

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	1226	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) (% Share)	17.79 (100.00)	18.65 (100.00)	22.54 (100.00)	2.53	4.85
Commercial (MTOE) (% Share)	6.11 (34.30)	6.23 (33.30)	9.36 (41.50)	1.05	8.89
Biomass (MTOE) (% Share)	11.69 (65.70)	12.47 (66.70)	13.20 (58.50)	3.28	2.45
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	0.82
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, comprises bio-mass fuel (agricultural residues, tree residues, fuelwood, animal 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 consumption 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 demand of biomass energy due to population increase on the other. It is estimated that about 13.5 million TOE of biomass 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 number 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 biomass energy through afforestation programme and other agricultural activities are being dealt under agriculture and forestry sector, the section deals under energy sector primarily concerns with conservation of biomass 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 enterpreneurous 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 photovoltaic 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) Equipping 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. wherever 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)					Total
	1990-91	1991-92	1992-93	1993-94	1994-95	
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 multinational 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 Pk.Av.	1990-91 Pk. Av.	1991-92 Pk. Av.	1992-93 Pk. Av.	1993-94 Pk. Av.	1994-95 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	185	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 1990-95
	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	
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 DMRE of Eastern Refinery Ltd. adding a secondary conversion plant to the existing Refinery and completion of storage and bottling plants at Elenga and Kailashtilia 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)

	Total	(Tk. in crore)				
		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 PBSs 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.

Reduction 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/Naphtha, 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

Year	Revised ADP provision			Actual Expenditure		
	Total	F.E.	Local	Total	P.A.	Local
1990-91	997.33	672.63	324.70	552.85	280.18	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	Generation Capability	Firm Capability	Reserve Capacity	% of Reserve Capacity over Max. Demand
	(MW)	(MW)	(MW)	(MW)	(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 2226 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	44046	17140	61188
	- Electrified village (No.)	8930	23811	10730	3800	14530
	- Consumer Connection (No.)	495565	1282465	708962	254000	962962
DESA	- Distribution line (KM)	-	-	4850	1325	6765
	- 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 696 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)

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	(In crore Taka)	
						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 (1423.59)	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)

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-kilometrage 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. In spite 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.

Mode	(Tk. in crore)			
	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 damaged 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 assets. 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 without 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 assets 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 crores 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 earmarked 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 programme, (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. Consequently, 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 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 rehabilitation/ 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, She-pur and Halda bridge, Kanchan bridge, Shango bridge, Thakurgaon Station Road bridge, Ghagol 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 services. 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 personnel 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		1990	
	Total	Roadworthy	Total	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
Trailer	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 tariff 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 Authority (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 Authority 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 kilometragerage in Bangladesh is 2746, which consists of 924 Kms of Broad Gauge (1.68 metres) and 1822 Kms of Metre Gauge (1.30 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-Dewanganj Bazar section and four Junction stations i.e. Kulaura, Shaistaganj, 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 Fulbaria to Kamalapur 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 summarised 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 Thrd 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. <u>Passenger Movement :</u>						
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. <u>Freight Movement</u>						
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. <u>Locomotive Movement</u>						
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 come 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 countryside 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 turn 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)	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	22
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 ferries 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 Transport 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	4.71	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 necessity. 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

Year	Import	Export	Total	(Figure in lakh M.T.)
				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 Birman (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 improvement 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 summarised 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 undertaken 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 overflowing 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 compound 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

Year	(In million Tk.)			
	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	1821476	45649	50602
1990	1826782	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 summarised 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 different 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 million 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	1988/89	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	3210
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:

- 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.
- 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.
- 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 network.

- (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 disquieting 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 occurrence 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 assets, 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 Year 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 in view 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 In 1989-90 prices

Name of Sub-sector	Allocation	(Tk. in crore)
A. Road and Road Transport :		
1. Roads & Highways Department (RHD)	2725	
2. Bangladesh Road Transport Corporation (BRTC)	12	
3. Planning Commission	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.

