



# ANNUAL PLAN 1986-87

GOVERNMENT OF INDIA  
PLANNING COMMISSION

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## CHAPTER 1

### ANNUAL PLAN 1986-87 AND REVIEW OF PERFORMANCE IN 1985-86

The Annual Plan for 1986-87 has been formulated within the framework of the objectives, policies and programmes indicated in the Seventh Five Year Plan and takes into account the performance of the economy in 1985-86. While seeking to promote balanced growth, it lays emphasis on the implementation of area-specific and beneficiary-oriented anti-poverty programmes in order to generate additional employment and incomes for the weaker sections of the society. Stress has also been laid on improvement in productivity through better capacity utilization, greater efficiency in the use of resources, upgradation of technology and timely completion of projects. High priority has been given to the completion of on-going projects in an advanced stage as well as those which can be completed quickly in order to realise the benefits from the investments made.

#### REVIEW OF ECONOMY IN 1985-86

1.2 With the launching of the Seventh Five Year Plan in 1985-86, certain major policy initiatives were taken to promote growth, reinforce anti-poverty programmes and give a new direction to fiscal policy. As a result of these policy initiatives and vigorous implementation of development programmes in different sectors, there was improvement in the growth rate of the economy, buoyancy in public revenues and a decline in the rate of inflation. The balance of payments situation, however, showed a deterioration.

1.3 Despite unfavourable monsoon, agricultural production in 1985-86 is estimated to have been higher than in 1984-85. There was also a substantial augmentation of infrastructural facilities. In particular, railway transport showed a marked improvement. Industrial production rose by 6.2 per cent. The gross domestic product in real terms is estimated to have gone up by over 4.5 per cent in 1985-86 as against 3.7 per cent in 1984-85.

1.4 The kharif crops in 1985-86, particularly in rain-fed areas, were affected adversely by the late onset of monsoon in the Central and Northern regions and its erratic behaviour in many States. Crops were, however, good in irrigated tracts and in regions outside the drought affected areas. On the whole, rice fared better and its output is estimated at 63.7 million tonnes, which is significantly higher than the earlier peak level of 60.1 million tonnes reached in 1983-84. Production of coarse grains, which are grown mostly in rain-fed areas, is, however, estimated at only 26.7 million tonnes as against 31.2 million tonnes in 1984-85, representing a drop of 4.5 million tonnes. Rains during September-October, 1985 in the northern

States provided adequate soil moisture for rabi sowings. The overall winter precipitation was also quite satisfactory. The area under wheat is estimated to have gone up to more than 25 million hectares and the production is placed at 47.2 million tonnes as against 44.2 million tonnes in 1984-85 and the previous record of 45.5 million tonnes achieved in 1983-84. The total production of foodgrains in 1985-86 is estimated at 150.5 million tonnes as against 146.2 million tonnes in 1984-85. As compared to the target, however, there was a substantial shortfall.

1.5 As for commercial crops, the production of jute and mesta in 1985-86 is estimated at a record level of 12.4 million bales, showing an increase of about 55 per cent over the preceding year. The estimated production of cotton and sugarcane also shows a marginal improvement over the preceding year. However, the oilseeds output is estimated to have been lower by 14.5 per cent.

1.6 Vigorous efforts to increase agricultural production and productivity continued during 1985-86. An additional irrigation potential of 2.22 million hectares was created during the year and the additional utilization of irrigation potential was 1.69 million hectares. With this additional utilization, the total area under irrigation went up from 60.27 million hectares during 1984-85 to 61.96 million hectares during 1985-86. Similarly, despite unfavourable monsoon, the consumption of fertilizers increased from 8.21 million tonnes in 1984-85 to 9.03 million tonnes in 1985-86, representing an increase of 10 per cent. The area under high yielding varieties also increased from 52.64 million hectares in 1984-85 to 55.18 million hectares in 1985-86 and distribution of certified seeds from 48.5 lakh quintals to 55.0 lakh quintals.

