme. It is envisaged that women folk may also be benefited from the peat extraction project.

ENERGY CONSERVATION MEASURES

12.16.4 In Bngladesh although the per capita energy consumption is low in comparison to other countries of the region yet there is good potential to conserve energy through better management and through the use of efficient end use devices. Energy Monitoring Unit (Now Energy Monitoring and Conservation Centre) was established during Third Five Year Plan to implement projects on energy conservation in industries. So far, it

has not been possible to make any notable success in achieving energy conservation measures. It is planned to enact appropriate laws to regulate inefficient use of energy in industries. It is planned to undertake different programmes to create awareness on energy conservation and provide technical support and incentives to undertaken energy conservation programmes.

A pilot project in the name of Improved Stove Project was implemented during Third Five Year Plan in 3 thanas. The Fourth Five Year Plan envisages to install 1 lakh stoves in selected rural areas of Bangladesh. Considering the important role of improved stoves in energy saving, benefiting the poor and women; a long-term project will be undertaken to cover the hole country in phases.

Standardization and incentive measures will be introduced to encourage marketing of efficient end use devices. Better load management practices will be considered to improve the overall performance of the power sector.

ENERGY PRICING

12.16.5 Energy pricing policy is an important issue to ensure rational use of energy resources and equity considerations with reference to regions, end-users, socio-economic groups and genders. It is also very important for the healthy growth of the energy sector itself. At present prices of different type of energy sources are fixed on an ad-hoc basis. During Fourth Five Year Plan attempt will be made to institutionalize energy pricing mechanisms for all types of energy sources. If possible an integrated energy pricing mechanism will be considered for both primary and secondary energy sources with due consideration to different interrelated factors.

ENERGY DEVELOPMENT AND ENVIRONMENTAL CONSIDERATIONS

12.16.6 In 1992, the Ministry of Environment and Forest declared Environment Policy and Action Programme (EPAP) for sustainable developent of different sectors. In future, energy sector developent programmes will be undertaken with due attention to the conditions mentioned in EPAP. Environment Impact Assessment will be undertaken for major energy development projects and environmentally sound technologies will be considered to implement energy sector development project. It has been mentioned that the implementation of area based energy planning approach would help in improving the environmental conditions of the locations already affected due to shortage of biomass fuels. During Fourth Five Year Plan, cooling tower has been incorporated with the Ghorashal fifth unit and Rauzan Power Plant in order to control thermal poilution due to direct discharge of warm cooling water in the nearby rivers. Necessary measures will be taken to reduce air pollution due to the discharge of fuel gases from road transport systems.

It may be noted that in Bangladesh at present per-capita emission of green-house gases is very low (0.04 ton carbon per capita per year). Even then whenever possible the selection of power generation technologies have been made with due attention to the reduction of C02 emission. As for example, combined cycle and co-generation power technologies have been introduced in suitable locations.

HUMAN RESOURCES DEVELOPMENT

12.16.7 It is well recognized that efficient management of the energy sector heavily depends on trained manpower. A long-term programme for continuing development of human resources will be considered from Fourth Five Year Plan period. The needs for trained manpower in different areas of energy sub-sectors and their levels will be assessed along with the capabilities of national training institutes and universities. In the short to medium-terms period the gap in training capabilities will be met through foreign training programmes. Gradually local training capabilities will be strengthened and developed to meet the future needs. National universities will be requested to develop user specific short training courses and post-graduate programme for the professionals working in different energy agencies.

RESEARCH AND DEVELOPMENT

12.16.8 It is well recognized that the development of energy sector programmes heavily depends on efficient management of technology. There is a need for continuing in-house research for efficient management of energy development programme in different energy sub-sectors. During Fourth Five Year Plan necessary attention will be given to develop and strengthen indigenous research capabilities. Wherever necessary energy utilities will be encouraged to undertake joint research programme with national universities and research institutions. Various research programme may include inter alia policy research, resource assessment, technology assessment, demonstration of new technology, environmental impact assessment etc.

ENERGY CONSERVATION AND ENVIRONMENT ISSUES

12.17 Energy Conservation law is being drafted to control inefficient use of costly commercial as well as very scare bio-energy, especially in the industrial and commercial sectors. It is hoped that in the future Government may fix targets for achieving efficiency standards on a time bound basis and will provide incentives for units which meet these standards. Bangladesh has also adopted strict Environmental Protection Law and since energy resources development and its final use is one of the important factors in polluting environment, have also taken measures to control degradation and pollution in developing energy resources, setting up of new power plants and in over exploitation of bio-diversity.

RESEARCH AND INSTITUTIONAL DEVELOPMENT

12.18 Governments' policy of decentralisation of the PDB activities in order to improve its operational and financial performances is already under implementation with the formation of Dhaka Elect. Supply Authority (DESA) and gradually formation of other regional distribution authorities will follow suit. During the last two years of the FFYP research activities, oriented towards identifying proven appropriate technology, technology transfer and technical, operational and financial improvements of energy sector entities were being pursued vigorously through initiation of different studies and programmes including manpower training both in the planning and in the implementation stages. Government is also endeavoring to develop a new approach in energy planning, thereby, integrating the energy plan with socio-economic groups, to ensure that scarce energy resources do not only benefit the rural and urban rich but also contribute in improving productivity and income of the small and marginal farmers and the rural urban poor who are mostly landless. Government have impressed upon the NGOs to participate more liberally in disseminating renewable and rural energy technologies among the rural population and also the urban poor. It has been realised by all that successes in order to achieve success in arresting deforestation, tree plantation and disseminating of R&RE technologies have to go hand in hand with active participation of local people.

Table 12.1 Bangladesh Energy Balance
Accounting Year: July 1989 to June 1990 (actual)

Flow	Natural gas MMCF	Crude oil 1000t	Petroleum products 1000t	Coal 1000t	Electricity GWH	Total Comm. Energy PJ
1	2	3	4	5	6	7
I. SUPPLY						
Primary production	167832	23	26	0	884	171.4
Import	0	905	967	454	0	93.0
Export	0	0	-189	0	0	-8.1
Stock Exchange	0	78	19	4	0	4.2
Total primary supply	167832	1006	843	458	884	260.7
Percent of total energy supply	21.9	5.7	4.7	1.6	0.4	34.3
II. TRANSFORMATION						
Refinery	-1000	-1006	988	0	0	-1.8
Thermal power station	-74496	0	-114	0	6848	-54.0
Losses & own use	-7817	0	-24	0	-3026	-19.7
Total final supply	84519	0	1693	458	4706	185.3
III. CONSUMPTION						
Domestic	10178	0	457	0	1318	34.3
Industrial	14656	0	198	350	2541	41.6
Commercial	3778	0	0	13	565	6.1
Transport	0	0	758	95	0	34.9
Agriculture	0	0	194	0	94	8.6
Others	0	0	0	0	188	0.7
Non-energy use	55907	0	86	0	0	59.0
Total final consumption	84519	0	1693	458	4706	185.3
Percent of total energy consumption	12.2	0.0	10.6	1.8	2.5	27.1

Table 12.1 (from column 8 to 13)

Flow	Agric. residues 1000t	Tree residues 1000t	Fuel wood 1000t	Dung 1000t	Total biomass PJ	Total energy supply PJ
	8	9	10	11	12	13
I. SUPPLY						
Primary production	25327	1803	5843	6183	499.1	670.5
Import	0	0	0	0	0.0	93.0
Export	0	0	0	0	0.0	-8.1
Stock Exchange	0	0	0	0	0.0	4.2
Total primary supply	25327	1803	5843	6183	499.1	759.7
Percent of total energy supply	41.7	3.0	11.6	9.4	65.7	100.0
II. TRANSFORMATION						
Refinery	0	0	0	0	0.0	-1.8
Thermal power stations	0	0	0	0	0.0	-54.0
Losses & own use	0	0	0	0	0.0	-19.7
Total final supply	25327	1803	5843	6183	499.1	684.3
III. CONSUMPTION						
Domestic	19440	1803	4460	6183	404.6	438.9
Industrial	5887	0	1262	0	92.6	134.2
Commercial	0	0	121	0	1.8	8.0
Transport	0	0	0	0	0.0	34.9
Agriculture	0	0	0	0	0.0	8.6
Others	0	0	0	0	0.0	0.7
Non-energy use	0	0	0	0	0.0	59.0
Total final consumption	25327	1803	5843	6183	499.1	684.3
Percent of total energy consumption	46.3	3.3	12.9	10.5	72.9	100.0

Table 12.2 Bangladesh Energy Balance
Accounting Year: July 1990 to June 1991 (actual)

Flow	Natural gas MMCF	Crude oil 1000t	Petroleum products 1000t	Coal 1000t	Electricity GWH	Total Comm. Energy PJ
1	2	3	4	5	6	7
I. SUPPLY						
Primary production	172599	22	54	0	838	177.1
Import	0	1182	711	90	0	83.3
Export	0	0	-223	0	0	-9.5
Stock Exchange	0	-94	-30	16	0	-4.9
Total primary supply	172599	1110	512	106	838	246.0
Percent of total energy supply	22.5	6.2	2.9	0.4	0.4	32.3
II. TRANSFORMATION						
Refinery	-1000	-1110	1088	0	0	-1.9
Thermal power station	-81457	0	-53	0	7432	-56.2
Losses & own use	-7298	0	-2	0	-3400	-19.6
Total final supply	82844	0	1545	106	4870	168.4
III. CONSUMPTION						
Domestic	10061	0	362	0	1217	29.8
Industrial	15542	0	194	98	2531	35.4
Commercial	3150	0	0	1	843	6.2
Transport	0	0	733	7	0	31.5
Agriculture	0	0	198	0	148	9.0
Others	0	0	0	0	131	0.5
Non-energy use	54091	0	58	0	0	56.0
Total final consumption	82844	0	1545	106	4870	168.4
Percent of total energy consumption	12.0	0.0	9.7	0.4	2.6	24.6

Table 12.2 (from column 8 to 13)

Flow	Agric. residues 1000t	Tree residues 1000t	Fuel wood 1000t	Dung 1000t	Total biomass PJ	Total energy supply PJ
	8	9	10	11	12	13
I. SUPPLY						
Primary production	25780	1811	6485	6204	514.8	691.9
Import	0	0	0	0	0.0	83.3
Export	0	0	0	0	0.0	-9.5
Stock Exchange	0	0	0	0	0.0	-4.9
Total primary supply	25780	1811	6485	6204	514.8	760.8
Percent of total energy supply	42.4	3.0	12.9	9.5	67.7	100.0
II. TRANSFORMATION						
Refinery	0	0	0	0	0.0	-1.9
Thermal power stations	0	0	0	0	0.0	-56.2
Losses & own use	0	0	0	0	0.0	-19.6
Total final supply	25780	1811	6485	6204	514.8	683.2
III. CONSUMPTION						
Domestic	19616	1811	4495	6204	407.7	437.5
Industrial	6164	0	1848	0	105.0	140.4
Commercial	0	0	142	0	2.1	8.3
Transport	0	0	0	0	0.0	31.5
Agriculture	0	0	0	0	0.0	9.0
Others	0	0	0	0	0.0	0.5
Non-energy use	0	0	0	0	0.0	56.0
Total final consumption	25780	1811	6485	6204	514.8	683.2
Percent of total energy consumption	47.2	3.3	14.3	10.5	75.4	100.0

Table 12.3 Bangladesh Energy Balance
Accounting Year: July 1991 to June 1992 (actual)

Flow	Natural gas MMCF	Crude oil 1000t	Petroleum products 1000t	Coal 1000t	Electricity GWH	Total Comm. Energy PJ
1	2	3	4	5	6	7
I. SUPPLY						
Primary production	188477	18	43	0	796	192.1
Import	0	1018	832	79	0	81.1
Export	0	0	-179	0	0	-7.6
Stock Exchange	0	-19	27	11	0	0.6
Total primary supply	188477	1017	723	90	796	266.2
Percent of total energy supply	23.4	5.4	3.9	0.3	0.4	33.3
II. TRANSFORMATION						
Refinery	-1000	-1017	991	0	0	-2.1
Thermal power stations	-87209	0	-106	0	8098	-61.7
Losses & own use	-8713	0	-39	0	-3557	-23.1
Total final supply	91555	0	1569	90	5337	179.3
III. CONSUMPTION						
Domestic	11469	0	339	0	1332	30.6
Industrial	14763	0	204	83	2771	35.5
Commercial	3583	0	0	1	942	7.0
Transport	0	0	719	6	0	30.9
Agriculture	0	0	228	0	163	10.3
Others	0	0	0	0	130	0.5
Non-energy use	61740	0	79	0	0	64.5
Total final consumption	91555	0	1569	90	5338	179.3
Percent of total energy consumption	12.7	0.0	9.4	0.3	2.7	25.2

Table 12.3 (from column 8 to 13)

Flow	Agric. residues 1000t	Tree residues 1000t	Fuel wood 1000t	Dung 1000t	Total biomass PJ	Total energy supply PJ
	8	9	10	11	12	13
I. SUPPLY						
Primary production	26243	1821	7180	6307	532.4	724.4
Import	0	0	0	0	0.0	81.1
Export	0	0	0	0	0.0	-7.6
Stock Exchange	0	0	0	0	0.0	0.6
Total primary supply	26243	1821	7180	6307	532.4	798.6
Percent of total energy supply	41.1	2.9	13.6	9.2	66.7	100.0
II. TRANSFORMATION						
Refinery	0	0	0	0	0.0	-2.1
Thermal power stations	0	0	0	0	0.0	-61.7
Losses & own use	0	0	0	0	0.0	-23.1
Total final supply	26243	1821	7180	6307	532.4	711.7
III. CONSUMPTION						
Domestic	19968	1821	4977	6307	420.7	451.3
Industrial	6275	0	2046	0	109.3	144.9
Commercial	0	0	157	0	2.4	9.3
Transport	0	0	0	0	0.0	30.9
Agriculture	0	0	0	0	0.0	10.3
Others	0	0	0	0	0.0	0.5
Non-energy use	0	0	0	0	0.0	64.5
Total final consumption	26243	1821	7180	6307	532.4	711.7
Percent of total energy consumption	46.1	3.2	15.2	10.3	74.8	100.0

Table 12.4 Bangladesh Energy Balance
Accounting Year: July 1994 to June 1995 (Projection)

Flow	Natural gas MMCF	Crude oil 1000t	Petroleum products 1000t	Coal 1000t	Electricity GWH	Total Comm. Energy PJ
1	2	3	4	5	6	7
I. SUPPLY						
Primary production	275000	0	100	0	800	279.4
Import	0	1450	1090	730	0	128.2
Export	0	0	-217	0	0	-9.3
Stock Exchange	0	0	19	0	0	0.8
Total primary supply	275000	1450	992	730	800	399.1
Percent of total energy supply	28.3	6.4	4.4	2.0	0.3	41.5
II. TRANSFORMATION						
Refinery	-1000	-1450	1228	0	-2.7	-10.5
Thermal power station	-120700	0	-300	0	11825	-89.7
Losses & own use	-11000	0	-67	0	-3787	-27.4
Total final supply	142300	0	1853	730	8835.3	271.5
III. CONSUMPTION						
Domestic	15000	0	455	0	2196	42.2
Industrial	24000	0	235	500	4566	63.7
Commercial	8300	0	0	95	1632	16.7
Transport	0	0	853	135	0	40.1
Agriculture	0	0	310	0	275	14.2
Others	0	0	0	0	166	0.6
Non-energy use	95000	0	0	0	0	94.1
Total final consumption	142300	0	1853	730	8835	271.5
Percent of total energy consumption	16.9	0.0	9.5	2.4	3.8	32.5

Table 12.4 (from column 8 to 13)

Flow	Agric. residues 1000t	Tree residues 1000t	Fuel wood 1000t	Dung 1000t	Total biomass PJ	Total energy supply PJ
	8	9	10	11	12	13
I. SUPPLY						
Primary production	27694	1848	7988	6339	563.4	842.8
Import	0	0	0	0	0.0	128.2
Export	0	0	0	0	0.0	-9.3
Stock Exchange	0	0	0	0	0.0	0.8
Total primary supply	27694	1848	7988	6339	563.4	962.5
Percent of total energy supply	36.0	2.4	12.5	7.6	58.5	100.0
II. TRANSFORMATION						
Refinery	0	0	0	0	0.0	-10.5
Thermal power stations	0	0	0	0	0.0	-89.7
Losses & own use	0	0	0	0	0.0	-27.4
Total final supply	27694	1848	7988	6339	563.4	834.9
III. CONSUMPTION						
Domestic	20786	1848	5868	6339	445.1	487.2
Industrial	6908	0	1885	0	114.8	178.5
Commercial	0	0	235	0	3.5	20.2
Transport	0	0	0	0	0.0	40.1
Agriculture	0	0	0	0	0.0	14.2
Others	0	0	0	0	0.0	0.6
Non-energy use	0	0	0	0	0.0	94.1
Total final consumption	27694	1848	7988	6339	563.4	834.9
Percent of total energy consumption	41.5	2.8	14.4	8.8	67.5	100.0

Table - 12.5 Energy Indicators for the FFYP (1990-95)

	1990 (Based year)	1992 (Actual)	1995 (Projected)	Annual Growth Rate % (1990-92) (Actual)	Annual Growth Rate % (1990-95) (Projected)
Total Energy Requirement (MTOE)	17.79	18.65	22.54	2.53	4.85
(% Share)	(100.00)	(100.00)	(100.00)		
Commercial (MTOE)	6.11	6.23	9.36	1.05	8.89
(% Share)	(34.30	(33.30)	(41.50)		
Biomass (MTOE)	11.69	12.47	13.20	3.28	2.45
(% Share)	(65.70)	(66.70)	(58.50)		
Per Capita Energy Consumption (KOE)	164.00	170.00	185.00		
Per Capita Commercial Energy (KOE)	56.00	56.00	78.00		
Per Capita Biomass Energy Consum. (KOE)	108.00	113.00	107.00		
Per Capita Electricity Generation (Kwh)	70.00	80.00	110.00		
Per Capita Natural Gas Production (MCF)	1.50	1.71	2.25		
Energy Intensity (TOE/Mill/Tk.)	24.03	24.83	23.81		
Commercial Energy Intensity (TOE/Mill.Tk.)	8.32	8.24	9.91		

Primary Energy Supply (Mix(%)

	1990	1992	1995
Oil	10.40	9.20	10.80
Natural Gas	21.90	23.40	28.30
Coal	1.60	0.30	2.00
Hydel	0.40	0.40	0.40
Biomass	65.70	66.70	58.50
Total:	100.00	100.00	100.00

Sectoral Mix of Commercial Energy Consumption (%)

	1990	1992	1995
Industry	54.29	55.77	58.12
Agriculture	4.64	5.74	5.23
Transport	18.83	17.23	14.77
Commercial	3.29	3.90	6.15
Residential	18.51	17.07	15.54
Total:	100.00	100.00	100.00

Sectoral Mix of Biomass Energy Consumption (%)

	1990	1992	1995
Industry	18.55	20.53	20.38
Agriculture	-	-	-
Transport	-	-	-
Commercial	0.38	0.45	0.62
Residential	81.07	79.02	79.00
Total:	100.00	100.00	100.00

RURAL AND RENEWABLE ENERGY

12.19 Rural and Renewable Energy, also called traditional energy, coprises bio-mass fuel (agricultural resides, tree residues, fuelwood, anial dung), sunlight, wind, flow of water, wave, animal fodder. The bioass energy constitutes about 66% of the total energy supply in 1989-90, and its per capita consuption is about 108 KgOE. The per capita supply of biogas fuel is declining with every passing year primarily due to dwindling of tree resources because of large scale felling of trees on one hand, and greater deand of bnioass energy due to population increase on the other. It is estimated that about 13.5 million TOE of bioass will be required in the year 1994-95 against the availability of about 11.8 million TOE, showing a deficit of about 1.37 million TOE. The importance of biomass fuel lies to the fact that 100 percent rural people and about 70 percent of urban people depends on biomass fuel for cooking. Besides, it will be principal source of energy supply upto foreseeable future.

12.20 The planning of traditional energy resources is difficult as over 65 percent of biomass is derived as a by-product of agricultural production rather than direct energy planning. Besides the activities related to traditional energy are spread over a nuber of ministries/agencies as well as individuals. Further that the augmentation of biomass resources through afforestation programme is a time consuming affairs.

12.21 As the augmentation of bioass energy through afforstation programme and other agricultural activities are being dealt under agriculture and forestry sector, the section deals under energy sector primarily concerns with conservation of bioass fuel through the use of improved cooking stoves, conversion of solar heat into energy, generation of electricity from solar sources and wind, and production of bio-gas from cowdung and vegetable waste. It covers the R&D activities carried under different research institutions including universities and NGOs. It also provides the necessary policies and facilities for the demonstration and diffusions of improved and efficient energy conversion technologies.

12.22 The major objectives, strategies and targets and policies of Rural Energy Development of Fourth Plan under Energy Sector are as follows:

OBJECTIVES

12.23 In view of the importance of the sub sector, the following objectives have been set for the development during the fourth plan (1990-95):

(a) To provide an assured supply of appropriate type of energy to meet the short and long term needs of the people of selected areas of the country.

(b) To intensify extension services for the quick diffusion of various proven renewable energy technologies to reduce pressure on biomass fuels in general and fuel wood in particular.

(c) To train-up rural youth interested enterpreneous particularly women on the construction, operation and maintenance of various new and renewable energy technologies for successful implementation of development projects.

(d) To provide energy to run small scale industries, boost agricultural production, and generate employment opportunities in the rural areas, particularly as part of decentralised participatory planning.

(e) To improve the quality of rural life and reduce environmental degradation and pollution.

STRATEGY

12.24 To achieve the above objectives for rural and renewable energy resources, main emphasis will be given on the following strategies:

(a) Selection of appropriate organisation (Government/Semi-Government/NGOs) for providing extension services for large scale dissemination of all energy conservation technologies including improve cooking stove, solar cooker, solar hot box etc.

(b) Diffusion of biomass technology among the selected rural domestic households along with the provision of necessary subsidies.

(c) Making coal easily available to the owners of the brick field at reasonable price. Owners not using coal/gas for brick burning would be penalised.

(d) Making kerosene, LPG etc. easily available at reasonable price to discourage people from using fuel wood for domestic purposes.

(e) Use of flat plate collectors in hospitals, hotels, motels and different industries to meet hot water demand and supplement the total energy demand as far as possible.

(f) Electrification of some selected isolated areas and remote islands by phovoltaic solar cells.

(g) Setting up of micro-hydro power plants, wind mills etc. for generating electricity and briquetting plants, for densification of biomass/peat in suitable locations.

(h) Equiping all the concerned Thana HQs with the facilities for training, demonstration, diffusion etc. for the development of renewable and alternative energy sources.

(i) Chalking out an action programme for implementation of Decentralization Energy Development Plan (DEDP) by involving politicians, researchers and the beneficiaries (Rural people). This programme will be a part of overall village development plan, to be prepared during the Fourth Plan, with people's participation.

TARGETS

12.25 The revised targets of Fourth Plan shown in the Table below:

Table 12.6

Programmes	Bench Mark (1989-90)	Target Original	1994-95 Revised
1. Energy Conservation			
(a) Improved Cooking Stoves (in lakh)	1.09	16.20	10.00
(b) Insulated Box Cookers (Nos.)	100	30000	15000
2. Energy Conversion			
(a) Biogas Plants (Nos.)	417	5000	2500
(b) Briquetting Plants (Nos.)	1	2	2
(c) Solar Thermal Conversion (Nos.)			
(i) Solar Cooker (Nos.)	800	5000	3000
(ii) Solar Hot box oven (Nos.)	4	4000	1000
3. Energy Augmentation			
(i) Solar PV Electricity Centres (KW)	5 (8.174 KW)	25 (50 KW)	25 (35 KW)
(ii) Wind Energy Centres (KW)	-	3 (10 KW)	2 (8 KW)
(iii) Micro Hydro Power Plant (MW)	-	1 (1 MW)	1 (1 MW)

POLICIES

12.26 To attain the aforementioned objectives and targets, the following policies are required to be adopted during the Fourth Plan Period:

(i) Increased allocation for the development of new and renewable energy technologies to save conserve traditional energy and maintain ecological balance.

(ii) Conserve rural energy particularly biomass fuel by improving the operational efficiency of the various appliances/devices and provide training, incentives, subsidies etc. whereever necessary.

(iii) Enforcement of the law, restricting the use of wood for brick burning in the rural areas, in words and deeds to maintain the ecological balances.

(iv) Decentralise development of electricity networks using appropriate commercial fuels and new energy technologies under the framework of an Integrated National Energy Plan for Rural and Agricultural Development.

(v) Gradual shifting of dependence from exhaustible energy sources to the inexhaustible ones.

INVESTMENT OUTLAY FOR THE FFYP

12.27 A total of Tk. 15.00 crore is required during Fourth Plan to implement the revised programme target as follows:

		(Tk. in crore)
i)	Biomass Energy Conservation	5.00
ii)	Energy Conservation	3.00
iii)	Energy Augmentation	4.00
iv)	Strengthening of EME Wing	3.00
	Total:	15.00

The agency-wise break-down is as follows:

i)	BCSIR	0.10
ii)	REB	11.90
iii)	Planning Commission	3.00
	Total:	15.00

THE ANNUAL PHASING OF THE ALLOCATION

TABLE-12.7

(Tk. in crore)

	1990-91	1991-92	1992-93	1993-94	1994-95	Total
At 1989/90 Constant prices	0.13	0.04	1.32	6.75	6.76	15.00
Current prices	0.14	0.05	1.60	8.64	9.13	19.56

OIL, GAS AND MINERAL DEVELOPMENT

12.28 Natural Gas plays a dominant and critical role in the socio-economic development of Bangladesh. It provides increased quantum of commercial energy to accelerate the pace of agricultural and industrial development and improve the standard of living, maintain the balance of payment by reducing the import bill for oil and coal; supply feed for the production of urea fertilizer and fuel for electricity generation.

OBJECTIVES

12.29 The major objectives of the Fourth Plan are as follows:

(i) To ensure the supply of increased quantum of commercial energy mostly from indigenous resources and optimise its utilisation;

(ii) To derive maximum benefit through the balanced development of exploration wells, production wells, transmission lines and distribution lines;

(iii) To contain the import of oil to the extent feasible through maximum utilisation of natural gas, coal, peat as well as NGL/LPG and Naptha.

(iv) To initiate and accelerate the development of coal and peat resources with a view to making a better mix in the energy supply and for balanced regional development.

(v) To accelerate the exploration of both hydrocarbon and other minerals to raise the resources base.

(vi) To maximise the use of motor spirit to substitute the import of diesel.

(vii) To conserve the energy resources through efficient utilization in power plants, mills and factories and in transport sector.

(viii) To emphasise the development of appropriate manpower for planning, negotiating, designing, execution and operation and maintenance of energy sector programme/projects.

(ix) To protect the environmental and ecological balance.

STRATEGIES

12.30 The following strategies will be adopted in pursuing the above objectives:

(i) To gradually involve the private sector not only in exploration activities but also in other areas of energy development.

(ii) To make a shift towards better energy-mix, so that dependence on a single energy source like natural gas is reduced and other energy resources such as coal, peat, etc. are exploited.

(iii) To reduce the import burden for oil, natural gas fields enriched in condensate and propanes/butanes should be developed.

(iv) To develop an effective regional balance in energy supply, more gas-based electricity would be taken to the western zone and efforts will also be made to take gas pipeline to that zone via Jamuna Bridge. Besides, emphasis will be given to develop the coal and peat resources discovered in the west zone.

(v) To evolve appropriate tariff system for the conservation and economic use of natural gas.

DEVELOPMENT POLICIES

12.31 In order to achieve the objectives of the Fourth Plan as well as the overall development of this sector the following policies would be pursued:

(i) Private sector particularly the multinational Oil Companies should be encouraged for investment in hydrocarbon exploration on mutually beneficial terms.

(ii) The capacity and capability of Bangladesh Petroleum Exploration Company (BAPEX) should be strengthened for exploration activities as well as assisting the Production Companies in drilling and testing of their production wells. Besides, it must develop capability for negotiating with multi-national oil companies.

(iii) To make BAPEX financially viable, a reasonable percentage of revenue from gas sale should be given to it to meet its revenue and a part of development expenditures.

(iv) The gas price should gradually be raised to the level of economic cost of supply.

(v) The dedicated reserve and additional gas availability should be annually revised and gas may be sold to export oriented industries at economic prices. A natural gas depletion and end-use policy should be formulated and be reviewed annually.

(vi) To maximise the utilisation of motor spirit available from the natural gas liquid in vehicles and surplus Naptha of Eastern Refinery in power plants appropriate mechanism needs to be evolved.

(vii) An appropriate manpower development policy should be evolved to reduce the present dependence on expatriate consultants.

DEMAND-SUPPLY PROJECTION

12.32 During the Third Plan gas production increased from 95 BCF in 1984-85 to 168 BCF in the terminal year 1989-90 showing an annual average growth rate of 12 percent. The Fourth Five Year plan envisages an annual growth rate of 10.3 percent which will raise the annual gas production from 168 BCF in 1989-90 to 275 BCF in 1994-95.

The projected peak demand and its supply from nine gas fields are shown in Table 12.8 and 12.9.

Table 12.8
GAS DEMAND FORECAST (MMCFD)

	1989-90 Bench Mark	1990-91	1991-92	1992-93	1993-94	1994-95
Peak Demand	580	600	650	700	800	950
Average Demand #	450	475	526	600	650	750
Annual Demand (BCF)	168	173	189	216	241	275

The average annual gas demand upto the FY'93 has been shown on the basis of actual gas production.

Table 12.9
CUSTOMER-WISE BREAK UP OF PEAK AND AVERAGE DEMAND (MMCFD)

	1989-90	1990-91		1991-92		1992-93		1993-94		1994-95	
	Pk.Av.	Pk.	Av.	Pk.	Av.	Pk.	Av.	Pk.	Av.	Pk.	Av.
Power		290	230	300	215	330	250	390	285	490	355
Fertilizer		170	150	200	190	210	208	220	205	255	225
Other		140	95	150	120	160	142	190	160	205	170
Total:	460	600	475	650	525	700	600	800	650	950	750

Table 12.10
PRODUCTION TARGET TO MEET THE PEAK DEMAND (MMCFD)

Field	1990-91	1991-92	1992-93	1993-94	1994-95
Sylhet	6	6	6	5	5
Kailashtilla	23	20	25	75	150
Rashidpur	-	-	-	60	120
Hobiganj	76	77	150	170	200
Titas	225	252	295	300	330
Bakhrabad	141	145	165	180	180
Feni	-	16	20	20	20
Total:	471	515	681	810	1005

PROGRAMMES AND TARGETS OF THE FOURTH FIVE YEAR PLAN

Bangladesh Oil, Gas & Mineral Corporation (BOGMC)/Petro-Bangla:

12.33 During the plan period Petrobangla will complete 3 exploration, 6 appraisal and 11 production wells; construct 132 Km, transmission and 1823 Km. distribution lines, produce 73,000 tonnes of LPG and conduct seismic survey of 2400 L Km. To extract 1 million tonnes of coal annually from 2000 AD initial works of the Barapukuria coal mine project has been undertaken by Petrobangla. In addition, a peat development demonstration project with the participation of local private investor will be implemented during the plan period in the peat rich southern part of the country with a view to popularising the use of peat/peat briquettes as fuel in cooking and brick fields as substitute of natural gas and imported kerosene/coal. Besides, efforts will be made to use compressed natural gas (CNG) as substitute of POL in the road and water transports. Initially a CNG project with 4 filling stations at Dhaka City with a target of converting 1000 road vehicles and some marine engines will be implemented during the plan period.

Table-12.11
THE PROGRAMMES AND TARGETS OF PETROBANGLA DURING THE PLAN PERIOD

Programme	Actual			Projected			Total
	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1990-95
1. (a) Peak Demand for Gas (MMCFD)	550	600	650	700	800	950	-
(b) Average Gas Consumption (MMCFD)	460	473	526	591	660	755	-
2. Annual Production of Natural Gas(BCF)	168	173	189	216	241	275	1143.3
3. Customers (Nos.)	31099	26405	27640	30404	33444	36000	153893
4. Exploration Well for Hydrocarbo (Nos.)	1		-	1	1	1	3
5. Appraisal/ Development wells	3	2	-	1	1	2	6
6. Production Wells (Operation)	24	2	3	1	2	3	11
7. Transmission Line (K.M.)	715	-	4	19	59	50	132
8. Distribution Line (K.M.) (Cumulative)	6566	298	325	350	400	450	1823
9. Seismic Survey (L.K.M.)	509	400	954	400	546	500	2400
10. Production of LPG (Tonne)	-	-	-	-	-	-	-
(i) From ERL.	-	8000	9000	9000	9000	13000	48000
(ii) From Gas Field	-	-	-	-	-	25000	25000
11. Oil Consumption (Million Tonne)	1.85	1.8	1.6	1.80	1.90	2.00	9.10
12. Production of Crude Oil (Tonne)	14766	14230	10900	8800	7000	5300	47230

BANGLADESH PETROLEUM CORPORATION (BPC)

12.34 The BPC's main activities during the Fourth Plan will be concentrated on the completion of BMRE of Eastern Refinery Ltd. adding a secondary conversion plant to the existing Refinery and completion of storage and bottling plants at Elenga and Kailashtilla gas fields.

GEOLOGICAL SURVEY OF BANGLADESH (GSB)

12.35 GSB will undertake extensive and intensive geological and geophysical surveys supported by drilling for mineral discovery, engineering, water resources and tectonic studies. The important programmes and targets of GSB in the Fourth Plan are as follows:

		1990-95	
a)	Detailed Geological Mapping for Minerals	4000	Sq.km.
b)	Research on Stratigraphy	4	Sections
c)	Research and Exploration for metallic deposits	100	Samples
d)	Gravity and Magnetic Survey	500	Sq. km.
e)	Seismic/Resistivity Survey	100	Sq. km.
f)	Drilling of Exploratory Wells	3000	Metres

BANGLADESH PETROLEUM INSTITUTE (BPI)

12.36 The existing capacity of the BPI will be strengthened to cater to the training needs of BOGMC and its subsidiary companies. It will also initiate modest research in the fields of petroleum exploration, data processing and interpretation, drilling, production and distribution of hydrocarbons.

FEASIBILITY AND OTHER STUDY

12.37 Some studies relating to oil, gas, mineral resources, pipeline construction etc. will be undertaken during the Plan period.

PRIVATE SECTOR PARTICIPATION

12.38 Government of Bangladesh always favour private sector participation in oil and gas exploration. As such specific programmes to encourage private sector participation will be drawn and relevant information will be communicated to foreign investors during the plan period. The Government will actively consider the adoption of some fiscal measures to attract foreign investors specially in oil and gas exploration during the Fourth Plan. At present transportation of LPG is being carried out by private sector. Efforts will be made to bottle, transport and market LPG; and use CNG in transport vehicles, river crafts, etc. under private sector during the plan period.

FINANCIAL ALLOCATION

12.39 A total of Tk. 2398 crore at constant prices has been allocated in the Fourth Plan for the development of oil, Gas and mineral resources in the Public Sector. The agency-wise and programme-wise distribution of this allocation is given in Table 12.12 and 12.13.

Table-12.12
AGENCY-WISE ALLOCATION
at 1989/90 prices (at current prices)

(Tk. in crore)

	Total	1990-91	1991-92	1992-93	1993-94	1994-95
BOGMC:	2048.00 (2603.00)	275.00 (300.00)	256.00 (369.00)	466.00 (563.00)	521.00 (661.00)	530.00 (710.00)
BPC:	300.00 (360.00)	64.00 (70.00)	65.00 (75.00)	80.00 (96.00)	50.00 (64.00)	41.00 (55.00)
GSB:	30.00 (37.84)	1.00 (1.09)	2.00 (2.25)	5.00 (6.00)	10.00 (12.50)	12.00 (16.00)
M/O. Energy	20.00 (24.30)	3.00 (3.25)	4.00 (4.50)	4.00 (4.80)	5.00 (6.25)	4.00 (5.50)
Total:	2398.00 (3025.14)	343.00 (374.34)	327.00 (450.75)	555.00 (669.80)	586.00 (743.75)	587.00 (786.50)

Table 12.13
PROGRAMMEWISE ALLOCATION

(In crore Taka)

PROGRAMMES	ALLOCATION AT CONSTANT PRICE (AT CURRENT PRICE)
A. PUBLIC SECTOR:	
Oil and Gas Exploration	200.00 (252.31)
Appraisal Gas Development	450.00 (567.69)
Gas Transmission Line	500.00 (630.76)
Gas Distribution Line	350.00 (441.53)
LPG Development	275.00 (346.92)
Petroleum Product Development	175.00 (220.77)
Coal/Peat Development	300.00 (378.46)
Geological Mapping & Mineral Exploration	30.00 (37.85)
Feasibility Study	70.00 (88.31)
Manpower Development & Research	48.00 (60.55)
Total of A:	2398.00 (3025.14)
B. PRIVATE SECTOR	
Oil & Gas Exploration	200.00 (252.31)
Others	100.00 (126.15)
Total of B:	300.00 (378.46)
Total of (A + B) :	2698.00 (3403.60)

POWER

12.40 Availability of reliable power supply is one of the primary essential ingredients for economic development. As such power sector has been attached high priority in the Fourth Five Year Plan 1990-95. The per capita electricity generation of 70 Kwh during 1989-90 is planned to raise to 110 Kwh in June 1995 having an average annual growth rate of 9%. It is expected that the maximum demand will grow at around 10% on an average during 1992-95.

DEVELOPMENT OBJECTIVES

12.41 The development objectives that will be pursued during the Fourth Five Year Plan comprises the following:

(a) Ensuring reliable and uninterrupted power supply through maximum utilisation of the existing capacities, adding generation capacities at least cost by optimising energy mix and balanced expansion of transmission and distribution network system.

(b) Encouraging productive and efficient use of energy.

(c) Reduction of System Loss technical as well as non-technical.

(d) Augmenting power supply in the rural areas to boost rural economy and thereby alleviate poverty and ensure women's participation in the rural areas through Area Coverage Rural Electrification Programme.

(e) Raising efficiency in resources management and improving financial performance of the power system.

DEVELOPMENT STRATEGIES

12.42 The following strategies will be adopted to achieve the above mentioned objectives.

(a) Expansion of the power system on least-cost basis through optimisation of fuel mix.

(b) Augmentation of the capacities through rehabilitation of power plants, transmission lines and grid sub-stations.

(c) Balancing of transmission and distribution networks to match generation capacity; and extension of transmission and distribution network to connect growth centres both urban and rural.

(d) Addition of East-West Interconnector with a view to transfer cheaper power from East to West Zone.

POLICIES

12.43.0 The policies to be pursued for realisation of the above objectives will primarily be related to technical, financial management and administrative issues.

(1) Increased operational efficiency and system reliability.

(2) Increased mobilisation of domestic resources through rationalization of electricity tariff;

(3) Enhancement of PBSs efficiency.

(4) Remove institutional deficiencies through appropriate reforms.

(5) Reduction of system loss to an acceptable level.

(6) Rationalisation of tariff and promotion of revenue.

(7) Improvement of consumer services.

(8) Manpower development and skill promotion.

(9) Women's participation in Power sector.

(10) Local input to Power development.

(11) Private sector participation.

(12) Need for Vigorous Load Management.

(13) Increasing Productive Use of Electricity.

Increased Operational Efficiency

12.43.1 The overall operational efficiency of the Power System is at a low level. BPDB's operating system is inefficient both in technical as well as non-technical terms. Technical inefficiencies comprise high system loss, poor maintenance of power stations and other equipment as well as uneconomic operation of various generating units. The non-technical inefficiencies comprise poor financial management, unscientific accounting, poor billing and collection system and above all poor administration involving leakage of huge amount of revenue in various ways. Poor inventory management also entails huge loss to PDB. All these technical and financial inefficiencies and pilferage must be removed for raising the overall efficiency.

Increased System Reliability

12.43.2 Even at the beginning of the Third Five Year Plan, the PDB system was vulnerable, witnessing frequent breakdown of the system, voltage fluctuation and uncertainty in the supply.. Although the situation significantly improved, there is still room for further improvement in this direction.

Increased Mobilization of Domestic Resources

12.43.3 Sufficient infrastructure in the Power Sector has already been built both during preliberation and post liberation periods. The system has by now developed a potential for generating surplus operating revenue after meeting the annual recurring expenditure. Out of this surplus revenue, BPDB has already started self financing some of the development projects. With the future growth of infrastructure through implementation of various new power projects, the surplus revenue will further increase resulting in the increased capability for self-financing.

REB has so long received the local currency from the Government as grant which was passed on to the PBSs as loan. The PBS have been expected to amortize the loan. Some of the operating PBSs have shown potential for generating surplus after making debt servicing to REB. All efforts should be made to see that more and more PBSs generate operating surplus and plough it back into the system for expansion and intensification of the Rural Electrification Programme. This will reduce the pressure on Government Fund.

Enhancement of PBSs Efficiency

12.43.4 In consideration of the gestation period needed for REB project implementation, the PBSs are now allowed subsidy for a period of minimum five years. It has transpired that most of the PBSs have not proved themselves economically viable after the expiry of subsidy period and they took longer period for achieving break even. Therefore, efforts should be made to raise the efficiency of the PBSs so that they can prove themselves economically viable within the prescribed period.

Institutional Reform and Decentralisation

12.43.5 In order to decentralise the activities of generation, transmission and distribution as a part of reorganisation to improve power sector's performance Dhaka Electric Supply Authority was made operational since October 1991. Other regional electric supply authority/board may be considered in future on the basis of experience and performance of DESA. The regional boards may be constituted in the form of REB.

Removal of Imbalance in the System

12.43.6 Technical imbalance presently exists in the power system. On the one hand, the system has some surplus generation capacity which cannot be fruitfully utilised due to bottlenecks in the grid sub-station/sub-station capacity as well as transmission and distribution lines. Therefore, the Fourth Five Year Plan will lay emphasis on removal of the bottlenecks by augmenting sub-station as well as line capacity which will help achieve the core objective of the plan, i.e. utilisation of existing capacity to the maximum extent and reduce pressure on scarce resources.

Reducation of System Loss

12.43.7 System loss of the overall power system was 39.14% in 1989-90 which rose to 41.1% in 1990-91. Special administrative measures to check underbilling and pilferage, streamlining of commercial operation of financial management, implementation of on-going system loss reduction project etc. are some of the efforts that are being made to bring down the system loss to an acceptable level. As a result, the system loss is gradually coming down. The overall system loss (BPDB/DESA combined) as recorded in December 1992, January 1993 and February 1993 are 36.7%, 36.1% and 34.6% respectively. Though the Revised Fourth Five Year Plan target has been fixed to reduce the system loss to 25% by June 1995 but the trend of reducing the system loss shows that the achievable reduction of system loss in 1994-95 may be around 30%.

Rationalisation of Electricity Tariff and Promotion of Sales & Revenue

12.43.8 The last electricity tariff study carried out in 1985 recommended a tariff structure on marginal cost pricing principle. Since then considerable time had elapsed and the tariff structure needs to be revised for further rationalisation in the present context of electricity consumption and its pattern. This should be carried out with a view to evolving a more suitable structure for promotion of electricity sales and augmenting revenue tuning with achieving social justice. . This tariff rationalisation is also necessary for encouraging some of the peak hour consumers to shift to off-peak periods through incentive tariffs. This will also call for suitable adjustment in policies such as incentive tariff for encouraging use of electricity in the off-peak periods through incentive tariffs.

Improvement of Consumer Services

12.43.9 The responsibility of the public or the private utilities lies not only in billing for electricity, or collection of revenue for operation and maintenance of the distribution network but also providing high quality services and safeguarding the consumers interest. Improvement of the quality of services include measures like electric connections to new applicant within the specified time limit, sending bills to consumers at a regular interval preferably monthly basis and restoration of power supply quickly after receiving the complaint. The concerned utility or the employees concerned should be held responsible and should be penalised for poor consumer services.

Manpower Development and Skill Promotion

12.43.10 Manpower Development through in-house training and foreign training should be considered an essential ingredient for successful implementation of development projects and for raising the operational efficiency of the existing system. Hence foreign training as well as local training should be encouraged, if necessary, through adequate incentives. Foreign training need for specific project implementation because of its new technological characteristics should be allowed in all cases. On the job training particularly in implementation of major energy projects should be increasingly made binding with a view to acquiring technical know-how and reducing our dependence on foreign experts. There should be a common forum for exchange of new ideas gained through foreign training as well as through practical experiences gathered in different energy fields to ensure dissemination of knowledge and expertise. Participation in the regional and international seminars and workshops should by all means be encouraged in order to keep track of the latest technological development and know-how.

Women's Participation in Power Sector:

12.43.11 With the implementation of power project there will be a lot of job opportunities for execution during implementation period and for operation and maintenance after completion of the project. 20% of these job opportunities may be filled up as per government quota for women (except for some jobs for technical ground). As an indirect benefit of electrification lot of job opportunities will be created for women in the cottage industries, self employment programme and industrial sectors like garments industries, electric industries etc.

Local Input to Power Development

12.43.12 The development projects in the energy sector particularly the transmission and distribution projects of Power and Natural Gas sectors, which are continuous programmes by nature, need materials and equipments in large quantities for their implementation. Efforts will be made to manufacture such type of materials and equipment (like transformers, poles, ACSR conductor, cables, insulators, meters etc.) locally. To ensure markets of such locally produced materials for the investors, agreement regarding supply of materials between the public sector agency responsible for implementing the energy sector projects and private investors should be made before hand.

Private Sector Participation

12.43.13 The Plan emphasises the need for private sector involvement in power development. With the private sector involvement, additional investment is expected which can supplement the future long term energy expansion plan. The plan also permits to undertake generation projects in private sector on Build-Operate-Transfer (BOT)/Build-Operate Own (BOO) principle. The generation based on indigenous coal, peat, surplus furnace oil/Naptha, renewable energy (particularly solar photovoltaic and wind energy) municipal wastes etc. in the private sector may be encouraged by allowing various incentive packages. With the present encouraging policy of the government for private investment, it is expected that some new power plants will be set up in industrial units which will meet their own power demand and thereby reduce the pressure on public sector investment programme.

Need for Vigorous Load Management

12.43.14 Presently the peaking portion of the peak period's demand is abnormally high in Bangladesh, which has led to the creation of excess capacities beyond what is optimally desirable. Because of resource constraint, the Fourth Plan emphasises utilisation of existing capacity to the maximum extent and creating of new capacity on a minimum necessity basis.

In 1995 the generation capability will allow a very small reserve capacity, as a result load management will be needed for reliable power supply particularly during the peak period. Various measures of load management particularly pricing and non-pricing mechanism, closing down of big commercial shops, putting off irrigation pumps, avoiding various unnecessary illumination etc. during peak period may be vigorously pursued during the plan period. Besides, necessary steps may be taken to shift the demand from peak period to off peak period. With proper load management all efforts may be made to raise the present load factor of 58% to at least 60%.

Increasing Productive Use of Electricity

12.43.15 The Fourth Plan intends to rationalise the use of electricity for more productive purposes and avert all sorts of wastages in view of the fact that resources are posing a serious constraint in the Fourth Plan. This will call for formulation of more efficient tariff and non-tariff policies.

REVIEW OF THE PHYSICAL AND FINANCIAL PERFORMANCE

PHYSICAL PERFORMANCE DURING 1990-92

12.44 Physical performance during the First Two Year (1990-92) of the Fourth Five Year Plan was not satisfactory. Only 7 projects out of 45 projects were completed during this period. Problem in the generation sub-sector continued. The country suffered from a tremendous shortage of electricity supply with occasional load shedding due primarily to the following reasons:

(i) Delay in completion of schedule repair/maintenance and due to derated capacity of some of the units.

(ii) Temporary shortfall in the supply on gas due to delay in non-commissioning of North-South Pipe Line.

(iii) Fall in water level at Kaptai Lake resulting in decreased generation.

(iv) Delay in overhauling and renovation of several old Power Plants due to loan suspension of committed assistance, and in commissioning of on-going generation projects.

(v) Poor financial and operational performance.

Besides the diversion of development fund for payment of liabilities including DSL hampered the physical programmes of projects. In the generation sub-sector one project namely Bhaghabari Gas Turbine Power Station was completed adding a generation capacity of 71 MW. The available generation capacity in June, 1992 was 1724 MW (installed capacity 2398 MW) against a peak demand of 1672 MW. (Suppressed). The estimated peak demand of 1800 MW could not be supplied fully in FY 1992 due to shortage in generation capability. During 1990-92 6(Six) projects of BPDB including one TAPP and one project of NRSE were completed.

12.45 In the Transmission sub-sector physical progress was not significant during this period. This is because of the fact that implementation of major on-going projects like Ghorasal-Haripur Hasnabad 230 KV line, seven transmission line project, Kabirpur-Manikganj 132 KV line project were badly delayed. However, substantial progress was achieved on Ashuganj-Comilla 230 KV transmission line and Seven Transmission line project during this period. The pace of progress in the rest of the on-going project like Renovation, Rehabilitation & Augmentation of grid system, second East-West Interconnector are insignificant. One important development in the Power sector was the establishment of DESA to undertake a comprehensive distribution works in the Greater Dhaka Area.

12.46 REB concentrated its efforts during the period largely related to installation of sub-stations, construction of distribution lines and organisation of PBSs. During 1990-91 and 1991-92 5059 KM of distribution line. 3462 KM of distribution line constructed by REB respectively.

FINANCIAL PERFORMANCE DURING THE PERIOD 1990-92

12.47 ADP provision and actual expenditure during 1990-92 is shown in Table 12.14.

Table 12.14

(Taka in crore)

Year	Revised ADP provision			Actual Expenditure		
	Total	F.E.	Local	Total	P.A.	Local
1990-91	997.33	672.63	324.70	552.85	280.16	272.69
1991-92	1069.40	653.54	415.86	1169.91	761.17	408.73
	2066.73	1326.17	740.56	1722.76	941.33	681.42

The above table shows that actual expenditure at current prices was Tk. 1722.76 crore as against allocation of Tk. 2066.73 crore. The reasons for this were paucity of local resources, delay in release of fund, delay in signing of loan contract, problems of financial management etc.

LOAD FORECAST

12.48 The maximum demand as recorded in June 1991 was 1637 MW. Assuming this, the growth rate in power demand has been projected at the rate of 10%. The projected power demand, energy generation capability, and reserve margin up to 1994-95 is shown at Table 12.15.

Table-12.15

Year	Maximum Demand (MW)	Generation Capability (MW)	Firm Capability (MW)	Reserve Capacity (MW)	% of Reserve Capacity over Max. Demand (MW)
1989-90	1509	1832**	1624	325	21.5%
1990-91	1637	1719	1987	82	5%
1991-92	1817*	1724	1574	52	3%
1992-93	2017	2110	1829	793	4.6%
1993-94	2239	2601	2170	362	16%
1994-95	2485	3055	2558	570	22.9%

* Actual Suppressed demand was 1672 MW

** Capability raised to 2225 MW during the 3rd Plan period subsequently reduced to 1834 MW due to rehabilitation and deration of capacity.

Note: Maximum demand projected is based on around 10% Growth Rate annually commensurate with the GDP growth rate of 5%.

PHYSICAL PROGRAMME

12.49 The physical programme for the rest three years (1992-95) of the Fourth Five Year Plan period based on the Revised Fourth Five Year Plan allocation aims at achieving net addition of generation capability of 1019 MW (Including restoration of Capacity of 539 MW), transmission line of 499 KM and distribution line of 2680 KM under BPDB and 17140 KM under REB and 1325 KM under DESA during 1993-95. However, the Power Sector's main activities during the coming three years (1992-95) of the Fourth Five Year Plan will be concentrated mainly on the completion of on-going projects. The details of revised physical targets of the Fourth Five Year Plan along with actual position in 1991-92 is shown in table 12.16.

12.50 The target of achieving the generation capability in the Fourth Five Year Plan has been fixed at 3055 MW to meet a projected load demand of 2485 MW taking into account a reserve capacity of about 23% (570 MW) of the maximum demand. This corresponds to a total installed capacity of 3190 MW. With the available allocation in the public sector as well as other procedural and implementation constraints, the total installed capacity and capability are expected to reach 2878 MW and 2743 MW respectively in the public sector. Therefore, to achieve the plan target of installed capacity and capability of 3190 MW and 3055 MW respectively in 1994-95, an addition of installed capacity of 312 MW will be required during the plan period. This may be made by raising the allocation in the public sector and participation of private sector.

Table 12.16

Agency	Particulars	1989-90 Bench mark position the FFYP (1989-90 actual)	Fourth Plan Target	Actual position 1991-92 (Provisional)	Target	
					Net addition during 1992-95	Cumulative position 1994-95 Revised
Public Sector						
BPDB	- Installed capacity (MW)	2357 (2352)	3356	2398	480	2878*
	- Capability (MW)	2226	3218	1724	1019	2743**
	- Transmission line 230 KV 132 KV & 66 KV (KM)	2829 (2652)	4012	2652	499	3151***
	- Distribution line (KM)	37070	40040 (Including DESA)	34054	2680	36734
	- Consumer connection (No.)	1225000 (1174572)	1600000 (Excluding DESA)	903000	147000	1050000
	- Capacity of Grid Sub-station (MVA)	4718	7339	2459 (Excluding DESA)	6428	4147****
REB	- Distribution line (KM)	35529	83490	44048	17140	61188
	- Electrified village (No.)	8930	23811	10730	3800	14530
	- Consumer Connection (No.)	495565	1282465	708962	254000	962962
DESA	- Distrbutior line (KM)	-	-	4850	1325	6755
	- Capacity of Grids/S/S (MVA)	-	-	1046	1100	2146
	- Consumer connection (No.)	-	-	365000	205000	570000
Public Sector/Private Sector						
Installed Capacity/Capability (MW)		-	-	-	312	312

Note:

1) Installed capacity 2878 MW : 2398 MW + New addition 480 MW.
2) Capability 2743 MW : 1724 MW + New addition 480 MW + Capability increase 539 MW.
3) 3151 KM : 2652 KM + New addition 499 KM - Dismantling 167 KM
4) 4147 MVA : 2505 MVA – New addition 686 MVA - Dismantled 44 MVA
5) Cumulative position of installed capacity in 1994-95 both in Public and Private Sectors will be 3190 MW (2878 MW under BPDB in public sector + 312 MW in public sector/private sector).
6) Cumulative position of capability in 1994-95 both in Public and Private Sectors will be 3055 MW (2743 MW under BPDB in public sector + 312 MW in public/private sector).

FINANCIAL PROGRAMME

12.51 The Draft Fourth Five Year Plan allocation in 1989-90 constant price for the Power Sector was Tk. 6450 crore including Tk. 200 crore under private sector. However, based on the actual expenditure incurred in 1990-91 and 1991-92, allocation made in Revised ADP for 1992-93 and ADP for 1993-94, the revised allocation for Power Sector in the Fourth Five Year Plan, stands at Tk. 4536 crore at constant 1989-90 price (Tk. 5531.71 crore at current prices), the agencywise breakup of which is shown in Table 12.17.

Table-12.17
Revised Fourth Five Year Plan Allocation
at constant 1989/90 price
(at current price)

(In crore Taka)

Agency	Draft Fourth Five Year Plan at constant 1989-90 price	Expenditure 1990-91 (Actual)	Expenditure 1991-92 (Actual)	RADP 1992-93	ADP 1993-94	Balance allocation from 1994-95 out of FFYP allocation	Total FFYP
Public Sector							
BPDB	4236.00 (including DESA)	347.80 (378.75)	745.79 (853.56)	711.20 (858.70)	650.02 (828.00)	532.36 (715.44)	2987.17 (3634.45)
DESA	-	55.34 (60.26)	144.92 (165.86)	193.18 (233.25)	92.64 (118.00)	75.87 (101.96)	561.95 (679.33)
REB	1055.00	104.35 (113.64)	128.82 (147.44)	274.44 (331.36)	254.16 (323.75)	208.15 (279.73)	969.92 (1195.92)
BAEC	1124.94	0.18 (0.20)	0.21 (0.24)	0.17 (0.20)	0.20 (0.25)	0.16 (0.22)	0.92 (0.11)
TAPPs	7.00	0.04 (0.04)	0.05 (0.06)	0.03 (0.04)	8.70 (11.08)	7.13 (-)	15.95 (20.80)
NRSE	24.06	0.09 (0.10	- (-)	- (-)	- (-)	- ( )	0.09 (0.10)
Power Sector	6450.00 (7917.95) at current price)	507.80 (552.99)	1019.79 (1167.16)	1179.02 (1423.56)	1005.72 (1281.08)	823.67 (1106.93)	4536.00 (5531.71)
Private Sector					200.00		200.00 (252.31)
Power Sector (Total)							4736.00 (5784.02)

CHAPTER-XIII

TRANSPORT AND COMMUNICATION

A. TRANSPORT

13.1 Transport on the one hand acts as a catalyst in the socio-economic development of a country and on the other, socio-economic development generates demand for transport. Therefore, an adequate and efficient transport system is a basic requirement for both initiating and sustaining economic development. Transport facilitates expansion of domestic markets by transportation of surplus goods and services from production centres to the centres of consumption. Similarly import and exports are facilitated by efficient transportation.

13.2 No transport system can be conceived without reference to its terrain and geography. Besides, population distribution, level of industrialisation, the general level of economic activity and centres of administrative organisation have a direct bearing on the growth of transport system of a country.

13.3 Transport facilities including infrastructure are not adequate in Bangladesh. Surface transport network of Bangladesh consists of 1.55 lakh Km of roads (including rural and urban) of which 14,000 Km is paved; 2746 route-kilometerage of railways (BG-924-Km, MG-1822 Km) and 5200 Km of perennial waterways which increases to 8372 Km during the monsoon. Thus there are only 9.70 Km of paved roads, 1.91 Km of railways and 3.61 Km of perennial waterways per 100 sq. Km in the country. The terrain is deltaic, criss-crossed by a large number of rivers and inundated by annual floods making construction as well as maintenance of roads and railways costly and difficult. Again, millions of tons of silts carried by the river make it difficult to keep the waterways navigable. The high cost of construction and maintenance together with resource constraint makes the infrastructure for transportation of Bangladesh the least developed.

13.4 The subsistence nature of the economy, major demand for freight traffic originating from arterial movement of export and imports and some historical, political and economic factors have also contributed to the present status of transport network of Bangladesh. Inspite of the situation, transportation sector contributes about 8 per-cent to the incremental output of GDP of which the contribution of the road sub-sector is about 50 percent.

13.5 The transport system of Bangladesh consists of railway, road, inland waterways, two sea ports, maritime shipping and civil aviation catering both domestic and international traffic. While railways and inland water transport continue to bear the main burden of bulk of long haul traffic, road transport has been assuming an increasingly important role in the movement of short haul traffic, particularly the manufactured and perishable goods. This trend will further be intensified with expansion of the road network, both arterial and local.

13.6 Provisions for infrastructure facilities such as roads, railways, ports, airports etc., rest in the public sector. The railways and the civil aviation sub-sectors, are entirely in the public sector. While infrastructural facilities in the road and water sub-sectors are provided by the Government, operation in these sub-sectors are dominated by the private sector. Though primarily construction of roads is the responsibility of public sector, the institutional responsibility for the construction and maintenance of rural roads including connection of growth centres and market places is entrusted with the local government institutions and the LGED. Municipal roads are constructed by the respective municipal authorities. The Roads and Highways Department is responsible for construction and maintenance of arterial roads including Thana connecting roads.

13.7 Development of rural transport system is very vital for the overall development of rural economy. Production, distribution and marketing of rural products call for improvement of rural transport facilities. To keep pace with the development of transport system, rural road networks need be developed adequately so that they can feed the arterial road system. Transport system in the rural areas is not properly linked with the arterial system. Planning, resource allocation and implementation of rural transport development programmes are included within the overall programme for rural development.

REVIEW OF PAST DEVELOPMENT

13.8 Public Sector allocation in the transport sector during the past plan periods are shown in Table-13.1

Table-13.1: Public Sector Allocation in the transport sector During Various Plan Period.

(Tk. in crore)

Mode	First Five Year Plan	Two Year Plan	Second Five Year Plan	Third Five Year Plan
Rail	126.13	123.08	413.39	836.00
Road	149.61	168.79	409.02	1020.00
Water	186.22	109.86	316.87	571.00
Air	65.65	48.27	147.18	210.00
Total Transport Sector	527.41	450.00	1287.00	2637.00
Transport sector allocation as percentage of Total Public Sector Plan Allocation	11.85	13.79	11.59	10.55

13.9 It will be seen that the share of the transport sector has declined from 11.85 per-cent in the First Five Year Plan to 10.55 percent in the Third Five Year Plan although the investment size in current price has increased in absolute terms.

13.10 Basic strategies followed during the First Five Year Plan and the Two Year Plan (1973-80) were to rehabilitate the transport system intensively demaged during the War of Liberation and to expand the system marginally in the areas where these were essential. These were pavement of 804.5 Km of roads, construction of ZIA International Airport, construction of five permanent jetties at Mongla Port, procurement of some railway locomotives, coaches and wagons and 18 ocean-going ships, etc.

13.11 The Second Five Year Plan (1980-85) emphasised the provision of transport facilities commensurate with the increasing productive activities of the economy. It also aimed at developing a network of feeder roads connecting rural growth centres with particular emphasis on improvement of operational efficiency of public sector transport agencies. Performances of the Second Five Year Plan was, however, characterised by the decline in efficiency. Maintenance problems affected both railways and roads. In fact, the transport sector development, particularly in Railways, was characterised more by procurement from abroad rather than maintenance and utilisation of the existing productive assests. Similarly, there were inadequate allocations for maintenance of the existing roads. On the contrary, there were haphazard development of roads without due regard, in many cases, to existing or potential traffic density. Also feeder roads were constructed witthout due regard to overall water management perspective aggravating the problems of floods. As far as water transport is concerned, navigability conditions of channels have deteriorated. Besides, poor maintenance of existing IWT vessels in the public sector, failed to get its shares, both passenger and cargo, in competition with the private sector.

13.12 Emphasis laid on the Second Five Year Plan to consolidate the transport system and increase better utilisation of the existing assets continued during the Third Five Year Plan. A policy for adoption of a strategy to encourage efficient use of existing facilities through appropriate tariff adjustment on the basis of intermodal transportation economics and liberal provision of spare parts for maintenance of existing fleet was recommended. While tariff adjustments were made to a certain extent, maintenance conditions in all modes of transport remained poor. As a result, in spite of the tariff adjustment in a limited scale financial deficit of the railway continued to increase.

13.13 In general low productivity of the capital assests in varying degrees was the common feature of all modes of public sector transport. In fact capital out-put ratio remained as high as five.

EVALUATION OF THE THIRD FIVE YEAR PLAN (TFYP)

A. Road and Road Transport

13.14 The road transport has been playing an increasingly dominant role in the socio-economic development of Bangladesh and it turned out to be the largest mode for inland transport of the country

Speed, flexibility, increased geographical coverage, its ability to offer personalised and door to door service, reduced terminal handling cost and a combination of arterial and local service operations have made it to be the preferred mode of transport for small consignments, specially for perishables and fragile goods.

13.15 In view of the growing importance of the road transport system, a sum of Tk. 1020 crore were allocated in the public sector for this sub-sector. Out of this amount Tk. 780 crors were earmarked for the Roads and Highways Department for construction and development of roads and bridges and other ancillary works. Remaining Tk. 240 crores were earmerked for the Jamuna Multipurpose Bridge Authority (Tk. 200 crores) and Bangladesh Road Transport Corporation (Tk. 40 crores). In addition, a sum of Tk. 345 crores was made available to the Roads and Highways sub-sector from the block allocation kept in the TFYP for Thana infrastructure and Special Chittagong Hill Tracts Plan.

13.16 The Major programme of the sub-sector included (a) Construction of 1288 Km of paved roads, (b) construction of 15,244 metres of bridges including Buriganga, Megna and Gorai, (c) Upgrading of Nagarbari-Rajshahi, Nagarbari-Dinajpur, Dhaka-Chittagong, Chittagong-Cox's Bazar and Tangail-Mymensingh Highways, (d) Construction of about 2896 Km of paved roads and 9146 metres of bridges and culverts under Thana connecting road programe, (e) Construction of about 1220 metres of bridges and culverts and 320 kilometres of paved road under special CHT Project and (f) procurement of equipments and ferries for Roads and Highways Department. In addition, the plan laid stress on the feasibility study and construction of a multipurpose bridge over the river Jamuna. The programme for BRTC included replacement of 275 buses.

ROADS AND HIGHWAYS DEPARTMENT (RHD)

13.17 The TFYP allocation for regular projects of RHD was only Tk. 780 crores at 1984/85 prices. The allocation was inadequate relative to the needs of the sub-sector. Inclusion of additional projects not originally envisaged in the plan and damages of roads due to the devastating floods during 1987 and 1988 necessitated additional allocation for RHD. Consequantly, actual allocation made for the sub-sector was Tk. 1256.60 crore at current prices during the Plan period. In terms of 1984/85 prices, the allocation was Tk. 1091.39 crore representing a higher allocation by 40 percent. Actual amount spent by RHD, however, is estimated at Tk. 1294.61 crore.

13.18 In addition to the allocation for normal projects, RHD was provided with an allocation of Tk. 262 crore at current prices for the Thana connecting road project by the NICAR (National Implementation Committee for Administrative Reform). Actual utilisation was Tk. 279.48 crore, at current prices. Besides, Tk. 103.30 crore at current prices was allocated for construction of 15 roads under special CHT plan. Actual expenditure for special CHT road projects during the Plan period has been Tk. 103.85 crore.

13.19 The plan enlisted 137 projects for implementation including 127 on-going projects at various stages of implementation. Thirty six new projects, in addition to the projects originally included, had to be included during the Plan period without any increase in the sectoral allocation. In spite of the this, physical performance of RHD was satisfactory during the TFYP. Under the regular programme, 744 Km of paved roads (including partly paved road), were added to the road network and a total of 10,249 metres of bridges and culverts (including Bailey Bridges) were constructed during the Plan period. Under Thana connecting road project, 718 Km of paved road (including partly paved) were added to the Thana road system making a total of 1882 Km. In addition to the paved roads and partly paved roads, 570 Km of brick paved roads were constructed during the plan period. Besides, 9357 metres of bridges and culverts were constructed. Under special CHT road project 15 roads were taken up for construction and 98 Km of paved roads and 185 Km of partly paved roads could be completed upto June 1990. A comparative position of the category wise length of paved (including partly paved) road network under RHD in mid-1990 against that in mid-1985 is presented in Table-13.2.

Table-13.2 Comparative Position of Category-wise Paved Roads.

Category of roads	Length in Km Mid /1985	Mid /1990
a) Regular programme :		
i) National Highway	2681	2736
ii) Regional Highway	1036	1219
iii) Feeder Roads	1233	1739
Sub-Total :	4950	5694
b) Thana Connecting Roads	1164	1882
c) Special CHT Roads	103	386
Total :	6217	7962

The main focus of the development programme of RHD during the plan period was on rehabilition/ improvement of arterial road network, bridging the major river gaps, connecting Thana head quarters and Growth Centres with all-weather roads and development of roads in the CHT region. The Khulna-Mongla Road connecting the Mongla port, Feni by-pass and Comilla-Chandina by-pass on Dhaka-Chittagong Highway, Goalanda Daulatpur Road, of the arterial road network were completed during the plan period. Some major bridges like Buriganga bridge at Postagola , Khiro Bridge, Sherpur and Halda bridge , Kanchan bridge, Shango bridge, Thakurgaon Station Road bridge. Ghagot bridge, etc. were also completed during the plan period. Three infrastructural projects namely, Strengthening of Central Road Research Laboratory, 'Procurement of equipment, machinery, transport and portable bridges' and 'Modernisation and improvement of Ferry and Ferry Ghats' were also completed. Besides, the construction of important Bridges like the Meghna Bridge and the Karnafuli Bridge were almost completed. Six hundred and forty two Km of arterial roads system in the north-western and the eastern region of the country were taken up for rehabilitation and maintenance under two major investment projects namely, 'Road Rehabilitation and Maintenance Project' and 'Road Improvement Project'. To maintain an improved road transport linkage with agricultural surplus areas of the greater Mymensingh district, a feeder road development project was taken up with ADB assistance. In addition, construction of 25 bridges with ODA assistance was also taken up for implementation.

Bangladesh Road Transport Corporation (BRTC)

13.20 Bangladesh Road Transport Corporation is the only public sector agency to provide road transport serives. In line with the Government policy, the Third Five Year Plan laid emphasis on the private sector for operation of road transport services. As such no expansion of the fleet strength of BRTC was envisaged during the TFYP except for replacement of its condemned buses in a progressive manner. For this purpose, a sum of Tk. 40 crore was allocated to enable replacement of at least 275 buses. For augmentation of operational and financial performance it was envisaged in the plan that the scale of operation of BRTC should be restricted, a competitive pricing policy should be pursued, existing workshops, training and maintenance facilities should be optimally utilised and vehicle presonnel ratio is to be rationalised.