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 include 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.
- i) Subsidy should be granted to BRTC for rendering non-profitable mandatory utility services; and
- j) 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 separate 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 signalling 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 tariff 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 similar 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 development 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 locomotives 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 programme 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 riverine 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 strengthening 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 beginning, 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 (DWT 0.19 lakh) to 18 (DWT 1.75 lakh) between 1980-81 and 1989/90. In the same period the BSC has decreased 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 obsolete 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 undertake 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 Restructuring.

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 relevant 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 quantitatively and qualitatively 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 automobiles 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 firms do not become eligible 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 dependence 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 be 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 standardised 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, shouldering responsibility of maintenance may considerably improve the deficiency of transport infrastructure at an early date. Community 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 design, 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 obsolete 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 indigenous 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 tariff 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 capital 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 expertise.

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 Haliashahar, 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 balloon 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 balloon observatories were established. During the Second Plan (1980-85), 8 1st class, 3 pilot balloon 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 establishment 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 facilities 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 Infrastructure 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 only 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 targeted 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 undertaken during 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

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 bypassed 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.

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 inadequate 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 facilities of the rural post offices.

13.161 The post office registered an operating deficit 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 eliminating 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-equipped. 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 occurrence 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 "Courier Service". They are providing prompt and efficient services on payment of charges much higher than those of post offices. The "Courier 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) Stamp Canceling	36	40	15	55
(iii) Stamp 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 Warning 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	—	7
(b) Agromet observatory	5	5	—	8 c

Table 13.22 Physical Targets of the Communication Sector (Concl'd.)

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. Geomagnetic 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.

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). The Two 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 sq ft 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) Bungalows at Dhaka for Ministers' and 142 Bungalows 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 Kaiballyadham, 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

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	Achieve- ment	Position in 1989/90
1	2	3	4	5	6
Construction of Govt. quarters/offices					
1.	Construction of Bungalows	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	" 8391	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 saharas	" 24.70	40	29.74	54.44

Major Constraints to Development

14.6 The major problems/bottlenecks encountered in the course of implementing 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 resources 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 nucleus 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 allotted 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 perennial 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 conditions 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 metropolitan 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 during 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 wherever 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 municipal 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 Kalballyadham, 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 is 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 rubbish 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	22.99
	(a) Public servant's housing	
	(b) Govt. offices & Institutional Buildings	
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)-Concl.

(Tk. in crore)

Sl. No.	Agencies	Total
1	2	3
15.	Local Government Engineering Department (LGED)	102.12
D.	Ministry of LGRD & Co-operatives (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 allotted 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 sq. ft. 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. In spite 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 diseases 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-going 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 women's 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 technical 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 layout 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.

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 education 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	14,168	15,200	15,33,800	19,80,000
Dakhil	2,156	4,306	3,32,566	6,15,358
Alim	615	760	1,23,728	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 setbacks 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 year 1990-91.

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 Research	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) Gopalganj, (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 School Teachers	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 (NSED) was established in the premises of the Teachers' Training College at Dhaka as per the TFYP programme. The NSED 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 NSED 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 Teachers Training 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 VTII" 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 initiated 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 professional 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, inter alia, 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 POI 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 setting up 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. Parallely, 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, inter alia, 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 in spite 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 endeavours 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 of its regular administrative responsibility. The DGSHE will be properly equipped to handle the female stipend programme and the subventions to compensate exemption of tuition fees to girls in Classes VI-VIII. An MIS system will be re-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 accreditation 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 madrasah 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 ancillary 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 accreditation, 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 philanthropic 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 examination 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 philanthropic 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-substituting 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 infrastructure, 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.

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

Sl. No.	Name of the Sub-Sector	PA			Total
		GOB	RPA	F.E.	
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.