1.7 With record production of both rice and wheat and offer of remunerative prices to farmers, the procurement of foodgrains by the government remained at a fairly high level. The procurement of rice in 1985-86 was 9.6 million tonnes as against 9.9 million tonnes in 1984-85; the corresponding figures in the case of wheat being 10.4 million tonnes and 9.3 million tonnes respectively. The off-take of foodgrains from the public distribution system also went up and increased allocations were made for the National Rural Employment Programme and the Rural Landless Employment Guarantee Programme. Besides, a scheme of distributing foodgrains at highly subsidized prices in the Integrated Tribal Development Blocks was also introduced. On the whole, the stock of foodgrains with public sector agencies at the end of 1985-86 amounted to 21.2 million tonnes, which is about the same as at

the end of 1984-85. There was, however, a change in the grain mix of the stock, the proportion of rice at the end of 1985-86 being higher than at the end of 1984-85.

1.8 The anti-poverty programmes were strengthened and implemented more effectively. Under the integrated Rural Development Programme, the number of beneficiary families in 1985-86 is estimated at 3 million. The employment generated under the National Rural Employment Programme and the Rural Landless Employment Guarantee Programme is placed at 288.7 million man-days and 211.9 million man-days respectively.

1.9 Considerable emphasis was placed on the development of the infrastructure sectors of energy and transport. Coal despatches, electricity generation, goods traffic carried by railways and cargo handled at major ports showed a substantial increase. Production of coal increased from 147.4 million tonnes in 1984-85 to 154.2 million tonnes in 1985-86, or by 4.6 per cent. Although the increase in 1985-86 was less than in 1984-85, this was largely due to a deliberate decision to reduce the growth of output in view of the large pit-head stocks. Coal despatches during 1985-86 went up by as much as 9.6 per cent. Crude oil production increased from 29.0 million tonnes in 1984-85 to 30.2 million tonnes in 1985-86 i.e. by 4.1 per cent. The production of petroleum products, however, showed a marked increase, the crude throughput having increased from 35.6 million tonnes in 1984-85 to 42.9 million tonnes in 1985-86, or by 20.7 per cent. Power generation in utilities during the year increased by 8.6 per cent. The thermal generation showed an increase of as much as 15.8 per cent but hydro generation declined by 5.3 per cent due to low reservoir levels. An additional capacity of 4,233 MW was installed during the year and the thermal plant load factor rose from 50.1 per cent in 1984-85 to 52.4 per cent in 1985-86.

1.10 The performance of railways showed a remarkable improvement. The revenue earning goods traffic carried by railways registered an increase of 9.5 per cent as against the average growth rate of 4.1 per cent per annum during the Sixth Plan period and a growth of 2.7 per cent in 1984-85. The increase in traffic was achieved mainly through better utilization of capacity and, as a result, there was an increase of 12 per cent in net tonne kilometres per wagon day in 1985-86 over that in 1984-85. The wagon turn-round time, another important efficiency indicator, which had decreased by 1.5 per cent for broad gauge in 1984-85, showed a further decrease by 5.6 per cent in 1985-86. It was, however, still somewhat high viz. over 12 days, thus indicating scope for further improvement. The cargo handled at major ports showed an increase of 12.5 per cent as against an annual average growth of 6.3 per cent achieved during the Sixth Plan and of 6.5 per cent in 1984-85.

1.11 To provide a more congenial environment for industrial development and to promote modernisation

of industries, upgradation of technology, reduction in costs and greater competition, the industrial policy was further liberalised and the licensing procedures were simplified and streamlined. During 1985-86, de-licensing was extended to 82 bulk drugs and related formulations as well as the MRTP and FERA companies for certain industries, provided the units were located in Centrally declared backward areas. For industries within the ambit of licensing, the facility of broadbanding was extended to additional industries and, by the end of 1985-86, it covered over 82 groups of industries. A scheme for re-endorsement of higher capacity was also introduced. The provisions relating to MRTP and FERA companies were further liberalised in order to permit their entry into additional high priority industries, subject to certain conditions. The export obligation for MRTP and FERA companies in respect of the units set up in backward areas was also reduced. Specific policy measures were adopted to take care of the problems of the textile and sugar industries and promote their development along sound lines. Besides, a highly liberalised policy framework was adopted for the development of the electronics industry. Furthermore, certain fiscal concessions were also announced in the 1985-86 budget and a Long Term Fiscal Policy was announced in December, 1985.

1.12 While the full impact of the measures indicated above will be felt only over a period of time, the response in 1985-86 itself was quite encouraging. The capital market became quite buoyant. Approvals for capital issues (including bonus issues) by companies increased from about Rs. 2,003 crores in 1984-85 to Rs. 3,695 crores in 1985-86. As many as 1,457 letters of intent were issued during 1985 as against 1,064 in 1984 in spite of de-licensing of twenty five broad industry groups in March, 1985. Approvals for the import of capital goods during 1985-86 were of the order of Rs. 871 crores as against Rs. 745 crores during 1984-85.