13.21 The performance of BRTC during the plan period both in financial and physical terms was satisfactory. During the plan period, 286 (266 Tata buses and 20 Asoke layland double-deckers from India) buses were procured. Besides, 14 ISUZU buses were rehabilitated with the Japanese assistance. In total, Tk. 27.38 crore was spent by BRTC to accomplish the above task and also for the payment of arrear liability of the SFYP amounting to Tk. 3.59 crore. Although procurement of trucks was not envisaged in the Plan period and no allocation was made for the purpose, 65 trucks costing Tk. 7.44 crore procured initially by the Food Department was transferred to BRTC and another 25 trucks were purchased with the Corporation's own resources.

13.22 In 1990 the BRTC with 208 road worthy buses out of its fleet strength of 534 buses, operated on 90 routes. The fleet of trucks in 1990 was 333 of which 210 were road worthy. During TFYP, BRTC carried 5803.8 million passenger-Km and 248.8 million ton Km. The share of BRTC in the overall passenger and freight traffic by road in 1990 was 5 percent and 1.75 percent respectively. Comparative fleet position of BRTC in 1985 and 1990 is presented in Table 13.3.

Table-13.3 Fleet Position of BRTC

Fleet	1985 Total	1985 Roadworthy	1990 Total	1990 Roadworthy
Bus	627	405	634	208
Truck	186	168	333	210

Jamuna Multipurpose Bridge Authority (JMBA)

13.23 To support the economic integration of the potentially productive but relatively isolated north-west region of the country with the eastern-central markets and energy sources and to generate economic activity by a substantial reduction in transport costs across Jamuna river, the Government decided to construct a multipurpose bridge over the river Jamuna and attached very high priority. The Third Five Year Plan provided an allocation of Tk. 200 crore for undertaking a detailed feasibility study leading to a bankable project, and preliminary construction work of the bridge. Accordingly, a two-phase study was taken up in 1985-86. In the first phase, the characteristics and configuration study was completed in 1986 and a corridor 10 km south of Sirajganj was selected for construction of the bridge. The Second phase study commenced in June, 1987 involving economic analysis, detailed engineering design, river training, preparation of bidding documents etc. The final report of the second phase study has been submitted. According to the recommendations of the study report, construction of both a 4 lane road-cum-rail and a four lane road without rail bridge was found viable. The final report is being examined by the development partners for possible participation in financing the construction of the bridge. A total of Tk. 46.02 crore was spent on the study during the plan period. In addition, the JMBA took advance action for acquisition of land for construction of the bridge under a separate project. A sum of Tk. 22 crore has been allocated to defray the cost of land acquisition.

Private Sector

13.24 Private Sector involvement in the road transport sector is limited to provisions of road transport services, which they dominated overwhelmingly. About 98 percent of freight and 95 percent of passenger traffic by road are in the private sector. Encouraged by the response of the private sector during the Second Five Year Plan, an indicative allocation of Tk. 955 crore was made in TFYP for greater participation of the private sector as compared to an allocation of Tk. 534 crore in SFYP. Taxes and duties were also liberalised to provide incentives to the private sector. It was estimated that the private sector investment in mechanised transport during the plan period was almost to the tune of the entire amount of allocation. A comparative position of the mechanised fleet strength owned by the private sector in 1984-85 and in 1989-90 is presented in Table-13.4.

Table-13.4 Mechanised Road Transport Fleet Strength of Private Sector

Type of vehicle	Vehicle number 1984-85	1989-90
Bus	8883	11585
Truck	17107	23008
Mini-bus	6079	11912
Private Car	48998	83655
Jeep	9000	10100
Taxi	2000	3000
Auto-Rickshaw/Auto Tempo	16543	24739
Tractor	2575	4125
Motor cycle	80754	161486
Trailor	1030	1562
Others	3065	4501

Source : Bangladesh Road Transport Authority (BRTA).

13.25 In order to ensure safety, channeling transport services on the desired routes, ensuring discipline in operation and quality of services, reasonable level of tarrif and fare-structure, control of environmental pollution and discouraging undue competition, Governmental intervention becomes necessary. Governmental interventions in the road transport sector are generally in the form of (a) registration and licensing of vehicles (b) issuance of route permits, (c) setting passenger fares and freight rates, (d) capacity regulation and (e) periodic inspection and checking. The government virtually plays the role of a moderator in the process of rivalry between users and operators. Again the limited role indicated above was, hitherto, played by various authorities. In order to ensure proper regulation and control under an unified authority, the Government has set up a statutory organisation. The Bangladesh Road Transport Aurhtority (BRTA) by promulgation of an ordinance namely Motor Vehicles (ammendment) Ordinance, 1983 for overall control, management and supervision of road transports in Bangladesh. Since the creation of the Authority, its function remained restricted due to physical and financial limitations. It is expected that the Aurhority will play a dominant role in the regulation and control of operation of vehicles, more particularly in the areas of road safety and environmental pollution control.

B. Railway Transport

13.26 Since its inception in 1862, Railway has been the most important mechanized mode of transport in Bangladesh for over a century. Following expansion of road network and road transport services and large scale mechanization of inland water transport in mid sixties, railway lost its monopoly role. After liberation, building of road network and mechanization of inland water transport got further momentum with the result that railway is at present carrying only about 10-15 percent of the total freight and 20-25 percent of the total passenger traffic carried by all mechanized modes of surface transport. However, the past few year's trend confirmed that although Railway has been loosing short haul passenger and freight traffic to comparatively more flexible road transport, its share has gradually been increasing in long haul passenger and bulk freight movement. Besides, with the exception of some riverine southern districts, it is still the cheapest mode of mass transport of freight and passenger. Total Railway route kilometrerage in Bangladesh is 2746, which consists of 924 Kms of Broad Gauge (1.68 metres) and 1822 Kms of Metre Gauge (1.00 metre). In 1988/89, it possessed a fleet of 307 locomotives (BG-75;MG-232), 1468 passenger carriages (BG-336; MG-1132), 207 other coaching vehicles (BG-54; MG-149) and 18674 (BG-4557; MG-14117) freight wagons in terms of four wheelers. The existing railway system of the country is divided into two zones by the river Jamuna (Brahmaputra) which flows in the North-South direction. Two halves of the system are linked by ferries at Bahadurabad and Jagannathgonj.

13.27 Railway Programme in TFYP laid greater emphasis on more efficient utilization of existing facilities and improvement of the quality of services rather than expansion of the system. Thus the main thrust of investment of BR during TFYP was towards rehabilitation of the system, improvement of repair and maintenance facilities and attainment of higher standards of operational efficiency by optimum utilization of available assets. Against these overall objectives, the performance of the BR during the TFYP are summerised under the following headings :-

Project Implementation and Utilization of Fund

13.28 In the TFYP, a total sum of Tk. 836.00 crore at 1984/85 prices was provided to the Bangladesh Railway for implementation of 40 investment and 3 technical assistance projects. During the Plan period, a total of 33 investment (5 projects not included in TFYP initially) and 3 technical assistance projects could be undertaken for implementation. By June, 1990, 17 investment projects, (5 of which in reduced forms) and 3 technical assistance projects were completed. Besides, after some initial investment, 1 project (Construction of an Office Building for the Railway Head Quarters at Dhaka) has been dropped from TFYP. Thus 15 investment projects of the TFYP have been carried forward to the Fourth Five Year Plan.

13.29 Out of the total plan outlay of Tk. 836.00 crore, an allocation of Tk. 601.66 crore at current prices was made available through the Annual Development Programmes during the TFYP period. This was Tk. 536.87 crore (64.22% of the total plan outlay) at constant prices of 1984-85. Actual expenditure at constant prices of 1984-85 was Tk. 583.94 crore at the end of the TFYP, which is 69.85% of the total plan outlay.

Physical Programme and Performance

13.30 Major development programmes of the Bangladesh Railway during TFYP and achievements thereof are as follows :-

(a) **Rehabilitation of tracks and bridges** : For attaining higher speed with safety, rehabilitation of 547.80 Km of MG and 378.20 Km of BG track was targetted in TFYP. The rehabilitation of 313.12

Km (57.16%) of MG and 38.33 Km (10.13%) of BG track including 182 bridges on the MG section and 40 bridges on the BG section were completed during the TFYP. To augment renewal/rehabilitation of BG tracks a plant for manufacturing 75,000 nos. of MG Mono-block pre-stressed concrete sleeper annually went into production in 1989. About 1337 Km of MG and 317 Km of BG tracks and 195 nos. of MG and 113 nos. of BG bridges were affected by the devastating floods of 1987 and 1988. The rehabilitation of these tracks and bridges were undertaken under the assistance of Asian Development Bank (ADB). Major portion of the flood damaged rehabilitation programme was completed during TFYP.

(b) **Procurement/Repair/Rehabilitation of Rolling Stock** : The programme envisaged procurement of 20 MG and 5 BG locomotives; 5 MG air-conditioned coaches; 181 MG and 21 BG passenger carriages. In addition to these 300 MG and 150 BG passenger carriages and 1875 MG and 225 BG wagons were programmed for repair/rehabilitation during the Plan period. Against these targets, procurement of 181 MG passenger carriages (60 from Romania, 61 from India and 60 from South Korea) were accomplished during TFYP. Besides, 16 main line diesel electric locomotives were also procured under the CIDA assistance. Out of the targetted local construction of 120 MG passenger carriages, construction of 60 passenger carriages were completed in BR's own workshop. In addition, 375 MG and 225 BG wagons were rehabilitated under the 'Fertilizer Transport Project' and 243 MG and 100 BG passenger carriages and 1500 MG wagons have been either rehabilitated or taken up for repairs/rehabilitation under different projects during the plan period.

(c) **Development of Repair and Maintenance Facilities** : The investment programme included establishment of a modern workshop for heavy repair and major overhauling of 100 diesel locomotives annually; expansion and modernization of the existing facilities for wagons and carriages at Pahartali and Saidpur workshops; improvement of Parbatipur diesel locomotives shop/sheds and upgrading of 4 coaching depots, 10 wagon depots and a locomotive depot at Pahartali. While the physical work of establishment of a diesel locomotive workshop at Parbatipur has started at the end of TFYP, the expansion and modernization of existing facilities for wagon and carriage workshop at Pahartali and Saidpur and diesel workshop/sheds at Parbatipur were almost completed. The upgrading of 4 coaching depots and 9 wagon depots were also completed.

(d) **Improvement of the Signalling and the Telecommunication System** : The programme during TFYP included modernization of signalling equipments at 6 stations in Mymensingh-Jamalpur-Dewangonj Bazar section and four Junction stations i.e. Kulaura, Shaistagonj, Bonarpara and Kaunia; provision of signalling with approach warning at 25 special and 'A' category level crossing gates and establishment of an integrated tele-communication system for the Railway. Modernization of signalling equipment at 9 stations could not be undertaken during the TFYP period due to non-availability of foreign funds. However, modification of the single line relay interlocking to double line relay interlocking at 4 stations on the Dhaka-Chittagong section and the relay interlocking of Santahar and Ishurdi Junction Stations and signalling with approach warning at 25 level crossing gates have been completed. Besides, substantial progress was made in the establishment of an integrated tele-communication system for BR under financial and technical assistance of Norway.

(e) **Construction of Office and Housing Facilities** : Construction of office and residential accommodation for officers and staff for GM/West at Rajshahi, construction of office buildings for Railway head-quarters at Dhaka and 96 units of residential quarters at Dhaka were programmed for TFYP. The construction of 96 unit (6422 sq. metre) of residential quarters at Dhaka were completed. Besides, shifting of the Railway Hospital from Tulbaria to Kamlapur was also completed. At Rajshahi 20 units (2447 sq. metre) of residential quarters and piling works of office accommodation are expected to be completed by June, 1990. However, due to acute resource constraints, after some initial investment the construction of an office building for Railway Headquarters at Dhaka has been dropped from the TFYP.

(f) **Development of Passenger Facilities** : To provide basic facilities at stations for different classes of passengers, construction of 69 platform sheds, 8 foot over-bridges, 34 raised platforms, 17 combined 1st and 2nd class waiting rooms, 48 3rd class ladies waiting room, electricity at 76 stations, R.C.C. benches at 100 stations etc. were programmed for TFYP. Out of these 27 platform sheds, 3 foot over bridges, 17 raised platforms, 7 combined 1st and 2nd class waiting rooms, 26 3rd

class ladies waiting rooms, electricity at 32 stations, R.C.C benches at 100 stations, etc. has been completed during TFYP.

Operational Performance

13.31 The operational performance of the Bangladesh Railway during the TFYP are summerised under the following sub-headings :-

(a) **Freight Traffic :** Table 13.5 presents the achievement of BR in freight transport as compared to what was targetted during TFYP. The trends show some sort of stagnation in the operation of freight traffic.

Table-13.5: BR's Targets and Achievements with Regard to Freight Traffic During Third Five Year Plan (TFYP)

		1985/86	1986/87	1987/88	1988/89	1989/90
(a)	Freight tonnage (in million) :					
	Target	3.10	3.20	3.40	3.80	4.30
	Achievement	2.34	1.98	2.52	2.50	2.41
(b)	Tonnes- Km in (million) :					
	Targets	815.40	843.78	898.72	1006.88	1142.08
	Achievement	612.23	502.60	678.27	665.94	643.48
(c)	Average lead (in km) :					
	Target	263.04	263.68	264.32	264.96	265.60
	Achievement	261.50	253.30	269.50	267.10	267.00

Source: Bangladesh Railway.

(b) **Passenger Traffic :** Table 13.6 presents the performance of BR with regard to passenger traffic. It would be evident that except 5th year of the TFYP, there has been continuous decline in this regard. This is perhaps due to the redirection of railway passengers towards road transport and large scale ticketless travel. Although the volume of traffic has drastically fallen, decline with regard to passenger Km is not that steep. The average lead of a passenger has also increased. This indicates that although the short distance traffic has decreased, there has been an increase in long distance traffic. This is perhaps due to introduction of Inter-city trains.

Table-13.6: BR's Targets and Achievements with Regard to Passenger Traffic

		1985/86	1986/87	1987/88	1988/89	1989/90
(a)	Nos of Passenger (in million) :					
	Target	108	108	108	108	108
	Achievement	82.00	72.32	53.00	50.80	55.38
(b)	Passenger-Km (in million) :					
	Targets	6441.92	6457.60	6473.12	6490.83	6505.92
	Achievement	6005.26	6027.20	5052.18	4338.31	5069.57
(c)	Average lead (in km) :					
	Target	59.65	59.82	59.94	60.10	60.24
	Achievement	73.20	83.30	95.30	85.40	91.50

Source: Bangladesh Railway.

(c) **Operational Efficiency :** The operational efficiency (major performance indicators) of BR during the TFY plan period is furnished in Table- 13.7. From the Table it appears that the operational efficiency of Bangladesh Railway during the plan period has not shown any improvement. Rather, in some cases it remained either stagnant or deteriorated as compared to the situation during the initial year of TFYP.

Table-13.7: Operational Efficiency of Bangladesh Railway During the Third Five Year Plan (TFYP)

	Item		1985/86	1986/87	1987/88	1988/89	1989/90
1.	Passenger Movement :						
	1.1 Percentage of passenger carriages actually available for effective services	BG	70	67	73	65	60
		MG	83	86	84	85	85
	1.2 Vehicles Km per vehicle day for on line passenger carriages (four wheelers)	BG	218	230	207	202	192
		MG	195	207	218	183	183
2.	Freight Movement						
	2.1. Percentage of freight wagons actually available for effective services	BG	61	57	75	83	76
		MG	70	70	71	91	88
	2.2 Net ton-km per wagon day (four wheelers)	BG	151	115	184	159	102
		MG	104	86	90	101	87
	2.3 Average turn-round day of covered wagons (four wheelers)	BG	15.0	27.1	31.0	23.2	23.9
		MG	25.6	31.7	36.2	19.0	13.1
	2.4 Average speed of through goods train (KPH)	BG	11.2	11.9	11.9	12.1	11.7
		MG	10.0	10.7	10.7	10.2	10.3
3.	Locomotive Movement						
	3.1 Percentage of diesel locomotives actually available for effective use	BG	72	73	75	71	67
		MG	80	77	75	74	71
	3.2 Engine Km per day per engine in use (all engines)	BG	282	322	298	299	299
		MG	272	288	295	277	273
	3.3 Engine Km per day per engine in use (goods engines only)	BG	161	153	167	175	143
		MG	162	164	170	178	164

Source : Compiled from the Bangladesh Railway Information Book, 1986, 1987, 1988, 1989 and 1990.

Financial Performance

13.32 The financial performance of BR during the plan period is furnished in Table - 13.8. It can be seen that BR has been maintaining negative net annual operating income of more than 90 crore during the TFYP. It rose to 120 crore during 1987-88. Although, 1988-89 figure shows some substantial improvement and the negative net operating income has came down to Tk. 98.20 crore, it again increased to Tk. 110.30 crore during 1988-89.

Table-13.8: Financial Performance of Bangladesh Railway during Third Five Year Plan (TFYP)

	Item	1985/86	1986/87	1987/88	1988/89	1989/90
1.	Revenues from passenger carried, in crore taka (percentage of total revenues)	60.40 (37.9)	71.85 (44.9)	66.77 (39.0)	68.67 (39.0)	83.50 (41.0)
2.	Other coaching earning in crore taka (percentage of total revenues)	15.99 (10.0)	14.99 (9.4)	15.19 (8.9)	14.64 (8.3)	13.64 (6.7)
3.	Revenues from freight carried in crore taka (percentage of total revenues)	72.10 (45.3)	60.50 (37.8)	80.34 (46.9)	79.48 (45.1)	87.81 (43.3)
4.	[a]Total operating revenues in crore taka	159.29	160.12	171.20	176.13	203.01
5.	Total operating expenditure in crore taka	251.02	250.40	291.52	274.37	313.34
6.	Net operating income in crore taka	(-) 91.73	(-) 90.30	(-) 120.32	(-) 98.23	(-) 110.33
7.	Operating ratio (total expenses as a percentage of total earnings)	157.6	156.40	170.30	155.80	154.40

a. includes miscellaneous revenue earnings
Source : Bangladesh Railway Information Book, 1986, 1987, 1988 and 1989.

C. Water Transport

13.33 Bangladesh has got over, 5,200 Km. of perennial waterways which increase to 8,372 km. during the monsoon. As a result, IWT is the most suitable mode of transportation which keeps the link between urban centres and the countrysides particularly during the rainy seasons. IWT is rural in character as it reaches many outlying rural populations which are more or less, inaccessible by roads and railways. Besides, as already mentioned, costs of building and maintenance of roads and railways are very high compared to those of the water transport. The network not only caters for inland movement of freight and passengers but also plays a key role in the transportation of imports and exports to and from the sea ports of Chittagong and Mongla. Moreover, in the coastal areas as there is no rail and road transportation facilities, the water transport is the only means of transport for the people living in the region. The development of IWT is, therefore, very vital for effective and successful implementation of economic development programme and alleviation of poverty in the country.

13.34 Inland water transport services are dominated by the private sector. It is in trun dominated by the non-mechanised country boats and small operators of mechanised vessels. The share of the private sector on freight and passenger traffic was about 88 percent and 96 percent respectively in 1986/87. The country boat provides for about 58 percent of the total employment in the transport sector as a whole. Within the IWT sector, the country boat sector provides 94 percent of the total employment. The devastating flood of 1988 inundating about three-fourths of the country has highlighted the critical importance of the IWT sector as a means of transportation in the country during floods.

13.35 The public sector activities in the IWT sector are generally confined to development and maintenance of waterways, regulation and control, training of marine personnel, building and maintenance of ports and launch landing stations, provisions of ferry services and operation of larger vessels on relatively long hauls and coastal routes. The above services are provided by the Bangladesh Inland Water Transport Authority (BIWTA) and Bangladesh Inland Water Transport Corporation (BIWTC).

13.36 Movement of cargo and passenger traffic during the TFYP by mechanised vessels in Inland Waterways is given in Table 13.9.

Table-13.9 Cargo and Passenger Movement by Mechanised Vessels

Year	Cargo (Million ton)	Passenger (Million Nos.)	Share of the public sector Cargo (Million ton)	Share of the public sector Passenger (Million Nos.)
1985/86	5.90	135.92	0.88	5.73
1986/87	6.38	139.22	0.79	5.70
1987/88	7.21	132.26	0.78	5.06
1988/89	7.98	136.99	0.77	5.29
1989/90	8.57	141.13	0.62	5.17

Source : BIWTA.

Bangladesh Inland Water Transport Authority (BIWTA)

13.37 This authority is responsible for building and maintenance of inland water ports, maintenance of navigational channels, provision of navigational aids and regulatory functions such as issuance of route permits, determination of freight and fares etc. In order to maintain navigational channels and ensure safety measures, the Authority is required to carry out hydrographic survey and hydraulic investigation to keep the record of hydraulic changes of water regime and to take appropriate action.

Allocation, Targets and Achievements in the Third Five Year Plan

13.38 Originally, BIWTA was provided with Tk. 88 crore for implementation of 19 projects. Subsequently, another 12 new projects were included in the plan period. Out of these 31 projects, only 28 projects could be taken up for implementation of which 20 projects were completed during the Plan period. Total expenditures in this sector during TFYP plan period was Tk. 71.34 crore representing 87.38 percent of the total Plan allocation. Physical targets and achievements of BIWTA during TFYP are shown in Table 13.10.

Table-13.10 Physical Targets and Achievements of BIWTA During Third Five Year Plan (TFYP)

Area of development	Unit	Targets for TFYP	Achievement
a) Development of major waterways	Km	171	164
b) Development of major and secondary river ports	Nos.	2	2
c) Dredging	Million Cu.M	2.3	2.1
d) Launch landing stations			
i) Rehabilitation/Replacement	Nos.	75	2
ii) New	Nos.	75	0
e) Survey vessels	Nos.	3	0
f) Major ferry terminals	Nos.	4	4

Source: BIWTA.

Bangladesh Inland Water Transport Corporation (BIWTC)

13.39 BIWTC is responsible for providing passenger and cargo services in inland waterways and also in coastal areas of the country. It also provides ferry link services between the road gap at Aricha-Nagarbari, Aricha-Daulatdia, Bhuapur-Serajganj, Mawa-Charjanajat and Firingi bazar-Patharghat. In pursuance of the Plan strategy, BIWTC was provided with an allocation of Tk. 34 crore mainly for procurement of 4 Ro-Ro ferries and rehabilitation of floating dock. Subsequently, having considered the increasing demand of traffic, procurement of another 4 ferries (2 to be imported and 2 to be built locally) was taken-up during the plan period. Against the programme, 4 Ro-Ro ferries, 2 Ro-Ro feries and 2 pontoons and rehabilitation of the existing floating dock were in progress at local B.S.E.C. dockyards and BIWTC dockyards respectively.

Besides, Ro-Ro Ferry Shahjalal, was burnt in an accidental fire and the same was rehabilitated during the Plan period.

13.40 The BIWTC showed a mixed performance in carrying traffic during the TFYP. While both passenger and vehicle carried showed moderate increase, cargo carried indicates substantial decrease. The performance of BIWTC during TFYP is shown in Table 13.11.

Table-13.11 Performance of BIWTC during Third Five Year Plan (TFYP).

Year/Item	Cargo Carried (Tons)	Passenger Carried (Nos)	Vehicle Carried (Nos)
1985/86	8,76,603	57,29,552	4,08,436
1986/87	7,94,150	56,98,024	4,05,362
1987/88	7,83,074	50,58,241	3,81,534
1988/89	6,38,458	58,22,247	4,88,617
1989/90	5,31,387	64,03,510	5,84,619

Source : BIWTC.

Private Inland Water Transport

13.41 The private sector plays a dominant role in the Inland Water Transport sector. Out of 5391 registered vessels operating in the waterways during 1984/85, 4858 vessels (90%) belong to the private sector. Following the Govt. decision to promote gradual privatization of the Inland Water Trasnport sector, an amount of Tk. 531 crore was earmarked in TFYP for the private sector. During July, 1985 to December,1989, 1054 new vessels of various categories were procured and registered in the private sector. Besides, 12 bay crossing second hand coastal oil tankers with a total capacity of 13633 DWT and 4 second hand bay crossing coastal vessels with capacity of 4783 DWT were acquired in the private sector during the plan period.

Bangladesh Shipping Corporation (BSC)

13.42 During TFYP, BSC was provided with an allocation of Tk. 51 crore for implementation of 7 projects which include procurement of ships and construction of the head office building at Chittagong. The allocation was given mainly for making downpayments for acquisition of ships. Against this allocation an amount of Tk. 129.87 crore have been spent during the plan period representing 255% of the plan allocation.

13.43 Physical targets for this sub-sectors were to procure 11 cargo ships and 2 lighterage oil tankers and a mother tanker under new/replacement programme so that the fleet of BSC vessels could consist of 34 ships at the end of plan. Against this target BSC could only procure 2 lighterage oil tankers and 4 dry cargo vessels during the TFYP. However, a contract for procurement of another new vessel was signed with China and funds for acquisition of two second hand containerised feeder vessels and procurement of two new 9,300 DWT, 860 TEUs fully containerised vessels were arranged from the Islamic Development Bank and Pakistan respectively, which are expected to be implemented during FFYP. Besides, a new project for procurement of 12 grain conveyor machines which were not originally included in the plan has been implemented. The construction upto fourth floor of the BSC head office building at Chittagong was completed during the plan period.

13.44 In 1980-81, BSC had a fleet of 25 vessels with a capacity of 3.92 lakh DWT. In the same period, the private sector had only 2 vessels with a capacity of 0.19 lakh DWT. During 1988/89 (upto December 1988), the BSC fleet strength has reduced to 22 with a capacity of 2.87 lakh DWT, while the private sector has increased its number of ships of 21 with a capacity of 1.87 lakh DWT. This indicates that private sector is coming up in a big way although most of their vessels are engaged in tramping. The cargo carried by BSC and the private sector during the TFYP period is shown in Table-13.12.

Table-13.12 Cargo Carried by the BSC and Private Sector During Third Five Year Plan (TFYP)

(Fig. in lakh M.T.)

Year	Cargo carried by BSC			Cargo carried by private sector	Cargo carried by the Bangladeshi vessels	Total sea borne cargo of the country	Percentage of BSC cargo over total sea borne cargo	Percentage of private sector ship over total sea borne cargo
	B.S.C.	Chartered ship	Total					
	1	2	3	4	5 (3+4)	6	7	8
1985/86	3.80	10.27	14.07	3.97	18.01	84.75	16.57	4.68
1986/87	2.78	14.75	17.53	4.74	22.27	85.27	20.57	5.56
1987/88	2.96	13.98	16.94	4.98	21.92	105.91	15.99	4.70
1988/89	2.78	14.64	17.42	5.25	22.68	101.52	14.30	5.18
1989/90	2.27	12.82	15.09	5.36	20.45	105.89	14.25	5.06

Source : Department of Shipping.

13.45 As a member of the conference line, the Bangladeshi ships are entitled to carry 40 percent of the country's own sea-borne import and export cargo in their own bottom. At present, the private sector and BSC with their own and chartered vessels together carry only about 20.69 percent of the overall import-export cargo of the country. This indicates that there is enough scope for BSC and the private sector to carry a larger share of the import-export cargo of the country. Therefore, the future role of BSC and the private sector in maritime shipping needs to be determined through a fleet planning study.

Maritime Port

13.46 Chittagong and Mogla are the two maritime ports of the country. Seventy percent of the import cargo of the country are handled by the Chittagong Port and remaining thirty percent by the Mongla Port, whereas twenty five percent and seventy five percent of the export cargo are handled by the Chittagong and the Mongla Port respectively. The development strategy for ports during TFYP was to construct multipurpose jetties, remove problems of draft limitation, ensure optimal distribution of traffic between Chittagong and Mongla Ports and make provision for increasing volume of container traffic so that the two ports could handle efficiently the projected traffic of 11.25 million in 1989-90.

Chittagong Port

13.47 A sum of Tk. 301 crore was provided during TFYP for implementation of 9 development projects. Against which Tk. 152.26 crore was spent during the plan period. In terms of physical achievements, 2 multipurpose berths were constructed, 4 service vessels were procured locally, sixty different types of container handling equipment were procured and five road vehicles weigh bridges were procured and installed. Besides, the construction of back-up facilities for the multipurpose berths and construction of Moheshkhal bridge for connecting the existing port area with the container yard under construction has been started during 1989-90. One trailing suction hopper dredger to maintain the entrance channel of the port navigability has been ordered from abroad. The construction of one 33 K.V. sub-station and the renovation of existing 11 K.V. sub-stations for adequate supply of power to the port area has also been initiated to be implemented by local resources. The cargo handled at the Chittagong Port during TFYP is shown in Table-13.13.The table indicates that with the exception of 1989/90, the volume of cargo handled of the Chittagong Port has increased over the years during the TFYP.

Table-13.13: Cargo Handled at the Chittagong Port During the Third Five Year Plan (TFYP)

(Figures in lakh M.T.)

Year	Import	Export	Total	Container handled (in TEU's)
1985/86	58.14	3.38	61.52	31,809
1986/87	58.36	4.03	62.39	39,135
1987/88	71.08	6.39	77.47	42,870
1988/89	71.22	8.34	79.56	74,067
1989/90	67.98	6.95	74.94	1,10,644

Source : Chittagong Port.

Mongla Port

13.48 During TFYP, a sum of Tk. 74 crore was provided for implementation of 8 projects including 2 feasibility study projects. Against this, about Tk. 58.04 crore is expected to be spent during the plan period. The utilization of the plan allocation will be 78.43 percent. Some of the major physical facilities constructed/procured during the plan period are : one transit-shed (16092 sq. m.), one ware house (321825 sq. m.), 11 residential building (88 units), 0.12 lakh sq. m. open yard for stacking, 13 Km. of roads, 6 functional buildings and cargo handling/navigational equipments. Some important projects such as procurement of interim container handling equipment, construction of additional residential buildings for officers and staff in the port area which were not included in the Plan, are being implemented because of their urgent neccessity. Besides, two projects namely 'Installation of Sweet Water Supply System at Mongla' and 'Dredging of the Pussur channel' are being taken-up for implementation during the plan period. The cargo handled at the Mongla Port during the plan period compared to the base year is shown in Table-13.14. The table indicates that the volume of cargo handled at the Mongla Port has not increased compared to the base year except for 1987/88 when huge quantity of foodgrains were imported due to the devastating floods.

Table-13.14 Cargo Handled at the Mongla Port During the TFYP

(Figure in lakh M.T.)

Year	Import	Export	Total	Container handled (in TEU's)
1984/85	20.86	5.77	26.63	4,879
1985/86	15.61	7.62	23.23	11,154
1986/87	15.57	7.31	22.88	14,635
1987/88	22.36	6.28	28.64	14,231
1988/89	18.82	6.37	25.19	14,026
1989/90	18.92	6.95	25.87	17,792

Source : Mongla Port.

Department of Shipping

13.49 The major functions of this Department are administration of "Merchant Shipping Act", 'Inland Shipping Ordinance', transport co-ordination in inland ports and waterways, freight study etc. The administration of the Merchant Shipping Act and Inland Shipping Ordinance includes registration and survey of ships/vessels, inspection of ships/vessels, training of sea-men etc. During TFYP, an amount of Tk. 31 lakh was provided to implement the establishment of a Seamen's training school. The project was completed at a cost of Tk. 17.72 lakh and under this programme 70 fresher and 2038 re-fresher seamen were trained during the TFYP.

Mercantile Marine Department

13.50 The Mercantile Marine Department is mainly responsible for providing assistance for search and rescue of vessels in the territorial water of Bangladesh, navigational aids to ships approaching Bangladesh ports through construction and maintenance of light houses and light buoys. During TFYP, an amount of Tk. 17 lakh was provided for the rehabilitation of three light houses which was spilled over from the Second Five Year Plan. An amount of Tk. 8.10 lakh was spent for completion of the project to provide such services.

Marine Academy

13.51 The Marine Academy provides pre-sea and post sea courses for cadets and coaching class for higher level professional examination for merchant marine officers. Keeping this in view the project namely "The Master Plan for Development of the Marine Academy" was provided with an allocation of Tk. 17.93 crore during the plan period which was spilled over from the SFYP. The project was completed in June, 1989 at a cost of Tk. 14.96 crore. During the plan period, 263 pre-sea cadets and 1496 post-sea cadets were trained in the Academy in different fields.

C. Air Transport

13.52 In the present day world the growth of air transport has been playing a vital role in increasing economic activity of a country, specially those in their take off stage. Hence like many developing countries in the Asia-Pacific region, the development of air transport in Bangladesh has also been very fast since its Liberation in 1971. In Bangladesh, while the development and maintenance of aviation infrastructure are the responsibility of Civil Aviation Authority of Bangladesh (CAAB), the Bangladesh Biman (Air lines) is responsible for providing air services. Both these two organizations are corporate bodies.

Civil Aviation Authority of Bangladesh (CAAB)

13.53 The main function of CAAB is to ensure safe operation of all aircrafts within the air space of Bangladesh through development and maintenance of existing and construction of new facilities including formulation of rules and regulations and their proper application. At the end of TFYP, CAAB was operating 7 airports throughout the country. Besides these 7 airports, there are 15 airstrips within the geographical jurisdiction of Bangladesh. Of the 7 operational airports, one (the ZIA at Dhaka) is a major international airport and another one (Chittagong) is a regional airport with facilities for operation of F-28 type jet aircrafts. The remaining 5 are domestic airports with facilities for operating F-28 type jet air-crafts.

13.54 The Civil Aviation programme in the TFYP laid down emphasis on the modernization and expansion of existing facilities and on the improvment of quality of services as well. As such the investment programme envisaged development of physical infrastructure as well as development of professional and technical skill of CAAB personnel. The professional skill development programme got special preference to overcome the shortfall caused by the large scale retirement of skill manpower on the one hand and to standardise the existing status of service towards meeting the rapid change in aviation technology on the other. Against these overall objectives the performance of CAAB during TFYP are summerised under the following headings :

Project Implementation and Utilisation of Fund

13.55 In the TFYP, a total amount of 70.00 crore at 1984/85 prices was allocated for CAAB. During the plan period, a total of 10 investment (which includes 3 self-financed projects) and 4 technical assistance projects could be undetaken for implementation. By June, 1990 all but one technical assistance project have been completed. Out of the total plan outlay of Tk. 70.00 crore, an allocation of Tk. 89.37 crore in current prices was made through annual development budgets during the TFYP period, which is Tk. 77.40 crore at 1984/85 prices. The actual expenditure during the plan period at constant prices of 1984/85 was Tk. 65.59 crore, which was 93.70 percent of the total plan outlay.

Physical Programme and Performance

13.56 The major development programme of the Civil Aviation Authority sub-sector during TFYP and achievement thereof upto June, 1990 are as follows:

(a) **Airport Development** : Adjacent to the VVIP Terminal Building at the Zia International Airport (ZIA), an apron of 35437 sq. ft. (535' x 675') with two taxiway was constructed. The Cargo hanger at ZIA was also extended in capacity by 15000 tons to a total capacity of 52,500 tons. Besides, as a preventive measure against overflooding in ZIA, which happened during the devastating flood of 1988, one 11.5 Km long embankment around the airport was constructed. The Sylhet Osmani Airport was developed to meet the requirement for operation of F-28 type aircrafts and to match this, a new Terminal Building with such facilities as Apron, Fire station, Car Park, Approach Road, etc. were constructed. The Chittagong Airport runway was extended by another 7,500' to a total length of 10,000 feet to fit the airport for emergency landing of Boeing 707.

(b) **Development of Safety Services and Security Provision** : The fire fighting and safety services provisions was enhanced through procurement of 6 crash tenders, 6 RIV along with 60,000 gallon foam coumpound and 25,000 Lbs dry chemical powder and 36 motor vehicles.

(c) **Development of General Aviation** : For establishment of a Flying Club at ZIA, an aircraft hanger, an apron (106.71 m x 45.73m) and a Taxiway (304.88 m x 15, 2 m) were constructed.

(d) **Development of Training Facilities** : A self contained Civil Aviation Training Centre with ICAO standards was developed during TFYP. The centre is capable of training upto 120 trainees per year and comprises of a fully-equipped functional building and a hostel complex.

(e) **Development of Communication and Navigation System** : For improvement and modernisation of aeronautical telecommunication system and navigational aids as per ICAO Air Navigation Plan, 7 VOR, 1 doppler VOR, 2 ILS, 1 DME, 1 primary Radar, 1 secondary Radar, 10 NDP etc., equipments were procured and installed in operational airports.

(f) **Technical Assistance** : Three technical assistance projects were taken up during the TFYP period to ensure safety and regularity of civil air transport operation within the territorial airspace of Bangladesh in accordance with recommended practices set forth by the convention of International Civil Aviation Organization. These projects envisaged services of expatriate and national expert of

227.3 man months and 97.5 man months respectively for training of A.T.S., communication, AELD and Flight inspection manpower of CAAB. Under the Japanese grant assistance, a feasibility study for the development of the Chittagong Regional Airport into an International Airport has also been completed.

FINANCIAL PERFORMANCE

13.57 The Civil Aviation Authority earns its revenue in exchange of facilities provided in the form of navigational aids, landing, parking and housing of aircrafts in airports and service charges for providing various other facilities. With the exception of 1987 88, the CAAB's revenue earnings indicate gradual increase during the first 4 years of TFYP (Table-13.15). However, annual net operating income remained stagnant around 5 crore with the exception of 1987/88, when there was a deficit of about Tk. 4.50 crore.

Table-13.15 Financial Performance of the CAAB During TFYP

(In million Tk.)

Year	Revenue Earnings	Operating Expenditure	Net operating income	Operating ratio
1985/86	25.50	20.43	5.07	80.12
1986/87	33.40	28.50	4.90	85.33
1987/88	31.98	36.43	(-) 4.45	113.91
1988/89	44.13	39.18	4.95	88.78
1989/90	42.07	38.70	3.38	91.97

Source: CAAB

Operational Performance

13.58 With the increase in facility, the traffic movement has increased during TFYP. At present, more widebody aircrafts are operating and accordingly, the number of passengers and volume of cargo movement has increased. Five new air lines have started operation in Bangladesh during TFYP. The annual Traffic including aircraft movement during the plan period is shown in Table-13.16.

Table-13.16 Annual Traffic and Aircraft Movement During TFYP

Year	Passenger (Nos.)	Cargo (Tons)	Aircraft (Nos.)
1985	1645169	27661	61720
1986	1612134	33188	51619
1987	1592418	34320	31411
1988	1741501	37343	50523
1989	1621476	45649	50602
1990	1626782	50610	62303

Source: CAAB

Bangladesh Biman (BB)

13.59 The main function of the Bangladesh Biman is to provide both domestic and international air services and carry out activities ancillary to or connected with this. At the end of the TFYP, Biman has a fleet of 9 aircrafts consisting of 4 DC 10-30, 2 F-28s and 3 F-27s. With this fleet, it is now flying to 7 domestic and 25 international destinations across three continents - Asia, Europe and Africa.

13.60 The Biman's programme during TFYP laid down more emphasis on the improvement of operational efficiency and safety as well as quality in services. Against these overall objectives, the performance of the Biman during TFYP are summerised under the following headings :

Project Implementation and Utilisation of Fund

13.61 In the TFYP, a sum of Tk. 140.00 crore at 1984/85 prices was allocated for the Bangladesh Biman. During the plan period, 5 investment (3 of which are self financed) and 2 technical assistance projects could be undertaken for implementation. Among the 3 self financed projects, one (construction of G.T.C. at ZIA) was not originally included in TFYP. By June, 1990, 4 projects including 2 self financed projects were completed. Out of the total plan outlay of Tk. 140 crore, an allocation of Tk. 88.75 crore at current price was made through annual development budgets during the TFYP, which amounts to Tk. 75.77 crore at constant prices of 1984/85. The actual expenditure during the plan period at constant prices of 1984/85 is Tk. 75.13 crore, which is 53.66 percent of the total plan outlay. In addition to the development budget expenditures, the

Biman has also acquired a new DC-10-30 aircraft during TFYP at a cost of Tk. 207.70 crore under a commercial bank loan.

Physical Programme and Performance

13.62 Major development programme of Bangladesh Biman during TFYP and expected achievements thereof upto June, 1990 are as follows :

(a) **Procurement of Operational Motor Vehicles :** All the 50 remaining motor vehicles of diffrent categories scheduled to be procured during the SFYP were procured during TFYP.

(b) **Procurement of Communication Equipment :** During TFYP, two PABXs with 60 + 300 lines and 80 + 400 lines have been installed at the Biman Head quarter and the Zia International Airport respectively. Besides, different types of wireless communication equipments have also been procured.

(c) **Catering Services :** A new Flight Catering Centre established near ZIA with a maximum capacity of 8,500 meals per day.

(d) **Maintenance Facilities :** A new Hanger Complex is being constructed at ZIA for proper maintenance of aircrafts (upto C-check level). The complex is capable of maintaining two wide-bodied aircrafts at a time.

(e) **Training Facilities :** A new Ground Training Centre (GTC) with ICAO standard has been established for imparting training of various personnel of the Biman. During the plan period, 621 man-months of expert services have been utilised out of the targetted 770 man-months.

Operational Performance

13.63 During the Third Five Year Plan period, the performance of the Biman in its international as well as domestic operation showed substantial improvements. The Biman carried about 0.76 milion passenger during 1984/85 which increased to 1.00 million during 1988/89. The detailed traffic performance of domestic, regional and international routes during the plan period is shown in Table-13.17.

Table-13.17 Traffic Performance of Biman during the TFYP

	1985/86	1986/87	1987/88	198/-89	1989/90
Passenger (Nos.)					
Domestic	376019	352058	358538	421438	386397
Regional	143208	150703	182870	192718	169318
International	354243	362182	401467	432371	452407
Total :	873470	864943	942875	1046527	1008122
Cargo (Tons)					
Domestic	1546	1621	1824	2252	2374
Regional	2075	3380	3763	4534	3240
International	14299	14599	15089	16429	19921
Total :	17920	19600	20676	23215	25535
Mail (Tons)					
Domestic	68	84	77	113	81
Regional	28	30	20	22	28
International	235	220	190	182	181
Total :	331	334	287	317	290

Source: Bangladesh Biman.

During 1984/85, the total Revenue Passenger km (RPK) was 1466 million against the total Available Seat Km (ASK) of 2306 million. While during 1988/89 the RPK was 2026 million against ASK of 2917 million. The system wise Cabin Factor (CF) was 64 percent during 1984/85 and 69 percent year 1988-89. The schedule regularity is one of the highest priorities for Biman. In spite of unavoidable factors affected scheduled airlines operations, the Biman was able to attain a systemwise schedule regularity of 80 percent during the TFYP. Details of the aircraftwise schedule regularity during TFYP are presented in Table-13.18.

Table-13.18: Schedule Regularity of Flights of Bangladesh Biman During TFYP

Aircraft	1985/86	1986/87	1987/88	1988/89	1989/90
DC-10-30	Not	76.8%	73.1%	65.2%	63.31%
B-707	available	78.0%	77.6%	66.1%	-
F-28		81.5%	82.7%	74.2%	72.30%
F-27		80.8%	82.0%	77.2%	85.10%
Total :		79.8%	79.4%	71.2%	73.57%

Source: Bangladesh Biman.

FINANCIAL PERFORMANCE

13.64 The Biman incurred a net loss during the first 3 years of TFYP. In 1985/86 the net loss was Tk. 5.65 crore, which rose to Tk. 35.16 crore in 1986/87. However, since 1987/88 the financial performance of the Biman is steadily improving and in 1988/89 Biman earned a net profit of Tk. 41.01 crore. The financial performance of the Biman during TFYP is shown in Table-13.19. With respect to the deteriorated financial position of the Biman during the first three years of the TFYP, the major associated factors that have mainly contributed are very low tariffs as against operating costs in domestic flights, diversion of domestic traffic due to improvement of surface transport, reduction of traffic to/from the Gulf and Middle East due to receding employment opportunities, procurement of wide bodied and other air-crafts, etc.

Table-13.19 Financial Performance of the Bangladesh Biman During TFYP

(In million Tk.)

Year	Revenue Earning	Operating Expenditure	Net operating Income	Operating Ratio
1985/86	387.35	393.00	(-) 5.65	101.46
1986/87	389.38	424.54	(-) 35.16	109.03
1987/88	430.80	547.35	(-) 26.55	106.16
1988/89	489.37	487.98	1.39	99.72
1989/90	525.81	484.74	41.01	92.19

Source: Bangladesh Biman.

Constraints in the Transport Sector

13.65 The main constraints in the development and operation of the Transport sector are as follows:

(a) **Inadequacy of allocation:** Public sector allocation for the development of transport sector has been inadequate compared to its requirement. Investment projects taken up for execution were not compatible with the availability of resources. The consequences were obvious. Resources had to be thinly distributed over a large number of projects, barring a few aided and priority projects, leading to time and cost overrun of projects. This in turn, caused a large number of projects to spill-over to the successive plans and limited the scope for taking up new projects. Drastic measures are called for either raising the level of allocation or limiting the number of projects to ensure planned development.

(b) **Choice of projects:** Projects are often taken up for implementation without proper consideration of traffic volume, economic and financial viability. Socio political considerations prevail over other considerations. This approach is required to be restricted in order to reduce the misuse and wastage of the scarce resources.

(c) **Inter-modal consistency:** Investment decision for a particular mode of transport should ideally be made after proper analysis of its impact on other modes because investment in one mode

have a bearing on other modes as well. Unfortunately this is not done in most of the cases. A conscious and deliberate attempt is, therefore, required to ensure an integrated approach to the development of transport system as a whole in order to ensure efficient allocation of scarce resources and progressive improvement of the country's transport net-work.

(d) **Construction industry:** A critical factor in any effort to develop the transport network, is the existence of an efficient construction industry. Deficiency in this area not only affects the quality of construction but also impedes construction on schedule in a cost effective manner. The absence of a developed local construction industry forces the country to depend on foreign construction firms for foreign aided projects. A study has been undertaken to find ways and means to develop construction industry. Necessary measures would have to be required to be taken to create favourable conditions for improvement of the capability of local construction industry.

(e) **Deteriorated road conditions:** The major part of the road network of the country was developed in the Fifties and Sixties. Most of the road would be approaching the end of its normal life and would require major reconstruction and rehabilitation. The problem has been compounded by low standards used in the initial construction and also due to adverse affects of floods, heavy rainfall, cyclone etc. Insufficient attention to rehabilitate these roads due to resource constraint would cause further deterioration of the existing roads. To avoid worsening of existing roads, particularly major roads with high density of traffic, a major rehabilitation programme need be taken up, if possible, through postponement of programmes for creation of new facilities.

(f) **Maintenance allocation:** Lack of proper maintenance of transport infrastructure and ancillaries on a regular basis very often lead to capital investment requirement for rehabilitation and reconstruction. More disquitening than the paucity of investment funds for construction of roads is the fact that whatever roads are in place are not well maintained for want of adequate allocation of funds in the revenue budget. Though the situation has improved in the past couple of years yet the allocations for maintenance are far too inadequate. Unless care is taken to preserve the existing roads and to maintain them properly, in order to cope with the volume of traffic, the investment on building new roads will be of no avail. The routine maintenance of railway tracks and rolling stock, dredging of waterways, routine maintenance of navigational aids, craft and vessels etc. are to be ensured with sufficient fund allocation in the revenue budget.

(g) **Statistical gaps:** The type and quality of data required for appraisal of projects and also to decide on programmes and preparation of plans are not generally available in the various agencies involved in the transport planning and operation. Data on private sector investment and operation of transport is hardly available. The attention would require to be given to develop an appropriate statistical system.

(h) **Natural calamities:** Un-predictable occurence of natural calamities particularly, floods caused significant damages to the transport infrastructure: roads, railway tracks and physical facilities of IWT sector. Diversion of investment/maintenance fund for rehabilitation and restoration of flood damaged infrastructure negatively affects the development programmes.

(i) **Organisational, procedural & operational issues:** The weakness in the overall organisational and management aspect and the complexities of procedural system, internal and external cause inordinate delay in implementation of development programme. These factors also create operational difficulties in the transport sector. Railway operation is impeded by low utilisation of assests, pilferage, large scale ticketless travel, uneconomic branch lines, unprofitable passenger trains operation, frequent changes of policy management and organisational structure, redundant staff on the pay-roll, etc. The operational efficiency of public water transport sector is affected by operation of vessels beyond economic repair, over staffed organisation, inefficient management of physical facilities etc. Measures for rationalisation of organisational set-up, management and skill upgradation, closure of uneconomic operations, formulation of stable policy, etc. may improve the situation.

Fourth Five Year Plan Perspective
Inter-sector linkage

13.66 The Fourth Five Yeap Plan recognises the critical role of transportation in development not only in the passive sense of reflecting demand of the production and distribution sectors of the economy but also in

the active role of promoting and integrating economic development through opening up of latent production and economic forces. Transportation affects the consumption, production and distribution pattern of goods and services and thereby provides the vital linkage to all sectors of the economy. Agricultural and industrial growth, as envisaged in the plan, is unlikely to achieve the target without the support of proper transportation system because transport is the means to provide man and material in place and time. Similarly, development of social sectors and also other service facilities will not be possible in the absence of appropriate transport infrastructure and facilities. Development of transport facilities through its effect on area development programme and general economic activity will pervade all sectors of the economy and greatly contribute to the achievement of macro plan objective of accelerating economic growth, generation of employment opportunities and alleviation of poverty. Derivation of optimal benefit out of investment in the sector will however be difficult to attain because spill over projects will pre-empt the lion share of the resources allocated for the sector. To redress the situation attempt will be made to critically examine and prune out the spill over projects and components thereof to make provision for new productive projects.

Objectives

13.67 Keeping inview the critical role of transportation in the attainment of overall objectives of the Fourth Five Year Plan the main objectives of the transport sector in the plan period would be :

a) To facilitate the development of a suitable transport infrastructure commensurate with the need of the production sectors;

b) To maximise the utilisation of the existing assets in preference to procurement/creation of new facilities and assets;

c) To tackle the urban transport problems, particularly in the metropolitan areas with special emphasis on land use and water management system;

d) To ensure higher level of accessibility in rural areas.

Strategies

13.68 The main strategies for the development of transport sector in accordance with the objectives and targets of the Fourth Five Year Plan center-round :

a) Limiting choice of new projects to economic consideration only;

b) Addition to the existing transport network only on the basis of economic viability and maintenance provision;

c) Development of transport network should not be contradictory to overall water management policies and programmes, rather should be complementary to it;

d) Promotion of increasing participation of private sector in road and water transport operation;

e) Development of balanced regional transport network;

f) Co-ordination between transport policies/programmes and the land use plan;

g) Efficient and optimum use of existing facilities through appropriate tariff adjustments on the basis of inter-modal transportation economics and maintenance of existing system.

h) Undertaking study for identification of investment programmes required for the development of integrated urban transportation.

Programmes

13.69 In pursuance of the above objective of the transport sector. The major programmes for the Fourth Five Year Plan are :

a) Reconstruction/overlay of 600 Km of major paved roads;

b) Construction/reconstruction/improvement of 1600 Km of Thana connecting roads;

c) Construction of 10,000 meters and 12,000 meters of bridges and culverts on the major road sections and Thana connecting roads respectively;

d) Construction of 4.8 Km long Jamuna Multipurpose Bridge across the river Jamuna;

e) Procurement of 30 double decker and rehabilitation of 220 buses of the BRTC;

f) Undertaking study for identification and formulation of investment programmes required for the development of an integrated urban transport facilities with especial emphasis on Dhaka Metropolitan City;

g) Undertaking 'Transport Sector Study' to form a basis for the future development as well as investment in the transport sector as a whole;

h) Renewal and rehabilitation of 235 Km MG and 340 Km BG railway track;

i) Acquisition of 9 Locomotives and 21 carriages, and rehabilitation of 100 MG and 50 BG passenger carriages in the Railway's own workshop;

j) Improvement of overall operational and management system of the BR through manpower development, improved signalling system, renovation of workshop facilities etc.;

k) Dredging of channels and selected waterways and to provide navigational aids to ensure safe day-night navigation;

l) Construction of back-up facilities for Multipurpose Berths (MPB) and procurement of cargo handling equipments for containerized cargo at the Chittagong port;

m) Provision of launch landing station at 40 places and rehabilitation of 45 pontoons and gangways;

n) Introduction of cargo handling facilities at the Dhaka river port;

o) Construction of 4 Ro-Ro ferries in the local yeard;

p) Undertaking a fleet planning study to ascertain the future role and needs of public and private sector in maritime shipping;

q) Strengthening of runways, taxiways and aprons at Zia International Airport (ZIA);

r) Development of Chittagong and Sylhet (Osmani) airport for operation of wide-bodied aircrafts;

s) Development/improvement of Saidpur, Rajshahi, Barisal and Cox's Bazar airports;

t) Completion and commission of the Hanger Complex at ZIA for proper maintenance of the wide-bodied aircrafts; and

u) Undertaking a study on fleet re-structuring in the civil aviation.

Financial allocation

13.70 Total allocation for the transport sector excluding Jamuna Multipurpose Bridge is Tk. 8007 crore at 1989/90 prices of which the public sector allocation is Tk. 4653 crore. Remaining Tk. 3156 crore has been earmarked for the private sector. Besides, Tk. 1000 crore will be available from unallocated funds for construction of Jamuna Multipurpose Bridges if foreign assistance is lined up.

13.71 The sub-sectorwise public sector allocation in 1989/90 prices under Fourth Five Year Plan is given in Table 13.20.

Table 13.20 Public Sector Allocation Under Fourth Five Year Plan In1989-90 prices

(Tk. in crore)

Name of Sub-sector	Allocation
A. Road and Road Transport :	
1. Roads & Highways Department (RHD)	2725
2. Bangladesh Road Transport Corporation (BRTC)	12
3. Planning Commision	8
Sub-Total : (excluding JMBA)	2745
B. Railways :	
4. Bangladesh Railway	835
C. Water Transport :	
5. Chittagong Port	348
6. Mongla Port	67
7. Bangladesh Inland Water Transport Authority (BIWTA)	182
8. Bangladesh Inland Water Transport Corporation (BIWTC)	150
9. Bangladesh Shipping Corporation (BSC)	2.5
10. Marine Academy	8
11. Department of Shipping	30
12. Ministry of Shipping	5.5
Sub-Total : (C)	793
D. Air Transport :	
13. Civil Aviation Authority of Bangladesh	160
14. Bangladesh Biman	120
Sub-Total :	280
Grand Total : (excluding JMBA)	4653

In addition to Tk. 2725 crore earmarked for Roads and Highways Department, a sum of Tk. 720 crore is expected to be allocated for the thana connecting road project out of unallocated fund kept in the FFYP.

Modal Split of Traffic

13.72 Roads, rail and water transport are the three principal modes of inland movement of passengers and freight. A significant volume of traffic is carried by non-mechanised transport. Because of non-availability of reliable statistics of passenger and freight carried by non-mechanised transports, an estimate of passengers and freight carried by the mechanised transport modes only is presented in Table 13.21 below :

Table 13.21 Modal Split for Passenger and Freight Traffic (Mechanised) during 1989/90 and 1994/95.

(Figures in Million)

Mode	1989-90				1994-95			
	Freight		Passenger		Freight		Passenger	
	Ton-km	%	Pass-km	%	Ton-km	%	Pass-km	%
Rail	680	13.25	6540	19.03	850	11.75	6867	15.71
Road	2478	48.28	20834	60.63	3382	46.77	28126	64.36
WT	1974	38.47	6990	20.34	3000	41.48	8711	19.93
Total :	5132	100.0	34364	100.0	7232	100.0	43704	100.0

Source : Planning Commission estimates based on data furnished by relevant agencies.

Roads and Highways Department (RHD)

Objectives

13.73 The objectives of road sector development during the FFYP would be as follows:

a) To build up an optimum size of road network in order to provide an adequate transport infrastructure specially for short haul traffic for the growth of agriculture and manufacturing sectors;

b) Bridging the major river gaps or improvement of ferry system where bridging is not viable;

d) To rehabilitate and improve the existing arterial road network in order to carry the pressure of heavy traffic;

e) Development of road network in harmony with the land-use development and water management and

f) To ensure proper maintenance of existing road network.

Strategies

13.74 To achieve the above objectives the strategies to be followed will include :

a) Adoption of new projects would be discouraged with more emphasis on completion of carried over projects;

b) On-going projects would be re-prioritised and relatively lesser priority and non-economic projects would be dropped or deferred;

c) Construction and maintenance of roads of local nature would be entrusted with local bodies as far as possible and with this end in view projects of local nature would be pruned out from the ADP;

d) Roads and bridges would be designed in such a way as to avoid obstruction of natural water flows and increase the width and height of the road where necessary to serve as the flood shelter;

e) To attach priority to the rehabilitation and improvement of arterial road system;

f) Adequate fund for maintenance should be ensured and implementation of the maintenance programme should be regularly monitored.

g) Proper regional distribution of road network should be ensured and backward regions should be given special consideration.

Allocation & Programme

13.75 The public sector allocation for the development of roads under the Roads and Highways Department is Tk. 2725 crores. In the face of limited available resources, the programme of RHD for the Fourth Five Year Plan has to be re-prioritized by dropping and/or deferring lesser important projects. The foreign aided important projects carried over from TFYP and other important projects most likely to receive foreign assistance in near future have been given the top priority in allocation of resources. In addition, some on-going bridge projects under implementation with national resources have been included in the programme because of their importance in the integrated road network of the country. Besides, construction of roads in Chittagong Hill Tracts Region are included in the programme for balanced regional development. Major development programme of the RHD during the FFYP will thus includes the following:

(a) **Reconstruction/Rehabilitation/Upgrading/Overlay of Existing Roads**: During the Fourth Five Year Plan period 1760 Km of existing major paved road sections (excluding Thana connecting roads) will be reconstructed/rehabilitated/upgraded. In addition to those around 600 Km of paved roads will be improved through machine laid overlay.

(b) Construction/Reconstruction of Bridges and Culverts: Approximately 10,000 meters of bridges and culverts will either be constructed or re-constructed during the FFYP. Major bridges (excluding JMBA) which are scheduled to be completed during the plan period are : Meghna-Gumti, Mahananda, Shambhugong, Dhaleswari, etc.

13.76 In addition to the regular programme, 1600 Km of thana connecting roads will be constructed/re-constructed/improved during the plan period. Besides, construction/re-construction of approximately 12,000 meters of bridges and culverts on the Thana connecting roads will be completed during FFYP. For this purpose an additional amount of Tk. 720 crore in 1989-90 prices will be provided from unallocated fund kept in the FFYP.

Bangladesh Road Transport Corporation

13.77 As private sector would continue to play an increasingly important role in road transport services, expansion of the BRTC would be limited and vehicles will be procured mainly for replacement of old and worn-out ones. The Bangladesh Road Transport Corporation being a continuously losing concern, the following policies should be pursued for the improvement of its operational and financial efficiency :

a) Through reorganization/restructuring of the organisational set-up the corporation's administrative and management aspect may be strengthened.

b) The vehicle personnel ratio should be rationalized and the excess manpower be curtailed;

c) The fleet position should be reorganised by condemnation and sale of vehicles beyond economic repair;

d) The fleet position should be maintained at a higher level by quick repair and rehabilitation of operatable vehicles;

e) A competitive pricing policy should be pursued in road transport services of both public and the private sectors;

f) Tariff structures should be reviewed periodically to cover the cost of operation.

g) The method of fare collection, accounting etc. may be improved through appropriate measures to check the leakages and wastages of revenue earnings.

h) The existing workshop facilities should be fully utilised and the central workshop at Joydebpur may be run on commercial basis making it a limited company or may be disinvested in favour of private sector.

f) Subsidy should be granted to BRTC for rendering non-profitable mandatory utility services; and

g) Till the Corporation can attain the efficiency of a fully commercial organisation running on profitability, future investments should be made only on strict economic viability.

Objectives and Programme

13.78 In pursuance of the policy of restricted investment a sum of Tk. 12 crore is allocated for BRTC for the acquisition of 30 new double decker and rehabilitation of 220 existing buses.

Bangladesh Road Transport Authority (BRTA)

13.79 Bangladesh Road Transport Authority (BRTA) a statutory body was established in 1987 and started functioning from 1988. The BRTA has the following functions:

(a) Registration of all kinds of motor vehicles;

(b) Issuing of motor vehicles driving licenses;

(c) Issuing and renewal of road worthiness certificate of motor vehicles;

(d) Issuing and renewal of route permit of all kinds of commercial vehicles;

(e) Inspection of government motor vehicles relating to repairing and condemnation;

(f) Administering collection of motor vehicles taxes and fees; and

(g) Co-ordinating solution of problems relating to road transport owners and road transport workers and formulation of welfare measures for them.

13.80 BRTA is a regulatory body and disciplining force in the transport sector. During the Fourth Five Year Plan BRTA will consolidate its position in lowering down road accidents and minimizing environment pollution. Besides, a significant increase in revenue collection in the transport sector through BRTA is expected during the plan period. BRTA has not yet appeared in the ADP although there has been some components on institutional development under one of the TA projects of RHD sub-sector. During the FFYP facilities for institutional improvement of BRTA for more effective discharge of its functions and responsibilities will be provided. This will include computerisation of its different activities and setting up vehicle testing stations at 4 regional headquarters.

Planning Commission

13.81 Under the sponsorship and guidance of the Planning Commission two seperate studies will be undertaken during the Fourth Five Year Plan for future development as well as investment in the transport sector in general and integrated transportation of the Dhaka Metropolitan City in particular. The "Transport Sector Study" covering all modes throughout the country, will help formulation of strategic planning in the transport sector as a whole and required future investment in different modes. The 'Integrated Transport Study of Dhaka City', on the other hand, will assist in identification of investment programme required for the development of an integrated urban transport system for the Dhaka Metropolitan City. An allocation of Tk. 8 crore has been earmarked in the FFYP for undertaking those two studies.

Jamuna Multipurpose Bridge Authority

13.82 For overall development and regional integration of the country, construction of the Jamuna Multipurpose Bridge will be given the highest priority. On the basis of the characteristics and configuration study and detailed engineering design and feasibility study completed during TFYP and subsequent discussion with the development partners it was decided to construct a 4.8 Km long and 18.5 m wide 4 lane multi-purpose bridge located at 9 Km south of Sirajganj. The bridge will initially be a road bridge with provision to carry a power interconnector. The foundation substructure of the bridge will be so constructed as to permit inclusion of rail at any later date. Provision will also be made to carry a gas pipe line and tele-communication links at a later date. The construction of the multipurpose bridge will contribute to savings from reduction and/or discontinuation of ferry services and from the avoidance of the need for separate structures for power interconnector(s) and gas pipe line. Besides reduction of vehicle operating cost, the reduction in time for trucks and buses to make a round trip across the Jumuna will imply an increase in efficiency of use of available capacity. The bridge will also have forward linkages like redistribution, production and capital efficiency effects at the regional level and multiplier effect at the macro-economic level. In addition, the bridge will provide opportunities for movement of regional/international traffic. An allocation of Tk. 1000 crore in 1989-90 prices will be available from unallocated fund kept in the FFYP.

Bangladesh Railway

Objectives

8.83 The major objectives of the FFYP for the Rail sub-sector are as follows :-

(a) Improvement of operational efficiency.

(b) Reduction of financial loss and to reach on a break even position at the end of 1995.

(c) Development of repair and maintenance facilities.

(d) Rehabilitation of track and bridges of the main line sections including those damaged by the floods of 1987 and 1988;

(e) Rehabilitation and modernization of existing singalling and tele-communication system.

(f) Rehabilitation of carriages and wagons in railway's own workshops;

(g) Introduction of Pre-stressed concrete sleepers on some core lines;

(h) Introduction and development of containerised cargo transportation, handling and storage facilities in the Bangladesh Railway;

(i) Replacement of carriages and locomotives on a selective basis;

(j) Development of training facilities.

Strategies

13.84 The major strategies of FFYP for the Rail sub-sector are as follows :-

(a) Prioritized investment on the basis of economic criteria.

(b) Improvement and modernization of the system and better use and maintenance of it;

(c) Rehabilitation of the existing assets.

(d) Introduction of business/commercial oriented activities for recovery of the Bangladesh Railway (BR);

(e) Periodic revision of the tarrif rates to reflect increased operating costs as well as parity in fares among various modes of transport.

(f) Development of manpower skill and efficiency of different workshop units;

(g) Improvement of manpower skill and efficiency of different workshop units.

(h) Timely completion of all aided projects by giving special preferences to them in allocation of resources in ADP's.

(i) Reduction of railway sidings, unnecessary tracks and unprofitable passenger trains.

(j) Reduction of redundant staffs; and

(k) Organizational reforms required for recovery of the Bangladesh Railway (BR).

Allocation

13.85 A sum of Tk. 835 crore in 1989-90 prices has been allocated for implementation of the development programme of BR. Of the total public sector outlay, Tk. 585 crore (70 percent) has been earmarked for 12 projects carried forward from TFYP and the balance of Tk. 250 crore (30 percent) will be available for new projects.

The Programme

13.86 It is evident from 13.85 that the development programme of BR during FFYP would largely be limited to completion of projects carried over from TFYP. Hence the main features of the development programme would be more or less simillar to those undertaken during TFYP. A few new projects, which could be undertaken during FFYP, would be to modernize the system, increase income generating capability and improvement of operational efficiency and safety. Major developrnent programmes of BR during FFYP will thus comprise the followings :-

(a) **Track and Bridges :** Rehabilitation of about 235 Km MG and 340 Km BG track will be completed as remaining work of TFYP. Besides all remaining work of flood damaged restoration programme of track and bridges will also be completed. Apart from rehabilitation programme, replacement of old wooden sleepers with pre-stressed concrete and new wooden sleepers in 96 Km and 97 Km respectively of the Dhaka-Chittagong main line will be undertaken if foreign assistance is available.

(b) **Construction of A New Siding Facility:** A new siding facility from Sharishabari Junction station to the Jamuna Fertilizer Factory will be constructed during the initial part of FFYP.

(b) **Development of Repair and Maintenance Facilities** : The major on-going project under this category is the establishment of a modern workshop at Parbatipur for heavy repair and major overhauling of 100 diesel locomtives annually. This project is expected to be completed by June,

1992. All remaining works of expansion and modernization of workshops for wagons and carriages and locomotive shops/sheds will also be completed during FFYP.

(c) **Procurement/Repair/Rehabilitation of Rolling Stock:** The programe envisaged procurement of 21 BG passenger carriages from abroad for replacement of overaged and damaged carriages. Besides, rehabilitation of 100 MG and 50 MG passenger carriages are expected to be completed during the FFYP. The remaining 9 locomotives will be procured under a German Assistance. In addition 3 cranes will be procured for replacement in relief trains. For income generating purposes 80 MG bogie wagon to carry forty feet long and high cube containers may also be procured.

(d) **Improvement of the Signalling and the Telecommunication System** : Remaining work relating to improvement of the signalling and the tele-communication system will be completed during FFYP. Besides, for improvement of operational efficiency and safety on some important junction stations and/or sections, improved signalling and the tele-communication system will be established if foreign assistance is available.

(e) **Inland Container Depot** : Development of the existing Inland Container Depot (ICD) at Kamalapur Railway Station Yard will be implemented under the assistance of the Asian Development Bank.

Inland Water Transport

13.87 In the riverine, flood prone and low lying physical condition, Inland Water Transport is an important mode of transportation in Bangladesh. It connects the two sea ports with the hinterland. However, Inland waterways has been facing serious problems of siltation. Therefore, huge cost of dredging and need for extensive rehabilitation of the waterways, particularly, after two major floods (1987 and 1988) are imposes serious constraints in the physical, as well as, financial performance of the IWT system. For a balanced development of transportation system in the country and preservation of ecological balance inland waterways call for an urgent attention for its conservation.

Objectives

13.88 Main objectives of the FFYP in the IWT sub-sector would be:

a) To improve the channel condition through dredging and provision of navigational aids;

b) To ensure safety in the waterways;

c) To procure/rehabilitate service vessels;

d) To develop reverine ports and Inland Container Depot(ICD);

e) To establish rural launch landing facilities;

f) To restore/rehabilitate flood damaged facilities including vessels; and

g) To procure ferries, coastal and passenger vessels and utilization of existing capacities through improvement of operational efficiency and institutional capacity.

Strategies

13.89 In order to achieve the above objectives, following strategies will be undertaken during the Fourth Five Year Plan:-

(a) Completion of spill-over projects.

(b) Intensification of the dredging programme to improve the existing channel condition and to ensure safe navigation in the waterways.

(c) Confinement of the public sector investment largely to strengthing navigational and shore facilities in view of large scale expected private sector involvement.

(d) Disposing off old, uneconomic and un-repairable vessels.

(e) Adjustment of freight/fair to reflect the costs of operation in order to reduce losses/government subsidy to the public sector IWT organizations;

(f) Priority for upgrading and improvement of country boat operations during the plan period.

(g) Rehabilitation of selected vessels.

(h) Improvement of managerial and operational efficiency of the IWT organizations; and

(i) Optimum utilization of the existing facilities.

Programme

Bangladesh Inland water Transport Authority (BIWTA)

13.90 The BIWTA has been provided with an allocation of Tk. 182 crore in 1989-90 prices. The major elements of the development programme of BIWTA are expected to be as follows:

(a) Dredging of selected channels/rivers to ensure the prescribed minimum draft throughout the year;

(b) Provision of navigational aids to ensure night and safe navigation and covering over 372 Km with navigation marks.