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

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 socio-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 network 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, annually, 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 4348 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. Continuous 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 strengthened in phases to provide first level specialized 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 Year 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 referral 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 organised 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 Addict 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 mechanism 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 against six killer diseases i.e. tetanus, diphtheria, measles, tuberculosis, pertussis (whooping cough) and poliomyelitis will continue to receive 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 epidemiological 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 indigenous systems of medicine will be integrated and brought to the mainstream of modern health system. Programmes to upgrade formal education in homeopathy and indigenous systems of medicines and to improve the skill of those 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 Metabolic 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. Action 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, Radiotherapy Technicians

and Physiotherapy Technicians etc. will be reviewed and readjusted in the context of present and future needs. In view 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, dysentery, 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 convergence 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 holding.

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 infants 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 MCH-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 mothers 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 competitive influence of the private sector to reform the efficiency of the public services and (iii) 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	Cumulative	34488	36488
	a) Health Services	Ditto	24501	26001
	b) Other Ministries & Private	Ditto	9987	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	% coverage	75	85
	b) DPT	Ditto	68	85
	c) Measles	Ditto	50	85
	d) Polio	Ditto	63	85
	e) TT (Pregnancy)	Ditto	45	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) (Concl'd)

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) Iodiodol	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 transfusion 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 health 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

Programme Area	(Taka in crore)	
	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

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 another 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 succeed 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 falling 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 growth rate. Already in Bangladesh most of the cities existing sewerage, 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-1 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 NRR-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 successful 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 health 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,

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- (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 (+) /Decrease (-)
CBR (1000)	38.4	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	Perform	Ach %	Target	Perform	Ach %	Target	Perform	Target	Perform				
Sterilization	455,000	267,543	58.8	520,000	350,580	67.3	551,000	156,015	376,000	230,979	61.4	427,000	224,666	52.7
IUD	212,000	367,668	173.4	285,000	420,303	147.4	355,000	379,128	861,000	361,696	42.0	916,000	364,924	39.9
Oral PI	750,000	909,114	107.9	893,000	1,001,534	112.2	1,032,000	1,273,312	1,535,000	1,641,320	106.9	1,810,000	2,267,318	125.4
Condom	630,000	906,054	143.8	725,000	994,902	137.2	813,000	1,109,746	1,035,000	1,213,174	117.2	1,307,000	1,519,285	116.3
Injectables	63,000	54,165	86.0	89,000	78,746	88.5	119,000	97,356	507,000	149,757	29.5	600,000	319,913	53.1
Enko	534,000	11,604	2.2	535,000	9,809	1.8	510,000	3,596	478,500	2,550	0.5	401,000	1,009	0.3
Form. Tab.	535,000	20,336	3.9	535,000	23,358	4.3	510,000	25,323	478,500	27,327	5.7	402,000	10,314	2.6
Total CYP	3,790,000	2,436,641	76.6	3,591,000	2,876,344	80.2	3,890,000	3,085,221	5,271,000	3,626,759	68.9	5,767,000	4,521,628	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 85 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 disjunctional.

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-storied 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

Year	(In current price)		(Tk. in crore)		
	Allocation for national ADP	Allocation for population sector	% of population sector as of national ADP	Expenditure 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 committees 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 "Cafeteria approach" in matters of contraceptive 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 legitimacy 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 strategy 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
Sterilization	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 counselling, 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

Method-Mix	(In Lac)										
	1989-90 Total*	1990-91		**1991-92		1992-93		1993-94		1994-95	
		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	5.88	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
Condom	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.

Methods						(in million)
	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 efficiency 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 Health 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 suffering of many committed clients due to lack of quality services

Establishment of Contraceptive Manufacturing 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 million pieces of condoms annually.

17.38 There is a rising demand for condom and oral pills as well as IUD and injectables. The increase 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

1) 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 acceptor 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 curriculum of programme managers. NIPORT will cater to the needs of programme managers training and retraining. The Institute will also exercise leadership in the areas of training needs, curriculum development, training of mid level personnel, preparation of appropriate training methodology, aids and evaluation of the training programme. NIPORT will also provide technical backstopping 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 institutional 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 facilities 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 FWVTs 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 mechanism 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 extensively 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 strengthened 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 will 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 inheritance.