1.13 The provisional index of industrial production for 1985-86 shows an increase of 6.2 per cent. While it is lower than the Plan target of 7 per cent, it is significant to note that the industrial growth rate has been rising steadily since 1983-84. The manufacturing sector recorded a growth rate of 5.8 per cent in 1985-86, electricity generation of 8.6 per cent and mining of 4.6 per cent. The index of industrial production, however, does not reflect fully the growth in the industrial sector due to the inadequate coverage of small units and industries in the newly emerging high growth areas e.g. electronics.

1.14 An analysis of the provisional data for individual industries for 1985-86 indicates that there was increase in output over a wide spectrum of industries. The increase was particularly marked in the case of consumer electronics, computer systems, industrial electronics, communication equipment and newsprint, besides petroleum refining mentioned earlier. Among other industries, steel, fertilizers, cement, coal, industrial machinery, commercial vehicles, soda ash, sugar, paper and paper board etc. recorded significant increases. Production of a few items like aluminium,



tractors, vanaspati and mill cloth, however, showed a decrease.

1.15 As compared to the targets, the performance in a number of industries was quite impressive. The production exceeded the targets in the case of crude oil, petroleum refining, steel, zinc, certain types of machinery, phosphatic fertilizers, bulk drugs and formulations, tyres, jute manufactures, a number of man made fibres, textile yarn, paper and paper products, newsprint, two wheelers, bicycles (organised sector), certain electronic items etc. However, there were shortfalls in respect of several important items like coal, cement, nitrogenous fertilizers, motor vehicles, ship building, certain types of machinery, sugar and mill cloth. The main constraint to production was inadequate availability of power, and in some cases, also of coal. The textile industry as well as a number of engineering industries faced demand constraint while there were equipment break-downs and operational problems in some other industries.

1.16. The village and small industries, which constitute an important segment of the economy and play an important role in terms of production, generation of employment and contribution to foreign exchange earnings, also registered an impressive growth. The production of these industries is estimated to have gone up from Rs. 64,734 crores in 1984-85 to Rs. 72,280 crores in 1985-86. The value of their exports in 1985-86 is estimated at around Rs. 4,950 crores against Rs. 4,786 crores in 1984-85. The employment in these industries at the end of 1985-86 is estimated at 30.3 million persons as against 29.1 million persons at the end of 1984-85.

1.17 A Long Term Fiscal Policy (LTFP) was announced in December, 1985. It indicates the direction of change in tax policy required to promote growth, increase the built-in elasticity of the tax system, secure better tax compliance and move towards a more equitable distribution of the burden of financing the Plan. By spelling out the fiscal policy for the Plan period, it seeks to provide an economic environment which is stable and has less uncertainties so that it is conducive to growth, productivity and investment.

1.18 An important development during 1985-86 was the strict adherence by the State Governments to the policy laid down in respect of overdrafts with the Reserve Bank.

1.19 The monetary policy continued to be guided by the twin considerations of checking inflationary pressures and meeting fully the requirements of funds for productive purposes. To mop up excess liquidity and raise additional resources for public sector investment, the Statutory Liquidity Ratio (SLR) was raised from 36 per cent to 37 per cent in two stages—36.5 per cent effective from June 8, 1985 and 37 per cent effective from July 8, 1985. The incremental cash reserve ratio of 10 per cent on the addition to deposits, was also maintained. Besides, the cut-off point for food credit beyond which 100 per cent refinance is made available to commercial banks was raised in stages to Rs. 5,800 crores. On the whole, the growth of money

supply ( $M_1$ ) slowed down substantially, the increase in 1985-86 being 9.5 per cent as against 18.7 per cent in 1984-85. The growth rate of aggregate monetary resources ( $M_2$ ) was also lower than in 1984-85.

1.20 As a result of the lower growth rate of money supply and effective supply management, there was a decline in the rate of inflation. The increase in the Index of Wholesale Prices between end-March, 1985 and end-March, 1986 was 3.7 per cent as against 7.6 per cent in the preceding year. The annual average increase in the Index for 1985-86 works out to 5.7 per cent compared to 7.1 per cent in 1984-85. The Consumer Price Index showed an average increase of 6.5 per cent during 1985-86, which is roughly of the same order as in the preceding year. The higher increase in the Consumer Price Index in 1985-86 than that in the Wholesale Price Index is due mainly to greater increase in the prices of foodgrains and other food items, which have a larger weight in the former Index. Prices of manufactured items remained fairly stable.