(c) Establishment of 40 new launch landing stations and rehabilitation of 45 pontoons and gangways.

(d) Procurement of 2 hydrographic survey vessels;

(e) Development of a general cargo port and container berth at the down stream of the Buriganga Bridge;

(g) Upgrading of existing tele-communication system between the vessels and shore; and

(h) Provision of support vessels and equipment to the fleet of dredgers and survey vessels.

Bangladesh Inland Water Transport Corporation (BIWTC)

13.91 In addition to its participation in the transportation of freight, the BIWTC will concentrate its activities mainly in the ferry sector, the coastal passenger sector and the inland passenger transport on the main trunk route. An allocation of Tk. 150 crore in 1989/90 prices has been earmarked for BIWTC during FFYP. With this allocation the following programmes are proposed to be undertaken during the FFYP:

(a) Provision of necessary passenger services in off-shore inlands and in the coastal belt after determining the type and number of vessels to be needed for this purpose through a study;

(b) Improvement of long distance passenger services in the main trunk routes specially in the Rocket service routes;

(c) Completion of the construction of 4 Ro-Ro ferries and two pontoons locally;

(d) Rehabilitation of the floating dock in BIWTC yards;

(e) Rectification of 3 passenger vessels;

(f) Rehabilitation of 13 selected vessels; and

(g) Creation of infrastructural facilities and procurement of equipment.

Maritime Shipping

13.92 The Bangladesh Shipping Corporation (BSC), a public sector organization no longer enjoys its initial virtual monopoly in maritime shipping. The reserved field of maritime shipping was opened to the private sector during the mid seventies. In the begining, the private sector was slow in getting itself involved in

shipping. But with the passage of time, it gained experience and developed interest in the sector. As a result, the private sector has increased its fleet of ships from 2 (DWT0.19 lakh) to 18 (DWT 1.75 lakh) between 1980-81 and 1989/90. In the same period the BSC has decreases its fleet capacity from 25 (DWT 3.92 lakh) to 21 ships (DWT 2.99 lakh). During 1989/90 overall import-export volume of Bangladesh was to the tune of 100.81 lakh tons. Of this, BSC carried 16.1 lakh tons (3.66 lakh tons by own vessels and 12.45 lakh tons by chartered vessels), while the private sector carried 4.71 lakh tons. The development strategy of the sub-sector during FFYP will be as follows:

(a) To undertake a fleet planning study in order to ascertain future role of the private and the public sector in maritime shipping.

(b) To improve operational efficiency of the existing BSC vessels for turning its operating deficit into operating surplus through replacement of obsolate vessels, improvement of management, reduction of cost etc.

(c) To limit B.S.C's operations of chartered vessels.
(d) To encourage private sector to play greater role in shipping.

13.93 The BSC has been provided with an allocation of Tk. 2.50 crore to undertaken a feasibility study of fleet planning in order to ascertain future role of the private and public sector in maritime shipping. Acquisition of ships in the public sector during the Plan period will be considered on the basis of recommendation of the fleet planning study which is underway.

Maritime Port

13.94 Both the sea ports have physical problems to operate efficiently and economically due to draft limitations. Therefore, main objective of the development programme of ports during the FFYP will be to improve the navigational channel through dredging, utilization of existing assets through increased productivity and creation of facilities for handling increased volume of containerised cargo so that the projected traffic to the tune of 12.83 million tons including 2.40 lakh TEU's of container may be handled efficiently and economically in 1994/95.

Chittagong Port

13.95 A sum of Tk. 348 crore has been allocated for the development programme of the Chittagong Port during FFYP. The programme includes the following :

(a) Completion of back-up facilities required for already completed multipurpose berths;

(b) Procurement of container handling equipment to facilitate handling of increased volume of containerised cargo during the plan period;

(c) Procurement of one trailing suction hopper dredger during the plan period for ensuring the required draft of the channel including the entrance channel of the port;

(d) Construction of 33 K.V. sub-station and renovation of existing 11 K.V. sub-stations safe, secured and sound operation of the port;

(e) Procurement of service vessels (one bouy lifting and one sea going tug) to ensure smooth and efficient operation of the port;

(f) Salvage operation of vessels sunked due to the cyclone of April, 1991;

(g) Rehabilitation of the port facilities damaged/destroyed by the cyclone of April, 1991; and

(h) Undertaking a feasibility study for construction of deep draft port.

Mongla Port

13.96 A sum of Tk. 67 crore has been allocated for the development programme of the Mongla Port during FFYP. The main development programme of this port would be to maintain the navigational channel through dredging so that vessels upto 26 feet draft could be brought to the jetty. The Mongla Port has two other pressing problems viz; non-availability of fresh drinking water and scarcity of residential quarters at the

Mongla Port area. Therefore, the development programme for the Mongla Port during FFYP will consist of channel dredging, sweet water supply, construction of residential quarters for officers and staff, procurement of interim container handling equipment, completion of unfinished work of the permanent port, development of dry port at Benapole and rehabilitation of the existing equipment instead of new procurements. Besides, two feasibility studies such as (i) Khulna-Mongla Port Complex and (ii) Mathematical Model Study will be undertaken during the plan period. The port complex study will determine the future role of Mongla Port with emphasis on handling of container traffic and the model study will determine the cause and effects of siltation at the port entrance channel and the remedial measures there on.

Department of Shipping

13.97 As the Department of Shipping advise Government on all matters relating to Shipping and also trains up technically qualified manpower for the shipping sub-sector, some Technical Assistance (TA) projects namely (a) Nautical and Marine Engineering Examination, Survey and Administration, (b) Upgrading of Existing Deck Personnel Training Centre, (c) Enforcement of the Inland Ships Safety Administration System, (d) Inland Waterways Environmental Monitoring Control System, etc., will be undertaken during Plan period to assist the Government in setting up a sound, efficient and internationally accepted maritime safety administration alongwith trained manpower and also to protect the waterways from environmental hazard. Besides, a project namely "Permanent Seamen's Training School" which was included in TFYP and could not be implemented due to non-availability of external assistance would get due priority in FFYP. For these, a sum of Tk. 30 crore has been allocated in the plan.

The Marine Academy

13.98 The Marine Academy provides pre-sea and post-sea courses and coaching classes for higher level professional examination. Keeping this in view, a Master Plan for development of the Marine Academy has been completed during TFYP at a cost of Tk. 28.00 crore. But a component namely, ships handling simulators included in the Master Plan could not be procured due to non-availability of foreign assistance. Besides, a proposal is under process to make the Marine Academy a Regional Branch of the World Maritime University. On the other hand, the proposal for increasing the number of pre-sea cadets from existing 48 to 100 is under active consideration of the Government. Therefore, the objective of FFYP will be to procure ship handling simulators, navigational equipments and to create some new facilities to make the Academy a regional branch of the World Maritime University. An allocation of Tk. 8 crore has been provided in FFYP for undertaking those programmes.

Ministry of Shipping

13.99 Ministry of Shipping is responsible for overall co-ordination of Inland Water Transport-3 Package Programme sponsored by the World Bank. Keeping this in view, a Project Monitoring Unit (PMU) is set-up in the Ministry of Shipping for monitoring the progress of the implementation of IWT-3 Package Programme placed under the different agencies. For these, a sum of Tk. 5.5 crore has been earmarked in the FFYP.

Civil Aviation Authority of Bangladesh (CAAB)
Objectives

13.100 The FFYP combines the objectives of both modernization and development of aviation facilities. The main objectives of FFYP for the Civil Aviation Authority are as follows :

(a) Extension and/or strengthening of existing runway, taxiway, aprons etc., of both international and domestic airports to the required standard for efficient and safe operation of aircrafts;

(b) Development of Chittagong Airport as an alternative international airport to the ZIA;

(c) Expansion and development of domestic airport facilities for operation of wide-bodied aircrafts;

(d) Development of new areas for extension of air transport facilities;

(e) Modernization of tele-communication and navigational air system;

(f) Development and modernization of passenger services facilities; and

(g) Extension and development of international terminal facilities.

Strategies

13.101 The major strategies for FFYP for the Civil Aviation Authority are as follows :

(a) Economic use of existing assets and available resources.

(b) Mobilization of resources for implementation of projects out of CAAB's own resources.

(c) Prioritisation of investments on the basis of economic criteria; and

(d) Planning and implementation of large projects on modular forms.

Allocation

13.102 A sum of Tk. 160 crore at 1989/90 prices has been allocated for implementation of the development programme of Civil Aviation sub-sector. Except Tk. 1.00 crore, earmarked for implementation of remaining work of the only spilled over TA project, the balance of Tk. 159.00 crore will be available for implementation of new projects during FFYP.

Programme

13.103 Main emphasis of the Civil Aviation Authority's programmes in FFYP would be expansion, development and improvement of existing airports and their service facilities. Of the new projects, the major development components are: strengthening of runways, taxiways and aprons at ZIA; extension and development of the existing international terminal building at ZIA; installation of 4 boarding bridges at the ZIA; development of Chittagong airport into an international airport; expansion and development of Sylhet (Osmani) airport for operation of wide-bodied aircrafts; construction of a new airport at Barisal; extension and development of Saidpur, Rajshahi and Cox's Bazar airports; procurement and installation of some essential communication, navigation, rescue and lighting equipments at ZIA and some other domestic airports, etc.

Bangladesh Biman

Objectives

13.104 The main objectives of the FFYP for the Bangladesh Biman are as follows :

(a) Raise the quality of services and facilities to a level where the airline may attract spontaneous and appreciative response from the target customers.

(b) Improvement in overall efficiency through procurement of upto-date as well as appropriate supporting, operational and maintenance equipments for aircrafts; and

(c) Improvement in the financial performance so that the airline could come out as a self sustained profitable organization.

Strategies

13.105 The major strategies of FFYP for the Bangladesh Biman are as follows :

(a) More emphasis on customer-oriented programmes i.e. comfort to the passengers, elimination of delay in passenger services, maintenance of schedule regularity, etc.

(b) Special preferences will be given to those programmes/projects which will ensure improvement in efficiency as well as safety in the operation of aircrafts.

(c) Economic use of existing assets and available future resources.

(d) Mobilisation of resources for implementation of projects out of Biman's own resources.

(e) Prioritisation of investment on the basis of economic criteria.

Allocation

13.106 A sum of Tk. 120 crore at 1989/90 prices has been allocated for implementation of development programmes of the Bangladesh Biman. Of the total allocation, Tk. 47.52 crore (39.60 percent) has been earmarked for the implementation of remaining work of the 3 spilled over projects and the balance of Tk. 72.48 crore (60.40 percent) will be available for implementation of new projects during FFYP.

Programme

13.107 The main emphasis of the Bangladesh Biman in FFYP would be to provide and develop safe, efficient, adequate, economical and properly co-ordinated air transport services both domestic and international air routes. Hence the major development programme of FFYP would be completion of remaining work of the hanger complex for proper maintenance of the wide-bodied aircrafts; procurement of ground support and communication equipments for different airports; procurement of tools and equipments for Overhaul Shop and Hanger Complex; computerisation of the departure system at the ZIA; utilization of remaining as well as future available expert services in training of manpower; feasibility study on Fleet Re-structuring.

Private sector participation in transport

13.108 Following the general government policy towards privatisation the private sector is expected to play an increasingly important role in the development of transport sector during the FFYP. In recognition of the involvement of the private sector, the Fourth Five Year Plan earmarked an indicative allocation of Tk.3156 crore for the private sector (Tk. 2100 crore for Road and Road Transport and Tk. 1156 crore for Shipping and IWT sector). Hitherto, private sector was by far the primary provider of road and inland water transport service in Bangladesh. Other private sector investment in the sector was related to the creation of facilities for repair and maintenance and construction of bodies of vehicles and vessels. Private sector participation in the construction of physical infrastructure for transport is generally confined to the provision of contractual services, investment being done solely by the public sector. Construction of physical infrastructure for transport being capital intensive in nature and the relavant return being slow, it is unlikely that private sector investment would be forthcoming for investment in the construction of roads and bridges and other physical facilities in the transport sector.

13.109 Private sector has, however, a great potential for further investment both quantitively and qualititively in the field of transport operations. The growing demand for road and water transport services will call for significant investment by the private sector in the transportation of freight and passengers. This sector will be encouraged to participate in the implementation of the recommendations of the study for improvement of the country boats. With the construction of Jamuna Bridge, the generated economic activity will further raise the demand for road transport service. The private sector will also require to improve the quality of services in transport operations. This will call for additional investments. Services provided by the private sector in respect of repair and maintenance of authomobiles and vessels will need to be standardised and modernised. The workshops will require to be manned by trained manpower as well as deployment of modern tools and equipment. The private sector, playing a vital role in the construction and maintenance of transport infrastructure as contractors will also deserve to be attended to during the Fourth Five Year Plan. The trade, basically a private sector operation, is dominated by heterogeneous elements with varying degree of standards. The domestic construction industry is not well developed. Consequently, local firm do not become eleigible even to compete in international bidding in the construction of transport infrastructure. The industry will require to be developed during the plan period in order to reduce dependance on expatriate construction firms. To develop the local construction industry, a recently concluded study recommended a number of measures, implementation of which would encourage the private sector to play a significant role in the construction of physical infrastructure.

Private sector investment however, is contingent upon :

(a) Public sector investment in infrastructure development such as roads, ports, waterways, landing stations, provision of navigational aids etc.

(b) Availability of vehicles and spare parts at economic prices;

(c) Credit facilities on favourable terms;

(d) Appropriate fiscal policy;

(e) Fare structure; and

(f) Other ancillary facilities.

13.110 In anticipation of the private sector playing a dominant role during the Fourth five Year Plan, the adoption of the following policy measures may be necessary :

a) The private sector participation in the transport operation is hampered by the rigidity of fare-structures. In fixing up passenger fares flexibility within reasonable ranges should be maintained so that adjustments in fares may be made with the rise in operating costs.

b) Measures for gradual elimination of slow-moving vehicles in urban areas by stages, restriction of slow moving vehicles on important busy roads, better management of traffic, regulatory system etc. may be taken up.

c) Credit facilities may be extended to the private sector through banks and co-operatives to encourage investment in road transport and road construction activities.

d) Local manufacturing of tools, equipment and spare parts should be encouraged and import of tools, equipment and spare parts should liberalised, where necessary.

e) Construction activities should be recognised as an industry ensuring facilities pertaining to an industry. This will help encouragement of private construction firms in developing their capability. Contract forms and procedures should be improved to ensure proper rights and obligations.

f) Encouragement should be given to develop standerdised training facilities by the private sector and also to provide technical co-operation.

Local Level Planning and Community Participation

13.111 Construction and maintenance of transport infrastructure is a costly proposition. With the investment of public sector resources, it is hardly possible to meet the growing demand for transport infrastructure of the country. Inadequacy of transport infrastructure in country can be resolved to a great extent through local level planning and community participation. For meeting local transport needs and implementation of transport infrastructure programme, local level planning will be more suitable than central planning. Community participation through voluntary contribution of land, labour and capital, voluntary earth work for construction of embankment, souldering responsibility of maintenance may considerably improve the deficiency of transport infrastructure at an early date. Communicy participation in the construction of road infrastructure would be of particular interest in the case of growth centre connecting roads and other roads of local interest as benefits from these roads are likely to be reaped by the communities involved. The community involvement will also be desirable for proper upkeep and maintenance of local roads through tree plantation, shoulder protection and safeguarding the roads and other infrastructure like launch landing stations, etc.

Women Participation in Transport Sector

13.112 Participation of women in the construction and maintenance of transport infrastructure and transport operation is limited mainly because of lack of skill and training required for jobs in the sector. Women participation in the sectoral activities are presently confined to stone and brick chipping for aggregates and earthwork on road embankments and minor road repair works. Following the government policy of greater participation of women in all spheres of development activities, the following potential areas of involvement of women in the transport related activities deserve to be considered:

(a) Brick and stone breaking for aggregates;

(b) Carrying material for road repair;

(c) Earthwork on road embankment;

(d) Collection of stones from river beds;

(e) Skilled and semi-skilled activities like telephone operators, receptionist, secretarial jobs, sales services, statistical computational activities, etc.; and

(f) Highly technical professional and administrative activities.

13.113 Gearing up the level of women participation in the sectoral activities will, however, call for some policy prescriptions. These are: (a) contractual obligation will have to be imposed on contractors to employ certain percentage of women labour force; (b) improved working conditions and health safety measures should be ensured; (c) remuneration and terms of employment should be properly fixed; and (d) training facilities for women should be provided. In addition, extensive women participation may be ensured through reservation of quotas for them in suitable categories of job opportunities.

Research and Development in Transport

13.114 The need for Research and Development (R&D) in the construction and maintenance of transport sector can hardly be exaggerated. For appropriate engineering desing, standardisation of construction material and workmanship, geometrics befitting to the specific terrain and climatic condition, quality control and cost effectiveness of investment etc., continuous research and technological advancement is called for. Inadequate attention to R&D may result in sub-standard construction of roads and also creation of adverse effects on costs and environment. In realisation of the importance of R&D, the Central Road Research Laboratory have recently been strengthened and 10 field laboratories have been set up. For determining the standard of construction of roads and use of standard construction materials, a research study programme has been taken up for implementation by RHD. In the railway sub-sector a research cell is in the process of establishment, which will look after standardisation of different obsolute and heterogenous equipment as well as technologies. Research programmes can also contribute significantly in respect of reduction in cost and improvement of quality of construction and use of indigeneous materials.

Resource Mobilisation

13.115 Mobilisation of resources for the development of transport facilities has been constrained, among others, owing to low level of operational efficiency of existing assets and pricing policy. As a result the public sector commercial organisations like BR, BIWTC and BRTC incur operating loss. Raising of operational efficiency of these commercial organisations and adjustment of tarrif structure to realise the cost of operation can help generation of additional resources for the sector.

13.116 The public sector investment fund for the development of transport infrastructure may also be supplemented by mobilisation of resources from the users of the facilities. The existing fees, taxes, terminal charges etc., may be revised from time to time and adjusted to the cost escalation for providing the transport services. Tolls may be introduced on big bridges and on roads and water routes offering specialised services. Resource may be generated by leasing out the road and railway embankments and borrowpits to the private sector for agricultural production like fruits, vegetables, paddy etc. Resource mobilisation may also be effected through encouragement of savings of the transport operation. Introduction of special banking services, postal savings system and cooperatives for the transport operators may help generation of resources.

Environmental Impact

13.117 Transport infrastructure and operation creates some adverse effects on environment in the form of disruption of natural drainage system, shrinkage of arable land, air and noise pollution, etc. In order to minimise adverse effect on ecological system, development programme of transport network should be synchronized with the overall water management policies and programmes. The road and railway alignments should follow as far as feasible the natural terrain with minimum disruption of natural drainage system and existing land use. Adequate provision for drainage of water should be provided by sufficient numbers of bridges/culverts on roads and railways. Care should be taken in determining the roads and railway alignment so that minimum encroachment is made upon the cultivable land and waste land should be used for construction/establishment of transport infrastructure as far as feasible. The loss of agricultural land could be compensated by using the road/rail embankments and borrowpits for agricultural production and fisheries. Tree-cover on embankments will reduce the eroding power of rain and air thereby helping maintenance of embankment and soil protection. Trees will also help in resisting the environmental degradation through absorption of atmospheric carbondioxide and serving as noise barriers. For reducing the environmental degradation and depletion of natural resources, awareness of environmental problems, formulation of policy guidelines and action plan, environmental laws and development of institutional framework for implementation of environmental policies and laws are essential. The emission of smoke and use of hydraulic horns in vehicle operations should be strictly controlled specially in the urban areas.

Manpower Development

13.118 The critical importance of human cpaital in transport sector can hardly be exaggerated. Building and development of transport infrastructure as well as the operation of transport system require a wide range of manpower from highly technical hands to semi-skilled and un-skilled labourers including specific job/field oriented trained manpower. In the transport sector training facilities and institutions have been developed. Besides, transport related personnels receive training through different courses organised in the country and abroad. The association of the concerned personnels with the expatriate experts engaged in foreign aided projects helps to a great extent in developing their skill and experties.

13.119 The existing institutional facilities for development of manpower in the public transport sector are as follows:

(a) There is a training institute of BRTC for training of drivers and mechanics and for limited training in the field of stores and traffic management.

(b) In the railway training academy at Halishahar, Chittagong 1200 personnel are being trained annually in the operation of railway services and maintenance of various assets of the BR. In addition to this, a number of training centres are being set up for training in different aspects of locomotives operation and maintenance.

(c) In the field of water transport, a marine academy with an annual intake capacity of 48 cadets is being extended upto an annual capacity of 100 cadets. During the Third Five Year Plan period the academy has introduced courses to train marine cadet officers for preparing them to sit for higher competency certificate examination. This academy is being further upgraded to make it a regional branch of the World Maritime University (WMU) at Marlmo, Sweden. Besides, a deck personnel training centre offers, freshers and refreshers courses on different trades for the inland shipping.

(d) For training of manpower in civil aviation a self-contained training centre with ICAO standards was established. This centre has a capacity of training 120 personnel annually. Biman Bangladesh Airlines has a training institute with annual intake capacity of 214 personnel. In this institute there are up-to-date facilities for training in management, customer services, flight operation, flight services, flight and ground engineers for operation of the aircrafts. Besides, through the Apprentice Training School of Bangladesh Biman apprentices and engineers are trained for maintenance of the aircrafts.

13.120 The existing training facilities will be expanded and new facilities will be developed, as required, during the FFYP. Necessary measures will be undertaken to strengthen, modernise and properly equip the existing institutions and ancillary training facilities to cope with the up-to-date technology. Proper utilisation of the available training facilities through encouragement and incentives to the trainees will be ensured. In the foreign aided projects larger and effective association of local personnel with the foreign experts will be guaranteed. Encouragement and assistance will be extended to the private sector for development of transport related training facilities.

B. COMMUNICATION

13.121 Communication is a necessary infrastructure for economic development and plays a vital role in stimulating economic growth and improving the quality of life. Telecommunication can reduce the need for travelling and thus can act as a substitute for transport. Telecommunication facilities in Bangladesh are not yet adequate in terms of requirements, technology and the level of services to stimulate and sustain economic growth. The telephone density in this country is only about 0.21 per 100 population in 1989/90 as compared to 0.36 in India, 0.48 in Pakistan (1984). This figure is one of the lowest in the World. The total number of Post Offices in Bangladesh are 7,982 (as of 1989/90) and this is also inadequate in accordance with the standard set-up by the Universal Postal Union (UPU). The UPU standard requires one Post Office for 3,000 to 6,000 population on an average. Currently in Bangladesh, one Post Office serves, on an average, about 13,950 population. With the decentralisation of administration at the thana level and emphasis given to the development of rural areas, the need for expansion and development of communication facilities has grown and accordingly necessary programmes were taken in the TFYP.

Review of the Past Performance (1973-85)

Telegraph & Telephone

13.122 In 1973-74, there were 60,000 telephones operating in the country (6,000 in rural areas and 54,000 in urban areas). The number of telephones increased to 1,20,000 in 1979-80 (10,600 rural and 1,09,400 urban) and to 1,82,000 in 1984-85 (26,600 rural and 1,55,400 urban). The country's telephone density, which was 0.13 per 100 population in 1979-80, increased to 0.18 in 1984/85. During 1980-85, 39 manual exchanges were replaced by automatic exchanges in district towns. During the same period the number of automatic exchanges increased from 45 to 84. On the other hand, 144 manual exchanges and 20 auto-exchanges were installed in thana towns, and 100 Union Councils and Rural Growth Centres were connected by Public Call Offices during the Second Plan period (1985-90). In order to facilitate international communication, Digital Trunk Exchanges were set up at Dhaka, Chittagong, Khulna and Sylhet. The setting up of a 'A' grade Satellite Earth Station at Betbunia in 1975 to improve the overseas communication was a notable development. A type-'B' Satellite Earth Station was also established in 1981 at Talibabad to meet the increased international telecommunication demands.

13.123 Digital electronic exchanges were installed at Dhaka, Chittagong, Khulna and Bogra to provide nationwide dialling (NWD) facilities. Twenty-six district towns were connected with the NWD system by 1984/85. On the other hand, 488 telegraph offices were set up and 410 Telex/Gentex lines were commissioned till 1984/85.

13.124 Five telecommunication training sub-centres were set up at Dhaka, Chittagong, Rajshahi, Jessore and Barisal to impart training to operational and lower level technical personnel.

Post Office

13.125 The total number of Post offices in the country in 1973-74 was 6,680. It increased to 7,292 in 1979-80 and to 7,624 (644 urban and 6,980 rural) in 1984/85. The delivery system was also improved to some extent through acquisition of mail vans. In 1982/83, a new programme was taken up for construction of Thana Post Office buildings in places where there were no pucca buildings.

Meteorology

13.126 Weather plays an important role in Bangladesh because of its location in the monsoon belt. For improvement of meteorological services, 8 first class, 2 pilot baloon and 4 rawinsonde observatories, and 4 aviation forecasting centres were established during the First Plan (1973-78). During the Two Year Plan (1978-80) also, 9 First class and 4 pilot baloon observatories were established. During the Second Plan (1980-85), 8 1st class, 3 pilot baloon and 7 agromet observatories were introduced. A 13 storied Radar Tower with a modern hydrological-cum-surveillance radar atop was installed with UNDP assistance. Besides, one Meteorological Training Institute was set up and meteorological telecommunication services were established.

13.127 During the Second Plan, Tk. 341.00 crore (at current prices) was provided for the development of the communication system. The total ADP allocation was Tk. 321.87 crore and the actual expenditure was Tk. 346.90 crore including Tk. 38.73 crore given for thanas and CHT development. During the Plan period, 39 projects were completed but there were 30 spill-over projects to the Third Plan (1985-90).

Review of the Third Plan (1985-90)

13.128 With a view to developing communication, Tk. 388.00 crore (at 1984-85 prices) was provided in the TFYP, against which the total ADP allocations during the Plan period were Tk. 476.49 crore (at current prices). Besides, provision for TA Projects in TFYP and allocation in ATAP was Tk. 0.88 crore and 4.63 crore respectively. Again, Tk. 65.05 crore was allocated for thana projects of the sector from block allocations for the Zila and the thana infrastructural development. Special allocation of Tk. 16.59 crore was made for telecommunication development of the CHT region during 1985-90 under a special 5 year plan of CHT. Thus the total allocation during the Plan period for this sector was Tk. 562.76 crore and the actual total expenditure was Tk. 638.05 crore (at current prices). Thirtynine (39) projects were taken up during the plan for implementation, of which 31 projects were completed and 8 projects would be spilled-over to the Fourth Plan (1990-95). Following is the sub-sector-wise review of the Third Plan in details :

Telegraph and Telephone

A. Physical targets and performance

13.129 The Bangladesh Telegraph and Telephone Board (BTTB) undertook a number of programmes to expand and develop the telecommunication system of the country. Additional telephones numbering 75,000 lines (65,000 in Urban areas and 10,000 in rural areas) were to be installed under the Third Plan. In fact, 59,190 telephone lines (53,307 in urban areas and 5,883 in rural areas) have been installed, of which 26,000 lines are digital. As a result, telephone density per 100 population has increased from 0.18 in 1984-85 to 0.21 in 1989-90 and the total number of telephones in the country has become 2,41,190 in 1989-90.

13.130 It was planned to replace manual exchanges by automatic exchanges in the remaining 10 districts and to establish 14 digital telephone exchanges in the Dhaka City and other major district towns. Replacement of manual exchanges could be made in the 10 districts and digital exchanges were established in 6 places of Dhaka. Thus, the total number of automatic telephone exchanges has been raised from 84 in 1984-85 to 130 in 1989-90.

13.131 Twenty eight (28) automatic telephone exchanges have been established at the important thana towns during the TFYP period, as against the target of 42 exchanges. This has raised the total number of automatic telephone exchanges at thana to 48 (20+28). Installation of modern UHF radio links connecting 300 thanas of the country are progressing satisfactorily.

13.132 With the installation of high capacity Digital Telex Exchanges, the Telex system of the country is in a position to meet current requirements of the country. All the district head quarters have been brought under the Telex network. The gentex network has also been modernised and gentex facilities have been extended to 50 district headquarters from Dhaka. Telefax and Data Communication Services have also been introduced for national and international users. The number of telegraph offices has gone upto 759 in 1989-90 as against 601 in 1984-85.

13.133 Nationwide Dialling (NWD) facilities were present at 26 towns at the end of the Second Plan. Such facilities were extended to additional 27 Zila towns during the Third Plan. Besides, 3 other places are having NWD facilities. So far, International Subscribers Dialling System has been introduced with 186 countries through International Trunk Automatic Exchange, adding only one country (Australia) during the Third Plan.

13.134 The number of overseas telegraph/telex circuits has increased by 51 as against 167 targetted and the number of telephone circuits has increased by 68 as against a target of 142. Survey work for establishement of a satellite ground station at Dhaka has been completed. An agreement for a joint venture between BTTB and a British firm for establishment of this station has been signed.

13.135 Digital technology in the local telephone system was introduced with the installation of 26,000 line-digital-exchanges and 5,000 line-tandem switches in Dhaka. The Dhaka-Chittagong old microwave link has been replaced and the Dhaka-Khulna Microwave link is being replaced by a digital system.

13.136 PBX/PABX lines numbering 3,305 have been installed as against a target of 3,000 lines and 7,352 Telex/Gentex lines have been installed as against a target of 2,200 lines only.

13.137 The construction of a Telecom Staff College at Joydevpur has been completed and training of engineers has already started. The expansion work of the Dhaka Telecommunication Training Centre was completed in June, 1987. This provided physical facilities for training of 3,000 trainees per year. But due to embargo on appointment of officers and staff, and poor management of the centre, the actual number of

people trained in the centre in the past years were lower than the capacity of the centre. The establishment of a Telecommunication Training Centre at Bogra will almost be completed in 1989-90. This has been designed to provide training facilites to technicians/telephone operators.

13.138 The expansion of the Long Distance Telecommunication Net Work Project was completed in June, 1988. As a result, 26 low powered microwave links were established. The expansion work of the Jamalpur auto-exchange by 400 lines was also completed in June, 1988.

13.139 In order to extend telecommunication facilities in rural areas, 11 small sized auto-exchanges were established in selected places under the project "Installation of Small Auto-Exchanges in Rural Areas of Bangladesh". Fifty eight magneto exchanges were also established under the project "Installation of Public Telephone in Important and Priority Places" in parallel with the above mentioned project.

13.140 In all, 14 projects were completed during 1985-90. About 7 projects will be spilled-over in the FFYP. Delays in completion of projects are mainly due to delay in lining up of foreign aid and shortage of local resources, delay in project preparation and revision, delay in procurement of equipments and materials. The shortages of local resources acted as the major constraint for non achievement of plan targets.

B. Allocation & Financial performance

13.141 In the Third Plan, an amount of Tk. 420.01 crore (at 1984-85 prices) was allocated for 23 investment projects (19 spill-over from SFYP and 4 new projects) of BTTB. The BTTB received ADP allocations of Tk. 345.88 crore (at current prices) during 1985-90. Allocation for TA projects was Tk. 4.33 crore as against the plan provision of Tk. 0.24 crore. Besides, an amount of Tk. 60.68 crore from the Zila and Thana Infrestructure Development fund to finance the Thana telecommunication project and an amount of Tk. 16.59 crore for the Special Telecommunication Project in the CHT region were received during 1985-90. Thus, the total allocation was Tk. 501.61 crore. The total expenditure against it was Tk. 577.90 crore (at current prices). The excess expenditure was due to the fact that in 1988-89 though PA allocation for the project "Expansion of the Telecommunication system in Thanas" was Tk. 4.67 crore only, the actual expenditure under the Finish Grant in that year was about Tk. 55.05 crore. Besides, some development expenditures were met from R&R fund provided under the revenue budget.

Bangladesh Post Office

A. Physical Performance

13.142 At the beginning of the TFYP, there were 7,624 Post Offices in the country. Five hundred (500) New Post Offices were scheduled to be set-up during the TFYP period, but ony 358 New Post-Offices could be setup. Thus, the total number of post offices in the country at the close of the TFYP will stand at 7,982. Besides, 33 Post Offices buildings and 275 units of residential quarters were also constructed during the TFYP period, as against a programme of 29 & 246 respectively. Though the Third Plan target of construction of Post Office buildings was exceeded, there was still shortfall in regard to construction of Post Office Buildings. In order to improve the mail Van services of Post Offices, 96 vehicles of different types were procured, against a total target of 161 vehicles. For modernisation of postal services, 131 machines of different types were scheduled to be procured under the Third Plan. As against this, 122 machines were procured. Under the project "Development of Thana Headquarters Post Offices" which commenced in 1982/83, construction of post office building-cum-Post-masters' quarters at 157 Thana Headquarters was targetted for the Third Plan. But for shortage of fund only 57 of it could be completed during the plan period. The project, therefore, will spill-over to the FFYP. Besides, construction of a printing press whose implementation started in 1976-77 for printing of postal forms was completed in 1987-88 and the construction of the Rajshahi Postal Complex which commenced in 1980-81 was completed in 1988-89. Also, repair/reconstruction works of Post Office buildings damaged by floods of 1987 and '88 was partially completed in 1988-89. But the construction of tin-sheds for branch Post Offices (200 units) at the Union level, and extension/renovation and development of existing postal training centres at Dhaka, Chittagong and Rajshahi could not be undetaken duirng the Third Plan for shortage of fund. With the exception of one Thanaa project, all development projects which were under implementation by the Bangladesh Post Office during the Third Plan were completed.

13.143 Shortfalls in achieving programmes/targets in this sub-sector were mainly due to shortage of local resources, delay in acquisition of land and escalation of prices and scarcity of building materials.

B. Financial Performance

13.144 The main programme of the Bangladesh Post-Office department was to construct and rehabilitate post offices and residential quarters at various places of Bangladesh and procure different types of machines and vehicles for postal services. To improve and extend the existing postal facilities in the country, a total sum of Tk. 33.82 crore (at 1984-85 prices) was allocated in the TFYP for Bangladesh Post Offices for completion of 10 spill-over projects (including 2 wound up projects) from the Second Five Year Plan and 3 New projects. The total amount allocated to Bangladesh Post Offices through the ADPs was, however, Tk. 33.04 crore excluding Tk. 0.30 crore for TA projects and Tk. 4.37 crore received from the block allocation of the Zila and Thana Infrastructure Development Fund for development of Thana headquarters post offices. Out of Tk. 37.71 crore allocated, Tk. 37.22 crore (at current prices) was actually spent during the TFYP period.

Meteorology Department

13.145 The Department of Meteorology was provided with an allocation of Tk. 7.23 crore (at 1984-85 prices) in the TFYP for execution of 3 spill-over projects from the Second plan and 3 new projects. The Department obtained a total allocation of Tk. 22.55 crore (at current prices) in the ADPs during the Third Five Year Plan period. The ADP allocations were more than the Plan allocation because the preliminary cost of the foreign aided project entitled "Replacement of Weather Surveillance Radar at Cox's Bazar & Khepupara" ultimately rose from Tk. 5.52 crore to Tk. 19.14 crore. Against this allocation, the actual expenditure of the Department was Tk. 22.04 crore (at current prices).

13.146 All the 3 spill-over projects were completed. Of the 3 new projects included in the TFYP, one was completed, one was started but later on dropped in consideration of its lesser priority and shortage of funds. The implementation of the third project was not undertaken.

13.147 The following tasks were accomplished :

(1) Construction of a First Class Meteorological Observatory at Mongla.
(2) Completion of construction of First Class Meteorological Observatories at Chandpur & Kutubdia.
(3) Construction of an Agromet Pilot Station at Joydevpur.
(4) Construction of 22 residential quarters at Uttara Model town.
(5) Installations of radars-one at Cox's Bazar and the other at Khepupara, were completed.

Ministry of Foreign Affairs

13.148 For development of direct communication between the Foreign Ministry at Dhaka and the Bangladesh Embassies abroad, radio links were established with 15 Bangladesh Embassies between the years 1980-87, under the project "Establishment of Radio Links with Bangladesh Missions Abroad". Communication with the rest of the Bangladesh Embassies are being maintained through Telexes & Telegrams.

13.149 The Ministry of Foreign Affairs was provided with Tk. 1.20 crore (at 1984-85 prices) in the TFYP for execution of one spill-over and one new project for establishment of radio links with Bangladesh missions. Both allocations in ADPs and the actual expenditure during 1985-90 for the purpose were Tk. 0.89 crore (at current prices).

13.150 Public Sector investments in the Communication Sector during the Past Plan Periods are shown in Table 13.20.

Table-13.20 Public Sector Allocations for the Communication Sector Under Various Plans

(Tk. in Crore)

Agency	FFYP	%	Two Year Plan	%	SFYP	%	TFYP	%
1. T&T	80.63	71	103.46	80	211.59	89	345.75	89
2. Post Office	9.11	8	9.91	8	16.14	7	33.82	9
3. Meteorology Dept.	3.45	3	2.85	2	7.17	3	7.23	2
4. Ministry of Foreign Affairs	-	-	-	-	1.94	1	1.20	-
5. Radio Bangladesh	15.75	14	7.70	6	-	-	-	-
6. Bangladesh Television	4.56	4	5.48	4	-	-	-	-
7. Mass Communication Department	-	-	0.25	-	-	-	-	-
8. Planning Cells & other Projects under different Ministries	-	-	0.35	-	0.16	-	-	-
Total for the communication Sector	113.50	100	130.00	100	237.00	100	388.00	100
The Communication Sector allocation as % of the total Public Sector allocation of the Plan		2.9		4.0		2.1		1.5

13.151 It will be seen from the above table that Agencies/Sub-sectors of the Communication Sector were not the same during the past Plan periods. Bangladesh television and Radio Bangladesh were under the Communication Sector during the First Five Year Plan and the two Year Plan periods. The above table also reveals that the share of communication sector has declined from 2.7% (excluding Bangladesh Television and Radio) in the First Five Year Plan, to 1.5 percent in the Third Five Year Plan, though the size of investment has increased in absolute terms.

Constraints

13.152 The T&T sub-sector of the communication sector undertook a number of projects, the fund requirement of which was not commensurate with the availability of funds. As a result, funds had to be thinly distributed over a large number of projects causing delays in the utilization and even non-utilization of foreign aid, time and cost overruns and frustration of project viability and objective, etc. Besides, this agency by-passed the Governments procedure for choice and implementation of development projects. As a result, it faced shortage of funds for other on-going projects on the one hand and on the other, caused distortions in the objectives and targets of this sector. The shortage of local resources was one of the major constraints of this sector. Because of the constraint, implementation of the foreign aided projects has also been adversely affected.

Fourth Five Year Plan (FFYP)

13.153 One of the objectives of the FFYP is to accelerate economic growth. It has been envisaged that the annual growth rate of GDP would be 5% during the Plan Period. Communication plays a vital role in stimulating economic growth and thus helps in achieving the Plan target.

Objectives

13.154 The objectives in FFYP with respect of the communication sector will be :

i) To optimize utilization of existing facilities.

ii) To expand its services both in the urban & rural areas, especially in the latter in the light of decentralization of administration and development activities.

iii) To modernise the telecommunication system.

iv) Improved penetration of basic service in the rural areas.

Sub-Sector

T & T Services

13.155 The main objectives in the FFYP with respect to telecommunication sub-sector will be :

i) To expand the telecommunication facilities to meet its increasing demand with modern technology and efficient management and use of the existing facilities.

ii) To upgrade the maintenance services.

13.156 In order to achieve the above objectives the following strategies may be adopted :

i) The demand for new telephone lines in Dhaka and Chittagong is apparently quite substantial, although this demand has not yet been established through a proper study. On the other hand, the demand for new telephone lines in other Divisional Headquarters and Zila and Thana centres is also there. All these demands may not be met mainly due to resource constraint and limitation of physical facilities and manpower that could be provided during the FFYP. The demand for telephone in some thana may, however, be met through extension of NWD facilities by the private sector.

ii) Modern telecommunication facility is a capital intensive service. As such, the existing old technology in this sector will gradually be replaced by modern technology. Concurrently, the TSS, BCSS and the Telecommunication Staff College/Centres will also be modernised to meet the demand for spare parts and trained personnel in this sector.

iii) Despite low density of its network, the operating efficiency of Bangladesh Telephone & Telegraph Board is very low. Many of the telephone lines do not work properly. Majority of the reported faults are ascribed to underground cable problems mainly due to inadeqate provision for operation & maintenance, organisational & management deficiencies. In the FFYP emphasis will, therefore, be given on programmes for improvement of operational efficiency of BTTB, rectification of cable network problems and proper maintenance of existing facilities.

Policy issues of T&T Board

13.157 For the above objectives and strategies the following policies may be pursued:-

i) **Digitalisation :** Regarding digitalisation policy, the type of system to be adopted in Bangladesh needs to be reviewed and a policy of standardization of digital system in one region may be pursued. The Telecommunication Masterplan Study, being conducted by KFW, will help in selecting the appropriate digital system/systems.

ii) **Commercialisation:** The policy and organisational framework within which the T&T Board functions is not well suited for running a commercial enterprise. The Board may be transformed into a commercial enterprise by granting to the entity of greater managerial autonomy alongwith accountability.

The Post Office

13.158 Post office is a public utility organisation of the Government with 7,982 branches scattered all over the country and with 32,052 employees (16,845 regular and the rest extra-departmental) to run the services. The post office provides the cheapest means of communication, particularly in the rural area. But the postal services are required to be made more reliable and quick. It has, however, difficulties such as shortage of funds necessary for development, maintenance and operation, inadequacy of equipments and delivery vans, less than required number of branches etc. The objectives of the Fourth Five Year Plan with regard to the postal system will, therefore, be improvement of quality of postal services through efficient management and operation of existing facilities.

13.159 At the end of the Second Five Year Plan, one post office had to serve on an average, 13,070 population. With the increase in population, one post office has to serve about 13,950 population, on an average at the end of the Third Five Year Plan. So, the total number of post offices in the country will be increased keeping in view of the availability of resources.

13.160 About 90 percent of the country's post offices are located in rural areas but Physical conditions of many of them are dilapidated. Emphasis will be given in the Fourth Plan to improve the physical facilitates of the rural post offices.

13.161 The post office registered an operating delicit of Tk. 31.34 crore in 1988-89. The postal rates are low. Increases in postal rates and decreases in operating costs with a view to eleminating operating deficit will be an important strategy of the Fourth Plan.

13.162 In order to improve postal services, the focus of the investment programme will be shifted from civil works to procurement of equipments and on better utilization of existing facilities, provision of equipments and vehicles, development of physical facilities in rural post offices and reduction of operating deficits during the Fourth Plan Period.

Policy issues of Post Office

13.163 For the above objectives and strategies the following policies may be pursued :-

(i) Postage stamps are still printed in foreign countries which involves a large expenditure in foreign exchange. The use of postal stamps in mails can be done away with "Frank labels" given mechanically by Franking Machines. Use of Franking Machines alone may thus minimise the use of printed postage stamp and the foreign currency expenditure needed for printing of such stamps reduce the use of stamp cancelling machines, speed up the counter work and reduce the establishment costs of post offices. Mechanisation of counter-work at post offices is, therefore, advocated for improvement of speed and quality of postal services. But mechanisation has another aspect. It may aggravate the unemployment situation. So, the policy of mechanisation should be limited to urban post offices only. The number of staff rendered 'Surplus' by limited mechanisation may be absorbed in new post offices.

(ii) Of the 33,052 employees of the Bangladesh Postal System (as of June '90) 16,207 employees (49 percent) are extra-departmental, who get allowances for part time work (less than Tk. 400 per month in most cases). The service conditions of these extra-departmental agents are vitally linked with the question of improvement of quality of rural post offices, most of which are manned by them.

(iii) About 90 percent of the Post Offices are located in rural areas. These are ill-housed & ill-equiped. Most of them are housed in various types of non-government houses. To provide physical facilities to all these rural post offices is a gigantic task.

Meteorological Services

13.164 Bangladesh is subject to seasonal effects of tropical cyclones, nor westers, tornadoes, floods & droughts. Damages & losses of lives caused by those destructive weather-phenomena are well known. A significant amount of damages & losses of lives is avoidable, if timely and adequate forewarnings of their occurance are given. Meteorological services, therefore, contribute to the safety of life and alleviate the impact of natural disasters. But the infrastructure so far developed in the country for meteorological service fall short of present needs. The absence of accurate predisaster working system is a major constraint in the meteorological sub-sector. The Fourth Plan development programme of Meteorological Department will, therefore, aim at strengthening its capability for providing more effective weather forecasts, warnings and other related services.

Programme for FFYP

13.165 The main programmes of communication sector in FFYP will be as follows :

A. T&T Board

(i) Expansion of telephone services through installation of additional telephones in urban as well as rural areas of the country. 42,000 new telephones will be installed in greater Dhaka & 30,000 in Chittagong.

(ii) Replacement of existing analog telephones by digital ones. 18,000 old telephones in Dhaka & 10,000 in Chittagong will be replaced by digital telephones.

(iii) Establishment of UHF radio links of 300 thanas to connect them with their district headquarters.

(iv) Completion of the remaining works of thanas & rural projects.

(v) Completion of the work of extension of NWD facilities at 67 places of Bangladesh.

(vi) Completion the work of expansion of Dhaka-Khulna digital microwave system by 1800 channels.

(vii) 89 UHF radio links will be established in thanas and other important places to connect them with their district headquarters.

(viii) Establishment of Dhaka-Sylhet & Dhaka-Mymensingh-Bogra digital microwave system.

(ix) Rehabilitation of telecom facilities damaged by cyclone and flood.

(x) Establishment of a modern 'A' Standard Earth Satellite Station at Dhaka.

(xi) Establishment of computer centre and installation of data communication network.

(xii) Installation of 130,000 new digital telephone lines in Bangladesh.

(xiii) Modernisation of TSS with appropriate technology transfer for manufacturing and installation of 100,000 lines digital switching equipments per annum.

B. Post Office

(i) Completion of construction of 118 Thana Headquarters post offices & Post Masters' quarters spilled-over from the Third Plan.

(ii) Extension of 23 and Construction/Reconstruction of 18 Thana Post Offices with Postmasters' quarters.

(iii) Extension of 36 Head Post Offices with Postmasters' quarters and construction/reconstruction of 9 D.P.M.G. offices with residential quarters at district headquarters.

(iv) Construction of 133 rural post offices.

(v) Installation of one letter sorting machine.

(vi) Procurement of 200 Franking machines, 50 Stamp Cancelling machines, and 70 Fax machines.

(vii) Installation of 1 main and 4 mini-computers.

(viii) Extension of existing training centres and procurement of training equipments thereof.

C. Meteorology

(i) Improvement of agrometeorological services through establishment of four Agromet Stations at Hathazari, Jessore, Barisal and Rajshahi as well as four auxiliary stations at Faridpur, Khulna, Chuadanga and Dinajpur to meet the meteorological needs in the agricultural sector.

(ii) Development of capabilities for monitoring of earth-quakes through establishment of three Seismic Observatories at Rangpur, Sylhet and Dhaka, as well as modernization of the existing one at Chittagong.

(iii) Establishment of a high speed computer to introduce Numerical Weather Prediction Techniques for improved weather forecasts on all time scales.

(iv) Establishment of microwave links between Storm Warning Centres, Dhaka and Radar Stations at Cox's Bazar and Khepupara for the reception of rader-echoes directly at the Storm Warning Centre, Dhaka for improved cyclone warning and other severe weather forecastings.

Allocation of Resources
Public Sector

13.166 With a view to implementing the aforementioned programmes, Tk. 652.00 crore has been allocated for the Public Communication Sector of the Fourth Plan. Sub-sector-wise allocation of which is shown in Table-13.21.

Table-13.21 Public Sector Allocation of the Fourth Plan for Communication Sector (At 1989/90 prices)

(Tk. in crore)

Sub-Sector		Allocation
1.	Telegraph & Telephone Board	625.00
2.	Post Office	17.00
3.	Department of Meteorology	10.00
	Total :	652.00

13.167 Besides, for Thana Telecommunication project additional funds for Zila and Thana infrastructure development block fund will be provided.

Private Sector

13.168 It is stipulated that about Tk. 24.00 crore will be invested in the Private Sector for development of Telecommunication System in the country.

Private sector/community participation

13.169 In pursuance of government policies, participation of the private sector in the field of telecommunication has been introduced. The PABX supply, installation and operation have been given to private sector organisations. The PABX made by a Bangladesh private firm are being exported to foreign countries like Vietnam, Nepal, Bhutan etc. On the other hand, the responsibility of installation of digital automatic telephone exchanges at the Thana level has been given to a private firm which will install digital telephone exchanges with Nation Wide Dialling and International Subscribers Dialling facilities in 200 Thanas. Similar arrangements are also being made for another 200 Thanas. The responsibility for introducing the Cellular Mobile Telephone system, and the paging system in Dhaka and other cities of the country and the Riverine Mobile Telephone system in vessels of inland waterways has also been given to a private firm. In the Fourth Plan, more emphasis is likely to be given on privatisation of telecommunication services.

13.170 Some Private postal services are developing in urban areas in the name of the "Courrier Service". They are providing prompt and efficient services on payment of charges much higher than those of post offices. The "Courrier Service" is likely to expand further and thus reduce commercial activities of Post Offices. This situation will be closely monitored in order to formulate the development strategy of this sub-sector.

13.171 Postal Insurance and Postal Savings system run on deficit. In order to improve this situation, privatization of postal insurance and Postal Saving systems may be explored.

Women Participation

13.172 The principle of integrating women in the overall development plan and undertaking special programmes for them to raise their status in Society has been emphasised in the FFYP. Communication facilities serve equally both man and women. Like education and health sectors, there is a little scope for undertaking gender specific programme for development of women in the communication sector. The employment quota earmarked for women in the Public Sector will, however, be ensured in the Communication Sector as well. Participation of women in the construction, installation and operation of the telecommunication system may be extended further during the Fourth Plan. However, participation of women in various jobs of communication services, other than the traditional jobs of telephone operation etc., will depend on the development of necessary education and skill of women in the respective fields. Women are now studying in increasing numbers in different branches of engineering including electrical and telecommunication engineering. Women electrical/telecommunication engineers/technicians will have greater scope for increasing women participation in Telecom development.

Research and Development

13.173 The BTTB has a small research organisation. The purpose of this organisation is to understand the design and technology of imported equipments and find out whether the required accessories can be manufactured locally. The recent major achievement of the organisation is in the field of expansion of the NWD net work. It has developed cheaper type equipments which are being manufactured in the Telephone Factory at Tongi. This has helped in expanding the NWD network. The centre is not properly equipped with necessary equipments. An attempt will however, be made to improve this organization during the FFYP.

Domestic Resource Mobilisation

13.174 Unlike many other government organizations, T&T Board is a profit earning Government Board. In 1988-89, its revenue earning was Tk. 311.35 crore as against operating expenses of Tk. 203.77 crore. Thus, the revenue surplus was Tk. 107.58 crore. It's revenue surplus has increased from Tk. 90.44 crore of 1984-85 to Tk. 107.58 crore in 1988-89. T&T Board is going to be converted into a Corporation. As a Corporation, it may be able to take loan from financial Institutions to finance some of its commercially viable projects and may also finance development projects from its own earnings.

Manpower Development

13.175 Telecommunication requires highly skilled manpower. Training is thus an essential requirement for efficient operation, maintenance and development of telecommunication services. A new Telecommunication Staff College capable of training 100 officers at a time had been established at Joydevpur for conducting training for supervisory, mid-and higher level officers of telecom services in modern telecom techniques, traffic and telcom management aspects. The college has trained 584 officers in existing systems, new technology and management courses of various durations between 1986-90. The achievements made will be consolidated and the training facilities created will be put to maximum uses during the FFYP. Moreover, there exist two Telecom Training Centres (TTC) at Dhaka and Khulna to train technicians and certain other categories of staff. These centres trained 550 staffs during 1988-89. Establishment of a third TTC is being completed at Bogra. There is a need for establishment of a fourth TTC in Chittagong region. Besides, to train the linemen, wiremen and operators, there are 5 Telecom Training Sub-centres (TTSC). These TTSC's have trained 766 staff during 1988-89. On-the-job training is also given to concerned personnel by the foreign experts associated with development projects.

13.176 Telecom technology is fast changing. Telecom Engineers are therefore sent abroad to keep them acquainted with the latest technological developments in Telecommunications. Sixtyfour (64) Engineers and Technical Staff were sent abroad for training in various fields of telecommunication system during 1988-89. During the Fourth plan period, emphasis on telecom training needs will continue for skill development, increase in efficiency, improvement of quality of services and expansion of telecommunication services. In order to derive optimum benefits from trainings, T&T Board would require to formulate a policy for training and development of skill.

13.177 A Postal Academy has been setup at Rajshahi for imparting training to supervisors, junior and mid-level management personnel of the Post Offices. Officers from foreign countries like Afganistan, Bhutan, Maldives, Nepal, Pakistan, etc. participate in some of the courses offered by the Bangladesh Postal Academy. Besides, there are four Postal Training Centres at Dhaka, Comilla, Khulna and Rajshahi to provide training to the operative staff, counter staff, postmen, mail carrier, and other lower grade personnel. During 1988-89 about 1469 employees and 152 supervisors of Bangladesh Post Offices received training in the above training institutions. Efforts will be made to expand the existing training centres to add further training facilities for skill development during the FFYP.

Physical Targets

13.178 The physical targets of the various sub-sectors of the communication sector during the Fourth Plan are given in Table 13.22.

Table 13.22 Physical Targets of the Communication Sector.

Items	Position in 1984-85	Position in 1989-90	Target for 1990-95	Position in 1994-95
1. Telephone capacity (No. of lines)	171834	242473	103058 a	345531
(a) Automatic	147,300	214,300	100,300	314,600
(b) Manual	24,534	28,173	2,758	30,931
I. Urban	148890	215790	99200	314990
(a) Automatic	1,46,120	212,600	99,200	311,800
(b) Manual	2,770	3,190	-	3,190
ii. Rural	22944	26683	3858	30541
(a) Automatic	1,180	1,700	1,100	2,800
(b) Manual	21,764	24,983	2,758	27741
2. Telephone per hundred Population:	0.191	0.220		0.266
(a) Percentage of Telephone in urban areas	86.6	89.00		91.1
(b) Percentage of Telephone in rural areas	13.4	11.00		8.9
3. Areas covered by Telephones:				
I. Districts and other areas (Nos.)	83	91	7	98
(a) Auto exchange	73	88	13-3=10	98
(b) Manual exch.	10	3	-3	-
II. Rural areas covered by Auto, Manual or PCO's (Nos.)				
(a) Thanas	387	391	-	391
(i) Manual Exch.	376	351	(-)6	345
(ii) Auto Exch.	11	40	6	46
(b) Union Councils	926	950	118	1068
i) Auto	-	2	-	2
ii) Manual	70	83	-	83
iii) PCO (i/e Wireless PCO)	856	865	118	983
(c) Growth Centre	428	454	105	559
i) Auto	-	-	-	-
ii) Manual	26	42	-	42
iii) PCO (i/e Wireless PCO)	402	412	105	517
III. PCO Nos.	1258	1277	223	1500
4. Telegraph Offices	624	682	76	758
5. NWD facilities				
(a) District H/Q	26	59	5	64
(b) Other Places	-	2	4	6

Table 13.22 Physical Targets of the Communication Sector (Contd.)

	Items	Position in 1984-85	Position in 1989-90	Target for 1990-95	Position in 1994-95
6.	PBX/PABX Lines	27,120	28,820	-1200	27620
7.	TELEX/GENTEX LINES	1,410	8,818	-	8,818
8.	Overseas Circuits (Nos.)	293	443	521	964
	(a) Telephone	118	243	540	783
	(b) Telex	162	187	(-)17	170
	(c) Telegraph	13	13	(-)2	11
II.	**Bangladesh Post Office**				
1.	No. of Post Offices:	7624	7982	750 b	8732
	(a) Urban:	644	678	50 b	728
	(b) Rural:	6980	7304	700 b	8004
2.	No. of Residential Qtrs.	1215	1490	—	1490
3.	No. of Various Machines:	141	263	295	558
(i)	Franking	88	182	200	382
(ii)	Stam Cancelling	36	40	15	55
(iii)	Stmp Vending	2	2	5	7
(iv)	Adding	15	39	—	39
(v)	Fax	—	—	75	75
4.	No. of Training Institutes:	5	5	—	5
(i)	Postal Academy	1	1	—	1
(ii)	Training Centres	4	4	—	4
5.	No. of Employees:	31790	33052	134	33186
	(a) Full time	16719	16845	134	16979
	(b) Extra Departmental	15,071	16,207	—	16207
6.	No. of Vehicles:	141	237	27	264
III.	**Meteorological Installations**				
1.	1st class Meteorological observatory	34	35	—	35
2.	Pilot Balloon observatory	11	11	—	11
3.	Rawin-sonde observatory	3	3	—	3
4.	Weather surveillance radar	3	3	—	3
5.	Computer Centre	—	—	1	1
6.	Storm Warnning Centre	1	1	—	2
7.	Main Meteorological Office	2	2	—	2
8.	Dependent Meteorological Office	2	2	—	2
9.	Supplementary Meteorological Office	2	2	—	2
10.	(a) Agromet pilot station	2	3	4	7
	(b) Agromet observatory	5	5	4	8 c

Table 13.22 Physical Targets of the Communication Sector (Concld.)

Items	Position in 1984-85	Position in 1989-90	Target for 1990-95	Position in 1994-95
11. Automatic picture Transmission ground receiving station	1	1	—	1
12. Automatic Weather observation station	1	1	—	1
13. Seismic Observatory	1	1	3	4
14. Geomagetic Observatory	1	1	—	1
15. Hydrogen plant	1	1	—	1
16. Meteorological Training Institute	1	1	—	1
17. Meteorological Workshop and Laboratory	1	1	—	1
18. Data Processing Centre	1	1	—	1
19. National Meteorological Communication Centre	1	1	—	1
20. Meteorological Store	2	2	—	2
21. Regional Inspection Centre	4	4	—	4
22. Meteorological and Geophysical Centre, Chittagong	1	1	—	1
23. Micro-Wavelink	—	1	2	3

a. Of the total telephone target, 50,000 are expected to be installed by the private sector.
b. To be opened under the Revenue Budget.
c. The agromet observatory at Barisal will be upgraded into pilot station.

CHAPTER -XIV

PHYSICAL PLANNING, WATER SUPPLY AND HOUSING

14.1 Physical Planning, Water Supply and Housing sector covers a wide range of activities important to the national economy and welfare of both urban and rural communities. The major areas covered by the sector are (i) physical planning of the whole country (ii) construction of Govt. offices and institutional buildings at administrative centres and important places (iii) provision of economic housing units for Govt. servants (iv) provision of private housing facilities for various income groups (v) provision for physical infrastructure in the existing as well as emerging urban areas (vi) provision of safe drinking water supply, sewerage and sanitation in urban and rural areas with a view to improving environment and the quality of life of the people (vii) development of basic infrastructure and services for newly created Zila and Thana head quarters (viii) development of tourism and recreation facilities (ix) creation of physical facilities for the Police, the Ansar, the Fire Services and Civil Defence and (x) research and development in the field of building materials and construction. Although Bangladesh is predominantly rural, yet the urban population has been steadily increasing at an alarming rate of over 7 percent a year. The urban population comprises about 20 percent of the total population. By the year 2000, the urban population is projected to reach between 35 million and 40 million. Since 1984, the incidence of poverty in urban area has surpassed that of rural areas. According to the 1985/86 Household Expenditure Survey, the incidence of poverty in urban areas stood at 56 percent as against 51 percent in rural areas. The rapid urban population growth is mainly due to economic factors which induce rural-urban migration, rural landlessness, natural disaster etc. This has resulted in severe shortages of basic urban infrastructure services, serviced urban land and housing in major cities. During the past plans, emphasis was given to provide serviced land to the middle and upper income groups of people in the urban sector. During the Fourth Plan, it is envisaged, in particular, to take up integrated slum upgradation projects for improvement of living conditions of the urban poor with water supply, sanitation, garbage disposal, health, education and income generating activities. This approach of urban development will gradually improve the quality of life of the urban poor. Emphasis to improve the quality of life of the rural poor by undertaking "Cluster Village" programme with income generating activities will continue during the plan period.

Review of Past Performance

14.2 In order to provide different urban services to the growing population, particularly in Metropolis, an allocation of Tk. 272.00 crore (8% of the public sector allocation) for development of physical infrastructure was made in the First Five Year Plan (1973-1978), while the realized expenditure was Tk. 270.00 crore (99.26% of the allocation). TheTwo Year Plan (1978-80) allocated Tk. 250.00 crore (8% of the total public sector allocation), while Tk. 241.00 crore (90.40% of the allocation) was actually spent. The Second Five Year Plan (1980-1985) allocated Tk. 820.00 crore (5.10% of the total allocation) and Tk. 739.00 crore (90.12% of the allocation) was actually spent. Besides, during the Second Five Year Plan, Tk. 319.00 crore was allocated by the National Implementation Committee for Administrative Reforms (NICAR) for development of such infrastructural facilities as construction of government offices and residential buildings at the Thana headquarters. The total public investment made in the physical Planning, Water Supply & Housing sector between the period (1980-85) amounted to Tk. 1058.00 crore. The existing 397 Thanas have been upgraded into Upazila in 1982 with additional manpower and physical facilities. Towards this end 1160 staff quarters, 145 dormitory buildings and 11.82 lakh sft staff office buildings have been constructed at different upazilas of the country.

14.3 The Third Plan (1985-90) allocated at 1984-85 constant price Tk. 550.00 crore (2.20% of the total Public Sector Allocation) to this sector. Against this initial allocation, through ADPs of the plan period, Tk. 926.18 crore (at current prices) was allocated and Tk. 860.14 crore (at current prices i.e. 92.90% of ADP allocation) was spent. Besides, an allocation of Tk. 696.00 crore was made by the NICAR during the Third Plan period for the development of zila and thana infrastructure out of the block allocation, of which Tk. 12.00 crore and 92.00 crore respectively were allocated for the Special Chittagong Hill Tracts (CHT) Plan and Development Assistance to Pourashavas. The entire amount was, however, spent.

14.4 The above discussion indicates that the sectoral allocation came down from 8 percent in the First plan and 6 percent in the Second Plan to 2.2 percent in the Third Plan, because of the change of emphasis on decentralization and devolution of administration to Zila and thana levels. But if the total allocation (normal sectoral allocation + allocation by NICAR + CHT plan) is taken into consideration, the percentage would be 5. It may be mentioned here that originally 59 projects were included in the Third plan, but subsequently, 95 projects were taken up. This happened, because 36 projects had to be included in the plan as per directives of the higher authorities. Out of total 95 projects, 59 projects would be completed during the plan period and

36 projects would spill over to the Fourth Plan requiring an allocation of Tk. 750.09 crore. Besides 13 self-financing projects and T.A. projects will also be spilled over with fund requirement of Tk. 216.19 crore and Tk. 4.25 crore respectively.

14.5 Major physical targets achieved during the Third Plan are as follows :

Government Offices and Residential Accommodation

(i) The International Conference Centre at the old Sangsad Bhaban Tejgaon, Dhaka, National Monument for Martyrs of the Liberation war at Savar and the National Monument at Mujib Nagar were completed.

(ii) A Civic Centre (Osmani Memorial Hall) at Fulbaria to arrange National and International Cultural Functions was completed.

(iii) Six (6) Bunglows at Dhaka for Ministers' and 142 Bunglows for senior level officers' at the Zila Head Quarters were built during this period raising the total number from 318 to 466.

(iv) Seventy (70) Officers' flats (1000/1250 sft) at Dhanmondi and 384 Staff Quarters (900,550 and 600 sft) at Paikpara, 3850 staff Quarters (1250,1000,800 & 575 sft at various Thana, Zila and Divisional Headquarters (excluding Dhaka) were constructed as per target raising the total number of government flats in the country from 12,938 to 17,408.

(v) 317 dormitory buildings in Thanas were constructed raising the total number of dormitory buildings from 580 to 897.

(vi) Office Accommodation of 441 units at Zila and Thana Head quarters were completed during the period raising the total number of office buildings from 624 to 1065 including a 20-storied office building (from 10th to 19th floor) at the Bangladesh Secretariat. Besides, Expansion and Development of Bangabhaban phase-III was completed.

Physical Planning and Housing

(i) Land-use plan for 356 Thanas and 53 Zilas would be completed raising the total from 42 to 398 and from 7 to 60 respectively.

(ii) Towards evolving affordable approach to low income housing, a site and services programme for allotment of 4144 small plots (323 sft to 815 sft) has been taken up with the World Bank assistance at Kaibaliyadham, Chittagong during the plan period. The total cost of the project will be recovered from the beneficiaries in instalments over a period of 20 years. The project is being treated as a pilot project and will be replicated in other places, if found successful. The land for the project has been acquired during the present plan period.

(iii) A slum upgradation scheme has been taken up in old Dhaka with the World Bank assistance for the development of such low income areas as Rasulpur, Shahid Nagar and Islamabag with roads, water supply, sanitation and drainage etc. This is the first project of its kind to bring about environmental improvement to slum areas instead of relocating them. Under the same project, 418 affected families of the Dolai Khal area will also be rehabilitated at Moutail. The land for the project has been acquired during the plan period. This project is also being treated as a pilot project and will be replicated in other places if found successful.

(iv) Another low income housing programme taken at Bashantek, Mirpur with the UNCDF assistance will be completed to resettle each of the 2600 squater families in 15'X30' size plot having a C.I. sheet core house of 8'X12'. These families will be given tenurial rights and basic community facilities. Part of the investment cost will be recovered from the beneficiaries in instalments.

(v) An agreement has been signed with the Asian Development Bank for Urban Infrastructure Improvement over an area of 500 hectares of land at Mirpur, Dhaka. About 40 hectares of low land of this area will be developed to provide 4974 housing plots of different sizes to low and middle income groups of people and 650 plots for rehabilitation of affected families. In addition, 145 plots for small scale industries, 100 commercial plots and 436 shops will be developed. The cost will be recovered from the beneficiaries and this project if found successful will be replicable in other

places. The entire area will, however, be provided with service facilities like roads, water, sewerage and drainage etc.

(vi) The rehabilitation of 1400 squatter families at Ershad Nagar, Tongi against the total target of 3,444 families would be completed.

Water Supply and Sanitation

(i) The water production capacity of Dhaka WASA was increased from 90 MGD to 125 MGD against the target of 109 MGD covering 65% of the total population of the Dhaka City.

(ii) The Water production capacity of Chittagong WASA was increased from 19 to 40 MGD fulfilling the 100% target and raising the coverage to 33% in the Chittagong City.

(iii) The piped water supply in District Head Quarters was increased from 24.7. MGD to 54.44 MGD against the target of 40 MGD raising the coverage to 41% of the relevant population.

(iv) All the 64 District Head Quarters have been covered with piped water supply along with the expansion of water supply facilities in Dhaka and Chittagong Cities.

(v) In the rural areas, 1,22,082 shallow tubewells, 5,665 Deep tubewells and 18,340 Deep set Tara Pumps were installed against the target of 1,20,000, 4,000 and 50,000 respectively. In addition, 56,374 choked up tubewells were replaced against the target of 50,000.

(vi) The rural water supply coverage was increased from 1 tubewell for 138 persons to 1 tubewell for 118 persons against the target of 1 tubewell for 125 persons.

(vii) Fourteen (14) water sealed latrines were provided on average in each village against the target of 13.

Others

(i) The Police Training Academy at Sardah was renovated and expanded to augment training facilities for the Police Force.

(ii) The Ansar Training Academy at Shafipur was completed to enable simultaneous training of 5,000 Ansars and VDPs.

(iii) The construction of 456, reconstruction of 84, repair of 433 Tehsil Offices at Union levels were completed. The construction of 102 and repair of 122 Thana revenue offices were also completed.

(iv) The construction of buildings at 6 fire stations, engine shed and dormitories of 13 fire stations, 10 staff quarters at the Dhaka Sadarghat Station and the station officers' quarters at 11 fire stations were completed. In order to strengthen the fire fighting capacity 21 water tenders, 4 towing vehicles, 50 pumps, 77,000 rft of delivery hose-pipe, 2 snorkel, 1 emergency Tender, 1 breakdown van, 1 foam tender and other associated modern equipment were procured.

(v) An amount of Tk.48.00 crore was allocated to the Dhaka Municipal Corporation during the plan period against which Tk.40.00 crore was spent for development of some major city roads, 3 Inter-District Bus Terminals (Saidabad, Mohakhali and Mirpur), provision of street lights (sodium) and 200 housing units for low income people at Islambag.

(vi) An amount of Tk.16.00 crore was allocated to the Chittagong Municipal Corporation against which Tk.10.00 crore was spent for the improvement of important city roads and Chaktai Canal.

(vii) Following the devastating flood of 1988, Dhaka City Flood Control Project was taken up on urgent basis to construct embankment/protection wall/drainage and Tk.100.30 crores (local) was allocated to DMC,RAJUK and Dhaka WASA during FY 1988-89 and 1989-90 and the entire amount has been utilised. This allocation was made in addition to the 3rd Plan allocation.