(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 measures 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 that 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 programme 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**

Programme areas/Activities	(In crore Taka)
	Amount (Cost calculated as per 1989-90 prices)
1. Service Delivery Support	763.00
2. Physical Infrastructure 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

**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 economically disadvantaged people, orphans, helpless children, old and disabled 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 development process both as contributors and beneficiaries and ensure their access to and control over development inputs, rather than being passive recipients 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-privileged 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 dimension 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 aptitude 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 retarded 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.	<u>New Programmes</u>	
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 Intirm	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 fundamental rights of women and forbids any form of discrimination on the basis of sex, women's 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 is 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 programmes 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 enhance 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 programme 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 stricken 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)

Sl. No.	Programmes	Allocation (Tk. in crore)
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 constitutes 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 trained 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.	<u>New Programmes</u>	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 Stadla, 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 Stadla, 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 tennis 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 athletics, swimming, football, kabadi, chess and volleyball. 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 qualitative 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 summarized 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, Sharfapur, 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 Laibag 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 embellished Kantanagar temple at Dinajpur and Rabindra Nath Tagore's residence at Shahjampur 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 involvement 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 facilities 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 Theatre 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. During 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)**

Programme	(In Crore Taka) 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 manifold 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, Rangamatl 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 efficiency 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 obsolete 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 documentary 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)

Name of the programme	Allocation	(In Crore Tk.)
A. Spill over projects from TFYP	22.0	
B. <u>New Programmes</u> :		
1. Programme for Radio	25.0	
2. Programme for Bangladesh Television	70.0	
3. Other Programme	6.0	
Total :	123.0	

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 technological 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 dominant 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 strategies 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 enterprises, lack of comprehensiveness in S&T policies and other policy support.

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, emphasised 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. This 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.

Plan	Plan outlay (Public Sector)	Allocation	% allocation	(In crore Taka)
				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 establishment 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.

BCSIR

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 Table 19.2

Table 19.2 Agency-wise Performance during Third Five Year Plan.

Agency	No. of TFYP Projects		Total	No. of Projects under Implementation during TFYP	No. of projects completed	TFYP allocation	(Taka in Lakh)
	Originally included	Subsequently taken up					Estimate Expenditure during TFYP
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 technological 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 uncoordinated 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 including 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 environment 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 entrepreneurs (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 centres 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)**

Year	Plan allocation	(Tk. in Crore)
1990-91	7.00	
1991-92	8.00	
1992-93	11.00	
1993-94	13.00	
1994-95	15.00	
Total:	54.00	

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 formation, 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 Training 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 strengthening 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 institutional network 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	Apprenticeship	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 training 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 network 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 foreign employment including pre-registration interview, scrutiny 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 \$	Crete 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				Total
	Professional	Skilled	Semi-skilled	Unskilled	
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 activities 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 sectors. A unit was set up in the Planning Commission to conduct studies and monitor employment generation 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 Inspection	No. of Violation	No. of prosecution	No. of cases disposed 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	6,822	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 abolished 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

Plan	Plan Allocation	Allocation through ADPs	Fund Utilisation	(Taka in crore)
				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 existence 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 bottlenecks 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 resulted 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 or no welfare impact on the labour force. They failed to provide any meaningful 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 comprehensive 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 occupational 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 assessment 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 quality 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 package 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 activated 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 in-plant 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 unprecedented 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 formulation 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 abroad including harrassment and exploitation.

20.39 Skill needs of the home economy will, however, have to be kept meticulously in view 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 garments, 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 production 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 accident 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, supervisors, 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 other 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, (i) 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 disadvantaged 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)**

Programme		(In crore Taka) Allocation
A.	On-going Schemes	10.00
B.	<u>New Schemes</u>	<u>75.00</u>
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

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 trainees 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 seminars 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 Establishment 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 auspices 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 institutes 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 commensurate 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.

**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 implementation 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 precondition 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 implementation. This activity goes round the year depending on nature and importance of the projects. Some of them are inspected 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 mechanism 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 implementation 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.