The performance of the Third Five Year Plan with physical targets and achievements is presented in table 14.1

Table 14.1 The performance during Third Five Year Plan with Physical Targets and achievements by Major areas

		Unit	Position in 1984/85	Third Plan Targets	Achievement	Positionltems in 1989/90
1		2	3	4	5	6
Construction of Govt. quarters/offices						
1.	Construction of Bunglows	Nos.	318	234	148	466
2.	Construction of Flats	"	12938	4504	4470	17408
3.	Construction of Dormitory	"	580	407	317	897
4.	Construction of Office Building	"	624	559	441	1065
5.	Police Barrack	"	—	45	21	21
	(a) Residential Flats for Police	"	—	3645	243	243
	(b) Office for Police Deptt.	"	—	270	108	108
6.	Morgue	"	—	45	—	—
7.	Construction/reconstruction of Union Land Offices	"	1060	860	860	1920
8.	Construction/reconstruction of Upazila Land Offices	"	138	196	96	234
9.	Housing					
	Rehabilitation of squatters families	Nos.	2860	6044	4000	6860
	Distribution of serviced plots to low & middle income groups of people	"	13,918	-	-	13918
	Construction of Rural Housing	"	-	-	-	-
10.	Rural Water Supply and Sanitation					
	Shallow hand tubewell	"	596086	120000	122082	715168
	Deep hand tubewell	"	16831	4000	5665	22496
	Tara/Deepset hand tubewell	"	8891	50000	18340	27231
	Choked up tubewell	"	-	50000	56364	56364
	Distribution of water sealed latrines	"	436725	500000	481400	918125
11.	Urban Water Supply					
	Dhaka City	MGD	90	19	35	125
	Chittagong City	"	20	20	20	40
	All other district sahars	"	24.70	40	29.74	54.44

Major Constraints to Development

14.6 The major problems/bottlenecks encountered in the course of implementating the Third Five Year Plan are indicated below :

(i) Programmes of this sector are highly capital intensive requiring a larger portion of plan allocation in local currency for construction of government offices, residential accommodation and supporting utility services, but these programmes are mostly non-productive in the conventional sense though they are important for development. The shortage of local currency resources hampers planned development of this sector.

(ii) The pinch of resource constraint, particularly with regard to local cost was felt for most of the on-going projects when funds had to be diverted for financing the 36 projects which were not originally included in the TFYP, but had to be undertaken during the plan period in accordance with the directive from higher authorities. Apart from this resource shortage for normal programmes, resource constraints was also caused due to diversion of funds for flood rehabilitation following 1987 and 1988 floods.

(iii) The utilization of project aid was delayed due to shortage of matching funds in local currency.

(iv) The failure on the part of concerned Autonomous Executing Agencies to make necessary provisions in the revenue budget for servicing debts already taken from the Government, resulted in deduction at sources from the ADP allocation. It accounted for the delay in implementation of on-going projects and cost escalation.

(v) It was envisaged that the Housing and Settlement Directorate could continue to undertake a vigorous programme for construction of housing units with funds to be advanced by intending buyers. But this could not be made feasible due to inadequate institutional arrangements of this organization. The present problem of housing is considered as more conceptual rather than as an outcome of resoures constraints. Housing is ordinarily conceived as mere construction of houses or shelters without giving due attention to utility services, social and economic factors in terms of affordability and standard. If common physical facilities in the form of land, road, gas, electricity, water, drainage and sewerage are provided by the government, massive self-help housing programme could be promoted.

(vi) The absence of a framework for development of urban centres, lack of enforcement of regulatory rules and multiplicity of agencies in metropolitan areas like Dhaka and Chittagong hindered planned development of the city areas seriously.

(vii) Land is a scarce resource in Bangladesh. Therefore, any planned development requires government intervention in land pooling and plot adjustment of this vital resources to new uses. This resulted in transfer of valuable agricultural land to urban expansion. Besides, delay in land acquisition caused delay in project implementation.

OBJECTIVES, STRATEGIES AND POLICIES OF THE FOURTH FIVE YEAR PLAN

Physical Planning

14.7 The major thrust will be to ensure systematic and planned growth of the Zila and Thana Headquarters. Land use Plans for Zila and Thana towns will be completed during the Third Plan. The Urban Development Directorate will provide supporting rules and regulations for development control of Zila and Thana land use plans. Updating of the Master Plan for Dhaka and Chittagong metropolis will be taken up in view of the expansion of urban areas and changes since the preparation of the Master Plan for these two cities in 1959. The City Development Authorities will continue to apply regulatory controls to ensure planned development of their territories. But the over all land use plan would ensure optimality in land use and it would be consistent with optimum water management and environmental issues.

GOVERNMENT OFFICES AND INSTITUTIONAL BUILDINGS

14.8 With the decentralisation of administration and developmental activities at local levels to local governments, the construction of government offices and institutional buildings at the thana and Zila headquarters will continue as spill over programme from the Third Plan. The Government Offices, which are being manned at rented accommodations, will be assessed to make provisions for minimum new office construction during the plan period. The construction of Govt. offices will enjoy comparatively lower priority in view of resource constraints and the emphasis of the plan will be given for ameliorating of poverty and creation of gainful job opportunities.

Housing

14.9 For lack of adequate resources, public sector agencies will not be able to meet the demand of housing for all groups of people. Therefore, their involvement will be limited to the planned development of land, road construction, water supply and sanitation, gas and electricity etc. which an individual can not easily afford without government intervention. The aim of the programme will also be to effect environmental improvement. The major objective in this area will be to formulate necessary policy prescription to stimulate expanded private sector participation. The public sector will not preferably go for construction of complete house/apartments, but for neucleus houses/skeletal houses/houses to suit the varying degree of affordability of the people. Through this process larger number of people could be provided with housing accommodation.

14.10 The govt. will continue construction of minimal public servants' housing in locations where services are essential and housing facilities in general are scarce. Middle and lower income groups of people will be alloted plot by the City Development Authorities. The government will continue to provide building materials at a reasonable cost in the market so that the people can build their own houses. The relevant Departments will continue to provide utility services and technical support for housing. The construction of public servants'

housing and their maintenance by the government exchequer are considered uneconomic, wasteful and a perenial burden to the government in many third world countries. Bangladesh is no exception to it. Besides, the government will continue to take up integrated area development projects with environmental improvement in urban fringe areas of Dhaka and Chittagong with likely assistance from the World Bank and the ADB during the plan period. These programmes are intended to improve urban infrastructure, affordable serviced plots with secure tenure, water supply, sanitation and drainage facilities to the low income people. The proposed urban services will increase density and ensure cost effective use of land. The programme will indirectly strengthen the institutional capability of the metropolitan agencies to guide, service and control the emerging urban growth. Intervention of the public sector will be necessary to provide housing to the economically weaker sections of the community, it will be necessary to mobilise both local and foreign assistance for housing the low and middle income group of people. In order to cater to the needs of funds for housing, a private sector Housing Bank may be created and the existing HBFC may be reconstituted. Besides a National Housing Council will be formed to laydown national housing policies and programmes with the mode of financing.

14.11 Due to rapid population growth, agricultural land are gradually being occupied under human habitation resulting decrease in cultivable land. The proliferation of rural homesteads are taking place at an alarming rate due to break up of joint families each year. If the existing proliferation rate is continued, it will occupy about 30 percent of the land area by the homesteads by the turn of the century. Therefore, the idea of the cluster housing concept has emerged. The government will continue to undertake cluster housing programmes for rehabilitation of the landless people in locations where khas lands are available. This programme will be tagged with income generating activities. This idea is being experimented by the government.

14.12 About 82% of the people live in rural areas and 86 percent of dwelling units are located in rural areas. Yet there has been very little public sector involvement in rural housing due to lack of resources and institutional arrangements. The severe floods in 1987 and 1988 prompted the importance of undertaking reconstruction programmes for rural housing. It was, therefore, felt necessary to take up a rural housing programme which could encourage housing delivery system, which are affordable, sustainable and replicable with the use of improved building materials. During the plan period, the government will therefore, undertake a low cost rural housing construction programme with the UNDP assistance. This programme is intended to stimulate expanded private sector participation in housing which is durable and resistant to flood.

Rural Water Supply and Sanitation

14.13 Safe drinking water together with sanitation facilities is a prerequisite for rural Bangladesh where about 82% of the population live. Realising the need for safe drinking water, the United Nations declared 1981-1990 as the International Water Supply and Sanitation Decade (IWSSD). The objective of this decade was to attain the target for improvement of community health through provision of safe water supply and sanitation facilities. The World Health Organization accordingly followed the declaration of IWSSD and launched the slogan, "Health for all by the year 2000." Bangladesh along with other countries is committed to materialise the slogan. The Bangladesh National Action Committee responsible for the implementation of IWSSD assumed the rural water supply target to be 1 (one) tube-well for every 108 rural population. The comparable target in the Third Five-Year Plan was 1 (one) per 125, but in reality 1 (one) per 115 people could be achieved. The UNICEF has been providing full support for different type of tube-wells through country programmes. This will also continue during the Fourth Plan. Thus a modest target of providing 1 tubewell for every 106 people has been set. Every year more than 7 percent of the installed tubewells get choked up and as such necessary provision of resinking of 75,000 tubewells has been made. The shallow hand tubewell area is being gradually reduced from 68 percent in 1980 to 53 percent in 1990 due to unplanned intensive extraction of ground water for irrigation during the dry season and overall deterioration of the environmental situation. This calls for increasing Tara Deepset hand tubewells involving higher technology at higher cost. More emphasis will be given to the programme of installing deep tubewells in the coastal saline area.

14.14 The Government policy of recycling the sale proceeds of spare parts will continue. The policy of installation of shallow tubewells by the beneficiaries on self-help basis, realisation from the beneficiaries of Tk.2000/- for installation of each Deep-Tubewell and Tk. 100/- for each Tara Deep set tubewell will be pursued.

14.15 The sanitation facilities in the rural areas is very poor and at present only 6 percent of the population is served by rural sanitation programme of water sealed latrines. Provision, therefore, has been made to increase the household coverage to 35% during the Fourth Plan period. In order to develop effective water

and sanitation programme, the level of awareness of the local population regarding safe drinking water and its use, sanitation and hygiene as preconditions to good health and longer life expectancy is to be gradually promoted from its present low level. Therefore, the package programme of water supply, sanitation, drainage and health education will be pursued during the plan period. This will lead to improvement of environmental conditons in the rural areas.

Urban Water Supply and Sanitation (Excluding Dhaka and Chittagong Cities)

14.16 At present, 41 percent of the population of all district towns (other than Dhaka and Chittagong) are covered by piped water supply. Though the service is inadequate, yet the achievement of 41 percent coverage has been possible with Dutch and Japanese grants and project aid from Asian Development Bank alongwith local Government funding. Emphasis will be given for completion of on-going aided projects and new projects would be taken up in important towns which have not yet been covered or which need expansion of water supply facilities. The relevant coverage in towns have been proposed to be raised to 60 percent during the Fourth Plan period. Package programmes will be taken up to integrate water supply, sanitation and drainage in district towns. Special care will be taken to provide water supply and sanitation facilities to the urban population of slums and fringe areas.

Urban Water Supply & Sanitation (Dhaka and Chittagong)

14.17 The existing water supply facilities covers only 65 percent of the population of Dhaka City. On completion of the IDA-aided on-going Third Dhaka WASA Urgent Expansion Project and the Dhaka Water Supply Crash Programme Project, the production capacity will increase from 125 MGD to about 200 MGD and cover 80 percent of population of the Metropolis. During the plan period, it is envisaged to undertake a long term water supply project in the metropolitanan Dhaka city by a technology which is likely to be a combination of sinking DTW and treatment of surface water. With the completion of the IDA aided Second Chittagong Water Supply project, the water production capacity was raised from 20 MGD to 40 MGD. During the plan period, it is envisaged to undertake third project with IDA assistance to enlarge the coverage of sanitation in urban slum and fringe areas and sewerage to important urban areas.

City Development

14.18 Master Plan for greater Dhaka and Chittagong will be prepared with UNDP assistance for systematic development of these two metropolis. All city development agencies and Poura Corporations/Pourashavas will concentrate on income generating projects to enable them to go for self-financing development programmes. As per government decision, no project of Municipal Authorities and City Development Agencies, except those to be financed with project aid, will be included in the Annual Development Programme. Block allocations in the form of grants will, however, be provided to 87 Municipalities on a limited scale to supplement their own development activities. In municipal areas, poor garbage disposal, unhygienic sanitation and drainage problems are the main causes of environmental degradation. Efforts will be made to improve the essential urban services during the plan period. Towards addressing the existing problems of slums and slum dwellers, recently the Dhaka Metropolitan Slum Improvement Committee has recommended for the rehabilitation of the squatters through upgradation of the slums rather than relocating them in three phases short,medium and long. The main responsibility of upgrading the slums, as suggested by the Committee will fall upon the Dhaka City Corporation and other government agencies. Efforts of various NGOs, donor agencies and the government will be coordinated by the Committee during the plan period. Upgrading living conditions and the surrounding environment of slums with provisions of civic amenities, employment opportunities, literacy, primary health care and family planning are the important aspects of the recommended programme.

Tourism, Fire Services, Environment and other Development

14.19 Tourism is considered as a multi-sectoral and multi-disciplined service industry. It can not be developed in isolation unless other sectors, particularly infrastructure are equally developed. Transport and communication, hotels, motels, catering establishments, parks, recreational facilities, provision of services and utilities are the responsibilities of different ministries and agencies. Therefore, the Master Plan, prepared curing the Third Plan for tourism development, will be taken up for implementation in phases through inter ministerial coordination. Greater emphasis will be given to take up economically viable projects which are income generating and could be financed with their own resources and bank loans whereever possible.

14.20 The existing Fire service stations will be strengthened with modern fire fighting equipment and new stations will be established at places of commercial and industrial importance which are imperative. During the plan period, efforts will be made to improve ambulance services to extend emergency services to hospitals for patients facing serious illness and unforeseen accidents.

14.21 The Department of Environment will be strengthened through ADB assistance by establishment of an appropriate and affordable environmental quality standard, laboratory, undertaking environmental impact assessment studies and focusing efforts on water and air pollution control/monitoring to improve urban environmental condition. Facilities for imparting training to the police forces will also be enhanced by construction of 4 regional police training schools. Union Tehsil offices and thana revenue offices will be constructed and renovated during the plan period. The UNDP will continue to provide technical assistance as a support for Area Development and Shelter Programme which is an integral part of the World Bank's First Urban Development project in Bangladesh. The project will focus new area development and shelter improvement along with strengthening the institutional capabilities of the Ministry of Works for formulation and administration of housing, land development policies and programmes. The project will ensure community and NGO participations. Besides, the UNDP will provide support for the Urban Management and the Municipal Services programme which is an integral part of the World Bank's First Urban Development project and will focus on municpal finance, major drainage, environmental and municipal services, improvement for low income neighbourhoods in Dhaka and Chittagong.

Programme for the Fourth Five Year Plan

14.22 In pursuance of the objectives and strategies described above, the major programmes of Physical planning, Water supply and Housing sector are stated below :-

(1) **Residential Housing** : Core houses will be constructed at Dattapara, Tongi (Ershadnagar) Dhaka to accommodate the remaining 2,416 squatter families. In order to solve the acute housing problems in city areas, 5144 serviced plots at Mirpur, Dhaka and 4,144 serviced plots at Kalbaliyadham, Chittagong will be provided with the ADB and the World Bank assistance to the low and middle income group of people. For rehabilitation of rural houses in flood affected areas of the country, 10,500 housing units will be constructed with the UNDP assistance. A total of 86 units of residential accommodation will be constructed under NICAR programme for 5 core officers (D.C., S.P; Civil Surgeon, District Judge, Executive Engineer) and bare essential accommodation for others in the 45 newly created District headquarters.

(2) **Office Accommodation** : In view of the resource constraints, particularly local resources no meaningful allocation can be made for construction of government office buildings. Present arrangements of housing these offices in rented accommodation will have to continue. Meagre allocations would be utilized only for such office buildings whose construction are absolutely necessary. The Prime Minister's secretariat at Tejgaon will be remodelled and expanded during the plan period.

City Development

14.23 Master Plans for Dhaka and Chittagong will be updated. Development Authorities will continue to embark on projects for land development and distribution of plots in major cities on self-financing basis. Besides, the land pooling/Land adjustment policy can be pursued either by legislation or Co-operative method with the community participation for development of urban land with common civic facilities. Under ADB assistance, 10 strategic secondary towns will be taken up for improvement of infrastructure with provision of road, water supply, sanitation, drainage and flood protection, solidwaste management, slum improvement, markets and community facilities. Apart from this, institutional capabilities of the municipalities will be strengthened with focus on the operation and maintenance of urban assets and financial management including resource mobilization.

Water Supply

14.24 Piped water supply capacity will increase from 125 MGD to 200 MGD in Dhaka and 54.44 MGD to 105 MGD in district headquarters. Existing water production capacity of 40 MGD at Chittagong in underutilised and as such there was no capacity expansion during the Plan period. Efforts will be made to ensure optimum utilisation of the present capacity. It is envisaged to install 40 DTWs under the on-going Crash Programme project and additional 25 DTWs under the Third Dhaka WASA urgent expansion project to produce a total of 65 MGD during the Plan period. Besides, a feasibility study will be taken up with french assistance for solving the long term water supply problem of Dhaka City and an investment project (Sayedabad Water Treatment Plant) has been taken up.

The UNICEF will continue to co-operate with the government in implementing the five on-going programmes. These are (a) Rural Water Supply and Sanitation in coastal belt, (b) Rural Water Supply and Sanitation in the low water table area, (c) Rural Water Supply and Sanitation in the shallow water table area, (d)

Rural Water Supply , maintenance, rehabilitation and upgrading and (f) Water Supply and Sanitation in urban slums and fringes. Under these programmes, 1,64,150 shallow hand tubewells, 21,750 deep hand tubewells and 61,710 deepset Tara pumps will be installed and 75,000 choked up tubewells will be replaced regenerated in rural areas during the Plan period. For environmental improvement, 14,75,000 water sealed sanitation units will be produced with UNICEF assistance for sale. A revolving fund will be created out of the sale proceeds of latrine units for reproduction and sale. The coverage of tubewells will improve from 1 (one) tubewell for 115 persons to 106 and water sealed sanitary latrines from 14 to 25 per village on average during the Plan period for preventing water borne diseases. Drainage facilities of Dhaka Metropolitan Area will be improved with Japanese assistance. The ADB aided on-going 5-District Towns Water Supply and Sanitation Project and Dutch aided 12-District Towns Water Supply and Sanitation Project will be completed in June, 1991. The 18-District Towns Water Supply, Sanitation and Drainage Project will be implemented with Dutch assistance during the Plan period. The remaining district towns which need expansion and improvement of water supply, sanitation and drainage services will be prioritised and taken up in phases commensurate with given allocation.

Tourism, Fire Services, Environment and Other Services :

14.25, The Tourism Corporation will continue to take up self-financing projects on the basis of the Master Plan prepared for tourism during TFYP. The policy objectives set and action programme proposed in the draft Master plan for the development of tourism in Dhaka, Cox's Bazar, Teknaf, Chittagong Hill Tracts, Sunderban, Sylhet, Moulavi Bazar and other areas on Zonal basis deserve consideration by the concerned Ministries/Agencies. The projects identified for development of tourism during the next 10 years are concerned with the Ministry of Education, the Ministry of Youth and Sports, the Cultural Division, RAJUK,Department of Forestry, IWTC, Private enterprises, Roads and Highways and Local Bodies. A high level Inter-Ministerial Committee may be formed to ensure coordination for implementation of the projects identified. The on going projects of Fire Services which will not be completed by June, 1990 will be spilled over to the Fourth Five Year Plan. Provisions will be kept for a few new fire stations at places of commercial and industrial importance and some ambulances for replacement during the plan period. The two on-going IDA assisted projects of Dhaka and Chittagong City Corporation will continue as spilled-over projects. Towards this end the Dhaka Environmental Improvement project envisages to improve the drainage system of the Dholai Khal area and to improve water supply, sanitation, roads etc. of adjoining low income areas of Islambag, Shahidnagar and Rasulpur. Chittagong Environmental Improvement Project also envisages to improve drainage system of the city by digging chaktai khal and other canals and improving garbage disposal system of the municipal areas. Under Slum Improvement Project with UNICEF assistance, efforts will be made to assist the urban poor with improved physical facilities, community health care and to strengthen the capability of the Pourashavas to work with the urban poor community in the planning and provision of basic services. Towards this end, physical environment of selected urban poor communities in 20 Pourashavas/City Corporations will be improved with road, drainage, water sealed latrines, tubewells, street lights, dustbin for rubish disposal. In addition, income generation loans to 15,000 slum women will be provided under this programme. In the field of environment, appropriate and affordable environmental quality standard, laboratory, environmental assessment study and focus on water and air pollution control and monitoring will be taken up with ADB assistance during the Plan period. Training facilities will be augmented for the police forces in four Regional Police Schools. Besides, Union Tehsil Offices and Thana Revenue Offices will be constructed and renovated during the Plan period.

Financial Outlay

14.26 Total allocation for physical planning, water supply and housing sector is Tk. 8244.00 crore at 1989-90 prices Tk. 1842.00 crore for public sector and Tk. 6402 crore for private sector. In addition, the sector will get some fund out of the NICAR block allocation for Zila and Thana Infrastructure, block allocation for Pourashavas and Four Poura Corporations and special allocation to CHT. plan. The break up of this allocation under major areas of activities and by agencies is shown in table 14.2.

Table - 14.2(A) Public Sector Allocations for main Programme by Agencies(1990-95) (At 1989/90 prices)

(Tk. in crore)

Sl. No.	Agencies	Total
1	2	3
A.	Ministry of Works	85.72
1.	Public works department (a) Public servant's housing (b) Govt. offices & Institutional Buildings	22.99
2.	Housing & Settlement Directorate	33.72
3.	Rajdhani Unnayan Kartipakha (RAJUK)	4.26
4.	Chittagong Development Authority (CDA)	15.58
5.	Khulna Development Authority (KDA)	6.18
6.	Rajshahi Town Development Authority (RTDA)	1.52
7.	Urban Development Directorate	.74
8.	HBRI	.73
B.	Ministry of Establishment	6.142
C.	Ministry of LGRD & Co-operatives	1449.00
	(I) Local Govt. Division	1414.14
9.	Dhaka WASA	621.65
10.	Chittagong WASA	20.39
11.	Department of Public Health Engineering	489.89
12.	Dhaka City Corporation (DCC)	112.19
13.	Chittagong city Corporation (CCC)	64.39
14.	Rajshahi City Corporation (RCC)	3.51

Table - 14.2(A) Public Sector Allocations for main Programme by Agencies (1990-95) (At 1989/90 prices)-Concld.

(Tk. in crore)

Sl. No.	Agencies	Total
1	2	3
15.	Local Government Engineering Department (LGED)	102.12
D.	Ministry of LGRD & Co-operatives	29.86
	(II) Rural Development Division	29.86
E.	Ministry of Environment & Forestry	8.39
F.	Ministry of Home Affairs	46.12
16.	Fire Services & Civil Defence	31.51
17.	Police Directorate	14.61
G.	Ministry of Land	7.77
H.	Ministry of Civil Aviation & Tourism	0.80
18.	Bangladesh Parjaton Corporation (BPC)	0.80
I.	Ministry of Law and Justice	3.60
J.	Ministry of Finance	6.91
K.	Unallocated	26.27
	Total:	1635.72
(B)	**Self-financing allocation by agencies**	
1.	Rajdhani Unnayan Katripakha (RAJUK)	66.22
2.	Chittagong Development Authority (CDA)	21.93
3.	Khulna Development Authority (KDA)	5.09
4.	Rajshahi Town Development Authority (RTDA)	7.48
5.	Dhaka City Corporation (DCC)	0.04
6.	Rajshahi City Corporation (RCC)	4.44
7.	Housing & Settlement Directorate	22.02
8.	Bangladesh Parjaton Corporation (BPC)	2.90
9.	Trading Corporation of Bangladesh (TCB)	3.31
10.	Sadaran Bima Corporation	1.23
	Total:	134.66
(C)	**Block Allocation for TA Projects**	71.62
	Grand Total :	1842.00

14.27 The sectoral allocation of Tk. 1842.00 crore have been alloted on the basis of the following criteria:

(a) Implementation on-going projects other than aided or likely to be aided having low priority may be postponed. New projects especially costly projects involving local fund may be dropped.

(b) Projects of Pourashavas/Poura Corporations will not be included as per decision taken in the Inter-Ministerial Meeting held in the Planning Commission on 15.9.85 and the Planning Commission meeting held on 28.12.88.

(c) Local fund for autonomous organisations like Rajdhani Unnayan Katripakha, Chittagong and Khulna Development authorities, the Parjaton Corporation etc. may not be provided through Annual Development Programmes. But economically viable projects to be financed through own resources or on bank loan may be accepted.

(d) Proposed foreign aided projects for Dhaka and Chittagong metropolitan areas and the UNICEF assisted urban and rural water supply projects will be given priority.

Private Sector :

14.28 Private sector supplies almost 93% of the housing facilities. So the housing development is overwhelmingly a private sector activity. Recognising this fact, the government has been encouraging private housing construction through fiscal and financial incentives. This is apparent from the housing development in recent years in major cities through private developers, but it is mere a drop of water in the ocean. In view of the prevailing situation, there is an important need to formulate policies and work out appropriate short and long term strategies to ease the existing housing crisis and to provide desirable living environment, for all sections of the people in the long run. In this context, policies and programmes along the following lines are required :

(i) Public Sector agencies may play a significant role in providing land and infrastructure which people cannot easily provide for themselves. The Govt. will play the role of 'facilitator' or 'enabler' by giving access to land, finance and building materials and less and less of a "builder".

(ii) Intervention of the public sector will be necessary to provide housing to the weaker segment of the community through cross subsidization. For this purpose, the Housing and Settlement Directorate may be converted into a National Housing Authority(NHA) which will operate as an autonomous organisation. The NHA will mobilize both local and foreign resources for housing the low and middle income groups of people on commercial basis preferably in competition with similar private sector organisations.

(iii) The House Building Finance Corporation may be reconstituted and broad-based so as to facilitate credit to co-operative groups and individuals.

(iv) The Bangladesh Bank's Housing Finance Programmes may be strengthened for channelling fund through appropriate institutions.

(v) Specified percentages of the General Provident Fund and also those of Insurance Companies should be set aside for housing loans to be administered by a Housing Bank.

(vi) Income tax exemptions should be accorded to dwelling units not exceeding 1000 sft. in plinth area for a reasonable time frame.

(vii) The private corporate sector should be encouraged to provide housing to their own employees.

(viii) Housing Co-operatives, now functioning in cities should be regulated and controlled through appropriate new legislation.

(ix) Since September, 1984, Grameen Bank started its rural housing operation to promote housing in the private sector and so far extended housing loan at 5% rate of interest for building 35,000 to 40,000 housing units. The programme has been financed by UNDP, NORAD and SIDA for creation of revolving fund for future rural housing. It is envisaged that this programme will continue during the plan period.

(x) No family be allowed to acquire more than one plot of land of specified size through any source within the declared city limits for construction of houses

Women's Role and Community Participation

14.29 The provision of clean water, improved sanitation and hygiene are the basic elements of primary health care and are essential preconditions for improvement of public health. Bangladesh has made remarkable progress during the last 15 years by installing about 7.65 lakh public tubewells and producing some 9.18 lakh water seal latrine units. Inspite of this, there has been little perceptible impact on health and hygiene of the people and decline in the incidence of diarrhoeal diseases and parasitic infections in the children during the period. Recent studies have identified three main reasons for lack of health impact. Firstly, although most people use tubewell water, they only use it for 25 percent of their needs and continue to use traditional polluted sources for the remaining 75 percent; Secondly, the practice of sanitary excreta disposal is still very low (2-4 percent) and thirdly, there has been very little improvement in personal hygiene practices. Even though clean water is available, diarrhoeal deseases and parasitic infection are transmitted due to indiscriminate defecation of the people around the homestead and the absence of hand washing practices of the mother, particularly before food preparation and serving. The hardware part of the on-gong programme is mostly engineering and the software part relates to health and hygiene education. These two should be integrated during the Fourth Five Year Plan. The women constitute about 50 percent of our population. They assume the primary responsibility of rearing up of children, keeping the living environment tidy and using water. During the plan period efforts will be made to employ female health workers against the water supply and sanitation projects for transfer of knowledge on health and hygiene to the users of water and sanitary latrines. Apart from personal contact, knowledge of this type of informal education can be disseminated through the media of radio, TV, Video, movies, leaflets, stickers etc, This policy will eventually generate public awareness on health and hygiene and will give rise to an approach of womens participation in operation and maintenance of tubewells, the water supply and the sanitation system. Towards this end, "Water and Sanitation Surveillance Committees" can be formed at ward level with 50:50 representation from both men and women. They will be responsible for the surveillance of public taps, pipes, identification of leakages and other fechnical defaults in the system and reporting to the technical section of water supply department of the pourashava. Besides, they will assume responsibility of minor repair and maintenance of hand pumps at their own cost and assist collection of water rates in the locality. During the plan period, it is envisaged that the Department of Public Health Engineering will not only be responsible for merely implementation of water supply, sanitation and drainage projects, but will also motivate beneficiaries/users on health and hygiene education and sharing a part of the cost of installation and maintenance. This will eventually transform it into a peoples' oriented organisation.

14.30 As a departure to traditional methods of land use development through sites and services schemes involving huge public investment for land acquisition, land development, road infrastructure and other facilities and utilities, the land pooling/land adjustment policy can be pursued by both legislation and co-operative methods with the community participation during the plan period. The proposed land development is a technique for development of urban land by providing/improving public facilities such as roads, drainage, shopping centres, educational institutions, open space and making individual sites usable as per detailed lay out plans with minimum or no public expenditures through land owners, community participation. The land owners included in the project/detail areas will lose a small portion of their land for common facilities and in return, they will get a planned plot with all basic facilities. Land required for common facilities will amount to 20 to 30 percent of total land. In this system, land owners participation has to be made compulsory legally. The option of voluntary participation of them through co-operation should also be examined. The land pooling/land adjustment/Co-operative land development projects can be initiated and implemented under the guidance of Planning Authorities (e.g. a city development authority, a municipal authority or the Thana Parishad under respective situation). This land pooling/land adjustment policy has been experimented extensively in Korea, Japan, Taiwan and Australia with success. Therefore, it is envisaged that the concerned authorities will identify suitable sites in different locations and motivate the land owners for such land pooling

project. This will be a new venture of its kind for development of urban land in Bangladesh during the Fourth Plan period.

Research and Development (R&D)

14.31 The cost of materials for building construction including low cost housing has been steadily rising since the seventies. The research and development activities so far undertaken by the House Building Research Institute (HBRI) could not bring about significant changes in the cost structure of building materials or change in techniques for construction. The research activities have been directed towards reduction of cost of urban civil works based on imported raw materials. No tangible research has been undertaken for rural construction on the basis of indigenous local materials. Against this backdrop it is envisaged to conduct research and promote development of low cost building materials and construction techniques of low cost houses which are durable and affordable to low income families. It is in general observed that the quality of construction work has been deteriorating. To overcome this problem, research on improvement of construction materials and techniques, architectural design, multi-colour bricks etc. for both urban and rural areas should continue with publication of necessary manuals. Efforts will be made to evolve design of rural houses which are suitable for flood and cycloneprone areas of Bangladesh. Inview of the fact that the two-thirds of Bangladesh remain under water for about 6 months of a year, portable and durable shelters should be designed for flood affected people of Bangladesh. Towards this end House Building Research Institute should be renamed as House Building Research and Training Institute to train the masons, carpenters, plumber, electrician and engineers in necessary techniques for quality construction and thus help transfer of innovative technologies from the 'lab' to the land. The HBRI will continue their normal research work and efforts will be made to have technical assistance from UNDP, UNCHS, ESCAP etc. during the plan period for research and development. The HBRI will also keep liasion with similar research organisations in other countries to have benefits of their research findings and join international forums, seminars etc. to exchange views on the subject from time to time.

CHAPTER-XV

EDUCATION AND RELIGIOUS AFFAIRS

Section 1 : Education

Introduction

15.1 In any economy, education is a matter of paramount national importance. It is more so in a less developed country like Bangladesh where a comprehensive base of mass literacy, a strong foundation of ethical values conducive to intellectual and material integrity in society, a high qualitative standard of education backed by a dynamic R&D system to promote productivity of labour and management and to enhance the country's resource base on a continuous basis should partially make up the deficiency of capital. Education is in demand in every household of the community, in all the national and international sectors of the country's economy and in all the branches of planning, research and other intellectual pursuits of society. Both at individual and national levels, education is an item of consumption, a form of investment and an avenue of employment.

15.2 By its very nature, education has pronounced multi-sectoral links. It is the single-most dominant antecedental and consequential factor for population planning, public hygiene and health. It is also a powerful instrument to institute community involvement in the process of socio-economic development and to ensure a meaningful commitment and accountability to people's welfare. Education is the fundamental source of supply for high, mid and junior-level professional manpower as well as operational level skilled personnel for all the production and service sectors. Education is also the stimulant to further generating its own demand as a continuous process. Under a situation when manpower export has assumed an important position as a foreign exchange earner, education has its contribution in replenishing the void created by emigration. Again, education is an area which represents the presence of the formal sector in rural Bangladesh characterised by a dominant informal sector. Education is also a major avenue of employment. In fact, it is one of the biggest consumers of its own output. Education can have a tremendous impact on technology transfer and on sectoral capital-output and labour-output ratios. In a nutshell, education is the engine for socio-economic transformation and advancement as well as the protector of human values and socio-economic stability.

A REVIEW OF THE DEVELOPMENTS DURING THE THIRD FIVE YEAR PLAN PERIOD AND A STOCK -TAKING OF THE CURRENT SITUATION

15.3 An evaluation of the developments over the Third Plan period and an assessment of the situation obtaining at the beginning of the Fourth Five Year Plan can be made under eighteen heads. These are: (a) Primary Education, (b) Secondary Education, (c) Madrasah Education, (d) Cadet Colleges, (e) College Education, (F) University Education (General), (g) University Education(Agricultural), (h) Engineering Education, (i) Polytechnic Education, (j) Vocational Training, (k) Teacher Training (General), (l) Teacher Training (Technical), (m) Commercial Education, (n) Scholarships, (o) Mass Education, (p) Special Projects of the Ministry of Education, (q) Extra-Curricular Activities,and (r) Religious Affairs.

Primary Education

15.4 The scenario in the field of primary education can be summed up as follows:

Table 15.1 : Important Parameters in Primary Education

Index	1985	1990
Number of institutions	44,220	45,836
Enrolment (in Lakh)	89.20	119.40
Drop-out rates(%)		
Class-I	N.A.	19.3
Class-II	"	12.0
Class-III	"	15.6
Class-IV	"	15.8
Class-V	"	11.0

Source : BANBEIS.

15.5 With an area of 144 thousand sq.km., overall spatial distribution of primary schools in Bangladesh in June 1985 worked out to be one school per 3.20 sq.km. The planning strategy was, however, to have at least one school for every 2 sq.km. of human habitat throughout the country. Estimated average enrolment per primary school worked out to be 260. With the estimated (June,1990) primary age-group population to be 1.49 crore, the schools enrolled 80.13% of the targetted clientele as against 52% in June, 1985.

15.6 The Third Five Year Plan document did not identify any target with regard to the total number of primary schools to be established. It was only provided that 1000 non-government primary schools would be nationalised in addition to the 36,881 government primary schools existing in June, 1985. The nationalisation programme was accomplished during the Plan period.

15.7 Attainment of the TFYP objectives on primary educaion was planned through the implementation of two schemes, namely (A) Universal Primary Education (IDA) and (B) Universal Primary Education (National). The first project had a cost of Tk. 96.00 crore with Tk.76.00 crore as project aid. The TFYP obligation for the project was to accomplish the final stages of the scheme inherited as a spill-over of the SFYP and originally scheduled for completion by June,1985. Except for some minor targets unfulfilled, the scheme was declared as completed in December,1986

15.8 A second project on the same line was launched for the remaining 416 Thanas not covered by the first project and all the 26 metropolitan thanas of the country at a total cost of Tk. 512.00 crore. This single project accounted for about 42% of the total allocation in the education sector.

15.9 The floods of 1987 and 1988 caused serious damage to educational institutions, particularly rural primary schools. During 1987-90, two major rehabilitation programmes were implemented covering about 1430 educational institutions. Further, a revised version of the Universal Primary Education (National) project accommodated the post-flood rehabilitation work of another 322 rural primary schools.

15.10 In addition, two more flood rehabilitation projects were launched with a total expenditure of Tk. 743.35 crore for 5825 schools. The major portion of both the projects will be implemented during the FFYP period.

Secondary Education

15.11 In secondary education, increases in the number of institutions and those of enrolment are presented in the following table:

15.2: Secondary Education: Number of Institutions and Enrolment

Year	Number of Institutions	Enrolment
1985	9,440	25,83,311
1990	10,448	29,93,730

Source: BANBEIS

15.12 On an average, for every 4.68 primary schools, there was one secondary school in June, 1990 as against 4.38 obtaining in June, 1985. Enrolment in the secondary schools was about 25.07% of the primary school enrolment in June, 1990 compared to 28.96% in June, 1985. This indicates that educational participation at the secondary level did not match well with the expansion in enrolment at the primary stage.

15.13 For secondary education, the TFYP enlisted the following principal programmes :

(a) Completion of the first phase of the community schools project. The programme envisaged that in 400 high schools (200 boys' and 200 girls') designed as community schools, a total of about 33,600 persons would be trained annually in five fields, namely: agriculture, building crafts, mechanical trades, sewing and food processing;

(b) Enhancing physical facilities in 79 selected government high schools, and

(c) Strengthening science education facilities in 3,800 selected private high schools.

15.14 The main achievements in secondary education were as follows :

(a) At the thana level, 400 high schools were developed as community schools. About 55,000 persons representing 33% of the TFYP clientele target of 1,68,000 were trained. The programme was discontinued after June, 1988.

(b) Though classroom accommodation capacities were enhanced and furniture, tools, equipment, books, etc. provided to 79 government high schools, some work remained incomplete on account of resource constraint. This part was spilled over to the FFYP to be accomplished during the first year of the Plan.

(c) Laboratory buildings were constructed and science equipment provided to 3,800 high schools and 200 madrasahs, all under private management.

Madrasah Education

15.15 In addition to general education, there exists a parallel system known as Madrasah Education primarily intended for religious studies. The levels in this system are: Ibtedayee (equivalent to the primary level), Dakhil (equivalent to secondary), Alim (equivalent to higher secondary), Fazil (equivalent to Degree), and Kamil (equivalent to Master's). Number of institutions and enrolment therein can be seen below:

Table 15.3 : A Profile of Madrasah Education

Type	Number of Institutions		Enrolment	
	1985	1990	1985	1990
Ibtedayee	14,169	15,200	15,33,800	19,80,000
Dakhil	2,156	4,306	3,32,566	6,15,358
Alim	615	760	1,23,726	1,57,410
Fazil	601	716	1,55,333	1,83,516
Kamil	67	91	27,301	40,712

15.16 With a view to modernising madrasah education, a programme for introduction of science course in 200 selected non-government madrasahs costing Tk. 763.08 lakh was undertaken during the TFYP which was implemented under the ADB assisted secondary science education project.

Cadet Colleges

15.17 There are now 10 cadet colleges in the country with an enrolment of 3,000, i.e. 300 students per college under a comprehensive fee exemption programme that takes due cognizance of the economic status of the student. The cadet college network is now able to widen its in-take opportunities to a larger section of the society.

15.18 The programmes envisaged for the Cadet Colleges under the TFYP were as under :

(a) Completion of incomplete works of conversion of Comilla Residential Model School into a Cadet College;

(b) Repair and renovation of 4 Cadet Colleges;

(c) Construction of mosques for the newly converted 6 Cadet Colleges; and

(d) Construction of staff quarters for Class III and Class IV employees of the 4 old Cadet Colleges.

Colleges

15.19 In the field of college education, the number of institutions and the level of enrolment can be seen from the following table :

Table 15.4 Basic Indicators in College Education

Level/Type	Year	Number of Institutions	Enrolment
Intermediate Colleges	1985 (June)	205	86,048
	1990 (June)	365	1,55,052
Degree Colleges			
(a) Intermediate level	1985 (June)	403	3,02,805
	1990 (June)	472	5,51,750
(b) Degree Level	1985 (June)	403	1,07,350
	1990 (June)	472	1,95,676
Sub-total (Degree Colleges)	1985 (June)	403	4,10,155
	1990 (June)	472	7,47,426
Total : Intermediate Level	1985 (June)	-	3,88,853
	1990 (June)	-	7,06,802
Degree Level	1985 (June)	403	1,07,350
	1990 (June)	472	1,95,676
Grand Total (Colleges)	1985 (June)	608	4,96,203
	1990 (June)	837	9,02,478

15.20 At the beginning of the TFYP, almost every thana had at least one college and some thanas upto three. At the end of the SFYP, not all the thanas had a college each and no thana had more than two. Half of the 1990 estimated enrolments (a) at the intermediate colleges, and (b) at the intermediate sections of the degree colleges gave a rough annual intake of 3.53 lakh. Eleven university colleges were offering Master's level courses in June, 1990. The number of colleges running post-graduate courses were 5 when TFYP was launched.

15.21 For college education, the main programmes of the Third Five Year Plan were the following :

(a) Enhancing the physical facilities in the 11 university colleges;

(b) Strengthening Science Education facilities in 76 selected private intermediate colleges and 25 selected private degree colleges;

(c) Expansion and development of the facilities at the Dhaka Music College, the only government institution in this field; and

(d) Establishment of a new Sanskrit College.

15.22 With respect to programme implementation, the actual performance had been as follows :

(a) New classroom accommodation capacities were created and furniture, tools, equipment, books etc. provided to 99 government degree colleges and 11 university colleges; and

(b) Laboratory buildings were expanded and workshop facilities enriched in 40 private intermediate colleges.

15.23 However, on account of resource constraints, private degree colleges could not be taken up for general development or even for strengthening of facilities for science education.

15.24 Work on the development of Music College was not launched. Further, the Ministry of Education lately decided to abandon the plan for the establishment of a new Sanskrit College, based on a stock-taking of the existing institutions of Hindu religious education where considerable under-utilized capacities were found to exist.

University Education (General)

15.25 Prior to the TFYP, four general universities, one each at Dhaka, Rajshahi, Chittagong and Savar (known as the Jahangirnagar University) were functioning and the Islamic University was under construction. In 1985-86, the Islamic University became operational. Further, during the TFYP period, enrolment and student residence capacities grew in the four old universities. The situation can be seen in the following table :

Table 15.5 Total Student Population and Hostel Accommodation Capacities in the General Universities

Sl. No.	Name of the University	Enrolment		Students Residence capacity	
		1985	1990	1985	1990
1.	Dhaka University	15,000	16,000	6,421	8,861
2.	Chittagong University	5,000	6,000	2,309	3,211
3.	Rajshahi University	11,655	15,000	4,937	7,000
4.	Jahangirnagar University	1,900	2,570	1,900	2,800
5.	Islamic University	—	1,800	—	830

Source : Ministry of Education.

15.26 The growth in enrolment and hostel capacities were in keeping with the TFYP objectives.

15.27 During the TFYP period, 13 new departments/Institutes were established in different universities of the country with an enhanced enrolment level of 2253.

15.28 The TFYP provided for the establishment of two new universities,one each at Sylhet and Khulna. Enrolment capacities during the first phase (1985-90) of these two projects were envisaged to be 300 and 295 respectively. The Shahjalal University at Sylhet enrolled its first batch of students in the academic session 1990-91. However, the progress towards the establishment of the Khulna University suffered some initial set-backs during the TFYP period.

15.29 With regard to Dhaka University, Rajshahi University and the BUET, TFYP completed the spill-over SFYP projects during the first two years. For these universities, the TFYP schemes started in 1987.

University Education (Agricultural)

15.30 In agricultural education, only the Bangladesh Agricultural University (BAU) is under the Education Sector. The growth of enrolment and student residence capacity between 1985 and 1990 at the BAU had been of the following magnitude :

Table 15.6 Enrolment and Hostel Capacity at the BAU

Head of Information	1985	1990
Enrolment	3,360	4,500
Hostel Capacity	2,838	3,500

15.31 The enrolment volume and student residence capacity in 1990 had been as per the TFYP targets. Development expenditure incurred for the BAU during the TFYP period was Tk. 3.04 lakh.

Engineering Education

15.32 Enrolment and hostel capacity in the institutions of engineering education were as follows :

Table-15.7 Student Population and Hostel Residence Capacity in Engineering Education

Sl. No.	Type of Institution	Enrolment		Hostel Capacity	
		June, 1985	June, 1990	June, 1985	June, 1990
1.	Bangladesh University of Engineering and Technology	3,360	4,500	1,970	2,650
2.	Bangladesh Institute of Technology, Gazipur	540	720	360	360
3.	Bangladesh Institute of Technology, Chittagong	720	720	720	720
4.	Bangladesh Institute of Technology, Rajshahi	720	720	650	650
5.	Bangladesh Institute of Technology, Khulna	720	720	500	500
6.	College of Textile Engineering	240	240	230	230
7.	College of Leather Engineering	80	80	100	100
	Total :	6,380	7,700	4,530	5,360

Source: Ministry of Education

15.33 Except for a marginal spill-over SFYP component, the TFYP did not have any development scheme for the College of Leather Engineering. For June, 1990 enrolment and student residence capacities were in consonance with the TFYP targets for the institutions enlisted above, except for the Bangladesh Institute of Technology, Dhaka where the shortfall had been to the extent of 33% and 50% respectively in the matter of enrolment and hostel capacity. The cause happened to be resource constraint. The shortfall was made up during the financial year1990-91.

15.34 In addition to the institutions mentioned above, the TFYP also accomplished the SFYP spill-over component of completion and commissioning of the Common Finishing Facilities Centre (CFFC) as an allied unit of the Leather College. The CFFC that had a daily capacity to convert 500 pieces of wet blue hides into finished leather has since been transferred to the Ministry of Industries.

Polytechnics and Monotechnics

15.35 Number of institutions, enrolment and hostel capacity in the Polytechnic and Monotechnic institutes are shown in the following table :

Table - 15.8 Polytechnics and Monotechnics

Type	Head of Information	1985	1990
1. Polytechnic Institutes	**Number of Institutes**	**17**	**18**
	Enrolment	12,750	12,900
	Hostel Capacity	5,888	6,988
2. Institute of Glass and Ceramics, Dhaka	**Number of Institutes**	**1**	**1**
	Enrolment	145	145
	Hostel Capacity	52	52
3. Institute of Graphic Arts, Dhaka	**Number of Institutes**	**1**	**1**
	Enrolment	120	120
	Hostel Capacity	150	150
4. Bangladesh Survey Institute, Comilla	**Number of Institutes**	**1**	**1**
	Enrolment	90	90
	Hostel Capacity	160	160
Total :	**Number of Institutes**	**20**	**21**
	Enrolment	**13,105**	**13,255**
	Hostel Capacity	**6,250**	**7,350**

Source: Ministry of Education

15.36 Excepting Jamalpur, Tangail and Patuakhali, 17 of the old districts had a Polytechnic each in 1990. Together with the Mohila Polytechnic, Dhaka had two polytechnics. The Institute of Glass & Ceramics and the Institute of Graphic Arts are in Dhaka.

15.37 The TFYP programme on technical education can be broadly classified under two heads : (a) completion of the final stages of the projects taken over as spill-overs from the SFYP; and (b) new TFYP schemes.

15.38 The SFYP spill-over schemes were duly completed during the TFYP period. The performance in a nutshell were as follows :

(a) The Mohila Polytechnic at Dhaka was made functional with an enrolment capacity of 240;

(b) All the existing Polytechnics (except the Mohila Polytechnic) were provided with increased academic space, residential accommodation, enriched workshop installations and staff training facilities under a scheme entitled "Technical Education Project-A"; and

(c) The Board of Technical Education was provided with an office complex, suitable set up of functional tools and trained personnel capable of handling inspection, affiliation, examination, grading and certification responsibilities.

15.39 Under a new scheme, the TFYP envisaged establishment of two polytechnic institutes, one each at Tangail and Patuakhali. On account of resource shortage and particularly delay in lining up external assistance, the project could not be completed during the TFYP period.

Vocational Training Institutes

15.40 Enrolment and hostel capacity in the existing 51 Vocational Training Institutes (VTI) were as follows:

Table - 15.9 Vocational Training Institutes

Year	Number of Institutes	Enrolment	Hostel Capacity
1985	51	4,490	860
1990	51	5,040	860

Source: Ministry of Education.

15.41 Out of 64 districts in the country, only 19 districts are without a Vocational Training Institute. These districts are Panchagarh, Gaibandha, Bogra, Rajshahi, Jessore, Khulna, Borguna, Jhalakati, Faridpur, Shariatpur, Sherpur, Narsingdi, Gazipur, Comilla, Laxmipur, Feni, Chittagong, Rangamati and Bandarban. Of the districts not covered by a VTI, there are Technical Training Centres (same as VTIs but under the administrative control of the Ministry of Labour and Manpower) in seven of them, namely, Bogra, Rajshahi, Khulna, Faridpur, Comilla, Chittagong and Rangamati. Again, there are two VTIs in each of the districts of Dinajpur, Kushtia, Jamalpur, Kishoregonj and Noakhali. In respect of numerical location, this was the situation also at the beginning of the TFYP. However, each one of the 51 VTIs have undergone qualitative improvement over the last five years by way of addition to their academic logistics under Swedish Technical Assistance.

Teacher Training (General)

15.42 The situation obtaining in the field of teacher training (general) can be seen from the following table :

Table - 15.10 Available Teacher Training Facilities

Type	Number of Institutes		Enrolment		Hostel Capacity	
	1985	1990	1985	1990	1985	1990
(a) Primary Training Institutes	51	53	8,303	10,100	9,500	9,900
(b) Teachers' Training Colleges	10	10	4,500	5,000	2,500	2,500
(c) Institute of Education and Reseach	1	1	450	450	-	-
Total :	**62**	**64**	**13,253**	**15,500**	**12,000**	**12,400**

Source: Ministry of Education

15.43 In all, 49 of the 64 districts have one or more Primary Training Institute located in each of them. Bogra, Rajshahi, Kushtia and Chittagong have two each. The districts without a PTI are : (1) Narayanganj, (2) Shariatpur, (3) Gopalgonj, (4) Rajbari, (5) Sherpur, (6) Rangamati, (7) Khagarachari, (8) Bandarban, (9) Lalmonirhat, (10) Panchagarh,(11) Narail, (12) Meherpur, (13) Borguna, (14) Jhalakati, and (15) Dhaka.

15.44 So far as the PTIs are concerned, the TFYP only implemented a small spill-over component of the SFYP. In addition, under the UPE project, it provided for the establishment of Women's Primary Training Institute at Joydevpur which was accomplished.

15.45 Under the UPE project, the following in-service training programmes were conducted :

Table - 15.11 UPE Training Programme

Type of Training	Nature of Clientele	Volume of Training
Supervisory Training	Thana Education Officers,Asstt. Thana Education Officers and Primary SchoolTeachers	49,98,738 man-days
Management Training	Officers of the Directorate of Primary Education, PTI Superintendents, etc.	8,560 man-days

Source : Ministry of Education

15.46 Ten Teachers' Training Colleges (TTC) are operating in the country, two at Mymensingh, one at each of the Divisional headquarters and four others at Comilla, Feni, Rangpur, and Jessore respectively. This was the number also at the beginning of the TFYP. The TFYP did not have any programme for the TTCs as such. However, to strengthen in service teachers' training programmes for secondary education, a National Secondary Education and Science Development Centre (NSEDC) was established in the premises of the Teachers' Training College at Dhaka as per the TFYP programme. The NSEDC coordinates the activities of Secondary Education and Science Development Centres that were set-up at the premises of the Teachers' Training Colleges at Mymensingh (in the one for men only), Chittagong, Comilla, Feni, Rajshahi, Rangpur, Khulna and Jessore. Enrolment capacity of each NSEDC is 100 per batch.

Teacher Training (Technical and Vocational)

15.47 Enrolment and student residence capacity at the institutes of teacher training (technical and vocational) are shown in the following table :

Table 15.12: Facilities for Teacher Training (Technical and Vocational)

Type	Number		Enrolment		Hostel Capacity	
	1985	1990	1985	1990	1985	1990
1. Technical TeachersTraining College, Dhaka	1	1	100	100	-	80
2. Vocational Teacher's Training Institute, Bogra	1	1	80	80	160	160

Source : Ministry of Education

15.48 The Technical Education Project 'A' and a TAPP entitled "Support Facility to the VTIs and VTTI" provided for enhanced quantities of workshop tools and equipment, staff training facilities and other academic inputs to the Technical Teachers' Training College at Dhaka and the Vocational Teachers' Training Institute at Bogra.

Commercial Education

15.49 The National Academy for Training and Research on Multilingual Shorthand (NATRMS),Bogra and 16 Commercial Institutes offer Diploma-in Commerce equivalent to HSC. The curriculum and the examinations are administered by the NCTB and the Dhaka Board of Intermediate and Secondary Education respectively. The facilities available in the field of commercial education are as follows:

Table 15.13: A Profile of Commercial Education

Type	Number of Institutes	Enrolment		Hostel Capacity	
		1985	1990	1985	1990
1. NATRMS	1	-	500	-	60
2. Commercial Institutes	16	2,457	2,800	190	190
Total:	17	2,457	3,300	190	250

15.50 The commercial institutes are located at the old district headquarters except Chittagong Hill Tracts, Noakhali, Tangail and Patuakhali.

15.51 The NATRMS is attached directly to the Ministry of Education while the commercial institutes are under the administrative control of the Directorate of Secondary and Higher Education.

15.52 A new TFYP scheme for the Multilingual Shorthand Academy, Bogra, was completed in June, 1987 as scheduled at a cost of Tk. 68.00 lakh. It is a leading teaching and research institution in Secretarial Science in the country.

Mass Education

15.53 On account of conceptual and operational flaws, the mass education programme intiated in 1980 was discontinued in 1982. With suitable adjustments, it was revived under the TFYP. A scheme costing Tk. 2.24 crore was cleared by the ECNEC in 1987 with the following programme :

Table 15.14 The Proposed Programme on Mass Education

Period	Thana	No. of Literacy Centres	No. of Illiterates to be Enrolled
September, 1987 to June, 1988 (1st phase)	64	60x64 = 3,840 (female 1,000)	40x3,840 = 1,53,600
July, 1988 - June, 1989	192 (64+128)	60x192= 11,520 (female 4,000)	40x 11,520= 4,60,800
July, 1989 - June, 1990	460 (192+268)	60x460= 27,600 (female 8,000)	40x 27,600= 11,04,000
Sub-total :			17,18,400
Literacy Programme through NGOs :			2,34,000
Total :			19,52,400
Assuming a drop-out of 33% :			6,44,160
Total :			13,08,240

15.54 It took quite some time on the part of the project administration to organise its activities and to plan out the academic and organisational schedule. In addition, there were inadequate GOB matching funds. Consequently, it was possible so far to cover only 27 Thanas with government literacy centres and involve some 53 NGOs through modest subventions.

15.55 For the Mass Education project, the TFYP expenditures represent Tk.1.82 crore of GOB funds, Tk.2.05 crore of RPA and Tk. 0.32 crore of project aid in foreign exchange, yielding a total of Tk.4.19 crore.

Scholarships

15.56 Under the Education Sector, the TFYP provided for two schemes on scholarships and stipends. The stipend scheme was for the students of the Engineering University, the Bangladesh Institutes of Technology, the Polytechnics, the Vocational Training Institutes and other institutes of technical education/training. The scholarship scheme was for the students of general and professional education. Number of student beneficiaries were 48,000 under stipend programme and 96,000 under the scholarships programme. The expenditure incurred was Tk.46.37 crore.

Special Projects of the Ministry of Education

15.57 In the TFYP, there were some special multi-dimensional projects which functionally were not confined to primary, secondary, technical or university education as such. Administratively and operationally, those schemes were under the direct management of the Ministry of Education.

15.58 One such project was the Bangladesh Institute of Distance Education (BIDE). The purpose of the scheme was to conduct school broadcasting programmes and offer audiovisual technological assistance to the then National Institute of Educational Administration, Extension and Research (NIEAR), the Teachers' Training Colleges, the Primary Training Institutes and the National Academy for Primary Education (NAPE). The BIDE was a SFYP spill-over project and was completed in June, 1986. It was further strengthened through a TAPP during 1987-88. As an additional output, the BIDE successfully introduced the Experimental Distance Education B.Ed. Programme.

15.59 Re-designated recently as the National Academy for Educational Management (NAEM), the former National Institute of Educational Administration, Extension and Research, an SFYP spill-over scheme completed in June, 1987, provides in-service foundation training for the BCS (Edn.) recruits. It also offers extension education and management training to the officers of the various Directorates of the Ministry of Education.

15.60 The Bangladesh Educational Equipment Board (BEEB), another spill-over project from the SFYP, had the following objectives : (a) to extend and strengthen the governmental machinery for the design and development of prototype educational equipment; (b) to institute quality control practices on a scientific basis; (c) to receive from government sources bulk orders for contracting out to private manufacturers; and (d) to train teachers and inspectors on the use and maintenance of laboratory apparatus.

15.61 The construction, installation and staff training works of the BEEB were completed in June, 1988. However, the project was retained in the development budget for another two years so that the institution could prepare itself for running as a self-sustained, commercially viable venture without imposing any burden on the revenue budget of the government. Having failed to demonstrate its viability, BEEB has been abolished.

15.62 The Bangladesh Boy Scouts had a target of attaining a membership of about 2 lakh by the end of the TFYP by expanding the scouting network further deep into remote rural areas. Increased accommodation capacities and an expanded set-up of training logistics were also planned for under the TFYP period. The Bangladesh Girl Guides had a TFYP programme to train more than 7,000 girls through camps and rallies during the plan period. In addition, physical facilities and organisational strength of the Girl Guides network were planned to be expanded under the TFYP. The targets were more or less achieved.

15.63 For the Bangladesh National Cadet Corps, the spill-over SFYP component was implemented. The programme for the SFYP was to raise 5 Regiments in the Army Wing, 3 Flotillas in the Naval Wing and 3 Squadrons in the Air Wing. It was envisaged that the BNCC would have 2 Divisions- a Junior Division comprising students of Classes VIII to X having a duration of 2 years, while the other Division would be formed with the college and university students with a duration of 3 years. During the SFYP period, about 12,000 cadets could be raised as against the target of 15,000. The incomplete works of the BNCC project were accomplished by June, 1988.

Objectives of FFYP

15.64 Keeping the above view in mind, objectives of the FFYP pertaining to Education and Religious Affairs are as follows :

i) to introduce compulsory primary education;

ii) to reduce mass illiteracy;

iii) to enlarge and upgrade the base of science education at all levels;

iv) to enhance the functional character of technical education and vocational training by making them more job-oriented through constant and appropriate links with the employment market;

v) to extend support to the universities to maintain an optimum size.

vi) to develop higher institutions of learning, namely, the general and profesional universities and the Bangladesh Institutes of Technology, as centres of excellence;

vii) to ensure optimum use of existing facilities at all levels and to introduce a process of accountability in the educational system;

viii) to utilise the multi-sectoral potentials of education with respect to other objectives: awareness, population planning, extension services, etc.

ix) to maintain regional balance in respect of the growth of educational facilities;

x) to ensure enhanced participation of women in every possible sphere of education; and

xi) to inculcate moral values in society.

Strategies for the FFYP

15.65 The FFYP will adopt the following strategies in order to obtain the sectoral objectives :

i) Optimum utilisation of existing facilities as much as possible through proper planning without venturing for construction of new facilities. Even when new construction becomes absolutely necessary, moderate-cost construction will be undertaken for primary schools in order to create more classroom accommodation capacities for an expanded intake of students. Well designed School Mapping investigations will be carried out to assess the genuine demand for educational facilities by defined demarcations of localities. This will serve as working guides to create school access opportunities of the type and quantum actually required. Meaningful efforts will be mounted to combat drop out and minimise its incidence.

ii) There will be a multi-frontal attack on illiteracy by expanding non-formal primary education, strengthening the government mass literacy centres, mobilising NGOs and utilising the skill development/income generating efforts of the Departments outside the Ministry of Education as well.

iii) Secondary schools, colleges and the general universities will be required to develop and adhere to a minimum standard of laboratory and library facilities as well as qualified science teaching staff. Such minimum standards will be laid down by the educational administration through appropriate academic and institutional arrangements.

iv) As distinct components of the educational process, academic supervision and administrative inspection over the schools and colleges will be strengthened and streamlined through restructuring of relevant organisations in order to bring about a qualitative impact on secondary and college education. An important role in this regard will be played by the National (Affiliating) Universities over the colleges.

v) The National Curriculum and Textbook Board will be professionally strengthened in order to continuously update the school and HSC level syllabi to keep pace with the constant changes and modernisation trends in the international arena in the realm of course contents.

vi) Extension Education and Management Training for teacher and educational administrators will be organised on strong foundations.

vii) The higher seats of learning, such as universities, will develop themselves into important centres of fundamental and applied research. All these are essential in the interest of discharging their national responsibilities for the development and transfer of technology and advanced skills.

viii) In order to enhance the efficient utilisation of the Vocational Training Institutes, the National Council for Skill Development and Training will be strengthened to promote effective inter-actions between the training institutions on the one hand and employers in the private and public sectors on the other. For Polytechnic education, similar arrangements will be instituted for a better rapport of the

Board of Technical Education/Directorate of Technical Education with the present and potential users of the polytechnic output in the job market.

ix) The planning outfits of the Ministry/Divisions and their subordinate agencies will be strengthened for a better formulation of development programmes and a more effective administering of the implementation process with due emphasis on regional justice. The planning units, interalia, will constantly monitor the extent of utilisation of physical and academic logistics as well as incurred public cost at every level of education. The MIS organ will be strengthened.

x) With regard to teaching methods, innovation techniques backed by proper logistic support will be adopted.

xi) Specific measures will be undertaken to ensure adequate participation of women at every level of education.

xii) Environmental education will be imparted to teachers and students at all levels of education.

Some Policy Issues

15.66 A reality that has to be appreciated is that resources available for the education sector is inadequate compared to the commitments for compulsory primary education, enlargement of the base of science education and other important development activities.Hence maximum efforts should be undertaken for optimum and diversified use of resources.

15.67 There does not seem to be any objective standard of hiring and utilising expatriate consultancy which ideally should be a self-liquidating phenomenon. Appropriate counterpart arrangements are hardly institutionalized and external consultancy is used in fields where local skills, in most cases better than expatriates, are available.

15.68 The relevant Ministries/Divisions have to minimise the financial wastages that prevail in some of their offices and projects. A disproportionate growth of the transport fleet and the POL expenses, acquisition of certain tools and equipment with nominal volume of use and the accompanying bill for consumables, the general contingency expenditures, etc. are some examples in point. They have also to bring about a notable improvement in financial administration and financial accountability. There are serious complaints of quantitative and qualitative gaps in the construction and supply programmes in various educational projects.

15.69 Under-utilization of capacity characterises quite a good number of educational institutions. There is a scope for multi-shift operation and co-education in a large number of them.

15.70 It is important to put a halt on the nationalisation process. This has blocked the potentials of community participation in material terms and has also resulted in enrolment sizes less than optimum.

15.71 To improve the standard of recruiting new teachers at all levels, an Education Service Commission should perhaps be constituted. The Ministry of Education will undertake necessary initiatives in the matter.

15.72 Investment in education has a significant opportunity cost especially in a resource-scarce country like ours. Therefore, as a policy, two things must be ensured - the social cost of education must be made visible, and second, the beneficiaries of this service must be made to bear its cost as far as possible specially at the higher level. Education at higher levels cannot be subsidized across the board. Various programmes like student loan programmes, student-employment activities can be undertaken to enable the beneficiaries of higher education to bear relevant costs. Education will be subsidized only when it is economically and socially justified.

Local Level Planning

15.73 The Plan sets out national targets on enrolment. Ideally, this should be the sum-total of the local and regional targets. However, such regional and local level monitoring of the national planning process is hardly done. It is important that the local educational administration in consonance with the community leaders, identifies targets pertaining to their areas, monitors the implementation regularly and reports the progress to the EMIS system periodically. Local level planning will gradually improve the implementation gaps with regard to attainment of enrolment targets.

Joint Sector Cooperation

15.74 Public expenditure on education both from the Revenue Budget and through ADP have all along been a joint sector cooperation. Payment of teachers' salaries, subventions for non-government schools and other institutions, running of the universities- all these fall under joint sector human development activities. These can be expanded in future. In the matter of settingup and maintaining new educational institutions, time has come to go for more joint sector cooperation instead of all government or all private management. The policy administration has to appreciate the imperatives to initiate in society the process for gradual evolution and eventual institutionalisation of joint sector cooperation in education and in other sectors. Joint sector cooperation is an effective way of maximising the merits of all government and all private ownership/management and minimising the shortcomings of both. The community will be encouraged to undertake initiatives and mobilise resources in the form of land and some infrastructural facilities. They will also recruit teaching staff and exercise over-all management over the teacher, the taught and the physical logistics of the institution. The government, in turn, will provide sophisticated inputs and modern educational gadgets like science laboratories, computer facilities and the like. In addition, government subvention for a part of the teachers' salary and periodic government grants for specific purposes will continue. Joint sector cooperation can also be instituted between the government and the NGOs. All such ventures should be run on no profit - no loss basis. The management of the educational institution should be reposed in a Board of Trustees. The Board should be chaired by the representative of the private sector. Private sector nominees will also constitute the majority. The government representative will only provide guidance and support and facilitate policy interactions to advance the cause of human resource development.

15.75 Female education (in such remote rural areas where there are no schools), particularly female secondary education intended to bring in womenfolk into the mainstream of development activities in the modern sectors, should receive top priority in organising joint sector cooperation projects. There can also be one college in each of the 5 Divisional Headquarters that should serve as centres of excellence for female education, the clientele being drawn from remote rural areas having no college. Second priority after girls' institutions, can be accorded to co-educational institutions. This will be one of the means of exploiting the potentials of rural education (particularly of the womenfolk) as agents of social mobility and social transformation.

15.76 Language centres, particularly for English teaching should be identified as one of the potential fields for joint sector cooperation. Fruitful cooperation from leading international agencies can be enlisted for training teachers and resource persons. It might be possible to explore throughout the country some unutilized and under-utilized land/buildings that can be renovated to operate language training centres under the aegis of joint sector cooperation. Professional/vocational education constitute another area of joint sector cooperation.

15.77 On the issue of integrating joint sector cooperation in the development planning process, an approach will be that for the present such projects will be supported from the Block Allocation provided for in the ADP/RADP. In due course, after a phase of experimentation through implementation, joint sector cooperation will be organised to form a separate category in the ADP/RADP like investment projects, technical assistance projects and self-financed projects.

Sectoral Programme for FFYP

15.78 In the following paragraphs, different programmes to be undertaken during FFYP at various levels of education have been elaborated :

Primary Education

15.79 Until recently, the policy target was universal primary education. This meant that primary education was open to the relevant age-group population without any barrier. The government maintained the bulk of the primary schools (about 86%) as a nationalised sector. There were no tuition fees. Additionally, textbooks were provided to the students free of cost. All these incentives could not ensure full educational participation by the entire primary age-group population and their retention throughout the primary education cycle. Compulsory primary education is therefore a step forward to achieve the objectives hitherto unfulfilled.

15.80 Satellite Schools, a new innovation, are affiliates to nearby primary schools with Classes I and II. This is for minor children who find it difficult to attend distantly located primary schools. Satellite schools will be setup in places justified by good school mapping exercises. The affiliating school known as Mother School will exercise the day to day academic supervision under the over-all control and management of the Thana Education Office.

15.81 After nationalisation, even small repair/replacement of school buildings and furniture have to be done by the governmental administrative machinery through the long drawn bureaucratic process. Community involvement is virtually nil in these matters. It has therefore become imperative to revitalise and strengthen community participation in primary schools. Apart from obtaining funds/material support for construction of school buildings and procurement of furniture from the community, their involvement in supervising the construction works and furniture procurement process will be a highly productive factor. Minor repair/renovation/replacement can be left to the community to be financed by itself as its exclusive responsibility. The presently dormant School Managing Committees (SMC) will be meaningfully activated as a regular instrument of school administration.

15.82 Creation of physical facilities for student intake capacities can take care of the supply aspect of school access opportunities. Parallelly, there has to be effective demand for primary education from the clientele, i.e. from the families. Efforts have to be taken to identify the factors that constrain demand and to generate the demand for educational participation and continued retention without drop-out in order to make compulsory primary education successful. To create demand, there must be economic and social motivation. Apart from the extension endeavours of the Thana Education Officer and the Assistant Thana Education Officers, community involvement has to be strengthened, if the motivation work has to be effective.

15.83 The most important economic factor which constrains demand for primary education is the existence of mass poverty. Where child labour in the household, in subsistence agriculture as well as in the formal and non-formal branches of economic activity is a reality, the demand for education must be handicapped by sizeable monetary and non-monetary opportunity costs. While poverty alleviation is a matter to be handled at the general economic policy planning level, on the educational front the most appropriate reply is adequate incentives to attract enrolment and retention. Values in the Bangladesh society do not permit an improperly clad girl child to come to a public place specially for regular routined stay for a few hours in a school. Hence, uniform for the rural girl child is an indispensable input for full-scale female enrolment and retention throughout the primary education tier. Under a situation of national and international policy commitment for integrating WID into the planning and development process which, interalia, inevitably implies full female enrolment in primary education, the uniform supply programme for rural girls and selective school feeding programme assume a critical role in education planning.

15.84 The vast majority of rural children are not only ill-clad but ill-fed as well. In a large number of cases, opportunity costs forgone will mean hunger for the child, both male and female, if he or she has to attend school compulsorily. With this vacuum, compulsory primary education will be extremely difficult to ensure. The families inspite of all their difficulties, may tend to agree to spare the child for regular school attendance if a free lunch is provided there as has been done in some neighbouring countries. However, for resource and management constraints, such a programme can not be simultaneously undertaken for the entire country. Initially, efforts may be concentrated in such areas where illiteracy rate is high and incidence of poverty is acute. Later on, the programme can be expanded to other areas. Food aid may be used for this purpose.

15.85 The present and the potential donors can consider formation of a consortium to introduce school lunch programme at the primary level in the rural areas. Food for Education of the hungry child will perhaps be a logical proposition for human resource development of the most downtrodden.

15.86 To initiate the process, the government will embark upon such an epoch-making venture beginning in 1993-94. The programme will be known as 'Food for Education'. In some selected localities of the country, parents of the children coming from such families as the landless, day-labourers and others living below the poverty level, if enrolling and ensuring regular attendance of their children in primary schools, will receive fifteen k.g. of wheat price per month per child subject to a maximum of thirty kg. for two children. The measure is planned to offset the opportunity costs of educational participation and retention. This, it is hoped, will ensure effective support to compulsory primary education.

15.87 Initially, the programme will be launched with one lakh metric tons of wheat. Depending upon experience by way of implementation, the volume, dimension and coverage may be expanded gradually and in phases.

Non-Formal Education

15.88 Since a huge portion of the population never had an exposure to formal or non-formal primary education or dropped out very early, non-formal education programme has to be an important component of Fourth Five Year Plan. A project will be implemented with the following components:

a) early childhood education.

b) non-formal basic education for the primary age-group children who could not participate in formal primary education or dropped out.

c) non-formal adolescent education.

d) adult education, and

e) life-long continuing education for neo-literates.

15.89 The Non-formal Education Programme has to be implemented through Thana and Union Parishads. Furthermore, NGOs and local level community organisations will be engaged in this programme for its successful implementation. A proper coordination among all these efforts will be ensured.

15.90 Furthermore, the Non-formal Education Programme will be encouraged in all the extension departments in the public sector like the Directorates of Agriculture, Fisheries, Livestock, Mass Communication, Cooperatives, Health, Population Planning, the IRDP, etc. to appropriately incorporate literacy components in their respective extension activities.

15.91 Neo-literates tend to get relapsed into illiteracy if they do not keep on cultivating a constant reading habit. It is therefore, necessary to encourage the Union Parishads, the local community and the NGOs to open mass literacy libraries with simple post literacy reading materials especially designed for the purpose, as well as posters/documentations of the Extension Departments, newspapers and magazines.

Secondary Education

15.92 Science is a compulsory subject at the SSC level. However, laboratory equipment, spares, consumables, books, manuals and other aids to science education are in a pitiable condition in the private secondary schools, especially in the rural areas. Under private management, there are at present more than 10,000 secondary schools which will further increase during the FFYP period. Through an inter-ministerial committee with representation from the Directorate of Technical Education, DGSHE, NCTB, Education Boards, Science and Technology Division, IMED, Planning Commission and others considered relevant, Ministry of Education will lay down the minimum standards with regard to these logistics that the secondary schools have to maintain. Based on those recommendations, necessary amenities for science education will then be developed. Apparatus and accessories for science teaching are meagre also in the government schools. In addition, most of these schools are quite old. Their facilities have worn out and are in a dilapidated state, some of them in a dangerous condition. Most of them would need major renovation and replacements (as distinguished from routine minor repairs which will be taken care of under the revenue budget). The Ministry of Education will undertake endevours to implement such programme.

15.93 There has been a policy announcement to the effect that tuition for girls will be free upto class VIII outside the municipal area. This will be implemented as a programme under the FFYP.

15.94 In a poverty oriented society where the private costs of education are considerably high compared to the average size of family income and under a social outlook that does not appreciate the utility of female education, a large-scale stipend programme for the rural secondary level girls would be a positive support measure for a break-through in the base of female participation at the secondary stage. A pilot project financed by the USAID, implemented recently through the Asia Foundation for girls of Classes VI-X have lent evidence in favour of the hypothesis. Apart from being an education and employment promotion input, it is backed by multi-sectoral population planning considerations as well. A large scale female stipend programme will be undertaken under the FFYP.

15.95 Inspection and supervision constitute a weak area in the schools. Under the FFYP, the Ministry of Education will devote appropriate policy attention to this aspect. The DGSHE will be strengthened to enhance

both its academic and administrative supervisory capacity in terms of frequency and pedagogical quality. In the interest of effective coordination, the inspectorate of schools in the Education Boards may be integrated with the DGSHE.The MPO processing function will also be transferred from the BANBEIS to the DGSHE as a part its regular administrative reponsibility. The DGSHE will be properly equipped to handle the female stipend programme and the subventions to compensate exemption of tution fees to girls in Classes VI-VIII. An MIS system will be established in the DGSHE for collecting and compiling day to day operational statistics for planning, monitoring and budgeting.

15.96 A number of studies will be undertaken for in-depth analysis of the following issues :

(a) Supervision of secondary schools and colleges;

(b) School mapping for secondary and post-secondary education;

(c) methods of accredition to secondary and secondary educational institutions;

(d) cost-sharing options;

(e) possible reorganisation of DGSHE and its bifurcation into two units, one each for secondary schools and colleges; and

(f) performance of the Secondary Education Boards and their improvement.

Madrasah Education

15.97 In pursuance of the policy of modernisation of madrasah education initiated during the TFYP, the programme for strengthening of science courses in selected non-government madrasahs will continue during the FFYP. With a view to advancing the cause of CPE, the Ibtedayee channel will be fully utilized. In pursuance of the policy of modernisation of madrashah education initiated during the TFYP, the programme for strengthening of science courses in selected non-government madrasahs will continue during the FFYP. Moreover, a rehabilitation programme of 65 selected non-government madrasahs will be completed by 1992. A national curriculum and textbook committee may be set up to evaluate the existing academic programmes of the madrasahs and recommend appropriate reform measures. Opportunities will be created for training madrasah teachers. With a view to strengthening academic supervision, the Inspection Wing of the Madrasah Education Board will be reorganised. Appropriate steps will also be initiated for improving examination system of madrasah education. There has taken place some unplanned growth of madrasahs in recent years. A good number of them do not have optimum enrolment. In many cases, an Ibtedayee madrasah and a primary school exist in close proximity, making one of them grossly under-utilised. School mapping surveys initiated by the primary education administration will enable a better coordination in this respect.

Cadet College

15.98 In view of the high capital and recurrent costs per student, a review may be undertaken to examine the potentials of increased enrolment in the cadet colleges beyond the present size of 300 per institute

College Education

15.99 The existing science teaching facilities are far from adequate in quality and quantity in most of the non-government and government colleges alike. Laboratories as well as other hardware and software logistics for science education will be developed at the government and private colleges under the FFYP. Many colleges have old and worn out academic and residential buildings, some of them in a collapsing state. Their structures need immediate renovation and replacement in order to avoid untoward incidents. Besides amenities for science teaching, other essential ancilliary facilities will also be developed for the colleges under the FFYP. A new scheme will be commissioned to upgrade some selected premier colleges into university colleges. Expansion of post graduate teaching facilities at the old district headquarters will, apart from expanding educational opportunities, relieve the present pressure on the general universities to go for indiscriminate expansion.

15.100 All the colleges will be brought under scientific inspection and supervision system of the DGSHE. The DGSHE will exercise (a) administrative inspection over all the colleges and (b) academic supervision over the intermediate colleges/intermediate sections of the degree and university colleges. Academic inspection

and supervision over the degree and university colleges will be undertaken by the National (Affiliating) University.

15.101 The only Music College of the country situated in Dhaka will be provided with minimum physical infrastructure and functional tools during the FFYP period. The Chittagong Art College will be suitably developed. A new Home Economics College will be set up at Chittagong. The Rajshahi Home Economics College will be expanded and modernised.

University Education (General)

15.102 Over the past, all the university projects during 1979-90 aimed mainly at the expansion of physical infrastructures like student and teacher residence, class-room and administrative buildings and such other civil works. Time has come for diversion of development resources from bricks and mortars to academic investments in order to promote the standard of education and research. For the general universities, the FFYP allocations will be devoted mainly to renovating, strengthening and building laboratory and library facilities plus some indispensable ancilliary infrastructural work purely to promote direct academic pursuits.

15.103 At the Jahangir Nagar University, the overall enrolment should be doubled by admitting attached students. Necessary amendments to this effect may be brought about in the legal statutes of the university in the interest of better utilisation of capacity that has been created with GOB's own scarce resources without any external assistance whatsoever.

15.104 The Islamic University should project the employment potentials of the output in the theological departments (Ulum-ul-Quran, Tawhid-ul-Dewan and the like) and restrict its enrolment accordingly. Instead of going for enrolment expansion in theological disciplines beyond absorption possibilities in the job-market, the university should better utilise its faculty talents to undertake research on the positive aspects of Islamic injunctions pertinent to life today and over the future. It should also lay adequate emphasis on academic programmes in natural and biological sciences. Per student capital and recurring costs of the university should be kept at the minimum possible level in keeping with the Islamic philosophy of plain living and high thinking.

15.105 Efforts must be taken to overcome session jams at every university. It could ease pressure on physical facilities.

15.106 An Affiliating University will be set up under name of National University. It will provide academic inspection/supervision, accord accredition, prepare curricula, conduct examinations and will award certificates for the degree (pass), degree (honours) and master's level students for the degree and the university colleges. The general universities at Dhaka, Rajshahi and Chittagong will be relieved of the affiliation, inspection, examination and certification responsibilities for the degree and university colleges.

15.107 Befitting the highest seats of learning of a sovereign nation of 120 million people, Dhaka University, Rajshahi University, Chittagong University, Jahangir Nagar University and the Islamic University should gradually turn into centres of excellence of strong research specialisations with a more productive utilisation of the academic time by the teachers and the taught. In view of the high capital and annual recurrent costs of university education, the universities owe this as an inescapable obligation to the nation. Considerably by 1995 and mostly by the turn of the century, greater emphasis should be laid in the universities on Master's, M.Phil. and Ph.D. programmes than on undergraduate courses that should be left to the degree and university colleges.

15.108 The Shah Jalal University and the Khulna University will largely concentrate on science education instead of liberal arts. Per student capital and recurring costs will be kept at a minimum at these two new universities.

15.109 The universities should establish links with industry and productive sectors to undertake research to raise productivity of labour and capital. The universities may endeavour to establish meaningful collaboration with the academic, research and extension organisations within the country and outside. The UGC Research Directorate may play a more active role in organising, monitoring and strengthening such links as a regular catalyst activity.

15.110 The Institute for Scientific Instrumentation, an unit under the UGC, trains technicians and assistants for the Physics, Chemistry, Zoology and Botany laboratories of educational and research

organisations. The Institute needs qualitative and quantitative upgrading. This will be taken care of under the FFYP.

15.111 An open university will be set-up under the FFYP. Teacher education at all levels and extension education in certain selected fields like agriculture, rural development, health and population planning will be accorded priority at the initial stages, while preparations will be on for introducing full scale educational programme sometimes towards the beginning of the Fifth Five Year Plan.

15.112 The BAU will freeze enrolment at the current level. Along with the UGC, the BAU will make projections and update them regularly about the job prospects of its output. Demand for additional undergraduate enrolments will be diverted to the Agricultural Colleges. If necessary, the volume of undergraduate enrolment at the BAU should be reduced in phases. The BAU will gradually specialise in Masters, M.Phil., Ph.D. programmes and will develop itself into a highly specialised centre of excellence for agricultural education and research. It will extend professional assistance to the agricultural colleges of the country. The BAU will also build up meaningful collaboration with the national and international centres of agricultural education, extension and research through joint research, student exchange programmes, teaching assistantships and fellowships by establishing appropriate rapport with international philanthrophic organisations assisting education.

Engineering Education

15.113 The undergraduate programme of the BUET has already reached an optimum size and no further quantitative expansion is desired for this tier. It should now specialise in Master's, M.Phil., Ph.D. and fundamental as well as applied research programmes and assume the character of a centre of excellence. The GOB allocations for the BUET under the FFYP will be spent with this objective in view. Further, through joint research projects, faculty exchange programme, teaching/research assistantships and fellowships, the BUET will establish appropriate linkage with the national and international centres of engineering education and research with the help of international organisations working to advance technological education.

15.114 All the four Bangladesh Institutes of Technology (BIT) have been provided with enhanced physical infrastructures, functional tools and staff training under TFYP. In order to improve themselves, there is an increasing need for BITs to establish an academic link with BUET.

15.115 With respect to physical infrastructures as well as academic tools and equipment, the College of Textile Engineering and the College of Leather Engineering are quite well-equipped in terms of Bangladesh standards. However, both these colleges need qualitative upgrading especially in the faculty strength. Internally, the Ministry of Education has to ensure a greater collaboration, under a well-defined programme with the BUET, BCSIR, BITAC, the relevant sector corporations and the like. Internationally, technical assistance for advisory service, overseas training programme and strengthening of the research capability is called for. Organisations like the UNDP will be tapped for the purpose.

Polytechnic Education

15.116 Work on the establishment of two new Polytechnic Institutes, one each at Tangail and Patuakhali has considerably advanced during the TFYP period. Both of them will be completed during the FFYP period.

15.117 In addition, as TFYP spill-over components of the Technical Education Project 'A', the on-going programme of enhancing the physical infrastructures, academic tools, equipment and training facilities of the existing Polytechnics will be accomplished during the first two years of the FFYP.

15.118 It has to be appreciated that huge development investments in the public and private sectors are required to absorb the continuous output of 20 Polytechnic Institutes. The MOE/DTE will keep an eye on the job market and regulate the polytechnic intake accordingly in order to minimise unemployment of the graduates of the system.

15.119 The three monotechnics, namely, the Institute of Glass and Ceramics, the Institute of Graphic Arts and the Comilla Survey Institute are more or less modestly well equipped with functional space and training apparatus. However, they need technical assistance in the form of advisory service, overseas and on-the-job training, enhanced research capabilities and also better linkage with the local industries. Their curricula and teaching materials should be pragmatic.

Vocational Training

15.120 Four old VTIs at Sylhet, Barisal, Pabna and Rangpur will be renovated during the first two years of the FFYP.

15.121 The VTIs suffer from (a) gross under-utilization of capacities, (b) high per student capital and recurrent expenditures, (c) poor quality of training, and (d) poor linkage of the training programmes to the job market. There is a National Council for Skill Development & Training (NCSDT). It is supposed to issue policy directives and ensure training and employment co ordination for the whole system of craftsmen training. A regular linkage of the training activities with employment market will be institutionalised as a basic component of the vocational education system. Skilled craftsmen are direct partners to polytechnic-level technologists. Hence, NCSDT should enlarge its terms of reference to encompass polytechnic education as well.

Quality of Education

15.122 In Bangladesh, the curricula of general universities, general colleges, secondary schools and primary schools are outdated. This is also largely true for professional universities, BITs and Polytechnics. Efforts should be made to tackle the problem. The universities, both general and professional, and the BITs will set out a calendar for updating the course contents that have to meet international standards. Together with NCSDT, the Board for Technical Education should now be able to perform similar tasks for the Polytechnics and the VTIs.The National Curriculum and Text Book Board (NCTB) will be strengthened to enhance its functional capabilities for curriculum revision from the primary level upto the higher secondary stage.

15.123 As an aid to improving the quality of general education, an Examination Reform project will be floated that will address itself to the following issues:

(a) an appraisal of the present public examinaion system;

(b) an appraisal of examination results in order to have some meaningful conclusion about the system;

(c) the need for tutorial support in schools as a substitute for commercialised private tuition; and

(d) introduction of open book examination system.

Teacher Training

15.124 Teacher training and orientation has been a weak area in university education in Bangladesh. The MOE/UGC should undertake adequate initiatives and endeavours for exchange programmes, teaching/research assistantships and fellowships with the leading universities of the world through the international philanthrophic organisations engaged to advance education.

15.125 There is an Institute for Advancement of Science and Technology Teaching (IASTT) which conducts in-service science courses for the teachers of universities, colleges, BITs, Polytechnics, and other specialised institutions. Established in 1969, the IASTT, has trained more than 4500 teachers to date. Since 1988, the Institute has been administering training in social sciences and commerce also. The Institute has grossly inadequate physical facilities, staff strength and other logistics. The FFYP will develop necessary capacities at the IASTT.

15.126 The Technical Teachers' Training College at Dhaka and the Vocational Teachers' Training Institute at Bogra will be developed under the Technical Education Project-A and a TAPP entitled "Support Facility to VTIs and VTTI" respectively. The PTIs will be renovated based on an evaluation of the extent of their present level of capacity utilisation and need for rationalisation and marginal expansion. The National Academy for Primary Education (NAPE) at Mymensingh will be suitably expanded and functionally reorganised to provide meaningful academic support to the Primary Training Institutes.

15.127 The National Academy for Educational Management will be developed as a centre of excellence for management training for educational administrators. It may also carry out foundation training of the BCS (Education) recruits till the current backlog is over.

Commercial Education

15.128 The existing 16 Commercial Institutes of the country need major renovation and replacement of their functional space, furniture, tools and equipment. Efforts will be taken to improve their operational efficiency.

15.129 The NTRAMS has demonstrated its potential to train up quality manpower in multi-lingual shorthand and secretarial science. It has produced import-substituing good text-books now in use in the commercial institutes. The NATRMS has also been manufacturing spares and soft-ware for type-writers with indigenous materials. The Academy will be suitably developed and expanded during the Fourth Five Year Plan.

Other Programmes

15.130 Scholarships will be provided at all levels based on the results of public examination.

15.131 In the interest of making the Educational Administration self-reliant in respect of engineering outfit so important for speedy implementation of new construction as well as regular maintenance of educational institutions, an Education Engineering Department will be set up.

15.132 At present, Bangladesh National Cadet Corps has a cadre strength of 15,000 cadets. This will be raised to one lakh. For this purpose, development of the minimum required physical infrasturcture, acquisition of tools and equipment and such other items of capital expenditure will be provided for under the FFYP. Necessary facilities of recurrent nature like manpower, uniform and other training consumables will be acquired under the revenue budget. Boy Scouts activities will also be assisted on similar lines.

15.133 The knowledge and consciousness about population problem and its impact on economy and society should be ensured through population education. Under the given situation in Bangladesh, this should be one of the functions of educational planning. Elementary population economics in terms of the relationship of demographic growth with per capita income, standard of consumption of basic items like food and clothing, savings and investment potentials of the economy, dependence on external aid for basic subsistence, unemployment, size of the population below the poverty line, the demands on education, health care, housing, transport, etc. have to be disseminated.

Regional Aspects of Educational Planning Under FFYP

15.134 In seven out of the 18 sub-sectors into which the Education and Religious Affairs programmes have been classified, there is hardly any scope for conscious geographical planning to locate new institutions in rural areas or to choose the existing rural units for development programmes. These are (i) Cadet Colleges, (ii) University Education (General), (iii) University Education (Agricultural), (Iv) Engineering Education,(v) Polytechnic Education, (vi) Teacher Training (General), and (vii) Teacher Training (Technical and Vocational). Barring these, some sub-sectors of education are open to deliberate planning targets in order to bring in increasing numbers of rural areas/institutions into the fold of development programmes. Development activities in all the branches of Education and Religions Affairs should be programmed out and evaluated on the basis of regional locations.

Rural Share In Educational Development under the Fourth Plan

15.135 At the beginning of the FFYP, the rural locational share in some critically important branches of education were as follows :

Table - 15.15 Locational Share of Rural Areas in Selected Types of Educational Institutions (June, 1990)

Sl. No.	Level/Type	Number of Institutions and Percentage							
		In Metropolitan Areas		In Municipal Areas		Country side Non-municipal Areas		Total	
		No.	%	No.	%	No.	%	No.	%
1.	Primary Schools	1270	2.80	7174	15.80	37003	81.40	45407	100
	(a) Government	1036	2.75	5875	15.61	30771	81.74	37642	100
	(b) Private	234	3.01	1299	16.73	6232	80.26	7765	100
2.	Secondary Schools	498	4.90	2003	19.72	7656	75.38	10157	100
	(a) Government	41	15.65	62	23.66	159	60.69	262	100
	(b) Private	57	4.62	1941	19.62	7497	75.76	9895	100
3.	Number of Private Secondary Schools equipped with Laboratory Facilities under the Secondary Science Education Project	176	4.63	528	13.89	3095	81.48	3800	100
4.	Colleges	89	10.89	241	29.50	487	59.61	817	100
	(a) Government	27	13.92	143	73.71	24	12.37	194	100
	(b) Private	62	9.95	98	15.73	463	74.32	623	100
5.	Vocational Training Institutes	-	-	48	94.12	3	5.88	51	100
6.	Commercial Institutes	6	37.50	10	62.50	-	-	16	100
7.	Mass Literacy Centres of the Ministry of Education	-	-	403	24.88	1217	75.12	1620	100

15.136 Though not set out as a target in quantitative terms by the TFYP, the UPE (National) scheme provided for programmes to initiate endeavours to narrow down the rural-urban gap. However, the actual performance does not conform to the PP objective in this regard. This can be seen below :

Table - 15.16 Rural Urban Share in the Development Works Undertaken

Location	Number of Schools for Construction of New Class Rooms				Number of New Class Rooms			
	PP Provision (1985-90)		Performance (1985-90)		PP Provision (1985-90)		Performance (1985-90)	
	No.	%	No.	%	No.	%	No.	%
Rural	6577	89.42	3598	79.44	19731	83.53	15247	79.91
Town	467	6.35	439	9.69	2335	9.89	1176	9.17
City	341	4.23	492	10.87	1555	6.58	1400	10.92
Total :	7355	100.00	4529	100.00	23621	100.00	12823	100.00

15.137 As evident from the above table, urban schools had a relative share more than what was earmarked for them.

15.138 There is thus a need for conscious planning to promote regional balance and to increase the rural share in respect of educational facilities.

Participation of Women

15.139 Women's share in education is considerably low. This is seen from the following table :

Table - 15.17 A Gender-wise Break down of Enrolment (Post-primary levels)

Level	1990					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Class VI	460801	63.13	269161	36.87	729962	100
Class VII	441775	65.56	232036	34.44	673811	100
Class VIII	394679	66.94	194910	33.06	589589	100
Sub-Total (Junior Secondary)	1297255	65.08	696107	34.92	1993362	100
Class IX	319269	71.07	129940	28.93	449207	100
Class X	262882	72.03	102096	27.97	364978	100
Sub-Total (Secondary Proper)	582151	71.50	232036	28.50	814185	100
Colleges	302276	62.63	180330	37.37	482606	100
General Universities	38678	80.12	9597	19.88	48275	100
BUET	3517	93.59	241	6.41	3758	100
BAU	3524	93.23	256	6.77	3780	100
BITs	2260	97.84	50	2.16	2310	100
Polytechnic Institutes	6724	92.62	536	7.38	7260	100
VTIs	2490	98.34	42	1.66	2532	100
TTCs	2380	64.19	1328	35.81	3708	100
IER,Dhaka University						
(a) Diploma	151	72.25	58	27.75	209	100
(b) M.Ed.	151	59.68	125	40.32	310	100
PTIs	3286	42.54	4439	57.46	7725	100
VTTI	58	100	-	-	58	100
Commercial Institutes	2678	84.59	488	15.41	3166	100
Mass Literacy Centres of the MOE	49918	78.24	13880	21.76	63798	100

15.140 A break-up of the enrolment in primary education by sexes for 1985 and 1990 can be seen below :

Table - 15.18 Trends In Female Enrolment

Class	Year	Male		Female		Total
		Enrolment	%	Enrolment	%	Enrolment
I	1985	15,38,793	56	12,57,099	44	27,95,892
	1990	20,28,162	56	15,93,550	44	36,21,612
II	1985	4,06,117	62	6,77,941	38	17,84,058
	1990	14,58,144	55.50	11,69,142	44.50	26,27,286
III	1985	8,38,508	63	4,99,535	37	13,38,043
	1990	12,70,183	55.50	10,18,434	44.50	22,88,617
IV	1985	6,77,943	63	3,92,492	37	10,70,435
	1990	9,83,292	56.50	7,57,047	43.50	17,40,339
V	1985	4,83,858	66	2,49,767	34	7,33,625
	1990	7,68,329	55.80	6,08,603	44	13,76,932
Total	1985	46,45,219	60	30,76,834	40	77,22,053
	1990	65,08,110	55.84	51,46,776	44	1,16,54,886

Source : Directorate of Primary Education.

15.141 The above table indicates and also there is a general consensus that in primary education, female enrolment is on the increase in keeping with the objectives of the TFYP which, however, did not set definite quantitative targets in this regard.

15.142 As a matter of policy, it is necessary to enhance female enrolment at all levels. Those who are bright and talented should be provided with easy access to higher education through scholarships, fee exemption, etc. More emphasis should be put on vocational training for women.

15.143 One can start with the basic premise where it says that if a male is educated, an individual is educated; but if a female is educated, a family is educated. Given this multiplier effect, special mass literacy programmes must be undertaken for women. These would enable them not only to read and write, but also to be better entrepreneurs, managers, etc.

15.144 Special non-formal and informal programmes must be made for bringing in women under their purview. The basic idea there is to give literacy, skill training, health and sanitational knowledge as well as population education to women. If these things are ensured, a necessary condition for participation of women in the mainstream of the development process is ensured.

Community Participation

15.145 No educational planning can be successful without community participation. The programme for compulsory primary education critically hinges on positive response from the community for its success. The community can help the programme by ensuring that all children in the relevant age-group go to school, by providing physical facilities for school spaces and other logistic support and by cooperating with teachers and administrators for implementing the programme.

15.146 As far as non-formal and informal programmes for mass literacy are concerned, community participation takes the pivotal role. For such programme, the community can provide for physical facilities, honoraria for teachers, text books and papers, etc. and above all, participate in them.

15.147 One particular area where community participation can be very effective is the maintenance of physical facilities. If the relevant community does not misuse school buildings, takes proper care of them, if they collectively repair any damages, the physical facilities can be better preserved. For the maintenance purpose, local committees with community leaders can be formed.

Private Sector Involvement

15.148 In education, the private sector is significantly involved at the secondary level and the higher secondary level. There is some involvement at the primary level also. For example, there are nearly 9,000 primary schools under private management, the bulk of them in rural areas. Furthermore, through private initiatives, a number of kindergartens and tutorial homes have been established in urban areas as well. At the secondary level, currently there are about 10,000 private secondary schools. At present a total of 700 private colleges are functioning.

15.149 With the introduction of CPE, in course of time, there will be a pressure for increased involvement at the secondary and college levels. As a consequence, more private institutions will be set up. A number of criteria must be followed to have an optimum network of private sector educational institutions. First, permission for setting up private institutions and their affiliations must be granted only on the basis of quality; second, this network must be complementary to the public network and third, their cost structure must not violate the norms of social welfare.

15.150 There will be tremendous social and political pressure for nationalisation inspite of the policy pronouncements to the contrary. As a matter of policy, the government may, therefore, introduce a new category of schools which will continue to remain under private management, but will be receiving some subventions to partly finance teachers' salary only.

15.151 At present, the government pays subvention to private schools and colleges to the extent of 70 percent of the teachers' salary. In addition, from time to time, a large number of private schools and colleges receive development grants both under the revenue and capital budgets of the government. As a matter of policy, there can be a third category of schools/colleges (besides the government schools/colleges and the ones receiving government grants) which by proclamation will always be "completely self-financed". Such institutions may be set-up in the urban areas, to start with.

Environmental Impact

15.152 Consequent upon the policy of compulsory primary education, the growth of extra educational centres will lead to regular, daily concentration of students in newer areas. The community will be encouraged to oversee that adequate sanitational arrangements are made to avoid environmental pollution.

15.153 Proper care will be taken to ensure that construction of educational buildings do not inflict unnecessary injury to nature by way of cutting hills, deforestation, blocking the flow of small rivulets etc. Further, as far as possible, it will be obligatory on the part of every educational project to provide for planting of trees in the premises of educational institutions and around.

Section 2 : Religious Affairs

15.154 The basic objective of the Religious Affairs Ministry should be to enhance the moral values of the citizens through its different programmes. Such an approach would improve social harmony and quality of life. Furthermore, the different projects of the Ministry could be used as a catalyst for various development programmes. For example, Imams trained under the Imam Training Programme can be significant facilitators for family planning movement, schemes for environmental upgradation, etc. Thus, all the plans and programmes for Religious Affairs should be linked to development issues.

15.155 In addition, since people of different religions live in this country, provisions should be there for research and publication on Hinduism, Buddhism, Christianity, etc.

Review of Performance

15.156 As of June, 1990, the field of religious affairs was characterised by the following scenario :

(a) One at every district headquarters, 64 Islamic Cultural Centres are operating in the country against 21 in June, 1985. These Centres maintain an Islamic Library attached to each, organise book clubs and mosque-libraries, bring out journals and formally observe the various national days and the Islamic anniversaries.

(b) About 27,000 Imams of the mosques trained by the Islamic Foundation and the Masjid Samaj in mass education, population planning, local resource mobilisation, cooperatives, fisheries, livestock, cottage industries, etc. are available in rural Bangladesh as useful extension and change agents. At the beginning of the SFYP, the number was 541 which rose to 13,000 at the point of commencement of the TFYP.

(c) During the TFYP period, about 425 books, eight specialized research monographs and 225 issues of the weekly journal published by the Islamic Foundation have added to the volume of Islamic literature in Bengali language in which even some years ago, the stock of Islamic books was nominal. Under the SFYP, 348 books and 55 specialised research papers were published.

(d) When the TFYP was launched, a short encyclopaedia of Islam and one of the volumes under the larger encyclopaedia series (initiated by the Islamic Foundation) was available in Bengali in published form. While the full series is now under preparation in 20 volumes, eight volumes have been prepared during the TFYP period.

15.157 The principal achievements under the TFYP can be summed up in the following table :

Table 15.19 TFYP Achievements in the Religious Affairs sub-Sector

Head of Information	Number	
	1985	1990
Islamic Cultural Centres	21	64
Trained Imams	13,017	27,000
Publication of Islamic Books	348	773 (Including reprint of 150 books)
Publication of Specialised Research Monographs	55	63
Volumes in the Larger Encyclopaedia Series	1	9

Source : Ministry of Religious Affairs

Programmes for the FFYP

15.158 During the first two years, the FFYP will complete the TFYP spill-over component of the Imam Training Project producing 15,500 Imams during 1985-91 trained in mass education, population planning, local resource mobilisation, cooperatives, fisheries, livestock, cottage industries, etc. The spill-over part of the publication programme will be accomplished during the second year. The TFYP target of printing 450 new books, reprinting 250 old books and preparation of 10 research monographs will be fulfilled. In addition, the Islamic Cultural Centres will be made operational in all the 43 new districts, thereby extending their coverage to all the 64 districts of the country.

15.159 Till 1980, the stock of Islamic literature in Bangla was nominal. Only a modest beginning has been made during the last 10 years and much more remains to be done on a continuous basis to enrich Bangla with Islamic books. An allocation of Tk. 7.00 crore is earmarked for the work.

15.160 As a historical achievement, nine volumes of an Islamic Encyclopaedia in Bangla have been produced under the SFYP and TFYP. Another 11 volumes will be accomplished during the FFYP to complete the series by 1995.

15.161 By 1992, four Imam Training Centres were made operational. Under the FFYP, the Imam Training Centres will be reorganised into branches of an Islamic Foundation Training Academy. The Academy will conduct the following programmes :

(a) Imams will be trained on population planning and other issues of development dynamics;

(b) Officers of Islamic Foundation headquarters, Islamic Missions and the 64 Islamic Cultural Centres will be given foundation and periodic in-service training in development and administration.

15.162 Islam decries unemployment, beggary and prostitution. Islam lays supreme importance on the dignity of man and healthy human resources development. Objective research on the teachings of Islam will unmistakably point to a course of human resource development based on planned parenthood. The FFYP will provide for such research arrangements.

15.163 The mosque libraries and those of the Islamic Foundation will be taken up for development. Prior to that, an evaluation will be undertaken to assess the need for expansion of the existing library facilities administered by the Foundation.

15.164 A scheme on Mosque-based Non-formal Education will be implemented as a pilot project to experiment the viability of multi-sectoral non-formal education programme as a supplement to similar endeavours of the Primary and Mass Education Division.

Women's Participation

15.165 Mothers have the effective role in enhancing moral values among their children. Therefore, if religious education is imparted to women, it definitely will have a positive impact on the society. Thus, women should be brought in huge numbers into the mainstream of religious training programmes. If necessary, separate institutions for women can be established.

Annexure - 'A'

Total Expenditure Incurred under the TFYP

15.166 Total ADP investment on Education and Religious Affairs during the TFYP period stands at Tk. 997.81 crore. The sub-sector-wise position is summarised in the following table :

Table - 15.20 Development Outlay on Education and Religious Affairs during 1985-90

(Taka in Crore)

Sl. No.	Name of the Sub-Sector	PA			
		GOB	RPA	F.E.	Total
1.	Primary Education	122.83	354.80	49.28	526.91
2.	Secondary Education	17.28	66.58	14.69	98.55
3.	Cadet Colleges	6.13	-	-	6.13
4.	College Education	32.15	-	-	32.15
5.	University Education (General)	56.51	-	-	56.51
6.	University Education (Agricultural)	3.93	-	-	3.93
7.	Engineering Education	8.07	8.90	11.94	28.91
8.	Polytechnic Education	36.77	30.19	28.18	95.14
9.	Vocational Training	4.20	1.50	2.00	7.70
10.	Teacher Training (General)	8.39	21.28	9.97	39.64
11.	Teacher Training (Technical)	0.73	2.34	6.26	9.33
12.	Commercial Education	0.68	-	-	0.68
13.	Scholarships	41.47	-	-	41.47
14.	Mass Education	1.82	2.05	0.32	4.19
15.	Special Projects of the Ministry of Education	5.43	2.08	4.95	12.46
16.	Extra Curricular Activities	8.65	-	-	8.65
17.	Religious Affairs	25.46	-	-	25.46
	Total :	**380.50**	**489.72**	**127.59**	**997.81**

15.167 The actual expenditure of Tk. 997.81 crore in current prices during 1985-90 is in contrast to the TFYP public sector allocation of Tk.1220.00 crore at constant prices of 1984-85.

Annexure - 'B'

Allocation in the Fourth Plan

15.168 In the Fourth Plan, the following public sector allocations have been made in the Education and Religious Affairs Sector :

Sl. No.	Sub-sector	Taka in Crore (at 1989-90 prices) Allocation
A.	**EDUCATION**	
1.	Primary Education	
	(a) Spill-over projects	778.51
	(b) New projects	649.65
	Sub-total :	**1428.16**
2.	Non-formal Education	
	(a) Spill-over Projects	123.57
	Sub-total:	**123.57**
3.	Secondary Education	
	(a) Spill-over Projects	194.05
	(b) New Projects	221.76
	Sub-total:	**415.81**
4.	Madrasah Education	
	(a) Spill-over Projects	7.38
	Sub-total:	**7.38**
5.	College Education	
	(a) Spill-over Projects	106.49
	(b) New Projects	64.57
	Sub-total:	**171.06**
6.	University Education	
	(a) Spill-over Projects	77.14
	(b) New Projects	250.85
	Sub-total:	**327.99**
7.	Technical Education	
	(a) Spill-over Projects	81.98
	(b) New Projects	1.07
	Sub-total:	**83.05**
8.	Commercial Education	
	(a) Spill-over Projects	9.00
	Sub-total:	**9.00**
9.	Cadet Colleges	
	(a) Spill-over Projects	9.50
	Sub-total:	**9.50**
10.	Other Programmes	
	(a) Spill-over Projects	4.54
	(b) New Projects	40.94
	Sub-total:	**45.48**
	TOTAL (Education):	**2621.00**
B.	**RELIGIOUS AFFAIRS :**	
	(a) Spill-over projects	8.69
	(b) New projects	28.31
	Total (Religious Affairs) :	37.00
	Grand Total (Education & R.A.)	**2658.00**

CHAPTER-XVI

HEALTH

16.1 Access to health is a fundamental right to a person. Health is a basic requirement to lead a socially and economically productive life. Socio-economic development and welfare of a nation is greatly dependent on the state of health enjoyed by its people.

16.2 The health, nutrition and soico-economic problems of Bangladesh are of vast dimensions. They relate and interact with each other and are aggravated and compounded by rapidly growing and largely illiterate population. About half of the population are under poverty line and suffer from various health problems.

16.3 Since independence, the government has been consistently pursuing a policy for providing essential minimum health care to all, particularly to those who are underserved. Successive health plans have emphasised Primary Health Care (PHC) as the key approach to the improvement of health status of the people. The Global Strategy of 'Health for All by 2000 AD' has been accepted by the government as the national health goal.

REVIEW OF PAST PERFORMANCES

16.4 The past plans in the health sector had endeavoured to provide essential health care to the general masses. To attain this goal, many development programmes were undertaken in the health sector during the First (1973-78), the Second (1980-85) and the Third (1985-90) Five Year plan periods.

16.5 The country inherited a system of health care with preference for curative services to preventive activities. Later, through the past few decades, vertical programmes were developed to organise preventive care. The efforts in the Third Five Year Plan (TFYP) had been essentially to reorient the health culture and create an infrastructure which responds to Primary Health Care (PHC), besides carrying on various new and ongoing vertical programmes and completion of ongoing essential health institutions. But the real goal to provide a comprehensive health care to the people is yet to be achieved. The health care facilities, developed through past plans, were able to cover only 40-50 percent of the population. While progress is apparent, there is still a long way to be traversed to reach the goal of an acceptable level of health care.

Thana Health Complexes (THC)

16.6 In order to bring the health service delivery system including the primary health care services to the door steps of the rural people, the programme for development of a comprehensive net-work of health infrastructure in rural areas through the establishment of one Thana Health Complex in each Thana was continued during the TFYP. Under the programme, 397 THCs were planned to be established of which altogether 351 health complexes have so far been made functional and out of them, 245 health complexes have been completed in all respects. Other THCs are at different stages of implementation and service delivery. Specialised service in the field of medicine, surgery, gynae and dentistry were provided in each Thana Health Complex. Supply of essential drugs and vaccines had been further improved, cold chain was instituted in each THC to maintain the quality and effectiveness of drugs and vaccines.

Union Health and Family Welfare Centres (UHFWCs)

16.7 The network of institutional facilities starts from the union level where there is a Health and Family Welfare Centre for providing outpatient services. There are at present a total of 2100 Union Health and Family Welfare Centres (UHFWCs) under the Family Planning Wing. Besides, at the union level, there are some 1275 Rural Dispensaries (RD) previously functioning under Health Wing and now transferred to the Population Wing for gradual upgradation and conversion as Union Health and Family Welfare Centres.

Hospitals and Clinics

16.8 Hospital beds had been increased significantly over the years. Efforts are still going on for further increasing the bed facilities to meet the growing demand. At present (upto June'90) there are about 34488 hospital beds of which 24,500 are in the public sector, giving a bed-population ratio of 1:3200. With the decentralisation of administration and upgradation of sub-division into district, the existing hospitals needed to be upgraded and modernised with adequate diagnostic and treatment facilities as referral hospitals for primary health care. The programme includes upgradation of 36 erstwhile sub-divisional hospitals into 50 beds and modernising 9 existing 100-bed hospitals. The existing Medical College Hospitals, Rehabilitation Institute and Hospital for Disabled (RIHD), Institute of Cardiovascular Diseases (ICVD) and Ophthalmological Institute were

further developed, Most of the works of the hospitals at Comilla, Khulna, Jamalpur, Bandarban, Jhalokathi have been completed. The Cancer Institute and the IPGMR are nearing completion to the extent included in the TFYP.

Public Health Services

16.9 An expanded immunization programme against six major killer diseases i.e. Tuberculosis, Tetanus, Diphtheria, Polio, Whooping Cough and Measles was undertaken for implementation during the TFYP. In the context of the TFYP, objective to immunize 85% children under 1 (one) year of age and pregnant mothers by 1990 in 460 Thana and Municipal areas for attaining Universal Child Immunization (UCI), and intensified Vaccination programme was undertaken in 8 thanas during 1985-86 and subsequently all the 460 thanas and municipal areas were brought under this programme during the plan period. The coverage of immunisation achieved upto December'89 is 88% for BCG, 49% for DPT, 52% for measles, 49% for polio (for children under one) and 22% for TT (for pregnant mother).

16.10 Acute diarrhoeal diseases are one of the leading causes of morbidity and mortality in children under 5 years of age. To combat diarrhoeal diseases, an average of 14.5 million packets of oral saline were produced annually. Besides, EDCL and others produce, annualy, about 7.00 million packets.

16.11 Malnutrition is wide spread in Bangladesh. About 76% of all the households are deficient in calorie intake. A comprehensive public Health Nutrition programme was undertaken during the TFYP to improve the nutritional status of the vulnerable groups. The programme comprised distribution of Vitamin 'A' capsules, imparting nutritional training and orientation to health and other related personnels. The programme also included establishment of 20 Child Nutrition Unit (CNU) as feeding and rehabilitation centres for severely malnourished children in the selected thana health complexes.

MANPOWER DEVELOPMENT

Medical Education

16.12 Substantial progress had been achieved in the field of medical education. The annual intake in 8 medical colleges and one dental college in the country are 1200 and 60, with average annual output of 1000 and 45 graduates respectively. The cumulative number of qualified doctors during the plan stood at 20,590 against a population of 114.2 million giving a doctor-population ratio of 1:5546.

Nursing Education

16.13 The role of nurses in the field of treatment is highly significant. Nurses training programme was strengthened during the TFYP. The annual intake of the existing 38 Nurse's Training Centres (NTCs) is 1135 students and annual output, on average, is 600. The total number of qualified nurses in the country is about 9188 giving a nurse-population ratio of 1:12549.

16.14 To meet the increasing demand for nurses, facilities for training of nurses were developed under two different schemes. Construction of 10 centres, out of 30 NTCs under these two schemes are nearing completion. Presently training programmes in all other centres are being undertaken in hired accommodation.

Mid Level Health Worker

16.15 To produce mid level workers at grass-root level for health care activities, Medical Assistant Training Schools (MATS) have been functioning. The annual intake of the 8 MATS is 240. So far 1348 Medical Assistants have come out from these schools.

Drugs and Vaccines

16.16 To meet the demand for essential drugs for PHC programmes and to support the drug policy, two pharmaceutical plants - one at Tejgaon and the other at Bogra have been set up and placed under a Public Limited Company with 100% share owned by the Govt. for optimization of production capacity. At present approximately 50-60% of the drug need of the public sector is met through the existing drug plants. The life saving drugs like TT vaccines, I.V. fluids are also being produced from the Institute of Public Health under public sector but further efforts are needed to improve the production of these items to meet the growing demand.

Traditional Systems of Health Care

16.17 A substantial amount of health care services is being provided in the villages by using indigenous medicines (Ayurvedic and Unani). But due to lack of training, research and patronage, the indigenous systems of medicine could not make much headway. Development of indigenous systems of medicine was recognised as one of the support strategies for delivery of primary health care. Steps were taken to develop the traditional systems of medicine so that it could be integrated and brought into the main stream of modern health care delivery system. The TFYP kept the provision for development of necessary infrastructure and manpower through establishment of an Ayurvedic and Unani College.

Physical and Financial Performance

16.18 A total of 62 projects were undertaken during the TFYP, out of which 34 projects were ongoing and 28 new. Of these, 13 projects were completed during the plan period, 4 projects were dropped/deferred and 45 projects were spilled over to the Fourth Five Year Plan.

16.19 The TFYP allocation for the Health Sector was Tk. 550.00 crore which was 2.2 percent of total public sector outlay. Of this amount, Tk. 530.6 crore were made available through ADPs.

Health Care Financing

16.20 The average annual per capita expenditure in health inclusive of revenue and development, during the last decade was Tk. 19.03 as against the average annual per capita total government expenditure of Tk. 580.93. This expenditure over the years has increased from a level of Tk. 9.60 during 1977/78 to Tk. 33.19 (unadjusted) during 1987/88.

16.21 Since 1977/78, the total development expenditure in health received, on an average, 68.5 percent government contribution and 31.5 percent from foreign assistance. In 1987/88 Govt. share decreased to 56 percent, while foreign assistance accounted for 44 percent. Foreign assistance in the total development expenditure on health has been increasing over the years with a proportional decrease of govt. contribution. The highest govt. contribution was 89.92 percent in 1978/79 while the lowest was 46.53 percent in 1984/85 and also in 1985/86.

16.22 On an average, 97.16 percent of the total revenue expenditure in health, during last two plan periods, was financed by the govt. and the rest 2.84 percent was financed from receipts of the organisation. Government share in the revenue expenditure on health remained almost same in the last ten years.

MAJOR PROBLEMS AND DEFICIENCIES OF THE PRESENT HEALTH CARE SYSTEM

Deficiencies of Management and Monitoring

16.23 There was very little application of modern managerial techniques or practices in running the health services. As a result, no effective system existed for project management and monitoring. Contineous delay in project formulation coupled with faulty preparation of project, lack of effective co-ordination and co-operation between the executive agency (MOHFP) and the construction agency (PWD) resulted in slow implementation and inadequate service delivery. Due to dearth of requisite trained personnel, hospitals and health complexes are generally poorly managed. Ill-defined levels of authority and no local accountability created confusion in the management system.

Low Utilization of Institutional Facilities

16.24 Utilization of existing facilities in the rural areas was not satisfactory. The bed occupancy rate in district hospitals, medical college hospitals and post-graduate institute hospitals was over 100% while that in the THCs was only 50 to 60%. This was mainly due to lack of people's confidence in THCs, owing to poor quality of care, inadequate drugs and other supplies and poor managerial practices. Poor maintenance of facilities, inadequate community participation, incompetent supervision, inappropriate manpower planning and unwillingness of doctors to serve in the rural areas also contributed for the same.

Inadequate Coverage of Health Services

16.25 Coverage of health services was inadequate because of a number of factors and their inter-actions involving service providers and consumers. The factors included lack of effective referral and followup system

at all levels, inadequate participation of community in decision making with respect to health, inadequate distribution of manpower and other physical facilities in different geographical areas etc.

Poor quality of Health Services

16.26 The poor quality of health services were mainly due to inadequate management in health service delivery, inadequate supply of medicine and other support facilities, too much private practice, inadequate diagnostic and laboratory facilities, ineffective referral and followup system at all levels. Besides, there is little technical back-up support from the higher levels.

Low Range of Available Services

16.27 Factors influencing the low range of available services were inadequate operational planning and implementation and lack of co-operation among the service providers. These were, in turn, related to number of factors i.e. inadequate awareness of job responsibilities, inadequate technical skill etc.

Insufficient and Inadequately Trained Manpower

16.28 Manpower is a critical resource for the health sector. It is not possible to improve the health services without improving the quality of different categories of manpower. The main deficiencies with regard to health manpower were paucity of personnel and lack of proper training. These were due to inadequate manpower planning, complicated recruitment procedure, insufficient training facilities etc.

Inadequate Multisectoral Support

16.29 This was due to lack of understanding and application of the linkages between health and other sectors and lack of proper initiative by health sector in generating multi-sectoral support and lack of appropriate collaborative system. Initiative in this direction was not there because of absence of appropriate guideline and orientation.

Organizational and Structural Deficiencies

16.30 The health and family planning services were functionally integrated at the Thana level and below leaving the supervisory controls mostly bifurcated. Though there was agreement in policy that the services provided by the personnel of the two wings were to be effectively co-ordinated and integrated, the actual modalities of achieving this objective were not properly translated into action. Lack of modalities for integrating health and family planning services and lack of inter-sectoral co-ordination were responsible for impeding domiciliary services and for inefficiency in health care system.

16.31 Most of the THCs and UHFWCs run short of essential physical and functional facilities; similarly the district level hospitals suffer from inadequate equipment, supplies and manpower. Referral system with clearly spelt-out linkage and communication could not yet be established among UHFWCs, THCs and district hospitals as well as national level teaching and specialised institutions.

16.32 Epidemiological surveillance and monitoring system and other essential sub-systems like health laboratory services, maternal and child health care (MCH), school health, industrial health service, enactment and administration of public health legislation were not only inadequate but also not properly integrated with the general health care system.

16.33 Health information system could not be modernised to effectively link the national level with the peripheral health institutions. This deficiency has created problems in development and operational planning as well as management systems.

Budgetary and Financial Constraints

16.34 Allocation of financial resources, both in the development and the revenue budget were inadequate in the context of long-term national goals and strategies for HFA by the year 2000. Allocation of development fund could not be made as per phasing of the schemes due to paucity of resources. The annual revenue budget was inadequate to meet the increased requirement generated by development efforts and thus adversely affected supplies and services. THCs and UHFWCs were established but sufficient funds were

not made available for meeting the operating costs. As a result, full benefits from capital investments could not be achieved.

16.35 Inclusion of unscheduled projects without corresponding increase in allocation of funds led to further strain on already scanty resources. Allocation in the ADP hardly corresponds the financial phasing of approved schemes. Besides these reasons, many projects did not receive their planned allocation resulting cost overrun, time overrun and delay in project completion.

Cost Sharing

16.36 Hospital based health care is usually most expensive. These services were made available almost free of cost. This system seriously constrained expansion and further development of public health care system. Besides, lack of cost sharing led to overuse of services by the privileged few.

The Fourth Five Year Plan

16.37 The objectives of the Health Sector during the Fourth Five Year Plan have been formulated within the overall macro objectives of human resources development and based on the broad principles of promoting and supporting development and operation of national health care system so as to attain the national strategy for, 'Health for All by the year 2000'. The Fourth Five Year Plan will have special emphasis on consolidation of existing health facilities and programmes and strengthening of management capabilities to ensure efficient functioning and optimum utilisation of the same.

Objectives

16.38 Major objectives of the Fourth Five Year Plan will be as follows:

i) to improve the health status of population, particularly of mothers and children;

ii) to consolidate and strengthen the coverage of Primary Health Care and its supporting services for improved quality and quantity of health services;

iii) to deliver improved health and family planning services in a package to the family with a view to increasing its welfare;

iv) to prevent, control and treat major communicable and non-communicable diseases;

v) to improve nutritional status of the population particularly of mothers and children;

vi) to foster appropriate health manpower development and its optimum utilization;

vii) to promote adequate production, supply and distribution of essential drugs, vaccines and other diagnostic and therapeutic agents; and

viii) to strengthen planning and management capabilities of the health system for utilisation of existing facilities to the fullest extent and optimisation of health services; and to promote and strengthen health system and bio-medical research.

Health Policy

16.39 The existing health system is beset with many problems and bottlenecks and has failed to fulfil the people's aspirations and health care needs. A national health policy is being developed to reorganise/restructure the existing health care system to ensure preventive, curative, promotive and rehabilitative health care to the general masses and to bring about qualitative and quantitative changes in health services. It aims at improvement of the overall standard of health services in the country through bringing about a reformative change over the existing health system. It will ensure the exercise of people's democratic right and community participation in planning, budgeting, implementation and management of health programmes so as to ensure effective delivery of health care, better coordination and optimum utilization of health services.

Strategies for the Fourth Five Year Plan

16.40 In order to attain the above objectives, the following strategies will be adopted :

i) Primary Health Care Services will be provided through a three tier system for health promotion, disease prevention, treatment and referral. The level of services considered are (a) Community level-through community health workers, village defence party (VDP), mothers' club etc. This would be linked to the overall village development programme with people's participation, as envisaged during the Fourth Five Year Plan, (b) Ward level-through satellite clinics (health post) with mid-level health manpower,and (c) Union level-through Union Health and Family Welfare Centre. The on-going programme for establishment of UHFWC and raising of voluntary community health workers/ health volunteers will be speeded up. All THCs and UHFWCs will be equipped with necessary diagnostic and treatment facilities to provide PHC and act as referral centres.

ii) Health and family planning services will be integrated through unification of the Directorate of Health Services and the Directorate of Family Welfare to provide comprehensive services of PHC and MCH including family planning, in a package form;

iii) The immunisation and other related programmes such as public health laboratory, epidemiological surveillance/health information system and health education will be further expanded and strengthened to control communicable diseases effectively;

iv) Health manpower will be developed through development and implementation of appropriate curriculum and basic in-service training of all categories of health service providers i.e. doctors, para professionals etc. The thrust will be on production of specialised manpower (technical and managerial) and also on production of the mid and grass-root level health manpower. To meet acute shortage of graded specialists, some of the existing medical colleges will be upgraded with necessary facilities for post-graduate level medical training and research;

v) Health infrastructure throughout the country will be built with special emphasis on development of graded services with thana, district and national level, linked with a referral system. Thana Health Complexes will be strenghthened in phases to provide first level specilized care. District hospitals will be expanded with increased number of beds for different specialities. Medical college hospitals and specialised hospitals and institutes will be strengthened to provide services at the tertiary level;

vi) Supply of essential drugs, vaccines, sera, chemical and reagents, rehydration fluids, etc. will be augmented by increasing their production in the country. Bottlenecks experienced in the past due to an over centralised system of supply of basic drugs and medicines will be removed by decentralisation of the system through establishment of supply depots and subdepots at district/regional level and streamlining the distribution system;

vii) Intersectoral coordination and interaction between health and other sectors will be fostered, especially in relation to such fields as mother and child care, family planning, nutrition, health education, safe water supply and sanitation, local production of essential drugs;

viii) The entire health system will be restructured for efficient management and improved service delivery;

ix) Development of indigenous and homeopathic systems of medicine will be encouraged under public and private sectors. To this end, manpower development through education, training and research will be pursued so that these systems play complementary role to modern system of medicine;

x) Adequate health care facilities for the industrial worker will be developed through training of manpower in industrial health and setting up of appropriate infrastructure for the same;

xi) In order to generate resources, various methods like cost sharing, health insurance and cooperative will be adopted keeping in view equity among various socio-economic classes; poor, destitutes and disabled persons will, however, be exempted from user charges;

xii) Medical Research will be expanded to priority areas, particularly in development, operational and biomedical fields. The mechanism and processes for utilization of research findings will be strengthened;

xiii) Private sector and NGOs will be encouraged for setting up of hospitals, poly clinics, pharmaceutical industries and development manpower, equipment etc. Appropriate processes and procedures will be institutionalised to facilitate their activities.

xiv) Simple managerial techniques and practices will be introduced across the health system at all levels for bringing efficiency in service delivery and optimisation of existing facilities. Medical audit system will be practised to prevent misuse, wastage and under-utilization of manpower and scarce resources.

Development Programme for the Fourth Five Yea Plan

16.41 The potential directions and thrust identified for health development during the Fourth Five Year Plan are as follows :

i) Consolidation and further development of essential health infrastructure, developed earlier.

ii) Strengthening of quality, quantity and range of services based on the Primary Health Care approach, including referral system.

iii) Strengthening of the management capacity of health system to sustain and further develop service capability.

16.42 In this context, the likely programme thrusts during the Fourth Five Year Plan will be towards sustaining and further developing services and programmes based on Primary Health Care components, such as maternal and child health care, immunization, health education, nutrition, control of endemic diseases, treatment of common diseases and injuries, essential drugs, mental health care, safe drinking water and sanitation etc. Moreover, there will be programmes for developing sound refferal system, improving health management capability, building up a sound logistic base, working out monitoring capacity, building contingency plans during disasters etc.

16.43 Development of health situation is reflected through the advancement of health indicators. The targets and indicators are essentially based on those developed as a part of the national strategy for HFA/2000. These indicators should advance to some acceptable level and that as a minimum, all people in the country should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live.

Primary Health Care Services

16.44 Primary Health Care being the key strategy for delivery of various service elements, it will continue to be strengthened. The PHC will be provided through a three tier system e.g. (a) Community level (villages) (b) Union level (UHFWCs) (c) Thana level (THCs). Emphasis will be on the multiple component service delivery at the thana level and below, with health assistants and family planning workers carrying out jointly a number of activities. Efforts will continue to further improve health infrastructure performance, particularly at the union and thana level. Out of the planned 397 thana health complexes, there are still 50 THCs needed to be constructed along with the remaining 950 UHFWCs. The left over work of the THCs and UHFWCs will be completed during the Fourth Plan. Besides, the THCs and UHFWCs will require to be strengthened with requisite supplies, equipment, manpower and training facilities. Functional inadequacies of all the existing THCs and UHFWCs, particularly in respect of preventive and promotive care, are to be removed for full utilization of the created facilities and consolidation of services.

16.45 At the community level, health care services are envisaged to be taken to the door steps of the people through satellite clinics (Health post) to be orgnaised at ward level serving a population of 7000-8000. Integrated Primary Health Care Services like, MCH and Family planning etc. would be delivered at this level by para professionals with active participation and involvement of community leaders. The provision of health care was considered to be the sole task of the Government alone. Of late, however, there has been a general consensus that health development can only be ensured with the active involvement of the people themselves. Although administrative decentralisation at thana level has taken place in the country, tangible local level processes of ensuring people's participation have not yet fully evolved. In this context, people's participation would be viewed with utmost importance. Some innovative measures, such as raising of health volunteers; formation of village health committees; setting up drug, health cooperatives at union and village levels; setting up of committees for managing the activities at the thana, union and village levels; integrating the existing organisational structure with bottom-up planning process, monitoring system, coordination with health related sectors and NGOs etc, supporting and facilitating local level resource mobilization etc. will be pursued. Health and Family Planning being a transferred subject, the Thana committee will be actively motivated in formulating integrated programmes on Health and Family Planning for implementation through local funds. The committee will also be pursued to establish a functional linkage between the national programmes and the local programmes of their own.

Secondary and Tertiary Specialised Health Care

16.46 Hospital facilities at secondary and tertiary levels are inadequate in terms of capacity, equipment, supplies and expert professional hands. Secondary health care facilities, like some general and district hospitals including erstwhile subdivisional hospitals but excluding the districts, with medical college hospitals will be modernised and upgraded.

16.47 The district hospitals will be gradually upgraded to 100/200 bed modern hospitals. The district and the Medical College hospitals will be developed as composite units with all treatment facilities including diagnostic laboratories. Some tertiary/specialised hospitals like MCH Hospital, Casualty Hospital, Kidney and Urology Hospital, Drug Adict Hospital etc. will be set up during the plan period to provide specialised services and training. In view of the growth of the population in the urban areas, the need for setting up urban polyclinics under private sector deserve special consideration, particularly to meet the growing demand for urban health care.

Referral System

16.48 It is essential to develop an effective referral machinism in order to develop linkages with the community based services up to the specialised care. In this process, cases would be referred by community health workers to the next higher level and subsequently to other levels as per need. These referral centres should have the necessary physical and service facilities to answer the needs of the referred. Otherwise, the whole referral mechanism would be frustrated. The service providers should have the skill and knowledge for proper screening of the cases referred. There should be follow-up mechanism of the referred cases so that referee has the full knowledge of the out-come of the service provided.

Communicable Diseases

16.49 The communicable disease control programmes will provide technical services for the control of major communicable diseases. A major portion of these activities are to be concentrated at the primary health care level including static care at the THC and UHFWC.

16.50 The central components of epidemiological surveillance will be strengthened to enable them to provide technical assistance and guidance to the local agencies. Surveillance is to be carried out essentially at the local level by timely detection of diseases with epidemic potential so that quick and effective measures can be taken.

16.51 The public health laboratory component of epidemiological services will be developed at the central as well as at the division/district level, as an integral part of the various communicable disease control programmes.

Control of Diarrhoeal Diseases (CDD)

16.52 A more comprehensive programme of diarrhoeal disease control will be taken up during the Fourth Five Year Plan including decentralised elements of detection and epidemic control, and also production/distribution of ORS. Expert services and research experiences of the ICDDR'B would be utilised in developing the programme strategy and training of personnel. Diarrhoeal Cells in all the Medical Colleges and District Hospitals and ORT corners in District Hospitals will be strengthened to arrest the diarrhoeal episodes and for monitoring and evaluation.

Expanded Programme on Immunization (EPI)

16.53 The expanded Programme on Immunization aganist six killer diseases i.e. tetanus, diphtheria, measles, tuberculosis, pertussis (whooping cough) and poliomyelitis will continue to recieve importance. All the field level workers and their supervisory staff including doctors are to be fully involved, mobilised and made accountable for the efficient and effective implementation of the EPI. Besides, all out efforts will be made to sustain and effectively maintain the national capability for delivering the immunization services to the target population through integrated services of health and family planning workers, multisectoral approach and close supervision and monitoring.

Health Education

16.54 Health education needs to be further strengthened both in personnel and resources at headquarter and periphery level. The present Health Education Bureau will be structurally strengthened for the dissemination of knowledge on health throughout the country.

16.55 The health education programme will also be directed towards Health for all leadership development at all levels, promoting healthy life style, behavioural changes, and creating awareness about health and nutrition among individuals, families and communities.

Malaria Control Programme

16.56 Malaria and Kalazar has again become a major-health hazard. The ongoing malaria control programme will be strengthened particularly in the malaria and kalazar prone areas through inclusion of better eipdemiological coverage, spraying of wider areas with effective chemicals and use of appropriate technology. Sustained efforts will be required to bring the incidence of these two diseases under control. Approaches will be developed to integrate malaria control measures into primary health care for implementation at home, community and first health facility levels.

Mental Health

16.57 To create awareness about mental health needs and to promote early detection and intervention of mental health problems, community based programmes will be taken up. These activities will be built on the intensification of PHC at the village level as well as the training of community health workers. The programme will also include control of drug abuse and narcotics through extensive educational efforts.

Homeopathy and Indigenous Systems of Medicines

16.58 Homeopathy and idigenous systems of medicine will be integrated and brought to the mainstream of modern health system. Programmes to upgrade formal education in homeopathy and indigenious systems of medicines and to improve the skill of these group of practitioners will be taken up.

Cardiovascular Disease

16.59 A national programme for rendering clinical services in the field of cardiovascular diseases, particularly in the prevention of Rheumatic Fever and Rheumatic Heart Diseases will be strengthened. It will involve development of specialist manpower, setting up of intensive care unit (ICU) in Medical College Hospitals and IPGMR, improving the operation theatre facilities etc.

Kidney Diseases and Urology

16.60 A national Institute for Kidney Diseases at Dhaka and Nephrology and Urology Units in medical colleges will be set up to create facilities for investigation, treatment, training of specialised manpower and research.

Cancer

16.61 Development of community based approach for early detection and treatment of cancer will be strengthened. In this context programmes will be taken up for the specialist manpower development at the Cancer Institute. Clinical and laboratory services will also be strengthened.

Tuberculosis and Leprosy

16.62 The ongoing tuberculosis and leprosy control programmes will be further strengthened with active case finding and case holding efforts. The programme will be integrated with the health services to provide nationwide coverage.

Safe Drinking Water and Sanitation

16.63 Polluted water and poor sanitation cause diarrhoea and worm infestations in children resulting in endemic malnutrition. During the plan, adequate coverage of hand tubewells and hygienic latrines to rural households will be provided and people will be educated for adherence to sanitation and hygienic practices. The programme areas of this subject will be elaborately discussed in the Physical Planning and Housing (PPH) sector.

Diabetes

16.64 Diabetic health care delivery will be integrated with the primary health care to promote early detection, treatment and follow up in collaboration with Diabetic, Endocrine and Matabolic Centres (DEMC) and BIRDEM. The DEM centres will be created in the Medical College Hospitals for treatment and management of diabetes. Moreover, financial assistance will be provided to existing two institutes one at Comilla and another in North Bengal for widening the coverage of their services.

AIDS/Sexually Transmitted Diseases

16.65 Programmes will be taken up for assessing the extent of the problems, development of surveillance system and control strategies. Support to strengthen the capabilities for laboratory diagnosis will also be provided.

PHC SUPPORTIVE PROGRAMMES

Essential Drugs and Vaccines

16.66 To meet the growing demand for essential drugs for PHC programme and to support the govt. drug policy, production of essential drugs and vaccines will further be augmented. The Institute of Public Health will be strengthened to produce the necessary vaccines, sera and fluid. Emphasis will be given for creating facilities for the production of all types of vaccines to support the ongoing immunisation programme in the country. Efforts will also be directed towards production of Rabies, polio, measles, rubella vaccines through culture, within the country. Management of drugs will receive additional thrust so that the essential drugs are available in right quantities in right time to all health care institutions in the country.

16.67 Efforts will be made to produce the required essential drugs for PHC locally in the government pharmaceutical plants and in the private sector. In addition to the two government plants in Dhaka and Rajshahi Divisions, two more plants will be set up in phases in the two other Divisions of the country to attain greater self-reliance in the local production of essential drugs. As first phase, however, one plant will be set up in Khulna Division. A National Formulary of Essential Drugs will be published under the auspices of the government for wider dissemination of essential drugs information.

16.68 The two existing drug testing laboratories will be strengthened for quality control of drugs and raw materials produced in the country and imported from abroad.

Health and Safety in the Industries

16.69 With the growth and advancement of industries, the subject of industrial hygiene and safety measures have become increasingly important in the field of public health and preventive medicine which deals with the benefit and welfare of gainfully employed workers in mills and factories. Health care of industrial workers will be provided through training of manpower in health.

16.70 The plan attaches high priority for development of appropriate manpower at all levels of health care delivery system. Acton in this regard will include creation of new manpower and strengthening their skills and efficiencies through continuous training and retraining. A comprehensive master plan for production of different categories of health manpower will be developed, keeping in view the future needs upto 2010 AD (both in public and private sectors).

16.71 The current admission capacities in health institutions for different categories of personnel shall be adjusted to suit the plan needs. For this purpose, emphasis will be given on the maximum utilisation of the existing training facilities and establishing new ones, where needed. Performance appraisal of different categories of staff will be carried out and competency based career mobility is to be introduced for efficient and effective performance.

Doctors

16.72 Presently the country is having 8 (eight) medical colleges in which the annual output is around 1000 graduate doctors. The doctors population ratio of the country is estimated to be 1:5000. This ratio is not at all favourable to ensure the health of the people of the country. In order, therefore, to increase the number of graduate doctors in the country the govt. has decided to establish 5 (five) new medical colleges with 250 intake capacity in each. These new medical colleges will be set up in Dinajpur, Bogra, Khulna, Faridpur and Comilla. Admission of students has already been started during 1992-93 academic session. There is a great mis-match between the training of doctors provided in a medical college and the type of services they render. It is, therefore, essential that the curriculum be adjusted and updated to fulfil the job need. Along with this, practical field orientation during their training period is also needed. At the present turn-out rate, the cumulative number of doctors in 1995 would be nearly 25,600. The annual turn-out is expected to be around 1200 in 1997 when the 1st batch of doctors will come out from these five new medical colleges.

16.73 The medical students should be so trained that they become efficient community health service provider with emphasis on primary health care and on programme management. The training programme for teachers and specialists will be further improved. With the development of THCs and district hospitals, as referral centres for PHC, a large number of specialists would be needed in the near future. Facilities for post-graduate training for different specialities will be expanded in some of the medical colleges and also at the post-graduate institutes.

16.74 There is a great need for in-service training in the field of health planning and management, hospital management, health administration, hospital architecture and engineering etc. Existing facilities at the Public Administration Training Centre (PATC) at Savar, National Institute for Preventive and Social Medicine (NIPSOM), National Institute of Population Research and Training (NIPORT), Bangladesh Management Development Centre (BMDC) and Academy for Planning and Development (APD) shall be utilised to cater these needs.

Nurses

16.75 There is a great shortage of nurses and this is well reflected in the present unfavourable Nurse-Doctor/Nurse-Patient ratios. The acute shortage of nurses in the curative health as well as in the community health call for review of the situation for assessing the actual need and producing the required number of trained nurses including public health nurses and midwives by both augmenting the existing facilities as well as building new ones.

Midlevel Health Workers

16.76 The basic and in-service training of the mid level health workers like Medical Asstt., Technical professional etc. are essential to impart the skill necessary for job performance. Facilities for such training would be made available and strengthened. The existing 8 Medical Assistant Training Schools will be further strengthened to set as Regional Inservice Training Institutes for the para-professionals.

16.77 The training programme for para-medical personnel, such as laboratory Technicians, Radiographers, Pharmacists, Health and Sanitary Inspectors, Dental Technicians, Raciotherapy Technicians

and Physiotherapy Technicians etc. will be reviewed and readjusted in the context of present and future needs. In veiw of the great shortage of the technical health personnel, training programmes of these categories of workers will be taken up in the selected Medical Assistant Training Schools.

Community Workers

16.78 Community workers like FWA, HA & TBA need to have in-service on the job training for effective job performance. For this purpose, institutions are to be identified, established and supported to provide training. Other community health providers like Health Volunteers, VDPs, Youth and Mothers Clubs, Cooperative and indigenous practitioners should also be oriented for support of the health services.

Health Information system

16.79 The health information system will be developed through a net-work of information system for coordination, collecting and reporting health statistics to support programme planning, management and evaluation. A management information system (MIS) will be set up in the office of the Director-General of Health Services to cater the information need at different levels. Besides, computer facilities for monitoring and supervision should be provided at the district level and this should be connected through DGHS to a National Composite Monitoring and Control Unit in the Ministry of Health.

Planning & Management

16.80 Planning and development deficiencies of the health services need to be improved to reinforce the planning and management capabilities and functional deficiencies. For this purpose, the planning outfit at the Ministry level should be rationalised both in terms of manpower and logistics and at the agency level i.e. DGHS levels, an effective planning outfit would be developed.

Disaster Prevention

16.81 Natural disasters in Bangladesh include flood, cyclone, tidal bore, drought, tornado, earthquake etc. The loss of life due to these disasters is very high. The major health hazards caused by floods are due to contamination of drinking water which results in increased diarrhoea, dysentry, hepatitis, typhoid, skin infections and worm infestations. Other incidences like measles, acute respiratory infections, (mostly pneumonia), malnutrition also show high incidence during and after flood. The disaster management programme will include delivery of health services through mobile medical teams, supplies like water purifying tablet, ORS, IV Fluid, bleaching powder, essential drugs, logistics, arranging field hospital, maintaining epidemiological surveillance, training of health personnel, community awareness and participation etc.

Nutrition Development Programmes

16.82 Bangladesh suffers from some of the most severe malnutrition problems. The present per capita calorie intake is only 1850 kilo calorie which is, by any standard, much below the required need. Malnutrition results from the covergence of poverty, inequitable food distribution, disease, illiteracy, rapid population growth and environmental risks, compounded by cultural and social inequities. Severe undernutrition exists mainly among families of landless agricultural labourers and farmers with small holdning.

16.83 Hunger and malnutrition affect people of all stages of life. The children under five years of age, pregnant women and lactating mothers are most vulnerable to their ravages. Conditions of particularly high prevalence include protein energy malnutrition (PEM), micro-nutrient deficiencies and parasitic infestations. Malnutrition is a condition mainly resulting from inadequate food intake but it is a symptom of a larger and more complex problem. It has roots in the macro and micro level structures and dynamics.

16.84 To improve the nutritional status, various development activities will be vigorously pursued during the Fourth Five Year Plan. The per capita calorie intake is expected to be increased to 2100 kilo calories. The Health/FP programmes will include promotion of breast feeding, use of ORS for diarrhoeal diseases, nutritional surveillance, establishment of child nutrition units including rehabilitation centres at the THCs and to provide primary health care, specially to the vulnerable and risk groups, reduction in maternal, neonatal and child mortality and blindness prevention, control of IDD, improvement of diet through applied nutrition programme and with special reference to weaning and deworming of children. Safe drinking water will get special attention so that the progress achieved by other activities is not upset due to lack of sanitation,

portable water and personal hygiene. Nutrition education at the primary level along with communication through mass media will be taken up for educating people about nutrition and to create awareness about the welfare of the families and communities at large.

16.85 Nutrition being a multisectoral issue, its improvement will require multisectoral cooperation with an effective nodal point of coordination and should include the development of community participatory projects, similar to those which have proved to be successful in the region. The best of these would be expanded to national proportions during the Fourth Five Year Plan.

Women Health Development Programmes

16.86 Women's health status in Bangladesh is markedly low. Poverty coupled with social and cultural prejudices, beliefs and practices, political and economic environment and non-access to essential health care facilities contribute to women's poor health and place them at high risk of complications of pregnancy and child birth. The ultimate outcome is high maternal mortality rate. The maternal mortality rate in Bangladesh is 7 per 1000 live births. Lack of adequate pre and post-natal care is the major factor contributing the high maternal mortality rate. Rural women, primarily, depend on untrained relative and illiterate traditional birth attendant in this case. They rarely seek medical advice even in case of serious complications of pregnancy.

16.87 Severity of malnutrition and iron deficiency anaemia is also higher among the female of all age groups. Low birth weight in full term impacts are largely a reflection of sub-standard maternal nutrition.

16.88 During past plan periods, government attached priority to the improvement of the health status of women. But due to segregated efforts and lack of delineation of clearcut responsibilities of Health and Family Planning Sectors towards maternal health care, the desired objectives could not be achieved.

16.89 The goals of MCH-FP Programme during the Fourth Five Year Plan will be to:

a) reduce maternal mortality rate from 7 to 4.5 per 1000 live births.

b) reduce infant mortality rate from 110 to 80 per 1000 live births.

c) reduce neonatal mortality rate from 84 to 65 per 1000 live births.

d) ensure access of women to health care during pregnancy and delivery of trained persons.

e) reduce mortality, morbidity and disability from early childhood infectious diseases through immunisation.

f) reduce mortality and morbidity due to diarrhoeal diseases and malnutrition.

16.90 The MHC-FP programme will be an integrated function of health and family planning at the community and the primary health care level. These services will be rationalised to provide comprehensive services of requisite quality for mother and child. Stronger referred or back-up network will require to be effectively managed at the hospitals or health centres. The programmes will require to be organised as a composite whole, with package services for mothers and children

16.91 The health of girl child and old age women will be taken care of by the normal health programmes directed towards child and elderly people. The girl child health care will be given through immunisation, nutrition, deworming and other related interventions. The differential treatment towards female with regard to food and health care will be removed through health education and motivation under the coverage of PHC.

Women's participation in Health & Health Related Development Activities

16.92 Women constitute almost half of the population. However, because of the wide spread illiteracy among the women, it is difficult to ensure their active participation in health and health related development activities. The prime need, therefore, is to improve their status through improved literacy, functional education, using them as volunteers at village level, increasing their income generating potentials, promoting and developing the members of morthers club, womens cooperatives etc. Further, educated women at

community level may be identified as the focal points for health development activities such as, basic sanitation and hygiene, safe drinking water, immunisation, ORS, nutrition and other components of PHC. The educated women of the community will be increasingly involved in the committees at village, union and thana levels for managing health institutions.

16.93 In the field of education, preferential treatment of women for admission to all educational institutions including medical and engineering education will be pursued. During the plan, preferential treatment would also be given to women in recruitment for sectoral positions. The Government has already decided that from now onwards, all the vacant posts of Health Assistants would be filled-up by women.

16.94 The private sector in Bangladesh has a vast potential resource for expanding services and for improving the internal efficiency of the Health system and in fact, the private sector is already playing an active role, particularly in curative care. Private participation in the delivery of health services is usually in the form of establishment of hospitals, clinics, laboratories, pharmacies and professional private practice. Its role in the promotion of preventive health care delivery or financing of the health service is equally vital. A strong private sector is particularly important because of the fact that it can be instrumental (i) in substituting private resources and re-allocating the public resources to areas of greater priority. (ii) in using the competative influence of the private sector to reform the efficiency of the public services and (iiii) in expanding total resources devoted to health care. Since the private sector has the potential to supplement limited public resources, Government policy should support a public-private collaborative effort for increasing the coverage of health services and improving its quality. In addition to the existing tertiary and secondary health care level in which the private sector's initiative is limited so far, they will also be encouraged to extend their services to rural areas.

16.95 A large number of NGOs are working in Bangladesh. They mainly supplement and complement the govt. health development efforts. Cooperation between the Govt. and the NGOs has increased over times. Beginning in the mid seventies, NGO activities in the field of health and family planning began to expand. The NGOs can be classified into three categories : (i) local grass root level NGOs (ii) national NGOs having branches at grass root level (iii) international donor NGOs. The types of services and activities the NGOs offer and engaged in are many and varied. Their activities are mainly directed towards promotive, preventive, curative and rehabilitative health care. Some of the NGOs have independent programmes, while others are helping in strengthening the govt. programmes.

16.96 During the Fourth Five Year Plan, Govt. policy will be to promote the participation of private sector including the NGOs in various health development activities. For this purpose appropriate processes and procedures need to be institutionalised and quality, quantity and range of services will be standardized to facilitate their activities. An effective coordination will be initiated between the public and the private sector for equity, better understanding and avoidance of duplication. There is little statistical and systematic information on the private sector's involvement in health development. During the plan, an indepth study need to be undertaken for assessing the range and coverage of health services being provided by the private sector. Finally, the target of Health for all by the year 2000 will require significant increase in resources to the health sector and best use of available resources. The HFA/2000 is a huge task and the public sector alone will not be in a position to accomplish it. Therefore, a public, private and NGOs joint effort will be of extreme importance.

Health and Environment

16.97 In order to improve the environmental condition of the health establishments, appropriate measures will be taken for provision of safe water supply and sanitation. As a part of campus beautification, tree plantation schemes will be taken up in all the existing and new health institutions/hospitals so as to leave a favourable influence on the general environment. Environmental impact assessment will be carried out in some specified areas so as to plan and implement necessary programmes for maintaining healthy environment and preventing environmental diseases.

Other general programmes

16.98 Programmes in this area are directed to strengthening of the health care system including health system research, medical library services, construction of Health Directorate building, Civil Surgeons' offices and residences etc.

Targets

16.99 The main targets of the Fourth Five Year Plan with respect to health status, health services delivery and manpower have been set, keeping in view the performance of the previous plan (TFYP) and the objectives of the perspective plan. These have been shown at Table 16.1.

Table-16.1 Major Health Indicators and Target of the Fourth Five Year Plan (1990-95)

Sl. No.	Health Indicator	Unit	1989-90 Bench Mark	1994-95 Target
1	2	3	4	5
1.	Infant Mortality Rate	/1000 live Birth	110	80
2.	Child Mortality Rate	/1000 upto 5 Years	11	9
3.	Maternal Mortality Rate	/1000 live Birth	7	4.5
4.	Crude Birth Rate	/1000 Population	35.2	30
5.	Crude Death Rate	/1000 Population	13.9	12
6.	Population Growth	%/Year	2.16	1.8
7.	Life Expectancy at birth	years at birth	53	55
8.	Hospital Beds a) Health Services b) Other Ministries & Private	Comulative Ditto Ditto	34488 24501 9987	36488 26001 10487
9.	Thana Health Complex	One in each Thana	351	397
10.	UHFWC/RD	One in each Union	3375	4325
11.	Immunization (0-1 Year) a) BCG b) DPT c) Measles d) Polio e) TT (Pregnancy)	 % coverage Ditto Ditto Ditto Ditto	 75 68 50 68 45	 85 85 85 85 85
12.	Control of Diarrhoea	% of coverage of ORS Distribution	90	90
13.	Control of T.B.	% of cases found (sputum positive)	20	50
14.	Delivery by trained personnel	% of pregnant women	20	50
15.	Antenatal care	% of pregnant women	45	60
16.	Nutritional Status	Av. adult energy intake in kcal	1850	2100
17.	Prevention of Night Blindness	% of children under 6 receiving Vit-A capsule	66	90

Table-16.1 Major Health Indicators and Target of the Fourth Five Year Plan (1990-95) (Concld)

Sl. No.	Health Indicator	Unit	1989-90 Bench Mark	1994-95 Target
1	2	3	4	5
18.	Control of Goitre	% covered for protection through		
		i) Lipiodol	70	100
		ii) Iodized salt	10	100
19.	Nutrition services	% of 2nd/3rd degree malnutrition treated	50	60
20.	Coverage of population by PHC	% of population	50	80
21.	Essential drugs and vaccines	Availability for public health services (% of total required)	60	70
22.	Health Lab Services			
	a) Simple lab facilities at THCs	% of coverage	100	100
	b) Simple lab facilities at district level	% of coverage	100	100
23.	X-Ray facilities in THCs	Number	143	397
24.	Blood transfussion upto District level (including medical Colleges)	Number	46	71
25.	Production of essential drugs, ORS, vaccines & I.V. fluids	Value in million taka	4317	4826
	Public		389	408
	Private		3928	4418
26.	Health Manpower :			
	a) MBBS Doctors	Cumulative	20590	25600
	b) Dentist	Ditto	805	1150
	c) Basic Nurse	Ditto	9100	11350
	d) Medical Assistant	Ditto	4348	4700
	e) Lab Technician	Ditto	1702	2050
	f) Radiographer	Ditto	522	850
	g) Pharmacist	Ditto	6283	7000

Financial Outlay

16.100 The Fourth Five Year Plan allocates a financial outlay of Tk. 1060.00 crore at 1989/90 prices for implementation of a total of 100 projects under health Sector. 39 percent (Tk. 411.00 crore) of this allocation will be required for 47 projects spilled over from the TFYP, while the rest 61 percent (Tk. 649.00) has been earmarked for 53 new projects. Broad programme-wise distribution of haalth sector's allocation may be seen at table 16.2. In addition to the public sector allocation of Tk. 1060.00 crore, an estimated amount of Tk. 186.00 crore is expected to be invested in the private sector including NGOs for various health development activities like establishment of poly clinics, nursing homes, hospitals, pathological laboratories, X-Ray clinics, medical institutions, etc.

Table 16.2 Broad Programme-wise Allocation

(Taka in crore)

Programme Area		Allocation	Percentage
(a)	Primary level	567.00	54
(b)	Secondary level	118.00	11
(c)	Tertiary level	203.00	19
(d)	Manpower Development	120.00	11
(e)	Drug, biologicals and equipment	42.00	4
(f)	Miscellaneous (programmes of general nature)	10.00	1
	Total :	1060.00	100.00

CHAPTER-XVII

FAMILY WELFARE

Introduction

17.1 Bangladesh with its estimated population of about 108.5 million (Mid-1990), ranks as the World's eighth and Asia's sixth most populous country with a land area of only 143,998 sq. kilometers. It has a density of 753 persons per sq. kilometer, one of the highest in the world. The population as on March 1991 (according to 1991 Census) was 109.9 million. Bangladesh Bureau of Statistics data indicate that in mid 1990, growth rate was about 2.1 per cent resulting from a crude birth rate (CBR) of 33.5 and crude death rate (CDR) of 12.0 per 1000 population. Due to past high fertility and falling mortality, Bangladesh's population has doubled in less than thirty years since 1961. Whereas previous doubling took eighty years; and doubling before that about two centuries. If population continues to grow at the present rate, it will double in ahother thirty three years.

17.2 Apart from the population size, there is a tremendous growth potential built into the age structure, as a consequence of past high fertility. Still population below 15 years is around 43.0% of the total population and females within the reproductive ages, 15-49, represent 48.0% of the total female population. Even in 1990, proportion of population 0-4 to the total population has not changed much compared to 1981 level. Life expectancy at birth, an indicator of mortality level is still as low as 52.5 for male and 52.0 for female, although some progress has been made in recent years in reducing premature mortality. Unless fertility control programmes succeed in preventing birth, MCH and EPI programmes succed in reducing infant and child mortality, any improvement in mortality level will be very difficult in the foreseeable future, especially in the rural areas where nearly 82 percent people live.

17.3 Even if the rate of population growth may drop from present level of 2.1 per cent to 1.8 per cent in 1995 and 1.5 per cent in 2000 A.D, size of the primary school age population will remain in the range of 17.9 to 19.6 million during 1990 to 2000 A.D. The size of this population will start dwindling from 2005 A.D. onward. At present, primary school enrolment is only 60% of this population. With hundred per cent enrolment which the Government is planning to ensure during the FFYP, the size of investment in primary school will be more than double and size of investment of secondary and higher education may be tripple when the primary school population will move up to their next academic ladders. Thus, the burden of a population as large as that of Bangladesh is tremendous. Working age population will increase from 1990 level of 73.37 million to 86.29 million in 1995 and 97.22 million in 2000 A.D. The government shall have to create employment opportunities failing which there shall be tremendous social and political implications. This workforce is nevertheless minimal as a ratio of total number of dependents. One worker presently supports 3.0 elderly and young persons compared to almost a half of this ratio in the developed countries. The ratio of non-workers to workers depicts the burden of supporting economically inactive population and is alarming in a country as poor as Bangladesh. Population growth has reduced land man ratio to 0.29 acres in 1990 from the 1981 level of 0.33 acres. With the increase in population, the land man ratio will further accentuate. The percentage of landless population which was 51.69% in 1988 will increase further. Estimates have shown that if population continues to grow at the current level of 2.1%, GDP would be required to grow at the rate of 11.5 per cent per annum during the remainder of this century in order to achieve a threshold per capita income level of US $ 700 by 2000 A.D. The generation of adequate resources for investment to achieve a growth rate of 11.5% per annum is a herculean task for the country faced with serious internal resource constraints and meets nearly 75% of its development budget from external sources. Early age at marriage, lack of opportunity for female education and employment, and high infant and child mortality among others, are still persistently influencing the high fertility trend in Bangladesh. A vicious combination of poverty, unemployment, illiteracy, malnutrition, poor sanitation, social apathy and lack of initiative for changes have continually been plaguing the prospect of planned parenthood, better health and better living. There is now a growing awareness of the complexity of urbanization in Bangladesh due to rapid unbanization and city growth. In 1990, the urban population was 19 million and it is projected to rise 35 million by 2000 A.D. The urban population growth rate is now almost three times the national population growkth rate. Already in Bangladesh most of the cities existing swerage, water supply, transportation, sanitation and other facilities are unable to cope with such a large influx of population. Most of the urban and suburban areas are now heavily polluted. Due to shortage of housing, a large number of new comers find themselves unable to find any accommodation in urban areas. Shanty towns and squatters have sprung up in various sub-urban areas of the country. Further, the rapid population growth has created a tremendous demand for land for constructing houses, schools, offices and other facilities. More and more agricultural land, forests and wet lands have been converted, cleared and levelled for urban purposes. The

high rate of population growth has, in fact, not only put excessive pressure on limited land space, but also exacerbated the problems of environmental degradation and rendered the development efforts in various sectors of the economy all the more difficult. Under such circumstances, Bangladesh has no other option but to pursue a policy of substantial decline in the rate of population growth.

Review of performance during the TFYP

17.4 The Third Five Year Plan recognized that the high rate of population growth was hindering socio-economic progress. The population policy of the TFYP envisaged greater degree of public awareness about the population problem and intensive local participation through decentralized thana administration and a high level of political commitment. Better maternal and child health services were aimed at by reducing infant mortality and improvement in the quality of family planning services including follow-up care.

17.5 The stipulated demographic targets were the achievement of NRR-I by the turn of the century and reducing the population growth rate from the 1985 level of 2.4 percent to 1.8 percent by 1990. The implication of this policy was to reduce the CBR and CDR from the 1985 level of 39 and 15 to 31 and 13.9 respectively by 1990, the contraceptive prevalence rate was planned to be increased from 25 percent to 40% in 1990. TFYP also envisaged reduction of infant and maternal mortality from 1985 level of 125 and 6 per 1000 live births to 100 and 4 per 1000 live births respectively by 1990.

17.6 The findings of Mini Contraceptive Prevalence Survey 1990, indicate that at present, one out of every 2.5 eligible couples are using contraceptives in comparison to one out of four during the Second Plan. Again 52.3 percent of currently married women have used a family planning method, at least, once in comparison to 33 percent in 1985-86. This improvement in family planning programme efforts was possible because of the intensive family planning programme undertaken nationwide from December, 1989 and through effective supervision of family planning programme at various levels.

17.7 Available data confirm that CBR and CDR were reduced to 33.5 and 12.0 per 1000 population respectively with resultant rate of growth of 2.1 percent in mid 1990. The planned target for reduction of total fertility rate from 1985 level of 5.6 to 4.32 in 1990 has been achieved. One recent survey (BFS, 1989) shows that median age at marriage has increased upto 18.5 years compared to 13.5 in 1976 and that most women prefer a family size of 3 children, a significant change in outlook compared to 4.1 in mid seventies. Decline in fertility, desired family size and increase in age at marriage have been much more steep during the TFYP than the preceding decade. Three factors account for the recent decline in fertility, namely, (i) increase in contraceptive practice, (ii) practice of breast feeding and (iii) increasing age at marriage. One non programme factor viz, abortion also accounts for some fertility decline. What is worrying is that the trend over time in respect of fertility rate among the younger women below twenty five years has not changed much. Based on the analysis of the data on fertility and contraceptive practice among these women, one inescapable conclusion is that long-term demographic goal of NNR-1 as envisaged in the TFYP can not be achieved by 2000 A.D. as such women with high fertility potentials are yet to be adequately covered by the field functionaries of the Family Planning Programme.

17.8 However, Bangladesh seems to have achieved the following pre-requisites of a favourable setting for successfull MCH-Based family planning programme characterised by :

(a) a strong political commitment to the programme,

(b) a strong programme leadership to translate commitment into action;

(c) a growing infrastructure to deliver family planning and primary heath care services;

(d) a high level of social and cultural acceptance of the programme; and

(e) a strong support to the programme by the international community.

17.9 The overall measurable results achieved in the context of demographic goals by FP-MCH programme interventions are evident from the following;

(i) More than 95 percent of all eligible couples know at least one method of family planning.

(ii) Only 7.7 percent of eligible couples were practicing some kind of contraception in 1975, but this has increased to 25.0 percent in 1985 and 39.0 percent in 1990 with a corresponding decline in TFR from 4.7 in 1985 to 4.3 in 1990.

A glimpse of the trend in demographic indicators and level of achievement as indicated below confirms that a process of substantial gains in fertility decline has already set in.

Indicators	1985	1990	Increase (+) /Degrease (-)
CBR (1000)	36.4	33.5	- 2.9
CDR (1000)	12.9	12.0	- 0.9
RNI (:00)	2.4	2.1	- 0.3
TFR	4.7	4.3	- 0.4
IMR (1000 live births)	122	94	- 28
CPR (:00)	25.0	39	+14.00
Total users (In million)	4.2	7.7	+ 3.5

Source: Bangladesh Bureau of Statistics

17.10 Family planning performance measured in terms of Contraceptive Prevalence Rate (CPR) was found to be 33 per cent in early 1989 (CPS, 1989). Most recent estimate of (Mini CPS 1990) shows 39.0 percent CPR in 1990 although it was expected to be raised from 1985 level of 25 percent to 40 percent in 1990. The period under review witnessed a spectacular rise in acceptors of oral pills and injectables resulting in a shift in methodmix. The contraceptive performance in terms of users during the Third Five Year Plan is shown yearwise in the Table 17.1 along with percentage of target achieved.

Table 17.1: Method specific performance in CYP for the period from FY 1985-86 to 1989-90

Methods	1985-86			1986-87			1987-88			1988-89			1989-90		
	Target	Perfrm	Ach.%	Target	Perfrm	Ach.%	Target	Perfrm	Ach.%	Target	Perfrm	Ach.%	Target	Perfrm	Ach.%
Steril - zation	455,000	267,543	58.8	529,000	350,560	66.3	551,000	196,015	35.6	576,000	230,979	61.4	427,000	224,666	52.7
IUD	212,000	367,668	173.4	285,000	420,333	147.4	355,000	379,128	106.8	861,000	361,696	42.0	916,000	364,924	39.9
Oral Pill	750,000	909,114	107.9	893,000	1001,534	112.2	1032,000	1273,312	123.4	1535,000	1641,320	106.9	1810,000	2287,318	126.4
Condom	630,000	906,054	143.8	725,000	994,902	137.2	813,000	1109,746	136.5	1035,000	1213,174	117.2	1207,000	1319,285	109.3
Inject-ables	69,000	54,165	66.0	89,000	78,745	88.5	119,000	97,386	81.8	507,000	149,757	29.5	603000	313,913	52.1
Emko	534,000	11,604	2.2	535,000	9,829	1.8	510,000	3,596	0.7	478,500	2,530	0.5	402,000	1,009	0.3
Foam Tab.	535,000	20,836	3.9	535,000	23,058	4.3	510,000	25,923	5.1	476,500	27,337	5.7	402,000	10,314	2.6
Total CYP	3179000	2436,841	76.6	3591000	2878,344	80.2	3890000	3085,221	79.3	5271000	3626,769	68.8	5767000	4521,629	78.4

Source: MIS, Family Planning Directorate.

MATERNAL AND CHILD HEALTH (MCH)

17.11 The MCH goals for reduction of maternal mortality, infant mortality and neonatal mortality were expected to be achieved from 1985 level of 6,125 and 85 to 4,100 and 65 per 1000 live births respectively in 1990 through strengthening of MCH clinical facilities, training of TBA's, immunization of children, use of ORS, preventive medicines and promoting activities of MCH through field workers. Review of MCH data shows that the progress in achieving the above MCH goals is not as satisfactory as expected with reference to the plan documents. Infant mortality and maternal mortality are estimated in 1990 as 94 and 5.72 respectively per 1000 live births.

17.12 **IEM Activities :** Included in these activities are (i) field workers interpersonal communication with eligible couples; (ii) use of media materials produced by the IEM Unit of the Directorate of Family Planning and (iii) use of mass media including Radio, Television and folk talents. Various studies show that nearly 40-45 percent of the client-population were not visited by the field workers for motivation. Some of the IEM materials require redesigning with proper messages, educational contents as well as training for the field workers and adequate orientation regarding how to use them appropriately. During the period under review, the folk talents programmes in 145 thanas were not duly implemented. However, mass media, especially Radio and T.V. played a very useful role in disseminating population related messages.

17.13 **Manpower Development :** Three types of institutes involved in manpower development are (i) NIPORT (ii) Family Welfare Visitors Training Institute (FWVTI) and (iii) Regional Training Centres (RTC) which have achieved two-third of their assigned training target. Programme were suffered owing to lack of qualified teaching staff. FWVTIs were underutilised. Training at RTC needs considerable improvement to cater to the needs of both Health and Family Planning functionaries in the light of the current functional integrated approach of health and family planning.

17.14 **Evaluation, Research and Monitoring** : During the period under review, PDEU carried out twenty five evaluative studies to indicate project level performance and one national family planning impact study to assess overall performance, both at national and local level. NIPORT has conducted twelve studies including three covenated studies such as (i) Sterilization Payment Studies, (ii) Workers Time Study and (iii) Bangladesh Fertility Survey. It was observed that NIPORT's researches were more of evaluative nature rather than operation research especially relating to training. Two Contraceptive Prevalence Surveys (CPS) were conducted by a local firm. "Health Financing Study" involving BIDS and IBA of the University of Dhaka was conducted by the MOH & FP. The MIS Unit of the Directorate of Family Planning has been strengthened to collect and compile areal level service statistics, mostly performance outputs, for monitoring on monthly basis. In addition to the above agencies, Bangladesh Bureau of Statistics (BBS) has collected vital data through dual record system covering 58,000 households.

17.15 **Women's Programmes** : Women's programme of the Ministries of Women's Affairs, Social Welfare and Rural Development and Cooperatives are now operating in two hundred and ten thanas. It is found that among the direct participants of the programmes, CPR was 50 to 60 percent and Total Fertility Rate was in the range of 3.00 to 3.70. Their monthly income was not very satisfactory but could have increased if more credit facilities were available.

17.16 **Statutory Councils and Committees** : National Council for Population Control (NCPC) and several committees at the District, Thana, Union and Village level as well as the project level were formed during TFYP. The NCPC headed by the President has provided significant leadership for social mobilization of population activities. It has taken a number of policy measures and many of them are under implementation. The project level committees were also active, but district, thana and union level committees whose primary tasks were to provide local level leadership and performance monitoring were disfunctional.

INFRASTRUCTURAL DEVELOPMENT

17.17 The projection for construction of new Family Welfare Centres at the Unions was 1200 during TFYP; In addition , construction of 225 FWCs were spilled over from the Second Five Year Plan, altogether the number of new construction stood at 1225 FWCs. But as a matter of priority, repair work of the previously constructed FWCs and renovation of the Rural Dispensaries were taken up during the early years of TFYP and as a result new construction of FWCs fell behind the target. Nevertheless, 725 new FWCs have been constructed during the TFYP. Further, construction of 700 FWCs taken up during the later part of TFYP has been going on (are likely to be spilled over to the FFYP and are at different stages of construction). Regarding renovation of Rural Dispensaries (RDs) , 203 have been repaired and renovated out of 1275 and in addition, 25 MCWCs have been repaired out of 87 MCWCs. The construction of a four-storyed building for NIPORT has

been completed. Over and above, the construction of Regional Warehouse at Chittagong and repair and reconstruction of 898 flood damaged FWCs have also been initiated at the close of the TFYP.

FINANCIAL PROGRESS DURING TFYP

17.18 Plan allocation for PC&FP sector was Tk. 933.98 crore at 1984-85 prices level which was 4.1% of the plan outlay. But taking into consideration the actual expenditure Tk.496.39 crore (current price) during 1985-89, tentative size of the investment to this sector was Tk.716.45 crore (current prices). Yearwise financial allocation through ADP mechanism alongwith expenditure and utilization is shown in Table-17.2.

Table - 17.2 : Yearwise Financial Allocation during Third Five Year Plan

(In current price) (Tk. in crore)

Year	Allocation for national ADP	Allocation for population sector	% of population sector as of national ADP	Expenditutre in population sector during TFYP	% of Utilisation of sectoral Allocation
1985/86	4095.54	127.69	3.11	87.56	68.57
1986/87	4513.36	142.47	3.15	106.96	75.08
1987/88	4650.61	170.40	3.66	139.88	82.08
1988/89	4595.34	214.23	4.66	161.99	63.00
1989/90	4680.89	279.19	5.96	220.06	74.04

FOURTH FIVE YEAR PLAN

17.19 The Fourth Five Year Plan envisages the creation of a greater degree of public awareness of the seriousness of the population problem through a social movement and the need to reduce the rapid growth of population within the shortest possible time. The Fourth plan further envisages an intensive local participation through decentralized thana administration and integrate family planning as an activity in the comprehensive development programmes. Better maternal and child health care would be aimed at by reducing infant, maternal and neonatal mortality.

Demographic Objectives During Fourth Plan

17.20 In the backdrop of existing demographic realities and its socio-economic consequences, the country faces a compelling need to reduce the rapid growth of population within a shortest possible time. A multipronged approach to influence key variables that will accelerate the fertility decline will be required to be pursued and whatever investment is necessary will have to be made. The population policy would aim at achieving a demographic goal of NRR-1 by the year 2005 A.D. which may be within reach. Even if this goal is achieved, the population will rise to about 137 million by the turn of the century. Keeping in view this goal, the demographic objective for the Fourth Five Year Plan has been set at reducing the growth rate from 2.15% in 1990 to 1.82% in 1995 and achieve a corresponding CBR of 33.5 in 1990 to 28.9 in 1995 and CDR of 12.0 in 1990 to 10.7 in 1995 per 1000 population. An achievement of estimated TFR from 4.3 in 1990 to 3.4 by 1995 would require the CPR of 39% in 1989-90 to be raised to 50% in 1994-95. The contraception target, therefore, shall have to be raised. The total users of contraceptives from the level of 73.0 lakh regular F.P. acceptors in 1989-90 to 116.0 lakh acceptors in 1994-95. Table-17.3 shows the yearwise projected target for fertility reduction and population growth rates and total fertility rate :

Table-17.3: Projected Population Size, Rate of Growth and Total Fertility Rate per Woman in Bangladesh (1990-1995).

Year	Population in July (in million)	Population in January (in million)	CBR (000)	CDR (000)	Rate of growth	TFR (per woman)
1990	108.5	107.3	33.5	12.0	2.15	4.3
1991	110.6	109.5	32.1	11.5	2.06	4.2
1992	112.8	111.7	31.1	11.3	1.98	3.9
1993	114.9	113.8	30.9	11.2	1.97	3.7
1994	117.1	115.9	29.7	11.0	1.87	3.5
1995	119.2	118.0	28.9	10.7	1.82	3.4

Source: Bangladesh Bureau of Statistics

MCH Goals of FFYP

17.21 The overall goals for the maternal and child health programme under the Fourth Five Year Plan are to improve the health condition of the mothers and children in order to :

(i) reduce maternal mortality rate from 5.7 in 1990 to 4.5 in 1995;

(ii) reduce the infant mortality rate from 94 per 1000 live births in 1990 to 80 in 1995, and

(iii) to reduce neonatal mortality rate from 80 per 1000 live births in 1990 to 60 in 1995.

Policy Approaches

17.22 The cardinal principle of the national population policy is an integrated and comprehensive approach for population and development required to provide services that are relevant to actual needs and priorities of the people. Towards this end, planning and implementation of population control and family planning objectives will receive high priority at the national as well as local level. It has emerged from a series of discussions that took place in the past that visible inter-sectoral population policies and programmes are of absolute necessity in order to diversify programme efforts with due focus on fertility reduction. Apart from a closely coordinated multi-sectoral programme, non-family planning interventions will be devised in order to create impact on fertility control. The responsibility for desired level of fertility reduction will be increasingly shared by the community and local level institutions, and thereby reducing the burden of the government.

17.23 The following may be listed amongst others as policy approaches to population issues :

(a) To promote and pursue population planning as an integral part of the total development process and integrate population issues in all development programmes upto community level;

(b) To accord top priority to family welfare programmes, build-up national commitment to generate "Social movement" and "mobilisation" to establish one-child family norm;

(c) To ensure total identification with and "ownership" of FW programme by local communities so as to enable them to develop required vigilance and monitoring for programme execution. Appropriate resources, motivational and training input will be provided to activate the local committies for these purposes. Community level (thana & unions) rewards and disincentives will be built to augment pertinent local efforts;

(d) To decentralise authority and responsibility for programme planning, strategy formulation and resource utilization, and integrate F.W. programme with the overall development programme at the local level;

(e) To concentrate efforts towards visible multi-sectoral F.W. programmes. The outreach manpower and facilities of all related development programmes to be harnessed for demand creation and service delivery where feasible;

(f) To continue the "Cafetaria appreach" in matters of contracaptive distribution with unhindered access to quality service at a nominal cost or free of cost;

(g) To mobilize educated women and those from influential families, satisfied clients and representative of local bodies to organise local women for MCH-FP support;

(h) To include 'beyond family planning measures', such as steps to raise age at marriage, particularly female age at marriage. This would be helped by introducing female stipend and other special measures for enhancing post-primary level female education, and supportive change in legal age at marriage; and,

(i) To issue appropriate health and family welfare legislations for the success of national policies and programmes; they are also needed to provide legal security and legal order, so that certainty prevails in respect of rights, authority, duty, obligation and responsibility of various parties involved in delivering and receiving MCH and Family Health Care services.

Strategies

17.24 Keeping in view the demographic goals of the FFYP (1990-95) as well as the long term demographic goal of achieving NRR-1 by 2005 A.D., the following strategies are proposed :

(a) Attaining time-bound demographic and MCH goals by achieving programme targets through providing quality services at all levels of the family welfare and MCH programme;

(b) Strengthening MCH component through a comprehensive MCH programme with special emphasis at the PHC level;

(c) Expanding FP-MCH efforts through integrated service delivery approaches by utilising both family welfare and health workers for intensive follow-up care for motivation, supplies and referral services, female village defence workers will be utilised;

(d) Improving the quality of services through counselling and follow up care for increasing acceptability as well as continuation rate of contraceptive practice;

(e) Strengthening information, education and motivational programme particularly contraceptive educational and counselling to increase the level of effective knowledge. Special programme will be developed through target setting specific groups of clients and potential client couples in different age parity categories, teachers, students and youth groups (future parents and leadership); and opinion leaders including religious leaders;

(f) Mobilising the communities to provide social lagitimacy for late marriage, birth spacing and planning, acceptance of small family norm and contraceptive practice. In this regard collection and distribution of Quranic verses and Hadiths, relating to family planning will be taken up;

(g) Undertaking special programmes for women with a view to raising their status by education, employment and income generation activities enabling them to decide about pregnancy and number of children;

(h) Encouraging voluntary and non-government agencies to promote their supplementary and complementary role in the implementation of the national programme and to innovate cost effective and nationally replicable models;

(i) Establishing local population data-base for local level programme planning and formulation of strategy;

(j) Developing capability for manufacturing of contraceptives and steroids;

(k) Raising professional expertise in planning for achieving demographic and contraceptive goals, and for ensuring effective accountability of all other concerned agencies and functionaries including co-ordination and monitoring of multisectoral projects and NGO activities;

(l) Progressively incorporating appropriate population variables into the sectoral plan and policies of various developmental sectors and particularly of education, including medical education, rural development, social welfare, women's affairs, labour welfare and agriculture;

(m) Developing the efficiency and expertise of field functionaries by preparation of appropriate and realistic training modules, imparting job-related and problem solving training through utilization of available facilities;

(n) Improving resource under utilisation of the infrastructure at thana and below, and rationalizing worker-population ratio as much as possible;

(o) Streamlining funding mechanism keeping in view programme priorities, changing needs over time, and mechanisms for timely utilisation of the allocations by developing frame-work of programme oriented funding rather than somewhat inflexible requirements for specific project related funds;

(p) Assessing the impact of the programme in terms of the demographic effect rather than programme efforts and input during a particular period. Accurate birth and death statistics at individual, local and national levels will be used. Efforts will be undertaken to develop the required data base through a nationwide vital registration system. Besides, potentials for collection, compilation, and utilisation of data through MIS will be expanded; and,

(q) Assigning responsibilities of Professors of Medical Colleges and other doctors areawise responsibilities in the family planning programme to ensure proper implementation.

Contraceptive Practices

17.25 The main stretegy for contraceptive services will be to provide a broad range of methods to allow the people a wider range of choices. Although the relative mix of practices of different methods will be determined on the basis of voluntary, yet it has now, been increasingly agreed that the Family welfare programme cannot afford to depend heavily on traditional methods which are difficult to monitor and whose demographic impact is hardly measurable. The Fourth Five Year Plan will thus rely on various modern methods as instrumental to fertility reduction. The following methods mix is considered to be reasonable and to be followed during the plan period.

Table-17.4 : Percentage of Users by Contraceptive Methods - Mix 1990-95

Method-mix	*1989-90	**1990-91	**1991-92	1992-93	1993-94	1994-95
Stegilization	29.0	24.3	22.8	22.6	21.8	20.8
IUD	6.2	6.0	5.8	7.5	8.2	8.5
Injectable	6.0	7.2	8.2	9.3	10.9	11.2
Oral Pill	34.2	44.8	47.7	46.5	44.8	46.2
Condom	6.8	9.9	9.8	9.3	10.9	11.2
Others	17.8	7.8	5.9	4.8	3.4	2.1
Total :	100.0	100.0	100.0	100.0	100.0	100.0

* Base year; ** Actual performance

17.26 It has been felt that with adequate counsellig, follow-up and management support, the scope of considerable expansion of IUD programme would be feasible. The satellite clinics near the door steps of the rural people with proper management will open the door for wider use of the contraceptive services. Again, with the recently introduced technology of non-scalpel vasectomy, considerable expansion of male sterilization is within realm of possibility. While proposing the above mentioned contraceptive-mix, the government is aware of the need for improvement in service delivery in meeting the unmet demand besides mobilizing for further demand creation measures.

Methodwise Yearly Total Users and New Acceptors

17.27 Projected as well as realistic year-wise target for total users and new acceptors for different methods among currently married women of 15-49 years prepared on the basis of the above method mix is shown in Table - 17.5.

Table-17.5 : Projected Annual Total Users and New Acceptors of Family Planning Methods Among Currently Married Women of 15-49 Years during 1990-95

(In Lac)

Method-Mix	1989-90	1990-91		**1991-92		1992-93		1993-94		1994-95	
	Total*	T	N	T	N	T	N	T	N	T	N
Sterilization	22.50	19.62	1.65	20.98	1.61	22.40	3.50	23.50	3.30	24.20	3.00
IUD	4.80	4.88	2.74	5.36	2.70	7.40	3.50	8.80	3.50	9.90	3.60
Injectable	4.70	5.86	5.86	7.52	7.52	9.20	9.20	11.70	11.70	13.00	13.00
Oral Pill	26.60	36.27	36.27	43.97	43.97	46.20	46.20	48.20	48.20	53.60	53.60
Comdom	5.30	8.01	8.01	8.96	8.96	9.20	9.20	11.70	11.70	13.00	13.00
Others	13.80	6.26	6.26	5.41	5.41	4.80	4.80	3.70	3.70	2.40	2.40
Total :	77.70	80.90	60.79	92.20	70.17	99.20	76.40	107.60	82.10	116.10	88.60

* Base year; ** Actual performance; T=Total users; N=New acceptors

Yearwise Target for CPR

17.28 Projected yearwise target for CPR for couples alongwith the total users, continuous and new acceptors of different methods of contraception during FFYP is indicated in Table-17.6.

Table-17.6 : Projected number of total users, Continuers users and new Acceptors of Family Planning Methods among the currently Married Women (1989-90 to 1994-95)

Period	CPR	Total Users (million)	Continuers (million)	New acceptors (million)
1989-90*	39.0	7.77	1.88	5.89
1990-91**	40.5	8.09	2.01	6.08
1991-92**	43.0	9.22	2.20	7.02
1992-93	45.6	9.92	2.28	7.64
1993-94	47.9	10.76	2.55	8.21
1994-95	50.0	11.61	2.75	8.86

* Base year; ** Figure is based on the data of the Mini Contraceptive Prevalence Survey, 1990.

Coverage Rate of New Acceptors

17.29 In order to facilitate proper supervision, follow-up and necessary evaluation of the performances and recruitment of new acceptors of F.P. methods assumed coverage rate of new acceptors among the eligible women of (15-49) years for FFYP has been calculated and is shown in Table-17.7.

Table-17.7 : Assumed Coverage Rate of New Acceptors among the Eligible Women,15-49 years (1989-90 to 1994-95)

Period	Sterillization	IUD	Injectable	Oral Pill	Condom	Others	Total %
1989-90 *	0.04	0.06	0.05	0.39	0.22	0.24	1.00
1990-91 **	0.03	0.05	0.09	0.60	0.13	0.10	1.00
1991-92 **	0.02	0.04	0.11	0.63	0.12	0.08	1.00
1992-93	0.05	0.05	0.12	0.60	0.12	0.06	1.00
1993-94	0.04	0.04	0.14	0.59	0.14	0.05	1.00
1994-95	0.03	0.04	0.15	0.60	0.15	0.03	1.00

* Base year; ** Actual performance

Contraceptive Need Projection

17.30 The annual requirement of contraceptives during Fourth Plan would be as follows :

Table-17.8 : Projected requirement of Oral Pill, Condom, Injectable and IUD, 1990-95.

(in million)

Methods	1990-91	1991-92	1992-93	1993-94	1994-95	Total
Oral Pill (In cycles)	54.40	65.96	69.30	72.30	80.40	342.36
Condom (pieces)	120.15	134.40	138.00	175.50	195.00	763.05
Injectable (doses)	2.93	3.76	4.60	5.85	6.50	23.64
IUD	0.28	0.28	0.35	0.35	0.36	1.62

Note : 1 CYP = 5 Doses for Injectables users. Normally four doses are sufficient. We have considered 5 doses including one dose for wastage, etc.

1 CYP = 15 cycles of Oral pills for Oral Pill users

1 CYP = 150 Condom for Condom users

1 IUD inserter for every 10 IUD acceptors/insertion

It may be noted that under condition of efficient use and strict monitoring of supplies at all level, requirement of contraceptives shown in Table 17.8 is considered optimal. However, procurement plan for the same is altogether a different exercise which shall have to be done, at least, bi-annually on the basis of contraceptive user/acceptor trend, supplies at stock and supplies in the pipeline.

Programme of FFYP

17.31 Family Welfare programme under the FFYP (1990-95) will include provision of family planning services, information, education and communication (IEC), maternal and child health services (MCH), development of physical infrastructure, manpower development, evaluation, research, monitoring and supervision and multisectoral programmes.

DEVELOPMENT OF PHYSICAL INFRASTRUCTURE

17.32 In order to ensure promotive, curative and outreach services in the rural areas, the GOB has been pursuing a policy of providing institutional support on a continued basis through the gradual establishment of Family Welfare Centres (FWC) in all the rural unions of Bangladesh. It is expected that by the end of TFYP period, 2389 FWCs, 203 RDs and 64 Union sub-centres would be constructed/renovated/upgraded. Following a realistic approach, during the FFYP the Govt. plans to construct 500 new FWCs, to reconstruct 965 Rural Dispensaries for conversion into FWCs and to up-grade 41 existing sub-standard sub-centres for covering all the rural unions by the end of the Plan period. It has been observed that frequent changes of office location results in administrative dislocation. Besides, office addresses remain relatively unknown to the public. These problems are impeding the effeciency of the programme management, consequently overall programme performance is affected. As such, it is desirable to construct MCH & FPs own buildings in Dhaka as well as for 64 District FP-MCH offices. As the goals and objectives of national F.P. programme is difficult to achieve without an adequate logistics system including proper and adequate storage facilities at the Thana level, proper storage facilities at Thana level have to be constructed. Thus it is envisaged to construct simple ware-houses at each of the functioning Thana Heath Complex of the country during the FFYP.

Family Planning Services

17.33 It will include contraceptive services and family planning related information, education and motivation.

Contraceptive Services

17.34 These will include oral pills, condoms, IUD, injectables, sterilization, menstrual regulation (M.R.), vaginal and traditional methods including breast feeding, withdrawal and safe period. Field and clinical workers of Family Planning and other Multisectoral agencies will continue to provide effective services to all eligible couples. FPMCH services will be delivered through different services outlets such as hospitals, FWCs, NGOs clinics in addition to domiciliary services through the field workers of Health & Family Planning Directorates.

17.35 The presently imbalanced worker-population ratio (1:5000 aprox.) will be improved. One practical approach to that would be to deploy volunteers/part-time workers in order to supplement the efforts of FWAs in the field. Among others, female VDPs (Village Defence Police), an organized and disciplined group, will be utilized for this purpose on payment of token honorarium or other incentives. This will mitigate the dysfunctional effect of the current visitation cycle of the FWAs (two or three months), by providing regular neighbourhood level source of supply and counselling to clients. Side by side, the potential of outreach workers of Health and various multi-sectoral agencies should be fully utilized in family planning service delivery.

17.36 Appropriate measures will be taken to achieve the contraceptive method-mix desired for the programme, with special attention to need of various kinds of clients, and management of side-effects. As it is difficult to monitor traditional methods, the service delivery will be based mainly on various modern methods, an instrumental to fertility reduction. In this context, it would be important to evolve institutional facilities to provide dependable MR services as a back-up for contraceptive failure of the clients. This would guard against current suffereing of many committed clients due to lack of quality services

Establishment of Contraceptive Munufacturing Plants for Local Production of Condom, Oral Pill, Injectables and IUD

17.37 The Third Five Year Plan (1985-90) envisaged for the establishment of contraceptive manufacturing plants. Following this guideline government has already allowed the private sector to go ahead with the establishment of a condom manufacturing plant in the country with a production capacity of 160 milion pieces of condoms annually.

17.38 There is a rising demand for condom and oral pills as well as IUD and injectables. The incrase in the actual number of eligible couples and the rising rate of prevalence of contraception necessitate timely flow of contraceptions (like condom, pill, IUD, injectables) in adequate quantity to the periphery. But total dependance on foreign procurement often creates a desperate situation in the supply line.

17.39 The country therefore, needs to establish another factory for condom production as the requirement for condom is likely to shoot up annually to 225 million pieces by 1995. Moreover, annual consumption of oral pill will rise from around 30 million cycles annually to about 45 million cycles of pill during next plan period and beyond. Similarly, use of injectables and IUD will go further up. While a feasibility study has been undertaken by UNFPA for local production of condom and pills, there may also be a feasibility for production of injectables and IUD with a view to making the country gradually self-reliant over a period of 10 years or so. The private sectors also needs to be encouraged in the local production of contraceptives.

Procurement of Adequate Supplies of Contraceptives for National Family Planning Programme

17.40 The programme has, unfortunately, experienced acute shortages in condom, oral pill and injectables for quite sometime (not less than a year) for a variety of reasons. Delayed shipment/long interval in shipping, inadequate fund commitment to meet the growing demand for contraceptives, among others, were responsible for creating a crisis. Until local contraceptive manufacturing plants go into production, the dependence on external procurement of contraceptives (condom, pill, IUD, injectables, etc.) in sufficient quantity will continue. On proper need assessment of contraceptives, timely procurement in adequate quantity will be arranged, otherwise all efforts to meet unmet demand and to create more demand for contraception will go in vain.

INFORMATION EDUCATION COMMUNICATION SUPPORT

I) Introduction of FP and MCH Curricula in Medical Colleges

17.41 The introduction of MCH-FP education in the curricula of medical colleges is of urgent necessity. Specific Course content in the areas of MCH-FP/population for student of medical science is required for

upgrading their knowledge and providing exposure so the medical graduates having knowledge of MCH-FP could serve the rural areas with proficiency.

II) Information Education and Communication (IEC) Programmes

17.42 The creation of demand for FP-MCH services with a view to reaching the demographic and MCH goals call for sustained IEC efforts. IEC programmes have to be reshaped and redesigned from time to time. IEC strategies would also need suitable changes periodical extensive use of mass media like TV and radio, use of Village bards training and orientation of religious leaders, elected representatives, journalists, and formal and informal leaders. Observance of national population day and award to ideal accepter couples and community leaders with outstanding contribution to FP-MCH programme would be taken up during the Fourth Plan period. An attempt will be taken to make a functional integration with the Health Education Bureau (HEB) of Health Directorate and the IEM Unit of F.P. Directorate under a unified structure to develop and disseminate health and FP messages according to the needs of specific motivational programmes of the sectors. A modality will be worked out to improve co-ordination between HEB/IEM and population planning cell in TV and Radio for proper use of inputs of HEB/IEM in developing messages for telecast and broadcast.

III) Population & Health Subjects in School Curricula

17.43 Health and demographic education is considered as a prerequisite for successful implementation of programmes in the Health and population sector. Population Education has already been included in the syllabus and curricula of primary and secondary schools. Health education is also provided through Health Education Bureau under the Directorate of Health Services. With a view to further strengthening the population and health education in the primary and secondary education a project may be taken up under the Fourth Plan for providing support to activities relating to modification of the existing curricula, suitable addition of new components, teachers orientation, supplies, publication and teaching new concepts after careful examination.

Maternal Child Health Programme

17.44 Strengthening of the MCH component of the family planning programme would be pivotal. Facilitating appropriate ante-natal care including safe delivery at home through TBA, reduction of high risk pregnancies and provision of TT to mothers strong feedback from EPI, ORS, vitamin-A distribution and other primary Health Care Services of the Directorate of Health Services and strengthening of such programmes as provision of safe drinking water, sanitary latrine, and parasite control will be given emphasis during the 4th plan period. The interventions which are considered as pre-conditions of low fertility norms will be taken up on urgent basis to enhance MCH care, and lower the prevailing morbidity and mortality levels.

17.45 It is further noted that for time to come, the institutional facilities for safe delivery will not be possible and TBA's will be the main service provider in their area. So it is imperative to organize a good training programme for all the traditional birth attendants so that they are in sufficient number to provide safe delivery to the pregnant mothers in time of need. Besides, they may also be looked upon as change agents for certain social customs having damaging effect on the mothers health (i.e nutrition, rest etc.). The present training programme of the TBA's needs further gearing up so that more "TBA's" are trained annually to cover up 68000 villages during the 4th five year plan.

IV) Support for MCH Supplies, MSR, DDS Kits etc.

17.46 For providing efficient MCH-FP services sufficient quantities of MCH supplies will have to be ensured. Uninterrupted supply of MCH items will ensure timely as well as better MCH services to clients asking for such services. Provision of MCH services contribute to the reduction of maternal and child morbidity, mortality, and ensure better health for mothers and children on the one hand, on the other, promote acceptance of planned-life through contraception.

V) New MCH Programme-Maternal Mortality Reduction

17.47 In Bangladesh, the levels of maternal mortality and morbidity are extremely high. Major causes of obstetric deaths are septic abortion, haemorrhage, eclampsia, obstructed labour and infection. Added to these general contributory factors, there are other factors such as poor services relating to antenatal care, poor obstetric techniques during child birth, and the lack of access to life saving procedures in emergencies during child births.

17.48 An assessment of existing health services for maternal health care has been made by the Directorate of Health Services to undertake a concrete plan for the maternal and child health services to reduce substantially the maternal and child mortality and morbidity in Bangladesh.

The study has come out with the following recommendations which will be taken up in the Plan period.

- Facilitate outreach services into the community.
- Services are to be made available.
- Clarify job description of all categories of staff in relation to maternal care.
- Availability of adequate physical facilities.
- Availability of adequate logistics and supplies.
- Strengthen MCH Co-ordination Committee at all levels.
- Promote female education and income generating programmes for women.

VI) Re-organizing Nutrition Programme

17.49 Malnutrition is one of the major causes of blindness, maternal and infant mortality, as well as for present poor health situation in the country. Much of the death and sickness amongst mothers and children could be averted by undertaking nutritional programmes along with other primary health care services. The programme may be designed to provide educational and motivational support to the existing MCH services with particular emphasis on nutritional aspect of mothers and children to reduce infant, child and maternal mortality and morbidity. Nutrition education may be provided through mass media and non-media approach. In addition, nutritional food supplement may be served to the mothers and children at the Family Welfare Centres.

17.50 The present nutrition programme being implemented is far from adequate. It is recognized that the problem of nutrition will have to be addressed in a macro frame so that interventions look specifically at the causes of malnutrition and seek remedy. For more immediate attention to the increasing proportion of first degree malnourished children and mothers an appropriate screening and treatment programme will be aimed for.

Manpower Development

17.51 In order to ensure successful delivery of integrated Health and Family Planning Services and for the achievement of qualitative and quantitative demographic targets there is absolute need for development of manpower potential. For this purpose all training institutes of family planning namely National Institutes of Population Research and Training (NIPORT), Family Welfare Visitors Training Institutes (FWVTIs) and Regional Training Centres (RTC), Medical Assistants Training Schools will be reorganized under the integrated Health and Family Planning Programme. Job specific and skill related training will be imparted under these Institutes. A manpower development policy will be developed for this specific to each of the Institutes. Due emphasis will be given on the maximum utilization of the training facilities to be imparted to mid-level managers, paramedics and field workers.

Mid-Level Managers

17.52 The efficiency of mid-level programme managers largely depends on their training, both basic and refresher. Imparting professional knowledge and skill, updating the same from time to time and creating team spirit for effective integration of Health and Family Planning activities with an attitude for supportive supervision of field worker will be given due weightage in designing the curriculam of programme managers. NIPORT will cater to the needs of programme managers trainging and retraining. The Institute will also exercise leadership in the areas of training needs, curriculum development, training of mid level personnel, proparation of appriopriate training methodology, aids and evaluation of the training programme. NIPORT will also provide technical backstoping and coordinate manpower development activities of NGOs. The Family Planning Services and Training Centre (FPSTC), and related institutions will provide training to NGO managers under the overall guidance of NIPORT.

Paramedics

17.53 In view of the posting of Medical graduates in the FWCs the Instutional training of Medical Assistants in MATs has been stopped. But since the functions of both MA and FWVs are clinical and institutional in nature, the existing training curriculum alongwith their job descriptions requires to be reviewed further by a special advisory committee to make it job oriented. The existing FWVTI's may continue to give both institutional and clinical counselling retraining FWV in the FFYP period. The committee will also determine the future needs of the Medical Assistants and explore the possibilities for proper utilization of existing physical facilties of MATs.

Training of Field Workers

17.54 The national health and family planning programme possesses a vast cadre of field workers. By 1990 the number of FPAs would stand at 4500, FWAs not less than 22,500 and HAs 20,000. The fresh

recruits would need basic training while others would need refresher training for updating their knowledge and upgrading their skill to deliver services to the people. The existing 20 Regional Training Centres will provide basic and job related refresher training to build up field worker's expertise in discharging their responsibilities. The training centres will also continue to impart regular team training of male and female field workers. In view of the increasing need for training of field workers, a special advisory committee will examine whether under utilized and unutilized physical facilities of MATs and FWVTIs can be utilized for above mentioned field workers.

Other community workers like volunteers VDPs, youth, religious leaders, village leaders, and members of mothers club and cooperatives will be oriented towards support of family planning services.

Involvement of private sector and NGO's in population activities

17.55 Fourth Five Year Plan(1990-95) will lay emphasis on the involvement of private sector and NGO's in population activities in order to make population and health programmes more dynamic and to generate additional demand for MCH-FP services. The Government follows a clear policy for the promotion of NGOs/Private Sector and looks at it as a strong partner in progress. Currently the NGOs are mostly doing CBD type of work which seems rather a duplication of what is being done by the Government workers. But the NGO's because of their flexible role in innovations can bring more dynamic social change. As such in the FFYP the NGOs/Private Sectors will be encouraged to specialize in some specific areas of service delivery such as promotion of injectables, intensification of health education activities, delayed marriage movement, education on breast-feeding, nutrition and training/orientation of religious leaders or some other innovative works including income-generating activities for women. They will also be encouraged to evolve cost-effective, and nationally replicable models of MCH-FP service delivery as well as demand generation. Following the Private participation in the delivery of FP MCH services, the Govt. has already allowed the Private Sector for establishment of Condom Manufacturing Plants. This policy of complementarity with Private Sector will be further intensified.

Evaluation and Research

17.56 Successful implementation of the programme depends upon continuous feed-back on how the programme is performing. Simultaneously efforts to fill-up gaps in knowledge of population, family planning and related field will help policy makers and programme planners to make useful change in policy strategy and programme. As such proper emphasis will continue to be given in FFYP period for undertaking operation and action oriented research. For this purpose built- in provision for action oriented and evaluative research will be kept in the respective project. An appropriate machanism will be evolved for coordination and dissemination of action oriented research findings among programme managers to provide feedback in implementation and management of the programme at the field level.

17.57 Major areas of evaluation and research will include bio-medical, social and demographic aspect of family planning reproductive and contraceptive research management and training aspects of family planning.

17.58 Different institutions that will participate in the above mentioned research and evaluation will be as follows :

I) NIPORT

17.59 Bangladesh Fertility Survey (BFS) has been recently conducted under the auspices of the NIPORT. BFS need to be conducted to assess the fertility trends including Family Planning programme impact at a regular interval. NIPORT will also undertake contraceptive prevalence survey (CPS) every alternate year. The current research seems to be more of evaluative rather than action oriented. Therefore, future research will be conducted more on the action and operational aspects aiming at the improvement of the programme management and implementation. Research efforts will also be directed to the areas like use effectiveness and cost effectiveness of different FP methods and interventions. Also for improvement of training programmes, NIPORT will undertake training related research. Bio-medical research will continue to be undertaken by Bangladesh Fertility Research Programme (BFRP) and Bangladesh Medical Research Council (BMRC).

II) Management Information System (MIS)

17.60 MIS has been producing a number of programme related reports. These are being extenively used for programme monitoring and evaluations. The existing MIS systems will be strengthened by introducing Field Workers Record Keeping System (FWRS) so as to facilitate assessment of programme performance at the field level. MIS will take necessary measures for substitution of present system of CYP estimation by CPR

estimation method. Efforts will be made to strengthen district offices in the existing data collection, methodology, analysis and storage of data and timely dissemination through a process of computerization.

iii) Statistics Division

17.61 The Statistics Division in the Ministry of Planning will conduct population census in 1991, and other related demographic studies, to provide reliable demographic indicators.

iv) PDEU

17.62 Population Development and Evaluation Unit (PDEU) of the IMED (Implementation, Monitoring and Evaluation Division) will continue to play its role in evaluative research. It will undertake evaluative studies and provide feedback to policy planners and programme managers. In order to analyze family planning performances including family planning cost analysis it will continue to carry out related F.P. impact study.

17.63 In addition to the above, the universities and their concerned Departments and Institutes like IPGMR, Institute of Social Welfare (ISW), Institute of Statistical Research and Training (ISRT) and International Centre for Diarrheal Diseases Research in Bangladesh (ICDDR'B) and Population Study Centre in Bangladesh, Institute of Development Studies (BIDS), will continue to undertake population related research activities.

Monitoring and Supervision

17.64 In order to gear up and steer programme efforts into a social movement, a National Council for Population Control headed by the Prime Minister with cross sectional representation including MPAs has been formed. Programme monitoring activities will be strengthend to monitor and review the implementation status of the decisions taken at the highest policy levels. To further boost up supervision and monitoring efforts, Members of the Parliament, elected representatives of local bodies and senior government officials will continue to be in-charge of programme implementation in their respective areas. In future, public representatives will be given increasing responsibilities to this end.

Local Level Programme Planning and Strategy Formulation

17.65 Local level programme planning and strategy formulation, adequate autonomy and authority of the local leaders for successful implementation of Family Welfare Programmes appropriate to local needs. In order to enable the local leadership to discharge their responsibilities in respect of programme planning, implementation, supervision and monitoring, a number of steps will be taken during the Fourth Plan Period. An orientation workshop of the concerned thana level officials using population data wil be undertaken to highlight the existing population problems, future prospects and strategy to resolve it Ministry of Health and Family Welfare will develop necessary guidelines for participation of Thana and Union Parishad members in the FP-MCH programme implementation and supervision.

17.66 The Field Workers will regularly enlist all eligible couples, their family planning practices, and other profiles including vital statistics. The information derived from the field will establish a local data base for target setting, strategy formulation, client segmentation for specific IEC and service delivery assessment and evaluation of the programme efforts.

17.67 The family planning coordination committees at District, Thana, Union and Village Level will be further strengthened on the line of the functions of National Council for Population Control to deliberate on local population problems, review programme efforts and provide implementation guidelines.

Multisectoral/Intersectoral Population Programme Support

17.68 The existing family Planning in MCH based programme with community involvement having multisectoral approach. Since population problem is considered as the number one national problem in the country, it requires multi-dimensional approach and total mobilization to make the family planning programme a success. As such in all the development plans since 1973 most of the development Ministries such as Agriculture, Information, Rural Development and Cooperatives, Social Welfare, Education etc. were involved to combat population problems by drawing up respective special projects incorporating population factors. But the incorporation of population factors in the different development projects of various Ministries has not been found fully fruitful and effective. In the Fourth Five Year plan the Government therefore plans to intensify further the current multisectoral approach and undertake intersectoral population projects through identification of potential roles in different Ministries/Divisions in family planning activities. One of the potential area, interalia will be the utilization of VDP members taking one VDP from each village as change agent and FP service delivery agent, another area for example will be to engage primary school teachers for dissemination of

IEM through income generating activities, still another area may be to employ one co-operator from each village as the depot holder for contraceptives. Several projects in education, agriculture, labour, industry, cooperatives and local government will be formulated to provide effective coverage.

17.69 Different Ministries and their agencies will be encouraged to undertake appropriate population control programmes within the framework of their normal activities. An appropriate mechanism will be developed to ensure that intersectoral population project within various development Ministries are identified and required funds for the same are available. All educational /training institutions will be encouraged to incorporate population related contents into their training module.

Women's Programmes

17.70 Women's development has an important bearing on population growth. Rapid increase in population has accentuated the task of improving women's status in order to help in reducing their fertility. Providing women with income earning opportunities is an effective tool for reduction of fertility. In addition, increase of women's income will enhance their households health and nutritional well being.

17.71 Women's participation in economically gainful work both in the home and outside alongwith education will have a greater effect in reducing fertility. During the plan period efforts will be made to expand productive resources and services specially at grassroot level to encourage income earning facilities for women. This would be in the form of their access to training, credit and marketing of produced goods as a mechanism to improve women's control over their income and development. Three women's development projects in the Ministries of Social Welfare, Women's Affairs and Rural Development and Cooperatives will be continued during the plan period. These projects have been developed on the basis of the premise that raising the status of women through income generating activities will serve as an intervening variable to modify/regulate the fertility behaviour of the women. The specific objectives of these programmes include, organising rural women, especially those in the reproductive ages as cohesive social groups, providing skill training to raise their level of income and make them more self-reliant, and arousing their interest in, an adoption of small family norm, and using them as catalysts for FP motivation of other women in the country.

17.72 Women's education has a stronger and more negative effect on fertility than does men's education (as found from various studies). This is more significant in higher education. Moreover the opportunity cost of children is higher to women than men and this increases with the increase in womens education.

17.73 Forty eight percent of women with more than primary education used contraception as opposed to 35.0 percent of those with some primary education and 27.0 percent of those with none. Thus population programme will be framed for creating educational and employment facilities for women. This could be done by way of introducing stipend programme for female students at secondary level and above. In this way marriage could be delayed as daughters would be self reliant instead of being treated as burdens in the family.

17.74 Another issue pertains to female health, the average weight of a Bangladeshi women is less than that of most developing countries and they have lower life expectancy. Complications during pregnancy and childbirth are the leading cause of morbidity for women, maternal mortality which is 70 times higher in Bangladesh than in developed countries accounts for nearly 27 percent of all female deaths. Even though there are indications of decrease of the maternal mortality rate from the 1950s to early 1960s there has been little decrease from late 1960s. Another aspect is that female children are stunted and female child deaths between 1 to 4 years is higher than males.

17.75 Improvement of MCH care with greater emphasis on TBA training will be ensured. Greater involvement of women in Vulnerable Group Development programme need to be ensured. Appointment of more women doctors at thana level alongwith other facilities would be made available in order to increase access of women to MCH facilities.

Socio-economic Measures

17.76 In support of population control and family planning certain socio-economic measures are proposed below :

17.77 Improved status of family planning workers and family planning acceptors are important for a widespread expansion of the programme. The family planning acceptors, particularly those who have received permanent method or practised family planning continually for, at least, five years should be given preferential treatment in all government facilities, e.g., allotment of accommodation, medical care, education facilities etc.

Family planning acceptors and satisfied user would be encouraged to form Mother's Club and Father's Clubs to promote responsible parenthood, to act as interest-group for family planning acceptors, and to organise sports, cultural and income generating activities. Couples of ideal families who will accept small family norm, will be given receptions to demonstrate social desirability of small family. Government will continue to observe National population day on January 2 every year. A system of community awards that has been instituted will be continued to generate peoples interest in family planning. Similarly field workers who will make outstanding achievement in recruitment of family planning acceptors will be awarded.

17.78 A family planning programme through insurance for the acceptors of permanent methods with age and parity limitation will be introduced on experimental basis.

17.79 (a) **Vital Statistics :**

Certain amendments will be made in the vital registration and recruitment of birth certificate or equivalent evidence for ascertaining age for marriage and for other public purposes, such as admission in school, appointment in government services, issuing of passport, etc. Death certificates would be required for settling legal matters, particularly inheritence.

(b) **Incentives and Disincentives :**

i) **Income Tax** : The Income Tax benefits up to 2 children will be provided.

ii) **Allotment of Government Housing /Land etc.:** No consideration should be given to large family, rather preference be given to small family in allotment of government housing, khas land, government plot, cluster villages and ration cards.

iii) **Charges for Maternity Services :** After the second child, fees may be charged for the third and subsequent deliveries in the Government Hospitals and Maternity Centres.

iv) **Social Security Measures :** In case of death of children of permanent method acceptors social security measures in the form of financial assistance may be introduced. The government will also bear all the educational expenses upto graduation level for the couples with one female child.

v) **Appointment, Overseas Posting, Foreign Training, etc. in Govt. and Non-Govt. Services :** Preference may be given to govt./semi-govt./non-govt. servants with smaller family members.

Programme Planning and Management Support

17.80 The national family planning MCH programme necessitates planning exercises in a continuous process for periodical adjustment of plans to accommodate changing needs. With new strategies developed and with changes in policy directions during the Plan period short-term measurs are required to be adopted. In order to ensure incorporation of appropriate population variables into the sectoral plans of other development Ministries such as Education, Rural Development & Co-operatives, Social Welfare, Women's Affairs, Labour and Agriculture. Population Planning Wing of Planning Commission will undertake policy related policy and periodically review the progress achieved and recommend further necessary measures in this connection.

17.81 Programme management is another important area thal calls for urgent attention. Management is an area that is found to be weak and needs strengthening. Management development support, services, studies on reorganization issues and structural changes would be necessary. Supervision and management support teams would be critically important to ensure administrative efficiency. Support for the development of a financial system that suits the needs of a dynamic progamme would be considered. Delay in release of fund, delay in sanctioning specific items of expenditure, cumbersome accounting and reporting procedure, inefficient monitoring led to a weak financial management system. The weaknesses have to be shed off and a system upon appropriate study, has to be developed to suit the current and emerging needs of the programme.

17.82 A brief description of programme-wise cost implication is given in the table below :

Table-17.9 : Cost Implications for Family Welfare Sector Activities Fourth Five Year Plan

(In crore Taka)

	Programme areas/Activities	Amount (Cost calculated as per 1989-90 prices)
1.	Service Delivery Support	763.00
2.	Physical Infrastracture Development including equipment, transport and maintenance of building	200.00
3.	Information Education and Communication (IEC)	30.00
4.	Manpower Development (Training)	40.00
5.	MCH Programme (including MSR and Nutrition)	180.00
6.	Clinical Services (Sterilization, IUD Norplant, MR etc.)	110.00
7.	Multi-sectoral/Inter sectoral programme including Womens programme	75.00
8.	Involvement of private sectors and NGO's in population activities	20.00
9.	Contraceptive (IUD, Condom, Oral, pill, injectables etc.)	170.00
10.	Contraceptive Manufacturing plant (Condom, Oral pill, Injectables manufacturing plant)	10.00
	Total :	**1598.00**

CHAPTER-XVIII

SOCIAL WELFARE, WOMEN DEVELOPMENT, YOUTH DEVELOPMENT, SPORTS & CULTURE AND MASS MEDIA

1. SOCIAL WELFARE

Introduction

18.1.1 Balanced socio-economic development of all segments of the population, including distressed and disadvantaged groups, is a pre-condition for overall development of the country. Social welfare programmes are undertaken to assist the socially and conomically disadvantaged people, orphans, helpless children, old and disadbled persons to enhance their potentials, skill and capabilities in order to attain dignity and self-reliance. The ultimate objective of the integrated and comprehensive approach of social welfare programmes is to encourage effective participation of these groups in the national developrnent process both as contributors and beneficiaries and ensure their access to and control over development inputs, rather than being passive recepients of relief and charity.

18.1.2 Since poverty alleviation is the major theme of the Fourth Five Year Plan, major thrust would be given on socio-economic development of the under-previleged groups. Success of development efforts in the area would be crucially dependent on the adoption of integrated and comprehensive approach taking the family as the basic unit for social services programmes with emphasis on family and group development rather than individual development.

Review of Past Development

18.1.3 A total of Taka 75.00 crore was allocated for social welfare programme in the Third Five Year Plan. The expenditure during the period was Tk. 63.00 crore representing 84 percent of the allocation. A number of programmes were undertaken during the past plan period for the benefit of the most disadvantaged groups. The programmes undertaken during the Third Plan period emphasised provision of institutional services for the rehabilitation of the orphans and physically handicapped in addition to motivate, organize and involve the disadvantaged, especially the poorest men and women, in activities aiming at development of their socio-economic potentials and learning new skills.

18.1.4 Under the institutional services physical facilities for 17 Sarkari Shishu Sadans were created and conversion of these Shishu Sadans into Shishu Paribars were implemented. Expansion of services for care and rehabilitation of juvenile delinquents were initiated and the work of one out of the three proposed centres was started.

18.1.5 Facilities for skill training, provision for integrated education and meaningful rehabilitation of physically handicapped such as mute, blind and mentally retarded children were also expanded. The institutional services provided under this category have benefitted a total of 18,000 persons in rehabilitation and some 12,000 orphans, handicapped and shelterless in continued maintenance during the period.

18.1.6 Community development programmes under social services consist of activities both in urban and rural areas. Programmes for skill training, income earning and other skill and family development activities in 34 cities/towns were undertaken during the Third Plan period. In the rural areas, 187 Thanas were covered where the landless and disabled were organized (groups of children, both women and men). In order to assist the poor and distressed men and women, skill training, development of small enterprises, production programmes with interest free loans through revolving fund and other individual family and community development activities were undertaken with the direct participation of the organized groups. Population activities were promoted through multi-sectoral projects implemented within the frame-work of sector development programmes. It is estimated that such community development programmes have benefitted a cumulative total of 1.25 million persons during the plan period.

Objectives of the Fourth Five Year Plan

18.1.7 The major objectives of the social welfare programmes during the Fourth Five Year Plan would be to :

(i) Create opportunities for gainful employment of the distressed groups of people, both men and women, and ensure their participation in productive and development activities.

(ii) Promote rehabilitation of the physically disabled elderly-persons through community based training and counselling centres and family-based programmes.

(iii) Improve functional, managerial, organizational capabilities of the poorest group of men and women through formation of groups and participation in rural development programmes in respective areas.

(iv) Provide care, familial affection, educational facilities through institutions and family based programmes to orphans, destitutes and shelterless children to make them self-reliant and worthy citizens.

v) Create institutional facilities with a view to provide treatment, care and rehabilitation to juvenile delinquents and drug addicts.

vi) Provide special integrated education to mentally retarded children, hearing and speech impaired and the blinds and promote guidance, counselling and after care services to needy hospital patients and released prisoner through community organization and Non-Government Organization;

vii) Provide limited financial help, counselling and guidance to registered voluntry organization through subvention programmes.

viii) Motivate people to share responsibilities of the orphans, beggar and other socially disabled persons.

Strategies of the Fourth Five Year Plan

18.1.8 The strategies of the Fourth Five Year Plan would aim to provide basic services to the target groups through appropriate institutional mechanism, social welfare services would be provided not in the form of relief or charity but as incentives, since the primary objectives of the programmes would be to make them self-reliant. Social welfare programmes, in general, would be treated as human resource development activities rather than relief.

18.1.9 An intensive programme will be instituted to bring the unreached segments of people both men and women into the fold of all community based programmes. In this case, the major focus would be on provision and strengthening of support facilities so that the disadvantaged groups can organize themselves and make necessary arrangements for self-help. In this regard, the main thrust would be directed towards motivational activities.

18.1.10 Linkages will be established with other Ministries/Department/Agencies for promotion of skill development, employment generation and marketing of products made by the participants of different programmes.

18.1.11 (a) Community and family based programmes will be given greater emphasis in relation to care and rehabilitation of physically disabled, the aged, orphans and other disadvantaged groups. As a substitute to institutional care, family sponsored rehabilitation of the clients would be encouraged to organize the target groups and undertake poverty alleviation/community development programme as a partner to the government.

(b) Measures would be taken to provide treatment, training and rehabilitation of the victims of drugs and abuses both in urban and rural areas.

PROGRAMMES OF THE FOURTH FIVE YEAR PLAN

Urban and Rural Community Development Programme

18.1.12 The urban component will be expanded to cover all the remaining district towns and the rural component will be expanded to additional 81 Thanas. In urban areas, programmes will be organized to promote skill development, income generating activities, sanitation, health care etc. for the slum dwellers and other depressed urban groups through their own participation. In the rural areas, the organisation of target groups such as children, youth women and male adult will be formed in project villages to promote income generating small enterprises, skill development, primary health care, supply of safe drinking water, literacy and other production activities.

Development Services for the Physically and Mentally Disabled

18.1.13 The services in the existing institutions for the physically and mentally disabled will be improved in the line of National Complex established at Mirpur, Dhaka. The programme envisages skill training, vocational training and rehabilitation. Community based rehabilitation programme will be started in the rural social services for the physically disabled.

Development Services for Children

18.1.14 Care, protection, shelter and education will be provided to orphan, destitute and shelterless children Family based services for destitute children will be initiated and physical facilities will be constructed for the absolutely shelterless. Twenty-six existing Sarkari Shishu Sadan will be converted into Shishu Paribars to provide better services to the orphans. Different cultural literary, recreational amusement programme will be undertaken for mental and physical development of children.

Welfare Services for Juvenile Delinquents and Youth Offenders

18.1.15 Under the programme, an institute will be established to take custody of young offender and juveniles where they will be given treatment, training and rehabilitation. It has been decided to establish new centres at three divisions.

Welfare Services for the Aged and Infirm

18.1.16 The aged persons comprise an important and increasing segment of our population. During the Fourth Five Year Plan, arrangements will be made to provide medico-social services, cultural and recreational facilities to the aged persons. Under this programmes three centres are proposed to be set up.

Rehabilitation Programme for the Addicts

18.1.17 The problem of drug addiction has been assuming a threatening dimention in the country in recent years. The Health Ministry is taking up primary responsibility for treatment of these addicts. Department of Social Services will undertake programme for identification, counselling and rehabilitation of these addicts.

Social Welfare Services for the Beggars

18.1.18 Under the programme, efforts will be made to motivate people against unorganized alms and charity and to encourage people to take up responsibility of the beggars. Existing Vagrants Homes will be improved and able-bodied beggars will be given useful training according to their apptitude and suitability.

Social Welfare Services by the Non-Government Organization

18.1.19 Social Services is a gigantic task. It is not possible on the part of the Government alone to take up this responsibility. In this field Non-Government Organizations (NGOs) play a vital role. In order to encourage their activities, necessary guidance and supervision will be provided and financial help to a limited number of agencies will also be extended through subvention programme.

Medical Social Work

18.1.20 Medical social work is an integral part of Health and Social Welfare Services. Medical Social Units will therefore be established in all the district hospitals which are still uncovered.

Some of the major targets set for the Fourth Five Year Plan are given in table 18.1.1 .

Table 18.1.1 Major Benchmark and Targets for the Fourth Five Year Plan

Sl. No.	Name of the Programme	Benchmark 1989-90	Achievement 1990-93	Target (1994-95) (Additional
1.	Rural and Urban Community Development	227	15	80
2.	Welfare Services for the Children	17	12	20
3.	Welfare Services for the Vagrants and Destitutes	7	-	3
4.	Programme for Correctional Services	1	1	2
5.	Welfare Services for the Physically handicapped and Mentally tetarded persons	62	-	2
6.	Welfare Services for the aged	1	-	2
7.	Programme for Medical Social Work	41	44	44
8.	Social Services by Voluntry Agency	5	3	7

Policy Planning during the Fourth Five Year Plan

18.1.21 In order to achieve the objectives of the sub-sector during the Fourth Five Year Plan, adequate policies would be implemented with primary emphasis on providing social and economic security to the target groups. To this end, it would be essential not only to ensure their participation in production activities, but more importantly to integrate them with the overall development process. In this respect, co-ordination is important for monitoring and proper implementation of the projects. So close co-ordination would be ensured among Thana, District and national levels.

18.1.22 The successful implementation of the projects depends on taking correct and timely decision at the field level. In order to ensure this, field level officers would be given training on project planning, management, monitoring and leadership. The existing planning section of the Social Services Department would be strengthened and adequately equipped to perform the responsibilities.

18.1.23 Special care will be taken to ensure greater participation of women in all development process.

Financial Outlay during the Fourth Five Year Plan

18.1.24 In the public sector, an allocation of Tk. 110.00 crore has been provided for implementation of the programme of the Social Welfare sub-sector during the Plan period. The breakup of the total allocations on spilled-over projects and new programmes is shown in Table 18.1.2

Table 18.1.2 Programme-Wise Allocations In the Public Sector (at 1989/90 prices)

(Taka in core)

No. No.	Programme	Revised Allocation
1	2	3
A.	Spill-over Projects	36.00
B.	New Programmes	
1.	Urban and Rural Community Programme	30.00
2.	Welfare Services for Physically and Mentally Handicapped, Disabled and Retarded	5.00
3.	Development Services for Children	25.00
4.	Welfare Services for Juvenile Delinquents and Youth Offenders	3.00
5.	Welfare Services for Aged and Infirm	0.50
6.	Rehabilitation Programme for the Drug Addicts	0.50
7.	Social Welfare Services for the Beggars, Vagrants and Destitutes	3.00
8.	Social Welfare Services for NGOs	6.00
9.	Medical Social Works	1.00
	Total :	110.00

2. WOMEN'S DEVELOPMENT

Introduction

18.2.1 An overwhelming majority of women in Bangladesh are illiterate, malnourished, poor and deprived. By tradition and cultural norms, women enjoy much lower status compared to men. The discrimination in the treatment of male and female starts at birth and continues through the different phases of life. Gender inequality is established through socio-economic inequality and distribution of authority and assets between sexes as determined by the family organization and stratification of society. Even within the same socio-economic class, women are worse-off than men in nutrition, health, education and social status and the gap is widening over time. Moreover, being in a traditional segregated society, purdah or seclusion often keeps them unreached and denied of access to many opportunities. The burden of endemic poverty, widespread malnutrition, illiteracy and deprivation of socio-economic rights are falling heavily on the shoulders of women.

18.2.2 Women have a shorter life expectancy than men, their nutritional intake has decreased and as a consequence incidence of chronic, long-term malnutrition is higher for women. Compared to 30 percent male literacy rate, the female has only 16 percent literacy. Though the Bangladesh Constitution embodies the fundament rights of women and forbids any form of discrimination on the basis of sex, womens legal position has remained weaker compared to men specially areas governed by the Sharia laws. The situation is exacerbated by women's lack of access to legal assistance although several laws have been amended in recent times to provide women with further protection and improved legal status.

18.2.3 But the traditional roles of women in Bangladesh are changing fast due to increasing landlessness, poverty and male out-migration. Women are entering in the remunerative employment market as sole or joint income earner of the households. Women are now working in diversified field covering all sectors of the economy. In spite of traditional gender based division of labour, the involvement of women in post harvest agriculture, livestock, poultry, fisheries, forestry and off-farm informal sector is substantial. In urban sectors, women's activities are concentrated in low-paid informal sectoral activities and in recently emerged labour-intensive industries.

18.2.4 However, as in other developing countries, women's contribution to the economy have largely remained unrecognized and unaccounted for. Consequently their access to essential services necessary to overcome gender specific constraints to remunerative employment and better quality of life have been denied. Since an overwhelming large proportion of women live below poverty line, they are being deprived of health and educational opportunities on the one hand and their potentials remained unutilized for national development purposes on the other hand.

Review of past performances

18.2.5 The First Five Year Plan (1973-78) did not visualize the role of women in economic development separately. In the First Five Year Plan there was no Women's Affairs sub-sector or a separate budget allocation. Under the Social Welfare Sector, a programme entitled "Rehabilitation of War Affected Destitute Women and Children" was undertaken. In the later years of the planned development, the importance of women in development was realized. A special Women's Affairs Division in President's Secretariate was created in 1976 which started a few women specific projects, such as National Women's Academy and Headquarter, Women's Development Centre, Bangladesh Shishu Academy and working Women's Hostel in Dhaka.

18.2.6 In the Two Year Plan (1978-80), Women's Development for the first time got special priority. TYP (Two year plan) allocated Tk. 10.56 crore for women's development programmes. The main emphasis of the TYP was on the fields of vocational training, agricultural based rural development programmes, establishment of cottage industries, production and sales centre and creation of facilities for working women and their children. During the TYP period, projects relating to National Women's Academy and Headquarter, Women's Development Centres, Bangladesh Shishu Academy, Career Women's Hostel and Cottage Industries Centres were continued as spill over project of First Five Year Plan and/or taken up as new projects. The expenditure during the TYP period was Tk. 4.62 crore.

18.2.7 In the Second Five Year Plan(1980-85) Tk. 31.00 crore was allocated for Women's Development programmes. SFYP (Second Five Year Plan) emphasised on training and creation of employment opportunities for women. Accordingly, a number of programmes were outlined for the sector which included crash training programme for primary teachers, career women's hostels in four Divisional Headquarters, National Women's Training Academy at Dhaka and BJMS offices at National, Divisional, District and Thana levels and the Bangladesh Shishu Academy. The Plan recommended establishment of 204 skill training and

production centres with an ultimate objective of creating diversified avenues for income generation of women. In the SFYP period Tk. 19.26 crore was spent for the above programme.

18.2.8 The Third Five Year (1985-90) made more elaborate programmes on women's development and emphasised the need for women's participation in the mainstream socio-economic activities. In the TFYP, a sum of Tk.50.00 crore was allocated for Women's affairs sub-sectoral programmes. Three projects viz. "Development of Day Care Services", "NGO's Community Based Services for Poor Women and Children-Phase-II" and Socio-Economic Development Project for Women-Phase-II undertaken during the TFYP are already completed. The Phase-III of "NGO Community Based Services for Poor Women and Children" and "Socio-economic Development Project for Women" are under Implementation. Appreciating the role of women are playing in agriculture, TFYP included two agriculture related projects viz. "Agricultural Training Centre for Women" and "Agriculture Base Programme for Rural Women". Objectives of these two projects are to train rural poor women in agriculture and agriculture related activities. Considering the increased problems of prostitution, beggary and other anti-social activities a project undertaken. This project includes, inter alia, one Legal Aid Centre, one Employment Information Centre and one Sales-cum-display Centre in Dhaka . For raising awareness about the need for women's development, a project viz. "Advocacy Awareness and Strengthening of Information Base for Women in Development (WID) is under implementation.

18.2.9 During the TFYP, under the Women Affairs sub-sector around 60,000 women were trained in different vocational skill and other human resource development activities, around 2 lakh women were given non-formal education and around 20,000 women were provided with credit facilities for self-employment. Some special training facilities for women were also organized under different sectoral programmes. In the plan period, 5 hostels for career women, 35 day care centres for working mother's children, one legal aid cell, one employment information centre were established under the above mentioned projects. Tk. 40.00 crore was spent in the TFYP period. Some of the projects undertaken in the TFYP will be spilled over to the Fourth Five Year Plan

Objectives of Fourth Five Year Plan

18.2.10 In the previous Five Year Plans, programmes/projects for women development were taken up in an isolated manner. As a result those programmes/projects could not bring about the desired result .The Fourth Five Year Plan, would therefore, integrate the women in development into the macro framework for multi-sectoral thrust to bring women into the mainstream of economic development.The following objectives of FFYP are envisaged:

i) to increase women's participation as beneficiary and agent particularly in education, health and family planning, agriculture, industries, trade, services, environment and natural resources sectors;

ii) to increase women's share in the public sector employment from 6 percent to 15 percent;

iii) to increase female literacy rate from 15 percent to 30 percent ;

iv) to improve the nutritional intake of female population and to increase the access of medical services for both mothers and non-mothers;

v) to alleviate poverty among the women and young girls living below poverty line;

vi) to expand vocational skill development facilities for women specially in non-traditional areas;

vii) to expand credit facilities for women to enable them to take up self-employment both in rural and urban areas;

viii) to expand accommodation facilities for job seeking/working women and day care centre/services for the children of working mothers;

ix) to deal with special concerns of women relating to destitution, violence, and legal aid requirement and take measures to redress;

x) to take measures for over all development of children with special emphasis on girl child; and

xi) to create a gender-responsive development awareness in general and positive self-image of women in particular.

Strategies of the Fourth Five Year Plan

18.2.11 Women can not be integrated into development process unless women as a class are developed. This therefore, does not refer to more formulating and implementing women's programmes and projects in selected problems areas like population control, income generation etc. Rather, this would mean to develop women as a complete personality to give them opportunities to realize their full potentials and establish themselves in their legitimate positions in the society through education, training, employment, political participation etc.

18.2.12 In Bangladesh, children under 15 years of age constitutes about 47 and 17 percent of the total population respectively whereas the infant mortality rate is 125 per thousand live births which in among the highest in the world. Deaths of babies under one months old account for between one-half and two-thirds of the total deaths. For the children in the age group 1-5 years, death rate is 24 per thousand. Such indicators of health and nutrition reflects the vulnerability and disadvantage situation of mothers and children which needs to be addressed urgently child survival and development issues, therefore, would form a major component of all WID programmes.

18.2.13 Improving maternal nutrition and food intake during pregnancy and taking adequate health measures to reduce child mortality rate would be taken up by the Ministry of Health and Family Welfare and other relevant ministries and agencies of the government. However, the overall child development issue would be adequately emphasised within the activities of Ministry of Women and Children Affairs and Ministry of Social Welfare. Most women programme will have components of child nutrition, day care facilities for the children of working women, preparatory non-formal education and child survival awareness programme. Child care programme being multi-sectoral issue, close coordination and monitoring would be required between the Ministry of Health and Family Welfare and the Ministry of Women and Children Affairs and other related agencies.

18.2.14 To achieve the above objectives during the FFYP, the general strategy would be to undertake sectoral/multi-sectoral programmes within the macro-framework of the Plan. Special thrust would be given in related sectors such as agriculture, industries and trade, services, environment and natural resources, education, health and family planning. The broad objectives of these sectors would be framed keeping in mind the necessity of extensive participation of women in these sectors. Sectoral Programmes in the concern areas such as destitution, violence and legal aid requirement would be designed and implemented under the Women's Development sector.

18.2.15 Because of multi-sectoral nature of women's programme, coordination among the concerned ministries and agencies would be extremely important. As a strategy of inter-ministerial coordination of WID aiming at the promotion of cross-sectoral aspect and ensuring the active participation of different ministries/implementing agencies, a 'National Council for Women's Development (NCWD) 'would be formed. This council will be assisted by two committees (i) The Executive Committee headed by Minister for Planning (ii) The Standing Committee headed by Minister for Women and Children Affairs. The council will be headed by Honourable Prime Minister.

18.2.16 Besides the above general strategies, the following specific strategies would be adopted during the FFYP :

(i) Special women's related programmes/projects would be designed and implemented under the 'Women's Development sector.

(ii) Programmes/projects for poverty alleviation among women would get higher priority. Linkages would be established between the existing vulnerable Group Development (VGD) programme with women's training, credit and employment generation activities.

(iii) Training-cum-production pregrammes would be expanded for imparting skill training to women. More Vocational Training Institute (VTI) would be established for the women.

(iv) A substantial share of rural credit will be earmarked for women to encourage women in self-employment. A Women's Bank would be set up to promote female entrepreneurship;

(v) Low cost community based job seeking/working hostel and day care centre for children of working women will be expanded to enchance women's participation in organized labour force; and

(vi) The role of Non-Government Organizations (NGOs) in the field of socio-economic development of women will be promoted to supplement overall government activities in the literacy campaign and poverty alleviation programme.

Programmes and Targets of FFYP

18.2.17 Following women's development programmes will be undertaken under the Women's Development sector during FFYP :

(i) **Skill Development Training Programme** : Skill development training facilities will be expanded to give wider coverage to the unemployed women. The major areas of training will be on poultry, dairy, livestock, food processing, plumbing, masonry, electronics and other selected non-traditional areas. Under this programme 1,00,000 women will be trained in different trade during FFYP period.

(ii) **Women's Credit Programme** : A broad based women's credit progrmme will be undertaken to provide trained women credit facilities for self-employment. Under this programme 50,000 women will be provided credit facilities.

(iii) **Poverty Alleviation Programme for Women** : Regional poverty alleviation programmes for women will be undertaken. Under these programmes destitute women will be organized, trained and credit facilities will be provided for collective or individual income generating activities. Provision of food for work will be incorporated in poverty striken areas. 1,00,000 poor women will be provided training and credit facilities under this programme.

(iv) Programme to expand the accommodation facilities for job seeking and working women will continue in FFYP.

(v) **Day-Care Services for children of Working Mother** : Existing programme of Day-Care services for children of working mothers will be expanded in FFYP.

(vi) **Special Women's Concern Programmes** : To deal with special concerns of women relating to destitution, violence and legal aid requirement, special programmes/projects would be designed and implemented under the 'Women's Development sector.

Financial Outlay during the Fourth Five Year Plan

18.2.18 Programme, specific to particular sectors, would be implemented under those sectors and would be funded from the concerned sectoral allocations. For Ministry of Women's Affairs, programme wise allocation are given in Table 18.2.1.

Table 18.2. Programme-wise Allocation in the Public Sector (at 1989-90 prices)

(Tk. in crore)

Sl. No.	Programmes	Allocation
A.	Spill over Projects from TFYP	2.00
B.	New Programmes	
1.	Skill Development Training Programmes	5.00
2.	Women's Credit Programmes	22.00
3.	Poverty Alleviation Programmes for women	6.00
4.	Working women's hostel expansion	2.00
5.	Day-Care Services Expansion Programme	2.00
6.	Special Women's concern Programmes	6.00
	Total :	45.00

3. YOUTH DEVELOPMENT

Introduction

18.3.1 Youths are the most potential and viable human resources of the country. According to the 1981 Census Report, youth consititutes more than 30 percent of total population of Bangladesh with an increasing trend in share of this group in total population. About 85 percent of the youth live in rural areas, overwhelming majority of them neither attend any academic institution nor have much opportunity to learn skills suitable for productive activities. Most of them are handicapped with severe poverty, limited education, training and employment and thus remain outside the main stream of development. Consequently they often develop regressive social attitude and values and suffer from deep frustration causing threat to harmonious social order. On the other hand, the vast potential, vigour and vitality of the youth can be turned into a great productive force if organized and mobilised properly. In recognition of the fact that disciplined, properly organized and trained youth can take part and make significant contributions to the development process, the government has placed due importance to youth development programmes in order to facilitate their participation in organized activities leading to their physical, mental, social and economic development. The Ministry of Youth Development was created in December 1978 and subsequently the Department of Youth Development was established in 1981 to provide unified direction and coordination to youth development programmes.

Review of Past Development

18.3.2 Independent youth development programmes under the Ministry of Youth Development started first with the Two Year Plan (1978-80). During the Two-Year Plan an amount of Tk. 9.50 crore was provided for Youth Development Programmes, out of which Tk. 7.01 crore was utilized and 36,200 unemployed were trained in different fields.

18.3.3 In the Second Five Year Plan (1980-85) an amount of Tk. 26.00 crore was allocated for Youth Development Programmes, out of which Tk. 19.60 crore was utilised. Approximately 42,000 unemployed youth received training in different fields during this period and 2,999 trained youths started self-employment projects.

18.3.4 In the Third Five Year Plan (1985-90), an amount of Tk. 17.00 crore was allocated for youth development activities. A new project entitled "Thana Resource Development and Employment Project" (THARDEP) aiming poverty alleviation among the youths through self-employment was included since July 1988 outside the TFYP projects portfolio. So far, 32 Thanas have come under this project in two phases. An additional amount of Tk. 76.00 crore was allocated for implementation of this project. During the TFYP period, following projects were taken up for implementation :

i) Skill Development Training for Unemployed Youth;
ii) Support for self-employment Activities for the Trained youth;
iii) Youth Motivation, Publication and Award, and
iv) Thana Resource Development and Employment Project (THARDEP) Phase-I & II

18.3.5 The physical target fixed for the TFYP was to train 43,935 unemployed youths in the different trades, out of which a total of 42,937 unemployed youths have been trained upto June, 1990. The target under the self-employment project was set at 18,830 and 17,739 youth have taken up self-employment programmes till June, 1990. Under the 'Youth Motivation, Publication and Award project', targets were set to award 1800 youths, provide grants to 1000 Youths and publication of 20 books. Up to June 1990, 1000 were awarded, grants were provided to 705 youths and 8 motivational books were published. Thana Resources Development and Employment Project (THARDEP) has set up its beneficiary target at 12,750. Up to June 1990 an amount of Tk. 19.94 crore has been utilized for the above programmes activities. Publication rate of women in the youth development programmes is around 25 percent.

Objectives of the Fourth Five Year Plan

18.3.6 The major objectives of the Youth sub-sector development programmes during the Fourth Five Year Plan would be to organize and mobilize the Youth properly in order to enable them to participate effectively in national development. Some of the specific objectives of youth development programmes during the period would be as follows :

i) to increase the participatin of women upto 50 percent in the youth development programmes;

(ii) to alleviate poverty among the youth through increased self-employment programmes;

iii) to equip the youths with working skill and suitable training in technical, vocational and professional fields, and

iv) to organize youth groups and motivate them to assist community development through Voluntary Youth Organizations (VYOs).

Major Strategies of the Fourth Five Year Plan

18.3.7 Since education and training is one of the basic needs for developing human capabilities, emphasis would be given on proper education and training in different areas within the broad framework of human resource development during the plan period. In order to realize the objectives, effective measures would be taken to ensure cooperation and coordination among various ministries and NGOs involvement would be increased. More organized training of youth for employment would be under taken along with training programmes organized in cooperation with the private sector in order to meet the effective needs of the private sector. Training would also be imparted through educational institutions for transforming students as social workers and catalytic agents for desired changes. Within the above broad framework, the following strategies would be emphasized :

i) programmes of group training for the unemployed youths in different trades and follow-up credit facilities for income generating activities.

ii) 50 percent women trainees in all training programmes to ensure adequate participation of women;

iii) emphasis on modern and non-traditional areas of training with emphasis on optimal use of existing training facilities and creation of selected new facilities for enhancing training infrastructure;

iv) training and credit programmes to motivate youths to take-up self-employment both in rural and urban areas; and

v) motivation of youths in community development.

Programmes and Targets of the Fourth Five Year Plan

18.3.8 The major programmes and targets for youth development during the Plan period are as follows :-

(i) **Poverty alleviation Programme**

To alleviate poverty among the youth, programmes/projects would be taken up to establish an institutional framework for helping rural youths within the project area, to provide opportunities of self-employment, specially in the non-farm sector, inculcating in them saving habits and improve the credit worthiness of the poor youths and enhance their ability to utilize credit and other services for increased income generation. During the plan period, 50 more Thana would be brought under the poverty alleviation programme viz. "Thana Resource Development and Employment project" which would provide credit facilities for self-employment to 200,000 rural youths.

ii) **Skill Development Training**

Skill development training programme for the youths would be taken up to make them suitable for self-employment. During the Plan period, 80,000 youths are expected to be trained in different fields.

iii) **Self-employment Programme**

With a view to making training more effective and fruitful support programmes to tranined youths with credit and other inputs to facilitate adoption of self-employment projects will continue to receive priority. Target of self-employment projects to be undertaken by the trained youths under this programme would be 30,000.

iv) **Community Development Programmes**

During the period, youths would be encouraged to form Voluntary Youth Organizations (VYOs). VYOs would be assisted in community development through programmes based Grants/Aid. National, Zila, Thana-wise awards for better performance in VYOs would be introduced. Measures

would be taken to use mass media and booklets would be published for motivating youths in community development.

Financial Outlay during the Fourth Five Year Plan

18.3.9 An amount of Tk. 80.00 crore in the public sector would be provided for Youth Development during the Fourth Five Year Plan period. The major programme-wise allocation is presented in Table-18.3.1.

Table 18.3.1 Programme-wise Allocation in the Public Sector (at 1989/90 prices)

(In crore Taka)

Sl. No.	Programme	Allocation
A.	Spill Over Projects	5.00
B.	New Programmes	75.00
1.	Poverty alleviation programme (Thana Resource Development and Employment Project)	45.00
2.	Skill Development Training Programme	15.00
3.	Self-employment Promotion for the Trained Youth	10.00
4.	Community Development Programme through Voluntary Youth Organization	5.00
	Total :	80.00

4. SPORTS AND CULTURE

SPORTS

Introduction

18.4.1 Sports are considered as one of the major elements for development of discipline, physical and mental health and moral character of a nation. It helps to build up citizens with sense of patriotism enriched with national awareness and self-confidence. Lack of these qualities result in failure in achieving the desired goals and objectives both in individual and national spheres.

Review of Past Performance

18.4.2 The First Five Year Plan laid the foundation for development of essential elements of physical education. During the Second and Third Five Year Plans measures were adopted for qualitative improvement and some quantitative expansion in this field.

18.4.3 Most of the projects taken up for implementation during the Third Plan period were for infrastructural development like the construction of stadium, gymnasium, swimming pool etc. Besides, some training programmes for players and coaches were organized. Sports gears were distributed to youth and sports clubs. National teams in different sports were sent abroad and foreign teams were received in the country.

Institutional Facilities

18.4.4 Bangladesh Krira Shikha Protisthan (BKSP) has started its krira college and completed creation of further infrastructural facilities like college, hostels, gymnasium, two play grounds, synthetic hockey field, swimming pool etc. It also organised some training programmes for the national players. Other two important projects for further development of physical education colleges at Dhaka and Rajshahi could not be taken up due to shortage of fund.

Development of Stadia, Gymnasia etc.

18.4.5 Out of 10 district gymnasia, 8 have been completed and other two are in progress. Construction of National Stadium-2, partial development of Rajshahi and Khulna Divisional stadia and 29 district stadia have been completed. Expansion work of the National Stadium was completed and 7 sports clubs were shifted from the national stadium area. Construction of Chittagong Divisional staddium was in progress. Construction of National Indoor stadium and an International Standard Swimming Pool has been taken up.

Development of Sports Facilities for Women

18.4.6 Construction of a women sports complex at Rajshahi was taken up for which land has been procured. The remaining works could not be taken up due to shortage of fund.

Training and Other Facilities

18.4.7 Nearly 900 coaches were given special training in different games and sports and training programmes for the players of various games were carried out both at national and district levels. Sports gears were distributed to 3550 youth and sports clubs and sports competitions for the children of 12-16 years age group from the Thana to the national level were organized thrice during the Plan period.

Objectives of the Fourth Five Year Plan

18.4.8 The objective of development of sports during the Fourth Five Year Plan would emphasize generation of adequate interests among men and women for participation in games and sports and channelizing the entire youth force to foster all round human resource development.

18.4.9 The following major objectives would be pursued during the Fourth Five Year Plan :

(i) To generate adequate interest among masses, specially in rural areas, for participation in indigenous less costly games and sports;

(ii) To ensure wider participation of women in sports activities;

(iii) To develop a proper network of sports organisation by consolidating and strengthening the existing organizations;

(iv) To provide emphasis on sports activities rather than building sports infrastructures;

(v) To improve the standard of sports by providing adequate coaching and training facilities;

(vi) To strengthen physical education facilities in the educational institutions;

(vii) To encourage production of adequate sports equipments in the country.

Strategies of the Fourth Five Year Plan

18.4.10 For attainment of the objectives, the following strategies would be emphasized during the Plan period:

(i) development of selected indigenous less costly games and sports for wider mass participation, specially in rural areas;

(ii) measures to encourage and ensure female participation at all levels of games and sports;

(iii) consolidation and better utilization of the existing physical facilities and minimum expansion of new facilities to meet specific demands;

(iv) provision of about one hundred standard play grounds in each district /Thana for round the year practice in different games and sports.

(v) strengthening of existing College of Physical Education and establishment of additional colleges to provide physical education as well as physical education teachers in all secondary schools including girls schools.

(vi) more women sports complexes would be constructed to ensure their participation.

(vii) regular training and workshop will be organised at national, divisional and district levels and arrangement will be made for publication of books, journals etc. on national and international sports and games;

(viii) holding of national, zonal and regional competitions by different sports federations regularly with encouragement to private organizations to sponsor such competitions;

(ix) identification and intensive training programmes for sports talents, both male and female, from the younger groups alongwith such training programmes for coaches; sports organisers, national players etc. to enhance their skills. If necessary, the services of foreign coaches would be utilized for the purpose.

(x) distribution of sports gears to facilitate sports activities in the country specially in the rural areas and adequate involvement of local authorities to supplement the national efforts.

Major Programme of the Fourth Five Year Plan

18.4.11 The major programmes envisaged for the development of sports during the Fourth Five Year Plan period are outlined below :

Institutional facilities

18.4.12 Bangladesh Krira Shikha Protishtan has started its Krira College without a college building. A programme will be taken up to construct the college building, hostel and other ancilliary facilities. It will conduct well co-ordinated training programmes for national players, coaches etc. The existing Colleges of Physical Education at Dhaka and Rajshahi will be strengthened and two more colleges of physical education will be established at Chittagong and Khulna with requisite facilities for female students.

Development of Stadia, play grounds etc.

18.4.13 Implementation of projects viz National Indoor Stadium, Chittagong Divisional Stadium and International Standard Swimming Pool in Dhaka undertaken during the Third Plan period will be completed. Measures will be taken to provide separate play-grounds for men and women at some selected districts and

thana.Besides, further development of district stadia, construction of tenis complex at Chittagong and setting up of synthetic turfs at hockey/athletic stadium will also be taken up.

Development of Sports Facilities for Women

18.4.14 Construction of the women's sports complex at Rajshahi taken up during the Third Five Year Plan would be completed and two more women's sports complex would be set up. Special play grounds for women at the thana level would be made available and physical education at all girls schools would be introduced.

Training and Other Facilities

18.4.15 Intensive training programmes in different games and sports would be conducted for players and coaches, men and women at national and regional levels. Emphasis will be given in atheletics, swimming, footbail, kabadi, chess and vollyball. To facilitate sports activities, sports gears will be distributed free of cost to various schools and young clubs of the country, specially in the rural areas.

Financial Out-lay during the Fourth Five Year Plan

18.4.16 During the Fourth Five Year Plan period an allocation of Tk. 76.00 crore has been made in the public sector for the development of sports and games. The major programme-wise allocation is provided in Table 18.4.1.

Table 18.4.1 Programme-wise Allocation during the Fourth Five Year Plan (At 1989-90 Prices)

(In Crore Taka)

	Programme	Allocation
1.	Institutional Facilities	25.00
2.	Development of play ground, stadium, Swimming pool etc.	40.00
3.	Development of special sports facilities for women	5.00
4.	Training and other facilities	6.00
	Total :	76.00

CULTURE

Introduction

18.4.17 A nation is better understood through its culture which reflects the hopes, aspirations and values of the society. Cultural development is one of the indicators of overall development of a nation. Language, literature, arts and craft, music etc. are the ingredients of culture. Development of these ingredients in the right direction helps the nation in achieving desired progress in social, moral and economic life. Conscious efforts are needed for the development of national and regional culture in line with hopes and aspiration of the common mass.

Review of past Performance

18.4.18 During the Third Five Year Plan, some infrastructural facilities were provided for qualititive improvement as well as quantitative expansion of cultural activities. Emphasis was given on (i) Research on Bengali Language and Literature and Publication of Text Books in Bengali for higher education, (ii) book promotional activities (iii) construction and development of libraries at different levels (iv) promotion of national, regional and tribal cultures (v) construction/renovation of museums and (vi) conservation of archaeological monuments. The physical achievements made during the period are summerized below :

Language and Literature

18.4.19 The Bangla Academy published more than 700 research, reference and text books for higher education on different subjects during the Third Five Year Plan period. The library building of the Bangla Academy was completed and equipments like electric typewriter, word processors, etc. were procured. National Book Centre took various programmes on book exhibitions throughout the country and organized 13 training programmes and workshops on book production, book marketing and library administration. Besides, formation of Book-Lovers' Society, development of private libraries with book and financial assistance were carried out.

Library Development

18.4.20 Construction work of Chittagong Divisional Public Library was completed. The auditorium of Central Public Library was equipped with light and sound system. A public library namely 'Mahanagar Pathagar' was set up at Dhaka. Construction/Development of 9 district public libraries in new districts viz. Gazipur, Shariatpur, Sherpur, Lakshipur, Lalmonirhat, Panchagarh, Narshingdi, Mymensingh and Rangpur has been taken in hand.

Fine and Performing Arts

18.4.21 During the Third Plan period, no significant progress could be made in the field of fine and performing arts. The Shilpakala Academy could not start construction of its academy building due to delay in finalization of design. Only some repair and renovating work of its existing auditorium was done. Construction of an auditorium at Tribal Cultural Academy, Rangamati and Office-cum-cultural centre at Cox's Bazar were in progress.

Museums

18.4.22 Construction of the Folk Art and Crafts, Museum at Sonargaon alongwith other facilities such as office building auditorium, staff quarter, tourist spot etc. were in progress. Repair and renovation works of the historic Ahsan Manzil was taken up with a view to convert it into a museum. Besides, work of the General M.A.G. Osmani Museum at Sylhet and conversion of the Chittagong Ethnological Museum into a general museum were in progress. Moreover, renovation of the Lalbag Fort was completed. Work on setting up of a divisional museum at Khulna, preservation and conservation of ancient monuments of Paharpur and Begarhat are also progressing. Excavation and renovation of the ancient monuments at Mahastan (Bogra), structural repair and restoration of embelished Kantanagar temple at Dinajpur and Rabindra Nath Tagore's residence at Shahjadpur are going on.

Financial

18.4.23 Against the Third Plan allocation of Tk. 51.00 crore, Tk. 24.80 crore was spent for implementation of the above programme upto June 1989. An amount of Tk. 5.12 crore has been allocated during 1989-90. So the total expenditure during the Third Plan period is expected to be Tk. 29.92 crore which is 58.67 percent of the plan allocation.

Objectives of the Fourth Five Year Plan

18.4.24 The objective of cultural development during the Fourth Five Year Plan period would be to promote various cultural activities in order to find out the development context in our culture and use them with greater effectiveness to promote national development.

The Major objectives of the Fourth Plan would be as follows :

(i) to promote and foster cultural activities throughout the country reflecting the hopes and aspirations of men, women and young generation of the nation;

(ii) to develop Bangla language and literature and to create facilities to develop Bangla as medium of instruction specially at technical and higher levels;

(iii) to help and promote production and publication of quality books and make them available to the common masses at reasonable prices.

(iv) to develop and expand library services system up to Thana level to provide maximum facilities to the people;

(v) to develop institutional facilities for fine and performing arts including drama and theatre and to explore private and voluntary involement in this area;

(vi) to preserve national history, culture and heritage;

(vii) to consolidate the existing facilities with emphasis on programmes and performances rather than expanding physical facilities;

(viii) to carryout research on the lives and works of great men and women of our nation and ;

(ix) to promote and develop the cultural activities of the tribal people of Bangladesh.

Strategies of the Fourth Five Year Plan

18.4.25 For the attainment of the above objectives, the following strategies will be emphasized :

(i) Physical facilites of the Bangla Academy will be expanded and adequate programmes for the development of Bengla language and literature will be drawn up. Production of text books for higher and technical education will get priority.

(ii) Modernization of Bangla printing and publication technology through computers and other electronic devices.

(iii) The National Book Centre will be involved with the development of book production and marketing. Measures will also be taken to develop reading habits in the society with active involvements of community clubs and local libraries.

(iv) The National Library and the Central Public Library will be developed;

(v) The Shilpakala Academy will be developed for effective functioning of fine and performing arts.

(vi) National, regional and tribal culture will be developed through various programmes.

(vii) Historical mounments will be identified and preserved properly.

(viii) Participation of private organization especially youth and women's organizations will be encouraged in the development of cultural activities of the nation.

(x) Research programmes on the lives and works of great people both men and women will be undertaken.

Programmes of the Fourth Five Year Plan

18.4.26 The major programmes envisaged during the Fourth Five Year Plan period are as follows :

Language and Literature

18.4.27 The Bangla Academy will carry out works on research and publication of books, journals and periodicals in different fields of language and literature including technical and modern science subjects. It will also continue preparation production and distribution of text and reference books in Bangla for technical and higher education. The Bangla Academy Press will be modernized, expanded and technically equipped to cater to the growing needs. The National Book Centre will arrange training and workshop for the overall development of book industry and book marketing. The existing mobile book exhibition programme will be expanded and measures will be taken for the growth of reading habits of the common people. Necessary Physical facilities will be provided for the purpose.

Library and Archives

18.4.28 Central Public Library will be further developed. The on going programmes for construction and development of government public libraries in 9 districts will be completed. Non-government public libraries at district and thana level will be developed by providing books, furniture, equipment and training to the librarians and other personnel. The incomplete works of the National Library will be completed and the construction of the National Archives building will be taken up.

Fine Arts and Performing Arts

18.4.29 The Bangladesh Shilpakala Academy at Dhaka will be developed to serve the purpose of a cultural complex. Training programmes on fine and performing arts will be taken up by the Shilpakala Academy.

18.4.30 A modern Theature Hall at Dhaka will be constructed. Suitable programmes for the development of tribal culture will also be taken up. The Nazrul Institute will be developed and research on the life and works of the national poet will be carried out. Research on the lives and works of other great men and women are also expected to be carried out.

Archaeological sites, Museums and others

18.4.31 Bangladesh has inherited a rich archaeological heritage, preservation of archaeological monuments would be an important target of cultural sub-sector. Appropriate programmes would be taken up for preservation of the existing archaeological sites and to explore and discover unknown cultural remains so as to make the people aware of their own national history and culture.

18.4.32 A survey on archaeological sites and monuments was done in eight districts during the last Plan Period. Duirng the FFYP survey will be conducted in few more selected districts. Excavation, conservation and preservation of historic sites and monuments will continue. The work on conservation and preservation of the monuments of Paharpur and Bagerhat will also continue. Osmani Museum at Sylhet will be developed further and a museum of natural history will be constructed at Chittagong. Steps will be taken to preserve documents on the War of Liberation properly and further necessary research on it will be carried out.

Financial Out-lay during the Fourth Five Year Plan

18.4.33 The programme-wise allocation of the proposed financial outlay of Tk. 70.00 crore during the Fourth Five Year Plan in the public sector are summarised in Table 18.4.2.

Table 18.4.2 Programme wise Allocation during the Fourth Five Year Plan (At 1989-90 Prices)

(In Crore Taka)

	Programme	Allocation
1.	Language and Literature	15.00
2.	Library and Archives	15.00
3.	Fine and Performing Arts (including Tribal Culture)	30.00
4.	Archaeological sites Museums and others	10.00
	Total :	70.00

5. MASS MEDIA

Introduction

18.5.1 Radio, television, film, press etc. have a very effective role in development of the country. Bangladesh is a predominantly an agricultural country where nearly 85 percent of the population live in rural area. To ensure the participation of all people both men and women in the development process, they must be reached effectively through the mass media. In a developing country like Bangladesh, the mass media has a critical role to inform, educate and motivate the people towards national goals and objectives especially in family planning, adult education, health care, nutrition, religious and cultural values. It can also play a vital role to motivate and influence the people towards nation building activities by mobilising mass support for development oriented programme aimed at self-reliance and making the people conscious about their duties and responsibilities towards the country.

18.5.2 Bangladesh is confronted with manfifold problems such as over-population, unemployment, poverty, illiteracy. The mass media can play key role in making the people aware of the problems and disseminate knowledge for taking the needed measures on the one hand and serve as the much needed source of recreation on the other hand.

18.5.3 It needs no emphasis that training of manpower in modern technology and development in the fields of electronics, broadcasting and film-making as an important component of the mass media is essential factor for development. Mass media also has greater role to play in setting up relation between the people and the government.

Review of Past Development

18.5.4 A total of Tk. 50.00 crore was allocated in the Third Five Year Plan of which an amount of Tk. 34.24 crore was spent representing 68 percent of allocation during the plan period.

Radio

18.5.5 During the Third Five Year Plan, a project viz. "Establishment of 3 Low Power Transmitter" was undertaken to establish 3 Low Power Radio Stations at Comilla, Rangamati and Thakurgaon. All the 3 stations were completed and started their operation. The completion of the projects ensured availability of strong and good quality signals over an area of 3600 sq. miles. The project "Establishment of 100 K.W. Transmitter in the Northern Zone, Bogra" has also been commissioned. With the commissioning of the project, it has ensured provision of radio signals of good quality in an area of 20,600 sq. miles. Another project viz. "100 K.W. Transmitter at Chittagong" has already been implemented to provide strong radio signals in and around Chittagong Division.

Television

18.5.6 During Third Five Year Plan the projet entitled "Further Development of BTV including construction of OB/ENG Garrage-cum-Workshop" is completed. The completion of the project will make the existing studio fully operational and extension of good quality programmes and new production facilities. The project "Procurement of 2 ENG Units for strengthening of Mass Media", is also completed. This project will provide speedy and proper coverage of the development activities inside and outside the country.

Other Programmes

18.5.7 Phase II of the project "The history of Bangladesh War of Independence" has been completed. Under this project, a concise volume of the history of War of Independence in Bengla, summarising the 15 volumes published in phase-I of the project, and a photo album have been published.

Objectives of the Fourth Five Year Plan

18.5.8 The objectives of the Mass Media sector in the Fourth Five Year Plan are as follows :

i) to create facilities to cover the entire population and area of the country under Radio and TV network.

ii) to make the people aware of the national problems such as poverty, population explosion, illiteracy, unemployment, health care etc. in order to encourage them to participate in the development process.

iii) to provide timely signal to the people against natural disasters so that people can take necessary precautionary measures.

iv) to motivate people to raise their social, cultural and religious values and to be gender responsive with regard to social and development issues and

v) to provide training to radio and television engineers, artists and other to develop their professional effeciency and functional capability.

Strategies of the Fourth Five Year Plan

18.5.9 The following major strategies will be emphasised during the Fourth Five Year Plan :

i) The Services of Radio and TV will be made accessible and popular to people by broadcasting good quality programmes.

ii) Field publicity, disseminating knowledge about new skills and better mode of production aimed at self-reliance and improved quality of life will be strengthened.

iii) Emphasis will be laid to reflect our own cultural and religious values through radio and TV programmes.

iv) Telecast/Broadcast of rural life oriented programmes will be given due emphasis and priority.

(v) Programme related to attitudinal change of women will be given weightage.

PROGRAMME OF FOURTH FIVE YEAR PLAN

Television

18.5.10 During the Fourth Five Year Plan, new facilities will be created to bring the entire country under TV coverage. With this end in view, more TV Relay Rebroadcasting stations and regional studios covering the entire country will be established. The additional new facilities will increase capacity to produce good quality programmes and to cover new areas. The old worn-out and obsolate equipments of TV and Radio would be replaced for ensuring good quality broadcasting.

Radio

18.5.11 During the Fourth Five Year Plan, 100 percent population and area of the country will be brought under radio coverage. To achieve the above objective, additional facilities will be created. A self-contained 10 K.W. Radio Station at Cox's Bazar will be established to ensure strong signals locally and over a wide area around the station to make the people aware of the national development process. To ensure good quality broadcasting, a BMRE project is under implementation which will continue during the Fourth Five Year Plan.

Other Programmes

18.5.12 Adequate training facilities for the Radio and TV personnel and personnel engaged in other communication agencies will be provided. Besides, development activities in the Thana through exhibition of decumentary films will be taken up to encourage people to participate in the development programmes.

18.5.13 Major targets for the Fourth Five Year Plan are shown in Table 18.5.1.

Table 18.5.1 Major Targets of the Fourth Five Year Plan

Sl. No.	Name of the programme	Benchmark 1989-90	Proposed target 1994-95
1.	Bangladesh Television Coverage (percent)		
	a) Area	70%	100%
	b) Population	80%	100%
2.	Radio Coverage (percent)		
	a) Population	90%	100%
	b) Area	80%	100%
3.	National Institute of Mass Communication (No. of Training Courses)		
	a) Course	161	100
	b) Trainees	2044	2000

Financial Outlay during the Fourth Five Year Plan

18.5.14 An allocation of Tk. 123.00 crore at 1989-90 price has been provided for the development of mass media in the public sector during the Fourth Five Year Plan. Programme-wise allocation in the public sector is given in Table 18.5.2.

Table 18.5.2 Programme-wise Allocation during the Fourth Five Year Plan, 1990-95 (at 1989-90 prices)

(In Crore Tk.)

	Name of the programme	Allocation
A.	Spill over projects from TFYP	22.0
B.	New Programmes :	
1.	Programme for Radio	25.0
2.	Programme for Bangladesh Television	70.0
3.	Other Programme	6.0
	Total :	123.0

CHAPTER - XIX

SCIENTIFIC AND TECHNOLOGICAL RESEARCH

19.1 The Development of science and technology is crucial for accelerating the pace of economic advancement. The phenomenal growth of industrial economies has been possible on account of continuous technological research and innovations and their application. These have rather been largely carried out by private industrial enterprises within industries and through contract-research guided by the competitive market.

19.2 The need for a faster technogical development is being increasingly felt by a developing country like Bangladesh. The pressing need for a faster economic growth, increased factor productivity and above all, exploration of new production possibilities urge upon the necessity for technological development, and for a country like Bangladesh where the public sector plays a dominent role in economic development and where the private investment is low, the technology development has suffered from several limitations such as scarcity of resources, lack of skill and capability. The S&T research is mainly carried out in universities and in institutions financed under the public sector, often in quite isolation from the practical needs of the country.

19.3 Development plans of Bangladesh have emphasised on S&T research to develop technologies through adaptation of imported technology and as well as development of indigenous technologies. As the country is heavily dependent upon imported technologies, proper planning is required for its effective transfer through acquisition, assimilation and adaptation of such technologies. The technology transfer is thus a process involving man, machine and organisation. Transfers of imported technology require that local experts should not only learn to operate machineries, but they should also be involved in drawing, designing, fabrication, installation, operation and maintenance of such machineries. Unless this occurs the technology transfer would not complete in its cycle. The development of indigenous technologies has to be planned and directed strictly to need of different sectors and entail the process from the laboratory experimentation to commercialisation.

REVIEW OF THE PAST PERFORMANCE

19.4 Earlier plans have laid down policies and stratagies for technological development in different sectors. The problems and weaknesses in technology development have mostly been identified as organisational weaknesses, unplanned and uncoordinated R&D work, absence of R&D in private enterpriser, lack of comprehensiveness in S&T policies and other policy suport.

19.5 The TFYP recommended formulation of national S&T policies with goals and priorities of S&T development. It viewed S&T development to be relatively a long run process, within which the short-term strategies were to be directed towards meeting immediate need of the economy such as production and employment. The plan, therefore, emphasied S&T research strictly on assessment of needs in different sectors and prioritisation of the same in terms of resource and institutional constraints. The plan also recommended necessary infrastructural and institutional development, for S&T along with necessary policy supports for human resource development, import substitution and protection of local products and innovations, standardization of imports, price supports etc. The entire S&T organisational structure was recommended to be reviewed and rationalised to develop an effective institutional mechanism for coordinated R&D planning and dissemination.

19.6 Towards such development, a National Science and Technology Policy (NSTP) has been formulated and adopted in February, 1986. The NSTP laid down the directions towards S&T activities and research, institution and manpower development, dissemination of documentation facilities. The NCST, reconstituted in January, 1987, determines S&T policies, reviews the activities of different institutions, provides directions towards S&T research and activities.

19.7 A Consultative Committee on the Transfer of Technology headed by the Minister for Education and S&T, has been created to formulate a work plan for assessment of technological needs (both indigenous and imported), preparation of mid-term technology plans and schedules and adoption of legal & financial measures for technological development. The assessment of technological needs and capabilities are to be carried out by instituting technical committees in Ministries.

19.8 The most important weakness in technology planning is that it mainly emphasises laboratory research and virtually ends with it as a result of which neither imported technologies could be adapted nor indigenous technologies be commercialised. The other two impediments are i) financial and ii) institutional. Most of the resources of R&D organisations are spent on salaries and administration. However, in order to protect R&D, steps are now being taken to allocate resources separately under two heads one for R&D and the other for salaries and other overheads. Further, in order to work out the need for increased R&D allocations overtime, an interministerial committee under the S&T Division has been constituted.

19.9 A survey of existing R&D organisations and their manpower conducted in 1987 shows somewhat widely dispersed R&D activities under different Ministries with 43 organisations under 16 ministries. In addition, there are academic R&D, institutions like Universities. The required institutional reorganisation or restructuring as was suggested in TFYP has not been carried out. The R&D planning and coordination itself has remained weak and that of adaptation and dissemination have continued to be two major problematic areas.

TFYP PROGRAMMES AND ALLOCATION UNDER THE STR SECTOR

19.10 The S&T research and development cut across almost all the sectors of the economy. Accordingly, individual sectors like agriculture, irrigation, industries etc. have their own S&TR programmes and financial allocations under respective sectors in the plan. Apart from this, the STR sector include S&T programmes of a few R&D organisations and agencies, like BAEC, BCSIR, BSTI, SPARRSO, BANSDOC, NMST.

19.11 The TFYP earmarked a sum of Tk. 60.00 crore for projects of the above organisations. In all, 17 projects were included in the plan of which 7 were spilled-overs from SFYP with a carry-over cost of Tk.28.66 crore. The financial allocation and expenditure in SFYP, FFYP are shown in Table 19.1

Table-19.1 Financial Allocation and Expenditure (at Respective Base Year Prices) the STR Sector.

(In crore Taka)

Plan	Plan outlay (Public Sector)	Allocation	% allocation	Utilization
SFYP	16060.00	129.00	0.80	110.00
TFYP	25000.00	60.00	0.24	31.31

19.12 The allocation for TFYP was less than that of the SFYP because most of the institutional and infrastructural development of the agencies were carried out during the SFYP as in the case of SPARRSO, BCSIR, BAEC. The estimated utilization of the TFYP sectoral outlay is about Tk.31.31 crore. The main reasons for this shortfall was lack of resources for financing the projects, specially, foreign resources. No project aid could be lined up for some projects of BAEC, BSTI and S&T Division.

AGENCYWISE PROGRAMMES/PROJECTS

Bangladesh Atomic Energy Commission (BAEC)

19.13 The TFYP included 6 projects for the BAEC, of which two were spilled-over from the SFYP. One was the establishmont of an Atomic Energy Research Institute (AERI) at an estimated cost of about Tk. 54.06 crore. The other was Exploration of Uranium and Thorium in the Chittagong and the Sylhet region. The project, AERI was completed in June, 1987 and BAEC alongwith establishing research facilities in AERI carried out research activities in different fields in the Institute such as food radiation and preservation, isotope production, physical and material sciences. The BAEC established Nuclear Medicine Centres at different places like Dhaka, Chittagong, Sylhet, Dinajpur and Rajshahi in Medical Hospital prior to TFYP. During TFYP, the existing NMCs at Dhaka, Rajshahi and Chittagong were taken up for modernisation at an estimated cost of Tk.2.00 crore.

B C S I R

19.14 The Institutional facilities of BCSIR were largely created during FFYP and SFYP. These related to strengthening of Chittagong laboratory, Rajshahi laboratory, and development of laboratories of the Dhaka Centre. It developed its various Divisions/Centres namely Food Science Division, Ceramic Division, Pilot Plant and process Development Centre etc. The Third Plan emphasised R&D activities of BCSIR. The R&D activities on solar and fuel energy, chemical food herbal medicine, etc. were carried out under the revenue budget. It also established some links with industries both in public and private sectors. The improved cooking stoves developed by BCSIR were disseminated under a Pilot Project of BCSIR involving NGOs in three thanas. A

large number of processes and patents have been developed by BCSIR which need pilot plan studies before they are released for commercial application.

SPARRSO

19.15 SPARRSO was established under a development project implemented during 1978 to 1986. The space research and remote sensing facilities were created under the project. Besides, a Regional Remote Sensing Centre at a cost of Tk.31.29 crore was established with French Assistance for survey of natural resources on a regional basis. In addition, with assistances from USAID, institutional facilities (equipment, training, advisory service) were created under another project named Agro-Climatic Environmental Monitoring Project (ACEMP). The ACEMP started its operation from 1980. With the facilities developed, SPARRSO has conducted research and studies on resource survey and mapping on agriculture, forestry, fisheries, water resources, floods etc. It has continuously studied and monitored weather and natural hazards.

S&T DIVISION

19.16 The TFYP envisaged development of the Museum of Science and Technology in its own buildings with facilities of exhibits and equipments. While the construction of buildings being completed the equipment and exhibits could not be procured in the absence of any foreign assistance. The project will spillover to the Fourth Plan. The S&T Division had four other projects included in TFYP, two of them were feasibility studies, one for establishment of an Oceanographic Research Institute and the other for a Biotechnology Research Institute. The projects could not be implemented as no technical assistance was available for the studies.

19.17 The S&T Division under the purview of their normal activities carried out review of R&D in different fields and dissemination of S&T knowledge through science fairs and exhibitions. It has also taken up projects for development of small scientific experimentations of science clubs. Besides, it provided fellowships to scientists and researchers for research in different fields. With the assistance of the Asian Development Bank, the S&T Division carried out a study on three industrial sub-sector viz. Electronics, Processing Industry and Small Scale Engg. Industry to help prepare mid-term technology plan.

BANGLADESH STANDARD & TESTING INSTITUTIONS (BSTI)

19.18 The TFYP envisaged development of institutional and physical facilities of BSTI including construction of buildings for the Headquarter at Dhaka and establishment of branches at Khulna and Chittagong. BSTI is involved in standardisation, metrology, testing and quality control of industrial products. It is also implementing metric system of weights and measures throughout the country.

OVERALL TFYP PERFORMANCE

19.19 Out of the 17 projects included in the TFYP 11 were taken up for implementation of which 9 could be completed and two would spilled-over to the Fourth Plan. The agencies' financial allocations and expenditure (estimated) are shown in Talbe 19.2

Table 19.2 Agency-wise Performance during Third Five Year Plan.

(Taka in Lakh)

Agency	No. of TFYP Projects			No. of Projects under Implementation during TFYP	No. of projects completed	TFYP alloc-ation	Estimate Expenditure during TFYP
	Originally included	Subsequ ently taken up	Total				
1	2	3	4	5	6	7	8
BAEC	6	-	6	4	3	2491.22	2219.00
BCSIR	2	-	2	1	1	576.78	225.00
SPARRSO	1	-	1	1	1	840.00	83.75
S&T DIVN.	5	2	7	3	3	1050.00	415.00
BSTI	3	7	3	2	1	1042.00	138.00
Total	17	9	19	11	9	6000.00	3080.75
Winding up project (1 for SPARRSO)	-	-	-	-	-	-	50.00
Total Expenditure						6000.00	3130.00

FOURTH FIVE YEAR PLAN (FFYP)

19.20 The major thrust of the Fourth Five Year Plan is to increase productivity & employment and alleviate poverty. One of the basic strategies of the Plan is to increase productive and operational efficiency in all sectors. This calls for technological development in different sectors of economy.

OBJECTIVES

19.21 The objective of STR will, accordingly, be scientific and technological development for different sectors. This would need proper S&T Planning and activities, institutional and human resources development. The S&T development would have to be conceived in a long-term perspective with direction in the short-run towards meeting immediate needs of the economy. It must meet inter-sectoral technolcgical requirements. Alongwith development of relatively capital intensive technologies specially required for the capital goods sector and large industrial enterprises, improvement of appropriate traditional and indigenous technologies for small enterprise in both rural and urban sectors would need special consideration and overtime the technological transformation would have to go to the changes in the economic structure.

STRATEGIES

A. S&T PLANNING & RESEARCH

19.22 Presently, S&T researches are undertaken in an unplanned and uncordinated way by R&D institutions. A planned and coordinated approach is required to carry out R&D activities based on needs. For a long-term direction of S&T development, an indicative plan and for short-term, an operational plan are to be prepared. The latter would envisage technological requirements of the Fourth plan for different sectors and identify the S&T programme and projects.

19.23 Since R&D planning has remained weak and adaptation and dissemination of imported technology have been poor, the technical committees now instituted under the Consultative Committee on Transfer of Technology in the S&T Division would assess technological capabilities and formulate future R&D programme. The S&T research should, therefore, be strictly need-based. The assessment of sectoral needs could provide the necessary direction. Further, within sectoral needs, priorities have to be determined in terms of needs and resources. Relative priority should be placed more on applied research and basic research ought to be selective.

19.24 The present national policy on S&T would have to be more articulated in terms of needs of different sectors including the private sector for both import substitution and export expansion. Steps will be taken to generate some indigenous technologies to meet local demand. Thrust will also be given to acquisition, assimilation and improvement of imported technologies with a view to improve the ability of the country to compete in the world market.

19.25 The above mentioned programmes, will be accomplished by strengthening the existing R&D organisations rather than creating new institutions. The strengthening of the R&D institutions will be made by installing new equipment, rationalising manpower by enhancing ratio of scientists/technologists, imparting suitable training to the scientists/technologists and also by improving the management aspect of the institution.

19.26 Though agricultural research has developed alongwith infrastructural and institutional facilities, there has been little or no progress in the area of industrial research. Hence great emphasis has to be given on industrial research. At the present stage of industrial development, the foremost consideration would be to expand the industrial base through diversification of industries both large and small, including those for import substitutions and exports. The Industrial Policy 1982 has emphasised promotion and development of indigenous technology based industry through research and adoption.

19.27 Research Organisations including Universities should seek specific assignment from the industries. The research scientists/technologists should be encouraged to visit the production units frequently to identify problems that might be tackled by them. The R&D institutions should increasingly seek funds for their activities from the user organizations includig the industry rather than from the Government alone.

14.28 Technological innovations and improvements must come from within industrial enterprises. The corporations and the private industrial enterprises must undertake R&D activities for such purposes. The R&D combined with the innovative or technological problem solving efforts at the plant level would enable enterprises to improve existing technologies as well as in producing new ones. Industrial enterprises should initiate activities in collaboration with existing R&D facilities in institutions such as the BCSIR, BAEC, BUET. Each institution, in turn, should formulate specific time bound programme. A wide range of activities is needed. Introduction of new products, new processes of production, market surveys, improvement in management practices, improved condition and procedures, modernisation and balancing activities and efficient operation of plants etc. would constitute the technological enviornment of industries.

19.29 A large number of small enterprises have grown in the industrial sector and the agriculture related industries. They produce or fabricate small machinery parts or agro-based products and are widely dispersed having little resources or skill for research. On the other hand, their products need to be improved and standardised. There is also a scope for development of indigenous technologies in this sector. This may be planned and directed by a central agency like BCSIR and contract research may be leased out to BITAC or other appropriate R&D institutions.

19.30 The R&D results of indigenous technologies, on the other hand, must pass through pilot plant operations for commercialisation. A large number of processes and patents developed by BCSIR and BAEC will be taken up for pilot plant studies during the Fourth Plan. There is a need to evolve a system to finance, develop and commercialize successful R&D products. The know-how developed in the local R&D institutions not only would be licensed for commercial application, but arrangements would also be made for evolving a mechanism of financing with provisions of necessary public sector equity as venture capital. The government policy of privatisation for industrial development shall be further geared up so that enterprenuers (small and medium size industries) are attracted to invest in commercialising locally innovated patents processes. Such activities may be initiated through BSCIC, BKB, BRDB etc.

B. ENVIRONMENTAL IMPACT CONSIDERATION

19.31 Technology has a great impact on environment. The imported technology has to be carefully assessed in this perspective. The Department of Environmental Pollution Control would undertake research and studies on the impact of technology on environment.

FOURTH FIVE YEAR PLAN PROGRAMMES

19.32 Greater emphasis will be given on S&T Research during the plan. However, for the purpose of institutional development and creation of research facilities, new development projects will also be taken up. The projects will belong to S&T Division, BAEC, BCSIR, BSTI and SPARRSO.

S&T Division

19.33 A unit for technological planning, programming, research, coordination and evaluation will be establishment in the S&T Division. The S&T Division will take up a project for dissemination of improved indigenous cooking stove (Chula) technology as developed by BCSIR. During the Fourth Plan period, the Bangladesh National Scientific and Technical Documentation Centre (BANSDOC) would further be developed. While the on-going project of NMST will spill over to the Fourth Plan, additional physical facilities for the Museum will be created. The NMST would also provide support to the development of innovative work of science clubs.

BAEC

19.34 The BAEC will continue its research activities through research facilities already developed during the SFYP and TFYP. However, the Atomic Energy Centre at Dhaka would be modernised and developed through procurement of new equipments. The BAEC will establish four nuclear medicine entres one each at Rangpur, Barisal, Khulna and Mymensingh. The Ministry of Health would review the possibility of operation and maintenance of the NMCs by the medical college hospitals. In case such transfer is recommended, the project will be transferred after its completion. BAEC would however, provide technical services to the hospitals in the application of know-how, training of doctors and technicians.

BCSIR

19.35 BCSIR, too would concentrate on R&D activities in the field of herbal medicine, food and food products, fuel, glass & ceramics, leather etc. utilising laboratory facilities developed during FFYP and SFYP. However, a project for acquisition of new equipment for its research laboratories/institutes would be taken up after assessing existing facilities and further needs.

BSTI

19.36 The project BSTI, Dhaka will spill over to the Fourth Five Year Plan, in order to further strengthen the existing facilities of the institute.

SPARRSO

19.37 Institutional and research facilities of SPARRSO has been developed during SFYP and TFYP. An evaluative study on facilities developed in SPARRSO, their uses and future needs is required before taking up any project for further development.

19.38 In the STR Sector, allocation for various agencies during the Fourth Five Year Plan would be as under:

Table 20.4 Year-wise Allocation during the Fourth Five Year Plan (at 1989/90 prices)

(Tk. in Crore)

Year	Plan allocation
1990-91	7.00
1991-92	8.00
1992-93	11.00
1993-94	13.00
1994-95	15.00
Total:	54.00

CHAPTER - XX

LABOUR AND MANPOWER

Introduction

20.1 The critical importance of human capital for development in Bangladesh is recognized especially due to the deficiency in most developmental resources except population. Sustained development of the country can be based on the abundant manpower that can be harnessed for productive activities by way of upgradation and enrichment through education, skill form action, improved health, sanitation, nutrition and other measures. Human resources development in this context is to be perceived within a broader perspective encompassing both the ends and means of development. Proper development of manpower would require careful consideration of the implications of different development strategies and priorities not only to maximise returns to development but also to optimise the distribution of benefits of development. In the process human factor would play a decisive role since the people are the ultimate beneficiaries of development. Human resources development is much more than an instrument of development, it is the ultimate objective of the development process. Human resources mobilisation and development issues and efforts, therefore, remain the focal point of the process of development in the country.

20.2 Alleviation of poverty through productive employment is the most fundamental objective of the country's planning process. Human capital, in the form of employable manpower, is of crucial importance towards realisation of this basic objective. Manpower situation in Bangladesh is typically characterised by the simultaneous existence of acute unemployment and underemployment including that of the educated/skilled on the one hand and shortages of strategic skills on the other. Such a situation necessitates the formulation of cohesive policies and matching action programmes for balanced development of skills and its optimum utilisation through planned enhancement of employment opportunities in the economy and in the overseas employment markets.

Review of Past Development:

20.3 At the beginning of the Third Five Year Plan, the country had a net work of 7 Technical Training Centres (TTCs) and one Institute of Marine Technology for imparting skill development training, 4 Vocational Guidance and Youth Employment Units, 21 District Employment and Manpower Offices, 4 Industrial Relations Institutes and 25 Labour Welfare Centres. Besides, work on 5 new TTCs under an IDA Vocational Traning Project was completed. Apprenticeship training activities continued through 3 Apprenticeship Training Offices. The Bureau of Manpower, Employment and Training (BMET) was in existence for administering the craftsmen skill training programmes and employment promotion both at home and abroad. The Third Plan programmes were undertaken in the areas of skill development, employment promotion, labour welfare, industrial safety and hygiene, industrial relations, organisational development and research, evaluation and monitoring.

20.4 In consideration of the strategic importance of skilled manpower in various sectors of the economy, emphasis was laid on skill development training in the sectoral programmes of the Third Five Year Plan. Such priority to skill development was also reflected in the pattern of resource allocation where 72.8 percent of total sectoral outlay of Manpower and Labour was allocated for skill development programmes. The major thrust of the skill development programmes was on strengthening and consolidation of the existing training network, better capacity utilisation and improved quality of training on the basis of available information on skill needs of the economy. Towards this end, a training needs assessment exercise for TTCs and VTIs was carried out in 1986 under an UNDP/ILO assisted vocational training project. Construction work of 5 new TTCs was completed which brought the total number of fully operational skill training centres to 12 including the Bangladesh Institute of Marine Technology (BIMT). The annual training capacity of this network stands at 5715 as against the estimated target of 4000 as envisaged in the Third Plan. In order to enhance the facilities of training in Marine Technology, a scheme for strerthening and renovation of the BIMT including a study to examine the employment situation and prospects of the BIMT graduates has been completed. Under an IDA assisted Vocational Training Project, all work relating to creation of physical facilities and manpower recruitment for the National Council for Skill Development and Training (NCSDT) and its four regional offices has almost been completed. The Council has the responsibility of formulation of National Skill Development Policies including overseeing the activities regarding curriculum development, setting up of trade standards, trade testing and certification. The Planning and development Committee of the NCSDT has setup trade standards for almost all skill trades and a unified system of trade testing and certification has been introduced in collaboration with the Bangladesh Technical Education Board for the TTCs as well as the VTIs. Through joint

efforts of the NCSDT, a system of trade testing and certification of untrained industrial workers has also been introduced.

20.5 Skill development training programmes were carried out through the instutional net work of 12 TTCs including the BIMT and also non-institutionally in the form of apprenticeship, inplant and upgradation along with supervisory level training. The TTCs in addition to offering training courses of one and two years duration in 16 trades also provided institutional facilities for special self-employment oriented vocational training programmes of short duration sponsored by a number of organisations such as the Ministry of Youth and Sports, Water Development Board, Technical Education Directorate, Chittagong Hill Tracts Development Board, Police Directorate, Bangladesh Navy, some leading hotels, private industries and NGOs. The BIMT, in addition to offering courses of various duration similar to TTCs, offered three-year Diploma Course in Marine Technology. Number of trainees passed out under the regular and the special courses of the TTCs and BIMT and under inplant and apprenticeship training programmes during 1985-1992 is shown in Table 20.1.

Table - 20.1 Training Performance of the BMET 1985-92

Year	Regular Course	Special Course	In-plant & Supervisory	Apprentice-ship	Total
1	2	3	4	5	6
1985	1157	723	445	686	3011
1986	2112	1067	61	49	3641
1987	2080	769	203	16	3068
1988	1941	803	-	282	3028
1989	2053	642	-	250	2945
1990	2581	325	-	185	3091
1991	2339	383	-	140	2862
1992	2629	533	-	244	3406

20.6 For the promotion of collaborative training programmes with the private sector and motivation for participation by way of cost sharing by the employers in training activities, the BMET has undertaken a trainining programme for the supervisory level workers in garment industries through a technical assistance project. The BMET has received all the equipments for the training programme through the Garment Industries Employers Association.

20.7 In order to disperse the country's employment services to increasingly meet labour market operations in rural areas and to promote self-employment, the BMET strengthened its net work of 21 District Manpower and Employment Offices which are located in the old district headquarters. These offices functioned for promotion of employment, both in-country and overseas including self-employment. The DEMOs were also entrusted with the function of employment monitoring and collection of employment and manpower information for the purpose of objective in-country and foreign employment planning along with traditional job registration and placement services. The DEMOs carried out, on regular basis, the functions of registration of both local and foregin employment including pre-registration interview, scrutinee and trade testing. The DEMOs referred the job seeking candidates to employers for local employment and to the Bangladesh Overseas Employment Services Limited (BOESL), BMET, different authorised recruiting agents and recruitment missions from abroad for foreign employment. Table 20.2 shows the registration for local and foreign employment and local placement arranged by the DEMOs during 1985-92.

Table - 20.2 Registration in DEMOs ,1985-92.

	1985	1986	1987	1988	1989	1990	1991	1992
Local	7099	8518	8636	7055	4552	3646	7850	810
Foreign Registration	11538	4764	617	2998	2357	1642	5042	602
Local Placement	8981	11682	14867	10842	5732	4650	5458	2424

20.8 A project of wider dimension entitled "Pilot Scheme on Strengthening of Employment Promotion Activities through Self-employment in Urban and Rural Area" was undertaken during the Third Plan. Under this project, the self-employment programme has been extended to 82 thanas with arrangement for cash loan and tool-kits. For implementation of this programme, Divisional Offices have been setup. Under the auspices of the BMET, another self-employment project has been under operation for the land/assetless in the rural areas and experienced and trained persons in the urban and the semi-urban areas. Under this programme, a total of 22 thousand self-employment opportunities have been created till January 1990.

20.9 Besides in-country and self-employment, considerable progress has been achieved in respect of export of professionals, skilled, semi-skilled and unskilled labour from Bangladesh in the overseas employment market, particularly in the Middle East and the Gulf Areas. While necessary institutional and promotional support for promotion of overseas employment was provided by the BMET and BOESL, the Government undertook measures for re-absorption of returnee migrants and productive utilisation of their earnings. Tables 20.3 and 20.4 show the year-wise picture of labour emigration from Bangladesh along with remittances during the Third Plan period and emigration by skill categories during 1985-92 respectively. It is seen that the target of 60,000 set in the plan has been exceeded.

Table 20.3 Total Overseas Employment of Bangladeshi's and Remittances during 1985-92

Year	Number Migrated	Remittances under WES	
		Million US $	Crore Taka
1985-86	78,422	555.10	1661.10
1986-87	63,145	696.90	2135.95
1987-88	73,772	736.90	2303.63
1988-89	84,196	770.80	2225.30
1989-90	48,017	226.69	736.66
1990-91	66,371	264.95	938.38
1991-92	79,902	265.16	1080.63

Table-20.4 Overseas Employment of Bangladeshi's by Skill Categories,1985-92

Year	Skill Categories				
	Professional	Skilled	Semi-skilled	Unskilled	Total
1985	2,568	28,225	7,823	39,075	77,694
1986	2,200	26,294	9,265	30,899	68,658
1987	2,223	23,839	9,619	38,336	74,017
1988	2,670	25,286	10,809	29,356	68,121
1989	5,325	38,820	17,657	39,914	101.718
1990	6,004	35,613	20.792	41,345	103,754
1991	9,024	46,887	32,605	58,615	147,131
1992	8,022	35,057	19,744	72,624	135,447

20.10 Four Vocational Guidance and Youth Employment Units under the BMET provided employment counselling to the Young School Students, 35,598 in 1985, 27,548 in 1986, 42, 488 in 1987, and 48,812 in 1988. In consideration of the fact that monitoring of employment on continuous basis is important for making necessary adjustment in different sectors and activites of the economy for realisation of the employment objective of the Plan, projects were taken up to monitor the trend of employment creation in different sectrors. A unit was set up in the Planning Commission to conduct studies and monitor employment genetation in various sectors of the economy. Another project with assistance from US AID was taken up by the Planning

Commission to investigate employment capabilities in small enterprises in certain sectors and recommend measures for employment promotion in the entire small industries sector.

20.11 In the area of labour welfare, health, educational and recreational facilities were provided by the existing 22 Labour Welfare Centres including the Labour Welfare Division for Tea Industry Workers at Srimangal. During the Third Plan a development scheme for functionally strengthening this net work was taken up with a view to undertaking repair and renovation including flood rehabilitation and augmenting the capability of the centres for imparting workers education.

20.12 In respect of industrial relation, the existing Industrial Relations Institutes (IRI) at Dhaka (Tongi), Rajshahi, Chittagong and Khulna organised regular training programmes in labour management relations for the representatives of workers, trade unions and management. The IRI, Tongi was strengthened with necessary additional physical facilities which provided better scope to the Institute for conducting training. A project was taken up for improvement and renovation of physical facilities of the IRIs at Chittagong, Khulna and Rajshahi which involved some additional construction and provision of equipment and other logistics.

20.13 The Department of Inspection of Factories and Establishments responsible for enforcement and administration of various labour laws/rules concerning work hours, workers condition, labour welfare, safety, health and hygiene of workers, payment of minimum wages, maternity benefits, workers compensation, conditions of employment and labour standard for workers engaged in different mills and factories, shops and establishments, road transport etc. continued regular inspection as per their functional purview. Table 20.5 shows the total number of inspection of the factories, shops and establishments, number of prosecution and the total amount of penalty realised by the Department during January 1985 to June 1992.

Table 20.5 Activities of the Department of Inspection for Factories and Establishments, 1985-92

Year	No.of Inspec-tion	No.of Viola tion	No.of prose-cution	No.of cases dispo-sed off	No.of pending cases	Amount of fine realised by court (lakh Tk.)
1985	35,360	39,664	4,310	2,884	8,185	3.15
1986	34,749	33,928	3,454	4,267	7,372	4.30
1987	40,331	40,114	5,819	2,640	9,044	2.47
1988	46,000	41,391	5,643	5,792	8,822	6.21
1989	26,308	26,730	2,788	2,072	9,273	2.55
1990	46,217	6,939	6,938	3,768	3,270	5.36
1991	48,622	7,012	7,012	3,806	3,206	4.50

20.14 In realisation of the fact that labour productivity is an important precondition of economic development and it is important to closely monitor productivity, the National Centre for Monitoring Labour Productivity was created in 1983 under the Ministry of Labour and Manpower. It was renamed in 1987 as the Bangladesh Productivity Centre (BPC) under the same Ministry in order to widen the scope of its activities. Subsequently, the centre was transferred to the Ministry of Industries. The centre is now working as the country's National Productivity Organisation. The centre has been conducting studies, organising workshops, offering consultancy services and imparting training on productivity promotion in different sectors. The centre also helped organise Productivity Cells for productivity improvement in the enterprises of BCIC, BSEC, BJMC and BSFIC which are also members of the CONCOPE. A high level "National Productivity Council" has also been formed. An Executive Committee headed by the Secretary, Ministry of Industries and eight Sectoral Advisory Committees have also been constituted. The BPC with the help of UNDP assistance worked on formulation of methods and techniques of measurement of productivity in various sectors.

20.15 In the field of research and evaluation, the Bangladesh Manpower Planning Centre of the Ministry of Labour and Manpower carried out research, studies and surveys on various aspects of manpower and employment and conducted related training programmes which also covered overseas employment and the country's education and training system. The centre has, however, been abolised in 1989. The Employment Monitoring Unit of the Planning Commission has formulated draft studies on methodology for employment

monitoring and employment and unemployment situation in the country. The small Industries Unit of the Planning Commission has been assessing the employment potentials of the country's small industries sector. The BIDS conducted studies on poverty alleviation, labour emigration, remittances and other related manpower issues.

Implementation Status of Third Plan Projects

20.16 A total number of 18 projects-3 on-going and 15 new were included in the Third Plan under the Manpower and Labour sector. Out of these, it was possible to take up 10 projects (including 3 on-going projects) during the Plan period. Of these, six projects were completed during the plan while 4 projects will spill over to the Fourth Five Year Plan.

Table - 20.6 Financial Performance during Various Plan Periods

(Taka in crore)

Plan	Plan Alloca-tion	Allocation through ADPs	Fund Utilisation	Fund Utilisation as percentage of ADP allocation
FFYP	12.00	9.14	5.03	55
TYP	16.00	16.62	9.68	58
SFYP	111.60*	107.35	89.80**	84
TFYP	93.00	40.90	27.94	68
FFYP	111.38	18.28	6.52	35

* Including allocation for 4 VTI schemes included under the Education Sector.
** Including expenditure for 4 VTI schemes.

Review of Past Strategies

20.17 Since human resource development is of crucial importance for enhancing the employability of the country's manpower, skill development programmes for productive activities in various sectors were assigned the highest priority under the manpower and labour sector. Both during the Second and the Third Plan periods, emphasis was laid on consolidation of the existing training system, maximum capacity utilisation, development of a unified skill training policy, effective co-ordination between skill generation activities under the public and the private auspices, closer linkages between the training system and the industries, development of standard course curricula, uniform national standard for skill in different trades, development of standardised system of testing applicable to all tradesmen trained either in institutions or in industries or under any other system. While some progress was achieved regarding standardisation of course curricula, testing and certification procedures, no perceptible progress was made in respect of formulation of a viable national skill development policy, objective skill needs assessment in various sectors and functional linkages between the public and private sectors on the one hand and between the skill training institutes and the industries, on the other. The strategy of consolidation and maximum capacity utilisation of the existing training network was followed as against proliferation of the system. One important emphasis in the area of skill development was on improvement of the quality of training personnel passing out from the training institutes.

20.18 In the area of employment promotion, broad-based programmes of expanding the country's employment service was taken up keeping in view the gradual dispersal and decentralisation of developmental activities and existance of widespread unemployment in the rural areas. However, development of the organisational network was rather slow to acquire optimum efficiency to take up jobs of new dimension. In respect of overseas employment, some promotional support was provided for sustaining the manpower export activities but no specific policies and programmes were formulated for dealing with different issues and problems relating to returnee migrants. The Third Plan identified the need to view labour welfare in a broader context and in the perspective of productivity, industrial safety, occupational hygiene and vocational rehabilitation of disabled workers as a package. No meaningful programme could, however, be taken up in this area, owing to organisational inadequacies and weaknesses.

Implementation Problems and Weaknesses

20.19 Combination of a number of problems and bottlenechs resulted into considerable shortfall both in terms of physical and financial performances in the sector. Planning outfits of all the agencies of the Ministry of Labour and Manpower were abolished during the early part of the Second Plan. Delay in preparation of plans and estimates, execution of actual construction and above all, inadequacies in monitoring mechanism of

project implementation hampered the progress of project execution. In respect of some large aided projects, delay in aid disbursement and utilisation slowed down project implementation.

20.20 Resource shortages, particularly during the Third Plan resulated into shortfall in the sectoral performance. During the Third Plan, it was possible to allocate only 44% of the total plan outlay through ADPs. Fund absorption capability also did not grow adequately at the executing agency level. Only 63 percent of the ADP allocated funds was utilised under the sector during the Third Plan period.

20.21 The major problem in the area of skill development was the lack of formulation of a comprehensive national skill development policy on the basis of objective assessment of skill requirements in the different sectors of the economy. This, among other resulted in the existence of the paradoxical situation of shortages of skilled workers in the economy on the one hand and large scale unemployment of some categories of skilled persons, on the other. The quality gap of the trained manpower persisted and success in respect of establishment of linkages between the public and private sector and between the training institutions and industries was rather insufficient.

20.22 The objective of development of a labour market information system responsive to the national needs through this employment service network remained more or less unrealised. With regard to self-employment, programmes were not taken up in adequate dimension to result any perceptible impact on the labour market.

20.23 The Labour Welfare Centres (LWC) set up during various plan periods remained functionally weak having little of no welfare impact on the labour force. They failed to provide any menningful welfare facilities and there was no effective mechanism for co-ordination and monitoring of their functioning.

Objectives of the Fourth Five Year Plan

20.24 Within the broad framework of the overall national development perspective of alleviation of poverty and improvement of unemployment situation, the major objective of the sector will be to raise the level of skill of the country's work force in order to meet the manpower demand for various activities in the economy keeping also in view the aspect of their welfare and safety. In the light of the major sectoral thrust of skill development and employment prospects at home and abroad and experiences of the specific objectives of the Manpower and labour sector during the programme implementation in the past, objectives of the Fourth Five Year Plan will be as follows :

i) to formulate a comprehesive national skill development policy on the basis of objective assessment of manpower requirements in various sectors keeping also in view the skill development needs of women for enhancing their employment;

ii) to strengthen and consolidate the craftsmen level skill training system for ensuring better capacity utilisation and to expand the network where necessary;

iii) to broaden the scope of in-plant and apprenticeship training as a major media of skill development, strengthen co-ordinational activities and to institute supportive legal arrangements relating to such training;

iv) to bring all institutional training activities, both in the public and the private sector, under a central testing and certification procedure;

v) to augment employment generation activities including self-employment with particular focus on the landless farmers, small farmers, rural and urban informal and disadvantaged women groups and enhancement of effectiveness of the institutional framework therefor;

vi) reinforcement of institutional support for promotion of manpower export, reabsorption of returnee migrants with some training if necessary and gainful utilisation of their earnings in the economy;

vii) to ensure industrial safety and occupational hygiene and to make arrangements for training in the area of ocupational health analysis and accident prevention;

viii) to ensure higher productivity by improving industrial relations through more effective motivation, workers; education and training on labour management relations;

ix) to strengthen the institutional set up for provision of labour welfare including arrangement for vocational rehabilitation of the disabled workers; and

x) to undertake action research on various issues in the areas of manpower and employment situation, employment and productivity monitoring out of which implementable programmes can emerge particularly relating to poverty alleviation, human resources development and participation of women in economic activities.

Strategies during the Fourth Five Year Plan

20.25 As in the previous plans, priority will be assigned to the programme of vocational skill development. Emphasis, in this respect, will be given on planning and organising training activities within the framework of a comprehensive skill development policy which is to be formulated on the basis of assesment of skill needs in various sectors of the economy. Necessary attention will also be given to the issue of co-ordination since skill development training will be a multisectoral activity involving a large number of organisations encompassing also the private sector. Diversification of the nature, content, duration, clientele as well as modality of provision of training will be an important aspect of such training programme in order to take care of the training needs of different disadvantaged groups including women skill development for activities in the rural and urban informal sectors, skill needs for manpower export and self-employment. The policy of laying emphasis on consolidation including improvement of the management and supervision of the existing skill training system to ensure maximum capacity utilisation and quality of training will be pursued as against creation of new facilities. Efforts will be made for establishing greater linkages with the industries as well as the private sector and the NGOs in respect of both development and utilisation of skills. Necessary attention will be given to instructor training and preparation of training materials which are important preconditions for ensuring qaulity of training. Non-institutional methods of training such as apprenticeship training, in-plant training and skill upgradation training for employed workers will be increasingly emphasised. Local resource endowments and training needs will be given adequate attention and weightage while designing training programmes. Mobile training units will be extensively used for such purposes. Some adjustments may also be made in the courses of even the regular training institutes in the light of local training needs.

20.26 In consideration of the fact that the existing training need assessment exercises are, by and large, limited within the organised formal sectors in the urban areas, efforts will be made during the Fourth Five Year Plan period to enlarge the scope of such assessment surveys to cover the unorganised informal sectors both in the rural and urban areas including the vast agricultural sector.

20.27 In respect of employment services, emphasis will be laid on promotion and supervision of self employment particularly of disadvantaged groups. Special attention will be given to the employment of women. Programmes will be taken up to expand the existing employment service network to match the country's decentralised and dispersed economic activities and also to functionally strengthen the efficiency of the system. The role of BMET at the central level will focus particularly on the training of personnel for labour market operation, overall system evaluation and performance reporting. Provision of labour welfare, better and safe working conditions, congenial labour-management relations, occupational hygiene and vocation rehabilitation of disabled workers will be considered as a pakage towards improvement of productivity.

20.28 Considerable number of NGOs are already engaged in skill generating, income earning programmes particularly through generation of self-employment and welfare activities. During the Fourth Five Year Plan efforts will be made to utilise the NGOs as active development partners of the Government in the aforementioned areas with thrust on Women's development and welfare of the poorer section of the population. Areas will be systematically identified where NGOs can supplement public sector activities in implementation of the sectoral programmes. Such programmes/projects will be designed and taken up where increasing NGO participation can be ensured.

Programmes during the Fourth Five Year Plan

20.29 Under the Manpower and Labour sector, Programmes during the Fourth Five Year Plan will be taken up in the areas of (i) Skill development, (ii) Employment promotion, (iii) Labour Welfare, (iv) Industrial safety and hygiene, (v) Industrial relations, (vi) Organisational development and (vii) Research and evaluation.

20.30 The programmes will be implemented through four on-going projects and ten new projects envisaged for the Fourth Plan. In view of the overwhelming importance of skill training for human resources development priority will be given to vocational training.

Skill Development

20.31 In order to remove the anomalies in the area of skill development and to give an appropriate direction to the programme immediate steps will be taken under the auspices of the Ministry of Labour and Manpower to formulate a comprehensive national skill development policy. A regular mechanism will be instituted in the Ministry of Labour and Manpower for continuous assessment of the policy and recommend necessary action programmes. The National Council for Skill Development and Training (NCSDT) will be further activised to oversee the national skill development policies and programmes as the apex body. In order to render the NCSDT operationally more effective, necessary reorganisation of the NCSDT and its supporting subordinate bodies will be considered. Since skill development training will continue to be a multisectoral activity involving a large number of ministries, divisions, agencies, organisations and institutions, the issue of co-ordination will be an important factor for achieving the desired results. An efficient co-ordination mechanism in this respect will need to be evolved under the overall supervision and guidance of the NCSDT.

20.32 Measures will be taken to strengthen the existing eleven Technical Training Centres with additional facilities and necessary renovation to make them functionally more efficient. As part of the programme, a mobile training unit will be established with necessary training equipment and trainers. A training need assessment study would also be taken up. Work on the ongoing project of strengthening the Bangladesh Institute of Marine Technology (BIMT) will be completed early during the Fourth Five Year Plan. It is estimated that annual training target of 5715 in regular courses of the 11(eleven) TTCs and the BIMT achieved during the Third Plan will be maintained. However, if necessary the training target can be increased through additional logistics and institutional facilities. The Technical Training Centres would also offer facilities for running special courses as and when requested by different Ministries/Departments, Corporations and Autonomous Bodies or Non-Government Organisations. In addition, courses of short duration will be provided by the mobile training unit. Entrepreneurial training orientation training for the returnee migrants etc. would also be organised by the BMET. It is estimated that the target for this short courses would be 2000 for the Fourth Five Year Plan. Supervisory level workers of the garments industries will be provided training under a Japanese assisted technical assistance programme for which Bangladesh-German TTC will provide physical facilities. After careful assessment of training needs 5 new TTCs would be set up where presently no skill training facilities exist. The location, trades, training methods etc. for these new centres will be firmed up on the basis of training needs assessment. A large number of non-government training centres are operating in the private sector producing semi-skilled and skilled workers. Overall quality of training of most of these institutions is extremely poor and the output of these institutions is generally found to be facing problems in local and overseas employment markets. A selected number of non-government technical training institutions may be assisted by way of provision of necessary equipments and consumable training materials. Such institutions will be required to adhere to a prescribed trade testing and certification procedure. Special emphasis will be given and arrangements made for adequate training of women workers in order to impart necessary skills for employment. Initially their employment in industries like textiles, electronic etc. may be considered. Both the formal institutional and non-institutional training systems may be used for such training.

20.33 Supplemental to the institutional training, non-institutional arrangement will be made for skill development through apprenticeship and inplant training. In the country, most industrial enterprises belonging both to the public and the private sectors do not have either necessary budget provision or initiatives to meaningfully and effectively carryout in-plant training for skill upgradation of their own workers. It is, therefore, essential to provide and arrange apprenticeship and in-plant training facilities for the overall skill development of the country's industrial labour. However, possibilities would be explored to increasingly motivate the industries to come forward for cost sharing in respect of apprenticeship and in-plant training. Suitable amendment of the present Apprenticeship Ordinance would be considered in order to provide adequate legal support to these programmes.

20.34 New and emerging technology are evolving at an unprecenndented pace and their effects on society are widespread and profound. Presently, many enterprises are still try to come grips with conventional technology. Options must be kept for alternative pattern of technology change, including the blending of advance technology and traditional technology. Many of the engineering based enterprises are expected to use CAD/CAM technology, NC/CNC machines and electronic/PCB assembly/control instrumentation etc. In the context of technology changes for proper applications of advance technology (AT) to set up AT institution to impart training and to update fast changing technology, joint collaboration may be established with the "Employers Association."

20.35 Garments Sector considered to be fast growing industry. This sector has already attained/major foreign exchange earners and also create opportunities for employment specially women-folk. To maintain global competition, high degree of skill is required to be developed for the persons engaged in this sector. It is necessary to establish a "Garments Technology Training Institute" through joint collaboration with Bangladesh Garments Manufacturer and Exporter Association (BGMEA).

Employment promotion

20.36 In view of widespread unemployment in the country, an efficient employment service is an essential requirement for promotion of employment. In Bangladesh only a very small number of vacancies are notified through the employment exchanges. Besides, the country's employment service system (DEMOs) does not appear to be properly geared to adequately take care of the work of registration and referral for local and foreign jobs, vocational guidance, administration of self-employment activities, essential personnel registration, employment monitoring and development of a comprehensive labour market information system. The activities of the DEMOs would, therefore, be objectively evaluated and suitably reorganised and strengthened to take up the above jobs which will be necessary for adequate employment Planning. Special facilities will be created in the DEMOs for women job-seekers in view of the particular acuteness of female unemployment in the country.

20.37 In view of the enormity of the problems of unemployment in the country, increasing number of persons entering the labour market annually and the inability of the formal sector to cope with the situation through wage-employment, it will be necessary to take all possible measures to promote self-employment in the country. The self-employment project taken up during the Third Plan for spreading the programme in 82 thanas of 21 old districts under the auspices of the BMET will be completed during the Fourth Plan. Expanded programmes along similar lines with participation of women in greater number may be taken up after objective evaluation of the on-going programme. Some mechanism would be evolved for co-ordination of all such activities within a national policy frame-work in order to avoid duplication of efforts and resources.

20.38 Manpower export will continue to remain an issue of national importance during the Fourth Plan. All promotional support in an organised manner will be provided along with launching of massive market promotion activities for augmenting manpower export. The Executive Committee of the National Economic Council (EC/NEC) has recommended to develop manpower for export on the basis of market research on the type and number required in the overseas employment markets. The Ministry of Labour and Manpower would be entrusted to establish effective and functional linkages with the Labour Attaches in Bangladesh Missions and the Ministry of Foreign Affairs for fomulation of a short and long-term manpower export policy for the country. In addition, there is a need for preparation of an observation report on the type and number of manpower likely to be required in the employment markets in different countries including the Middle East, Japan and the USA during the next five years. The vocational and skill training system of the country would be geared to produce manpower in large numbers in conformity with demand at home and abroad. In this connection, initiatives would be taken for amendment of the curriculum of the vocational training institutions in accordance with the skill needs in the overseas employment market. Steps would be taken by the Labour Attaches in Bangladesh Missions abroad in connection with solution of different problems faced by the Bangladesh workers employed aborad including harrassment and exploitation.

20.39 Skill needs of the home economy will, however, have to be kept meticulously inview in respect of manpower export. Such needs would be reflected in the country's manpower export policy both short and long term. This task would be an important element in the overall employment monitoring mechanism.

20.40 While all necessary promotional steps will continue to be taken for augmenting manpower export, increasing attention will be given to various socio-economic issues and problems relating to returnee migrants including their rehabilitation, productive use of their skills and gainful utilisation of their earnings. Detailed information on returnee migrants would be collected systematically and they would be increasingly sensitised for self-employment ventures.

20.41 Annual manpower export targets for the Fourth Five Year Plan is provided in Table 20.7.

Table 20.7 Manpower export projections during the Fourth Five Year Plan

Year	Number of Migrants (in thousand)
1990-91	98.3
1991-92	104.0
1992-93	109.8
1993-94	115.4
1994-95	121.3

Labour Welfare

20.42 Labour welfare is an important precondition for sound labour management relation which is necessary for desired labour productivity. The Labour Welfare Centres (LWC) cater to the health, educational and recreational facilities of the industrial workers. In view of the inefficient operation of the LWCs a scheme was taken up to functionally strengthen the existing operational net work which is expected to be completed early during the Fourth Plan. As per information of the Department of Labour, clientele per LWC was 3000 in 1987-88. With functional improvement of the LWC, setting up of a target clientele of 4000 per LWC annually may appear to be reasonable. Workers education programme of LWCs is expected to expand to cover female workers including garment workers. A need assessment study would be undertaken to ascertain the welfare needs of the workers and performance of the existing net-work. On the basis of findings of such a study some new LWCs would be established during the plan period. A programme is proposed for welfare training for specialized industries like garmets, tea-plantation, tanneries, etc. Some welfare programmes would also be considered for the Water, Road and Railway transport workers on the basis of assessed needs. It would be necessary to pay special attention to the Welfare of the Working Women including provision of residential facilities to them such as dormitories etc. where necessary. Such Welfare measures alongwith congenial working conditions are expected to enhance employment as well as productivity of the country's female labour force.

20.43 Rehabilitation of the disabled industrial workers in the economy is desirable both from the welfare and economic points of view. A scheme is proposed to be taken up to rehabilitate the disabled workers by integrating them into the productive process through necessary training and employment facilities so that they can be useful members of the society.

Industrial Safety and Hygiene

20.44 Occupational hazards are increasing in various production activities with development in the industrial sector. These hazards very often involve occupational accidents which lead not only to damage to produdction equipment and decrease in productivity but also to loss of lives of the skilled workers necessitating compensation. It is proposed that an integrated centre for both occupational accident analysis and acident prevention training be set up during the Fourth Plan. The centre is proposed to be equipped with facilities capable of conducting investigations of occupational health and safety problems and imparting related safety training to officials, management and workers.

Industrial Relations

20.45 Healthy labour management relations is an important preconditions of industrial peace and productivity which can be augmented considerably by providing training in labour relations and labour administration for the trade union leaders, supervisers, senior workers, representatives of the management and labour officials both in the public and the private sectors. The four existing Industrial Relations Institutes will continue to provide such training in labour relations during the Fourth Plan. The Ministry of Labour and Manpower would consider production of some educational and motivational short feature films for industrial and plantation workers.

Organisational Development

20.46 Safety and hygiene at work places as well as enforcement of various laws and rules concerning working hours, working condition, welfare, safety, health and hygiene of workers, payment of minimum wages, maternity benefit, workmen compensation, condition of employment and labour standard for workers engaged in different mills and factories, shops and establishment, road transport, tea plantation, docks and

ports and inland water transport etc. depend to a large extent on the existence of an efficient monitoring and supervision and inspection machinery. In Bangladesh the designated department for the above work is the Department of Inspection of Factories and Establishments. At present, there are about 15,000 factories registered with the Department and there are numerous shops and establishments in various Municipal areas of the country. Besides, the transport sector is growing fast. The Department is not, however, organisationally developed to cater to the inspection needs of the growing number of mills, factories and other establishments. With a view to strengthening the inspection activities, the Department of Inspection of Factories and Establishments will be strengthened with additional manpower, training, equipment and other logistic facilities. The Ministry of Labour and Manpower would consider the establishment of a Research and Statistical Wing under the Department after examination of its present and future needs.

Research Evaluation and Monitoring

20.47 Manpower, employment and labour related research activities will continue to be performed under the auspices of the BMET, BIDS, Planning Commission, Universities and the concerned non-government organisations. The Employment Monitoring Unit and the Small Enterprises Policy Study Project of the Planning Commission will continue to monitor employment impact of development activities in various sectors of the economy including employment generation capability and implications of policies in small enterprises in certain selected sectors. The Bangladesh Productivity Centre will undertake research, studies, training and work of dissemination of information on needs, methods and programmes for improvement of productivity in the economy. The BMET's research and study activities will include surveys on training needs and skill development, assessment of employment opportunities in the labour market at home and abroad and various issues related to returnee migrants.

2.48 Besides various development programme being pursued by the Govt. in the Public sector, thrust on involvement of the private sectors in the development activities have also been given adequate priority by the government. A substantial number of local voluntary organisations and otherr NGOs and a few international NGOs are creating opportunities for self employment through group formation and by providing inputs as skill training, credit, technology, marketing and extension service programmes are being implemented to help the informal sector micro enterprises of small and cottage industries. According to the department of Social services, 89 foreign and 210 National NGOs are engaged in educations, health, relief, women development and child welfare programmes. Self employment programmes carried out by five major NGOs so far are given below: (ILO Report, Dhaka, June 1991).

Table 20.8

Name of the organisation	No. of beneficiaries (in lakh)	No. of Districts
Grameen Bank	5.18	50
Swanirvar Bangladesh	4.74	29
BRAC	1.65	16
Proshika	1.03	22
Rangpur Dinajpur (greater district) Rural Service	3.42	5

20.49 The type of programmes as carried out by the NGOs are (a) Institution building, (b) Motivation and awareness raising, (c) Selection of Economic Activities, (d) Technology transfer, (e) Training which included (i) Human development and skill development, (f) Supply of credit and other inputs. About 3.4 million jobs (self-employment) have been generated by the Grameen Bank and other NGOs Bureau of NGO has been created to co-ordinate the activities of the NGOs. NGO activities will be encouraged and co-ordinated and integrated with the public sectors programmes for cottage and rural industries. NGOs in future will also play a significant role in the skill development of the urban and rural poor and disadvataged groups through motivation and training.

Financial Allocation during the Fourth Five Year Plan

20.50 For financing the above programmes, an allocation of Tk. 85.00 crore (at 1989-90 prices) has been provided in the public sector during the Fourth Five Year Plan. Of the total allocation, Tk.10.00 crore has been earmarked for the 6 on-going projects. Employment promotion and skill development have been assigned the highest priority in the sectoral programme. Besides, need specific skill development programmes will be taken

up by different ministries, departments, as well as NGOs for which investments would be made under other sectors during the Plan period.

20.51 Programme-wise allocation during the fourth Five Year Plan are provided in Table 20.9 :

Table - 20.9 Programme-wise Allocation during the Fourth Five Year Plan (at 1989/90 prices)

(In crore Taka)

	Programme	Allocation
A.	On-going Schemes	10.00
B.	New Schemes	75.00
1.	Skill development	27.00
2.	Employment promotion	31.00
3.	Labour Welfare	7.00
4.	Industrial safety and hygiene	6.00
5.	Industrial relations	
6.	Organizational development	3.00
7.	Block allocation	1.00
	Total :	85.00

CHAPTER-XXI

PUBLIC ADMINISTRATION

21.1 For a country where the economy is not fully privatised rather planned and directed and the public sector shoulders the responsibility of providing the basic services to the people, efficiency in public administration counts much for development. Whereas the traditional regulatory functions of the state usually multiply, the administrative machinery of necessity becomes involved in the complex process of development. Maintenance of law and order and administration of justice and other public services apart, the Government has to take up development programmes and administer those administrative reforms and institutional development become necessary to develop an efficient public administration suited to the country's socio-economic needs.

21.2 Since independence public administration has passed through several reforms and development. Immediately after liberation, the politico-economic goals necessitated major reforms in public administration in the context of large scale nationalisation policies and pursuance of a centralised planning system and economic controls at the hand of the Government. Further, the then provincial administration had to be reorganised and developed into a national Government. With subsequent changes in the Government and Governmental policies towards liberalisation of economy and decentralization of administration, the role of public sector greatly changed. Further, with the decentralisation of administration Governmental machineries have been reorganised, development planning and implementation process have also undergone changes.

Review of the Past Performance

21.3 Creation of an efficient public administrative system was one of the major objectives pursued in the plans. Enhancement of job knowledge and skills of the public officials through systematic training, establishment of training institutes for such purpose, organisational development, improvement of personnel administration in the government, semi-government, autonomous bodies, streamlining of administration through simplification of accounts, budgeting and financial and administrative procedures and restructuring of government offices and agencies were some of the major efforts towards bringing in efficiency in administration. Multi sectoral approaches and programmes were taken to increase organisational efficiency. MIS system in different organisation had been introduced and working facilities improved. The Plans stressed on the enhancement of capability of project planning, formulation, implementation, monitoring and evaluation in the ministries, agencies and local government bodies. Planning Cells were created in different Ministries and agencies to help formulate plan and policies.

21.4 Programmes under the public administration sector in the plans were taken up in the field of personnel training, personnel management, improvement of financial management and procedures and institutional development. A brief review of them is given below:

Training In Administration and Development:

21.5 With a view to providing overall guidelines for personnel training and formulating a comprehensive national training policy, a National Training Council (NTC) was set up in 1981. As an intermediary measures, the NTC approved the Government officials training policy in 1984. Efforts were undertaken by the Establishment Division to assess the personnel training needs of the different Ministries and organisations. A National Training Policy (draft) has been formulated. The policy sets as its objectives effective and proper utilisation of the existing training institutions and facilities, planning of need-based training to build up the career of civil servants, encouragement of the growth of private sector for training and research, streamlining of foreign training to make it need-based and encouragement of in-country training as against foreign training where such substitution is possible.

21.6 The Bangladesh Public Administration Training Centre (BPATC) has been imparting foundation training to the officials of different cadres of the Bangladesh Civil Service and mid and senior level training to government officials and autonomous bodies. Since its inception, the centre is estimated to have provided training to 7,000 officers. The BPATC has also held seminars and workshops, conducted research and published periodicals on various subjects in the area of administration, management and development. A separate Academy for B.C.S (Admn.) cadre has been established in 1987 and the same has been housed in the former COTA building. The academy imparted training to 329 officials during October, 1987 to October 1989 in six batches. The training, mainly of supporting secretarial staff and also some officers (Class-II) has been given at the four Regional Public Administration Training Centres (RPATC) at Dhaka, Chittagong, Khulna and Rajshahi and at 5 District Staff Training Institutes. It is estimated that the RPATCs have imparted training to

a total of 15200 trainiees upto June, 1990. The DSTIs are estimated to have provided training to 13,322 staff members during the period 1980 to 1989. Facilities such as buildings, equipment, manpower and other logistics for the BPATC and the four RPATCs at Dhaka, Chittagong, Khulna and Rajshahi have been provided under IDA assisted public administration project. The Academy for Planning and Development (APD) under the Ministry of Planning has imparted training in such areas as project planning, financial management, development administration and offered courses on basic economics. The trainees have been the officials of different Cadres, and other offices of government, semi-government and autonomous organisations and other public and professional bodies. Since the beginning of its training programme in September, 1981 the APD is estimated to have trained 4500 officials. It has also held siminars and regularly published journals. In addition to the above, specialised training in accounting, auditing, financial management, banking and insurance has been provided by such institutions as the Audit and Accounts Training Academy, Institute of Chartered Accountants of Bangladesh, Institute of Cost and Management Accountants of Bangladesh, Institute of Bank Management, Training Institute of different Commercial Banks, Insurance Academy and the Bangladesh Management Development Centre. Major training load for the local Government officials including elected representatives was taken by the BARD, Comilla, RDA, Bogra and NILG at Dhaka.

Organisational Development and Systems Improvement

21.7 A number of programmes have been taken up by Finance Division, ERD, IRD, BBS, IMED, Planning Commission, Ministry of Establishment and BIDS. With a view to improving the financial and budgeting performance of the public sector corporations, Finance Division has undertaken a project entitled "Development of Performance Evaluation and Financial Management Information System for Autonomous Bodies" under which a financial and performance reporting system has been developed. The project has been continuing over for four years and needs evaluation. The Ministry of Establishment has taken up a programme for modernisation of personnel management system and development of its O&M Wing through computerisation. It was scheduled to be completed by June, 1988. Though its implementation period has been extended upto June, 1990, its performance in computerisation of different cadres and grades of officers' records would be far below its targets. Ministry of Establishment has also carried out renovation and improvements of the Secretariat. Besides, with the US Aid assistance, the Ministry of Establishement has taken up project for training (long & short term) for different grades of officers of government and semi-government organisations on development and management. The Internal Resources Division has taken up a programme for strengthening the country's customs and excise administration under a comprehensive programme of computerisation. It has also a project with UNDP assistance for reviewing the tax administration. The Finance Division has initiated a project for developing computerisation models on financial analysis and management in respect of fiscal and monetary policies, programmes of the ERD related to development of foreign aid accounting and management including debt servicing. It has also built up a system for programming technical assistance. IMED has strengthened its implementation and monitoring capabilities through technical assistance projects and computerisation. The Statistics Division has developed cartography which would cater to the needs of different census and surveys. It has on experimental basis studied local level planning through collection of community based statistics. Apart from national censuses, it has taken up projects like survey of household capability, thana statistics, Monitoring of FFW and VGD programmes to build up local based statistical system and information.

Administrative Reforms

21.8 In pursuance of the recommendations of the Committee on Administrative Reorganisation and Reforms of 1982, several important administrative reforms and improvements have been carried out. The responsibility of overseeing the implementation of the reforms lies with the National Implementation Committee for Administrative Reforms (NICAR). The Government have carried out massive programme of decentralisation of administration and development of upazila (now thana) as the focal point of development, transferring substantial responsibilities of planning and implementation of development activities to that level of the local Government. The Thanas are, however, yet to attain the desired efficiency in planning, formulation and implementation of development programmes or activities owing largely to lack of experience, necessary expertise and resources. In order to rationalise the existing pay structure of the government employees a national Pay Commission has been constituted in 1989 for making necessary recommendations. A high level Committee has been formed under the auspicies of the Ministry of Home Affairs to make recommendations for reorganisation of the country's police service. The Committee has since submitted its report to the government.

21.9 The Ministry of Establishment has conducted a study on public administration efficiency. The study shows fundamental weaknesses that still exist in case of bureaucratic control of administration, centralised authority in decision making, lack of confidence in delegation of such authority, lack of professional

knowledge in the ministries and anomalous position in the services of different cadres. These are some of the vital malice in public administration and need to be corrected even though major restructuring of administrative system is required.

FOURTH FIVE YEAR PLAN

Objectives

21.10 The objectives of public administration sector during the Fourth Five Year Plan has been set within the overall macro framework of the plan. It is envisaged that the implementation of the Fourth Plan would be through the following major components: (a) Conventional Public Investment Programme; (b) An expanding investment programme for the private sector; (c) A more comprehensive and planned effort to use the NGOs and (d) Effort to promote a format for decentralized participatory planning.

21.11 In addition, one of the most important innovative features of the Fourth Five Year Plan would be the integration of existing sector based planning with group based planning.

21.12 In view of the above, objectives of the public sector system during the Fourth Five Year Plan would be:

(1) Improvement of efficiency of the public administration system for delivering goods and services from the overall planning system.

(2) Improvement in the capability of the public administration system in understanding, analysing and assisting the development of the market economy.

(3) Transformation of role of public officials into catalytic agents of change within a decentralized framework of bottom up planning.

(4) Restructuring of the existing primarily sector-oriented administrative structure so as to integrate sector based planning with group based planning.

(5) Improvement of the capability of public officials in understanding and application of technological upgradation, technology transfer and adaptation.

Strategies of the Plan

21.13 A two-way approach would be used to achieve the above mentioned objective. One, administrative measures and reforms to bring changes in administration suited to the needs and the other, organizational and institutional development. The administrative system and procedures, financial management etc. have to be improved through administrative measures and reforms. Organisational efficiency, on the other hand, may come through multisectoral approaches for which different Ministries and agencies would be required to launch a wide variety of programme for improvement of organisational capacities and working system.

21.14 Organisational development has hitherto been mostly conceived as creation of mere physical facilities without commensurate increase in professional skill. Such measures would hardly increase organisational efficiency. For some organisations, on the other hand, there is an acute shortage of working facilities. Such incoherent development must be remedied.

21.15 The Ministries and agencies are increasingly required to assure a greater responsibility of implementation of development plans, policies & programmes. This would require firstly, increase in knowledge, secondly, manning the organisations with proper personnel and thirdly, administrative restructuring. Professionalisation of administration would require training and personnel development.

21.16 One great anomaly exists in the dichotomy of planning and development function in the Ministries. The Ministries have both planning and development wings/units as separate entities. As a results there is not only overlapping of functions but also sometimes, contradictions in work. Whereas the Planning Units are responsible for preparation of development projects, processing them for approval, maintaining coordination with Planning Commission, IMED and other organisations, the Development Units usually take up the administrative aspects of these work including even the release of funds for the projects. Such dichotomy of functions must be removed and the two Units merged into one for the interest of overall work under the unit.

21.17 A major reorganisation would be required in training institutions and training programmes. There exists a large number of training institutions and there also exist for many services separate training institutions. Much of the facilities of these institutions are not adequately utilised whereas a heavy overhead has to be continuously maintained. As against this there is also an increasing need for training cadres. In the context of this scenario, available facilities of training has to be studied, institutions reorganised and their programmes replanned.

21.18 Instead of taking training as a routine work of the institutes, it should be properly planned in the context of the Ministries and carried out within the framework of a national training policy which is yet to be finalised. The Ministries and organisations will have their own staff development plan and the training institutions will organise training courses accordingly. Professional capability of the training institutes will have to be developed as opposed to their dependence on external help.

21.19 Career management and opportunities have to be coherently planned. Promotion, incentives, posting etc have to be based on types of training and objective evaluation of performance on jobs. Research is to be carried out on different administrative problems. This may be largely taken up by the training institutions. This ought to be a part of normal function of the training institutes and carried out by the faculty members as part of their normal duties. Such research or studies would help provide inputs for training and improve the quality and effectiveness of training.

19.20 Administrative efficiency is vitally linked with job accountability. In the absence of this, not only work would suffer but also there would be a tendency towards shifting of responsibilities. Centralised authority and decision making and lack of supervision of work at different hierarchical position further accentuate the problem. The basic goal of administration i.e., welfare of the people, is frustrated on account of lack of accountability specially at the level which deals with the public in general. Further, if the functions of an organisation are not properly and timely carried out, functions of other organisations would suffer. Moreover, there are various service Ministries which ought to provide service benefits to the employees of other Ministries (i.e. accommodations, pay, pension, etc.). If these are not rightly and timely provided, frustration grows among the employees who have to pursue those and this affects their normal duties and breeds corruption.

21.21 Job accountability has to be ensured at different levels and for such purpose reward and penalty system introduced. Even though various measures may be taken for organisational development, the lack of accountability alone may eat to the vitals of efficiency.

Fourth Plan Programmes

21.22 Administrative efficiency would thus depend upon quite a large spectrum of efforts some of which have to be carried out through administrative reforms and measures and some through development programmes. The latter under the Fourth Five Year Plan is outlined below:

Training

21.23 Training would be one of the vital components of the development programmes. Several aspects of efficiency measures would be integrated with training. Besides, increasing the efficiency of the public officials, each programme would also reflect the other objectives of the Fourth Plan such as increasing their capability for "Managing" the market economy, improving their role as catalytic agent and their ability to integrate sector-based planning with group-based planning; kinds of training would be foundation training, refresher's training and specific job or field oriented training. Particular emphasis would be put on field oriented action training programme increasing the interaction between the public officials and the people in all such training. Attitudes and motivation towards work have also to be integrated with the skill and knowledge to be imparted. It is difficult and rather not also practical to lay down the training targets for the plan period. On account of various backlog in training, specially at the foundations level, the training programmes and targets would greatly depend on how quickly such backlog may be reduced at the same time, the new entrants get the required training. Duration of foundation training in many cases may also be reduced and crash programmes may be taken for other training specially related to specific knowledge and job. The Ministry of Establishment have been conducting training under its training instituties like PATC, BCS (Admn.) Academy, RPATCs and DSTIs (District Staff Training Institutes). Though training targets would vary according to the training programmes undertaken in the years of the Plan, some tentative estimates may be made for the period of the plan.

21.24 Presently, PATC can train annually a little over 1600 officers. During the Fourth Plan, it will be able to train about 8000 officers. The four RPATCs with annual training capacity of about 5100 officers and staff will be able to train a total of 25,500 officers and staff. The BCS (Admn.) Academy with the annual capacity to train 345 officers will be able to train 1,725 officers during the plan period.

21.25 The Academy for Planning and Development of the Ministry of Planning offers post-foundation departmental training to the BCS (Economic) cadre officials, foundation training of other cadres, as and when directed (as in 1989-90), and officers of various Ministries/Agencies, autonomous bodies in different fields and subjects like project planning, financial management, development administration etc. According to a projection of the Academy, about 7000 officers of different Ministries and organisations can be trained during the plan period.

21.26 There are such other training institutes under different Ministries like Communication, Agriculture, Finance, etc. Some of them provide job specific training. Besides, there are other training institutions in the Public Sector like BMDC, Industrial Relations Training Institutions (Ministry of Labour and Manpower), BARD, RDA (Bogra), National Institute of Local Government, Co-operative College and Co-operative training institutions etc. Training Institutes in the private sector have also grown in large number and besides those providing technical training, some have been conducting training in computer programming.

21.27 Effectiveness in training would be the prime consideration and more important than the number of personnel trained. Follow-up measures would be required to see whether the personnel trained in certain fields have been posted in those fields and they work for a certain duration and their job efficiency has improved. While some of the institutions may need further development, some may be working under their normal capacities. Institutional development for training would require a reorganisation of the existing training institutions. The existing training institutes, their facilities and capacities and their training clientele need to be first studied. An evaluation study would be taken in the Plan to investigate into the effectiveness of present training and the need for further development of any institution or creation of new institutions which are being proposed by different Ministries. The Fourth Plan, therefore, provides only block allocation for development of training institutes. Specific projects would be taken up on the basis of the study.

21.28 Fourth Five Year Plan advocates to increase the comparative strength of the economy through continuous technological innovations and adaptations. Various policy instruments greatly influence and promote technological development. These include legal instruments such as patent/copyright/trademark laws, licensing rights etc., fiscal instruments such as tariff subsidise etc., financial instrument as bank credit policy, regulatory instruments such as pricing policies etc. Unfortunately administrators/policy makers are not adequately conversant with such policies and instruments. Administrators and policy makers should now cover the area of technology as well.

Organisational Development

21.29 Programmes would relate to those of Public Service Commission, the Ministry of Finance and the National Board of Revenue. The PSC has already taken a TA project; the purpose of which is to improve its capabilities. This would involve study on organisation of PSC and its functions, improvement in the examination and recruitment procedures, training of PSC personnel and procurement of equipment and aid for recruitments. The Ministry of Finance would implement a TA project for developing computer models for fiscal and monetary management. Such work would be institutionalised within the Ministry of Finance through their own staff development. The NBR would execute two TA projects; one, the study of tax policies and methods and the other, computerisation of the excise tax and customs administration. Under the organisational Manpower Planning project of the Ministry of Establishment, strengthening of a few important target Ministries with programmes of their manpower planning and development will be taken up.

21.30 As in the case of NBR, the Audit and Accounts Department also needs to be computerised. Presently the department has a network of offices from the headquarter at Dhaka to thana covering almost 500 offices. The efficiency of the department would much depend on computerisation of the accounts. The audit system has also to be modernised. The department has an Audit and Accounts Training Academy whose physical facilities also need to be developed. The department would take up programme for computerisation of audit and accounts system.

21.31 The Bangladesh Computer Council will promote use of computer and information technology, provide advisory and technical services to different organisations and standardise computerisation and information technology. The council presently working in a hired accommodation; needs its own building and

facilities. Computer training is now being provided in the private sector. At present the council instead of taking any training programme itself may help those training centres in developing their advisory services. It may take up a study to evaluate the performance of these centres. The Ministry of Planning would take up a project to integrate computer facilities for Planning Commission and IMED.

21.32 For development of budgeting and financial performance reporting of the autonomous bodies, Ministry of Finance has been implementing a project since 1986. Formats and systems have already been developed. Though the project implementation period is upto June, 1991, activities so far taken under the project would be reviewed and evaluated and with justification, if any, for its continuation beyond June, 1994.

21.33 Thanas have emerged as the focal points where multisectoral development programmes both of national and local character are being taken. Whereas national data base exists for population, agriculture, health and family planning, income and expenditure, employment, education, etc. thana based more detailed statistical information is needed. The Statistics Division would conduct a survey of eighty thanas to generate statistical information and a project for such purpose has been taken and it would spillover to the Fourth plan for completion. The Statistics Division will also monitor programmes of Food for Work (FFW) and Vulnerable Group Feeding in terms of income impact. A project has been taken up for such purpose and it will also spillover to the Fourth Plan. The work is being conducted in 64 thanas. As a part of the programme for improvement of peoples participation in planning, local people would be trained in collection of local level data which would help in planning for themselves. A few such projects would be undertaken during the Fourth Plan.

21.34 Finally, the Fourth Five Year Plan envisages the integration of sector-based approach with the group-based approach, promotion of efficiency culture, improved inter-sectoral balance, and empowerment of the people for participatory development. The critical input for achieving these aims would be action training to be followed by appropriate changes in administrative rules and procedures. This has been highlighted in the relevant sub-section of Macro Chapter on Implementation Strategies for the Fourth Five Year Plan (Chapter-II).

Reforms and systems Improvement

21.35 During the past years, several administrative reforms and procedural improvements were carried out which entailed changes both in the regulatory administrative system as well as development management and administration. During the Fourth Plan period, the existing administrative structure will be further reviewed to examine efficacy of the system to cope with the administrative, procedural and development needs of the country. On the basis of the identified needs, necessary reforms will be introduced in the public service, keeping carefully in view, the expanding role of the government and the policy of increasing decentralisation of administration and development.

21.36 Comprehensive training programmes for public officials at all levels have been planned. However, experience shows that training does not contribute towards enhancement of efficiency of an official if job analysis, career planning and training activities do not functionally match with each other. During the plan period, efforts will be made to analyse the job requirements at various levels more carefully and objectively, plan the career of personnel commensurate with their job requirements and design and implement the training programmes accordingly. Programmes will be formulated with efforts to synchronize job requirement, career planning and training programmes.

Staff Welfare

21.37 In addition to programmes envisaged above, staff welfare activities would be carried out by the Ministries and organisations as a matter of normal functions but carefully planned to provide incentives to raise the motivational level of officers and staff. This particularly would refer to the Ministries and organisations having large industrial enterprises (BCIC, BSEC, BJMC, etc.) and employees working in the industries. The present welfare programmes of the Staff Welfare Directorate would continue but need to be reoriented. Presently the Directorate having allocation from the revenue budget, provide a large amount of funds as grants to the community centres which have enough income. This should cease and instead, programmes for the low income staff should be expanded and programmes for the retired Government personnel may be taken up.

Women In Public Administration

21.38 Due emphasis will be given on increasing the role of women in public administration. Measures will be undertaken to integrate women in the overall national development process and the public administration system. Efforts will be made to increase the participation of women at all levels of the government machinery

from Ministries and Divisions upto the local government bodies commonsurate with the government policy of decentralisation of administration and development. Attention will be given to associate women in larger numbers at all stages of the development planning process-in planning, programme/project formulation, implementation, monitoring and evaluation. In view of the widespread unemployment among women, particular emphasis will have to be given to the issue of increasing the ratio of female employment in the civilian labour force. Special plans, policies and programmes, including implementation of the present quota system for women's recruitment, will be pursued during the Fourth Plan. In order to ensure greater role and participation of women in the process of policy formulation, adequate representation of women at the policy level of administration including the national policy making bodies will be given special emphasis during the Plan.

Financial Allocation

21.39 Taka 201.00 crore is proposed for the development programmes of this sector for the Fourth Five Year Plan of which cost of spillover projects would be Tk. 38.00 crore and allocation for new programmes would be Tk. 163.00 crores. Out of the spillover cost of Tk. 38.00 crores, Taka 19.00 crore is for T.A. projects which would be mostly financed through the external assistance.

CHAPTER-XXII

IMPLEMENTATION AND MONITORING OF DEVELOPMENT PROJECTS

22.1 The success of any plan, depends on its supportive policy environment and effective implementation. The experience of development planning indicates that attainment of the objectives largely depends on the efficiency of its implementation.

22.2 In Bangladesh, a number of factors impede iplementation of development projects and programmes at stipulated cost and the time schedule. The most important among them are the following:

(i) **Shortage of Local Currency:** Shortage of matching local currency has been a major constraint in project implementation and absorption of project aid. The growth in government revenue has fallen behind the rapid increase in current expenditure.This position has however, improved since 1991-92, still the limited amount of taka resource is being spread thinly over too many projects, including the new projects. Consequently, this has led to staggering of the implementation schedule for most of the projects.

(ii) **Delay in Land Acquisition:** The delay in land acquisition continues to be a major impediment in project implementation, particularly in projects of agriculture, irrigation, flood control and road development sectors. Land acquisition procedures are still quite lengthy. Attempts are, however, underway to simplify the acquisition procedures and amend the existing land acquisition law. Besides a block allocation has been provided in the ADP to meet shortage of fund for land acquisition from 1991-92.

(iii) **Donors' Procedures and Practices:** Delay in negotiation and signing of agreements because of centralised decision making authority of the donor agencies, stringent conditions for credit effectiveness, delay in appointment of consultants and contractors, delay in procurement under tied-aid are some of the important obstacles to project execution according to approved schedule.

(iv) **Insufficient Fund for Operation and Maintenance:** As slow implementation of projects means delayed benefit, slacks in operation and maintenance cause more severe sacrifices with regard to attainable benefits. The operation and maintenance problems are common in public sector projects. Because of lack of operational plan, many public corporations and agencies fail to provide for adequate funds for operation and maintenance of facilities. This necessitates the replacement of assets through the ADP. Thus what is contributed annually to the development programme by disclaiming their maintenance is taken out by the replacement. This costs more to the economy as inadequate maintenance of assets also reduces their benefits.

(v) **Inclusion of Significant Number of Unapproved and Probable Aided Projects in the ADP:** A significant number of unapproved projects as well as probable aided projects are included in the ADP. The fund release procedure in vogue does not permit release and utilization of funds for unapproved projects. Consequently such projects fail to make any progress. Further projects included in the ADP prior to finalisation of aid agreement and fulfillment of other conditionalities of aid disbursement cannot make any headway in project implementation.

(vi) **Inadequate delegation of Financial Powers:** The financial powers delegated to different levels is not adequate. Specially Project Directors do not have authority to purchase/procure any goods and services. The authority delegated to the Ministries are also not adequate. Consequently projects suffer in implementation.

(vii) **Defects in Project designing and Planning:** It has been observed that many projects face implementation problems due to faulty design or improper planning. Such projects are usually of large investment size being highly engineering and technical in nature. Though planned on the basis of feasibility studies, they occasionally vary with the objectives of field conditions or price structure. As a result, the projects undergo revisions leading to cost and time overrun. Sometimes projects are also found to have ambitious targets or understate the cost which necessitates revisions in the midst of implementation. Proper designing or planning of projects is a necessary preconditiion for successful execution of projects.

22.3 In order to remove the implementation difficulties, the Government of Bangladesh has adopted a number of measures over the past several years. These measures include:

(a) simplification of fund release procedures;

(b) delegation of authority to project Directors/Managers;

(c) introduction of a Three Year Rolling Investment Programming system;

(d) simplification of procedures for procurement of goods and supplies and hiring of project personnel;

(e) specific and adequate provision for CDVAT in the development budget;

(f) strengthening of monitoring of implementation in the line Ministries and in the Implementation Monitoring and Evaluation Division (IMED);

(g) Simplification of procedures for approval of development projects;

(h) Rationalisation of investment cost of projects by the IMED before formal approval of the PCP and

(i) Convening of regular meetings in the line Ministries and of the Executive Committee of the National Economic Council (ECNEC) for periodically reviewing the progress of implementation of various projects and programmes, and adopting measures for overcoming implementation bottlenecks.

While the above measures have yielded some positive results, yet project implementation delays continue to remain a matter of concern for the government and the donor agencies.

22.4 The failure to complete projects in time has not only meant loss of benefits in terms of production, employment and balance of payments contribution but also the "tyranny of on-going projects" carried over to each successive plan has diminished the possibility of implementing new policy measures.

Monitoring Mechanism

22.5 The implementation of projects is monitored through two ways-internal and external. Internal monitoring of projects is the responsibility of individual Ministries. Whereas responsibility of external monitoring of development projects lies with IMED.

In the beginning of 1980's Planning Cells/Wings were created in different ministries/divisions with a view to strengthen planning and monitoring activities of Ministries/Divisions/Agencies. Project information from the field level is routed through Agencies to the Ministries. Ministries in turn take decision to remove problems confronted by the projects in the field, through monthly inter-ministerial review meetings held in Ministries at the level of Ministers/Secretaries. The activities of the Planning Wings have weakened in the past years because of expanded development activities and some additional responsibilities entrusted on them. As a result intensive internal monitoring by Ministries/Divisions has hampered. To achieve the desired level of monitoring efficiency by the Ministries/Divisions the capability of Planning Wings are needed to be fully exploited by concentrating on drawing up realistic physical and financial programmes of different development projects in the beginning of the year and intensively monitoring them.

IMED is the central organisation responsible for regular and systematic monitoring of all development projects, including technical assistance projects included in the Annual Development Programme (ADP). In monitoring different procedures are followed for collecting information and compilation of data. Implementing Ministries/Divisions/Agencies are required to submit periodic reports to IMED on physical and financial progress of various projects under their control. Apart from that all the officials of IMED are required to undertake on the site inspection of projects under impelmentation. This activity goes round the year depending on nature and importance of the projects. Some of them are inspectd a number of times to assess their physical and financial progress and identify implementation difficulties and suggest solutions for redress. Site inspection reports are sent to concerned Ministries/Divisions including Planning Division for action needed at their end. IMED is one of the members of the inter-ministerial monthly review meetings where IMED's representative plays an important role in supplementing information of development projects for taking appropriate action. Annual reports are prepared, containing physical and financial progress highlighting

difficulties faced by the Ministries/Divisions/Agencies during a particular year and suggesting probable solutions. These reports are placed before the NEC for its consideration.

22.6 Monthly review meetings are held in each Ministry/Division with representations from IMED, Planning Commission, ERD and Finance Division. These meetings review outstanding implementation issues and adopt measures to resolve them.

22.7 Pursuant to NEC decision of 15.6.92 special arrangement has been made for monitoring of major aid utilizing Ministries (16 nos. Ministry/Division/Wing). Besides, high priority projects of these Ministries are specially monitored/reviewed.

22.8 In view of the need for expediting implementation through solution of major implementation problems & bottlenecks, Ministry/Division-wise review meetings are being held periodically under the chairmanship of the Prime Minister. Such meetings provide special impetus to the project implementation process.

22.9 Special monitoring for the procurement of goods/works and services has been introduced and this needs intensive monitoring. Delay in procurement of goods and works under project aid causes delay in implementation of development projects. As such it was felt that a close monitoring mechanism from floating of tender to issuance of work order should be developed. Consequently special monitoring for the procurement of goods/works and services have been introduced. Further, to improve the situation arrangements are underway to impart training to personnels dealing with procurement of goods/works and services.

22.10 The ECNEC undertakes review of the progress of implementation of development projects. Such a review process is a very useful mechansim for addressing implementation problems that need inter-agency coordination. In order to improve project implementation and establish accountability, the government has issued directives in 1988/89 requiring the defaulting Ministries/Agencies to report to the ECNEC the reasons for unsatisfactory performance along with fixing of responsibilities with respect to the following:

(a) non-completion of project targeted for completion;

(b) Progress as against annual physical targets;

(c) Utilization of annual allocation; and

(d) non-adherence to planning and financial disciplines.

The IMED prepares an annual report on the physical and financial performance of all the projects included in the ADP for review by the NEC. The success and failure of the line Ministries/Divisions are discussed in the NEC and appropriate directives/guidelines are issued to further improve implementation of projects/programmes and utilisation of fund.

22.11 Previously NEC used to review implementation of ADP on an annual basis. Presently however it is required to hold quarterly reviews as well. The IMED prepares the reports for such reviews. The reviews at such a high level are significant in giving among other things, policy decisions towards improvement in planning and implementation process.

22.12 In order to enhance the monitoring capability of the IMED, steps are being taken to strengthen the organisation with sufficient manpower and other support. A programme has been implemented for improving its information, technology/computerized data processing capability and for establishing linkages with the monitoring systems of the Prime Minister's Office and Technical Assistance Coordination Branch (TACB) of the ERD.

22.13 Besides, the monitoring of project impelementation and reporting to the ECNEC and the NEC, IMED undertakes evaluation of projects on a regular basis. It evaluates all completed projects of a given year. In addition it evaluates projects/programmes, either on-going or completed when it becomes necessary or as directed by the ECNEC or advised by Planning Commission/Prime Minister's Office/Ministries. The present project approving procedures also require performance evaluation of projects by IMED if its second phase or extension of the project are proposed. Such evaluation helps taking decisions on the approval of projects.

Implementation of Local Level Projects:

22.14 Institutional framework required for an efficient planning process is yet to be developed. Limited technical knowledge of the local bodies has been a serious constraint in developing and implementing the project. Government has given much importance on decentralization of development and planning process. With the abolition of the Thana Parishads, an overall institutional system at the thana level needs to be developed for better coordination and planning. A considerable amount of investment allocation is made in the ADP as block allocation under thana and pourashava development heads. Monitoring of these programmes are carried out by the Local Government Division.

22.15 Food Assisted Programmes are major development activities aimed at rural development, human resources development and employment generation. Considering their importance, attempts are being made to integrate this programme with national development plans and to introduce adequate mechanism for its monitoring and evaluation at national level.

Non-Governmental Organisations' (NGOs) Activities

22.16 The NGOs were initially involved in relief and rehabilitation, but they have gradually widened and diversified their operations in awareness building through motivation and training, various income generating activities and social services. The main areas of special and economic activities of the NGOs are: family planning, health, education, rural development and self-employment in agriculture and cottage industries. In most cases, they work in rural areas and their target people generally includes the landless and the marginal farmers. They are however concentrated in particular areas and their spread out needs to be wide and even.

22.17 The government has been encouraging NGO participation in nation-building activities for which various measures have been undertaken. In order to simplify procedures and for convenience of handling the NGOs affairs particularly those which are assisted out of foreign donations, a NGO Affairs Bureau has been established in the Prime Minister's Office. Efforts are being made to develop effective mechanism for monitoring NGOs Projects.IMED is considering to mount a study to evaluate role and impact of NGOs operating in Bangladesh in consultation with the main development partners.

Monitoring of Private Sector Projects

22.18 The government policy is to pave the way for rapid expansion of the private sector and for its transformation into a more effective market economy. The role of the government in respect of the private sector will be promotional rather than "regulatory". The government will play a catalytic role through the sponsoring agencies i.e. BSCIC for small and cottage industries. BEPZA for industries located in export processing zone and Board of Investment for all other cases. Major goals of the present industrial policy is to increase efficiency and productivity in the industrial sector by transferring public sector industries to the private sector. To facilitate the process a Privatisation Board has been setup in order to review the performance of the industries sector on the whole and to formulate any policy in the area of industries, there will be an Industrial Development Council under the Chairmanship of the Minister for Industries. The concerned sponsoring agencies shall collect information and data on quarterly and yearly basis and furnish them to all sanctioning/registering authorities and monitor the progress of overall industrial development of the country.

Policy Measures for the Fourth Five Year Plan

22.19 Improvement in efficiency of project implementation will continue to receive high priority in the Fourth Five Year Plan (FFYP) for which the following measures are needed:

(a) In view of the shortage of Taka resources efforts will be made to limit the number of projects in the ADP. Therefore, it will be important to follow rigorously the principles of prioritising the projects as "National important"," Aided" and Rolling Investment Programming System.

(b) To limit the number of projects in the ADP, particularly unapproved projects and projects for which aid yet to be lined up, in case of urgency such projects may be included in a separate list in the ADP under block allocation.

(c) In order to overcome the problems associated with land acquisition, it will be necessary to undertake advance planning and simplification of land acquisition procedures.

(d) Further delegation of financial and administrative powers to the project Directors/Managers in matters of procurement of project goods and supplies and hiring of personnel will improve implementation performance. The project Director/Managers should be made accountable and

trained on their job especially on project management and procurement and there should be a system of reward and punishment.

(e) Simplification and harmonization of development procedures can contribute to improvement in the rate of project aid utilization. Rigid conditionalities imposed at various stages of project processing and implementation, centralised decision making process of development partners and imposition of excessive consultancy services need to be smoothened. Besides, allowing domestic preferences of locally available produced goods and services may also help in smooth implementation of projects.

(f) A better balance needs to be established between operation and maintenance (O&M) expenditures of completed projects and the allocation of funds for new projects. In undertaking new projects, the recurrent cost implications should be kept in view. The donors should be persuaded to provide O&M support for some years after completion of projects, particularly in the social sectors.

(g) The capacity of the IMED as Central Monitoring Organisation should be further strengthened for effective monitoring of the progress of implementation of various projects and programmes as well as to undertake on going and ex-post evaluation.

(h) The Planning Wings of the line Ministries/Divisions/Agencies should be made more effective in such a way that it can deal with realistic programming of projects with intensive monitoring.

(i) Planning capabilities at the local level need to be developed and strengthened.

(j) Food assisted programmes should be integrated with the national development plans with adequate monitoring and evaluation arrangements.

(k) In order that NGO activities are consistent with the goals and priorities of the Fourth Five Year Plan, it will be necessary to carry out effective co-ordination and evaluation of their programmes.

(l) Monitoring of private sector investment in major sectors would be useful for guiding investment decisions. Monitoring of private sector investment would help in designing appropriate "incentive packages" for private investment.

22.20 Finally, the Fourth Five Year Plan has identified a number of constraints in chapter 1 that hamper and distort the development process. In the chapter on Implementation Strategies for the Fourth Five Year Plan (Chapter II) attempts have been made to identify some critical steps that have to be taken to improve the implementation of the Plan. If those implementation strategies can be followed there would be built-in transparency and accountability in the implementation process. This would facilitate the task of monitoring and evaluation of planned activities and adoption of timely corrective measures.

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