1.21 Preliminary data on foreign trade for 1985-86 show a sharp widening of the trade deficit to Rs. 7,951 crores from Rs. 5,187 crores in 1984-85. During the year, imports increased by about 11 per cent to Rs. 18,371 crores and exports declined by 8 per cent to Rs. 10,420 crores. Net of oil swap, exports increased by about 3 per cent in rupee terms, reflecting lower than targetted real growth over the year.

1.22 Judging by provisional commodity-wise customs data, about two-thirds of the increase in imports in 1985-86 is attributable to a few groups of commodities : petroleum, oils and lubricants, capital goods, sugar and coking coal. Larger crude oil and product imports (net of oil swap) reflected the higher growth of demand for middle distillates. The rise in capital goods imports is apparently linked to better aid utilisation and easier access to critical items of imported equipment, while higher coking coal imports were necessitated by the scarcity of domestic quality grades. However, the value of fertiliser imports is estimated to have fallen, essentially owing to a fall in urea prices. Edible oil imports also declined, both in value and volume.

1.23 The poor performance of exports is attributable, as the provisional commodity-wise export figures indicate, to the decline occurring in the case of a number of commodities, which together make up about 40 per cent of export earnings. These include not only traditional items like cotton textiles, tobacco, spices and tea but also such dynamic non-traditional products as engineering goods. But for the growth of other exports, at times to higher than expected levels, as in the case of garments, iron ore, coffee, cashew and the residual group of heterogeneous commodities which normally account for nearly one-fifth of export earnings, exports would have recorded a substantial fall. During the year, the growth in world trade was sluggish. The other main reasons underlying poor export growth were related to supply constraints and/or inability to compete aggressively abroad.

1.24 Details of current transactions, other than merchandise, during 1985-86 are not yet available. As regards capital flows, however, private deposits into dollar denominated non-resident accounts increased substantially. Official capital transactions too recorded a higher net inflow on account of improved utilisation of external assistance. Gross disbursements of official development assistance and the net inflow of assistance (after allowing for debt servicing) in 1985-86 were Rs. 3,165 crores and Rs. 1,795 crores respectively against Rs. 2,354 crores and Rs. 1,178 crores in 1984-85. Overall, there was an increase in

foreign exchange reserves by Rs. 530 crores over the year, but this is largely attributable to the gain accruing from holdings of appreciating foreign currencies.

1.25 The revised estimate of Plan outlay for 1985-86 at Rs. 34,219 crores consists of Rs. 20,094 crores for the Centre and Rs. 14,125 crores for the States and Union Territories. As compared to the original outlay, the revised estimate is higher by Rs. 1,594 crores in the case of the Centre and by Rs. 386 crores in the case of States and U.Ts., as shown in Table 1.1 below :

TABLE 1.1  
*Plan Outlay and Expenditure*

(Rs. Crores)				
Year	Sector	Approved Outlay	Actual Expenditure @	Percentage of Actual Expenditure to Approved Outlay
1	2	3	4	5
1984-85	Centre	17,351	16,650	96
	States	12,261	12,682	103
	U.Ts.	558	546	98
	Total	30,170	29,878	99
1985-86	Centre	18,500	20,094*	108
	States	13,097	13,482*	103
	U.Ts.	642	643*	100
	Total	32,239	34,219*	106
1986-87	Centre	22,300		
	States	15,879		
	U.Ts.	873		
	Total	39,052		

\*Revised Estimates

@Excludes expenditure on account of relief from natural calamities.

1.26 The estimates of savings and investment for 1984-85 and 1985-86 are shown in Table 1.2 below :

TABLE 1.2  
*Estimates of savings and Investment*

(Rs. crores at current prices)		
	1984-85	1985-86*
1	2	3
1. Gross Domestic Savings	47,206	52,398
2. Net Capital Inflow from Abroad	2,575	4,406
3. Gross Domestic Capital Formation	49,781	56,804
4. Rate of Saving**	22.1	22.3
5. Rate of Investment**	23.4	24.1

\*Preliminary estimates

\*\*As per cent of GDP at market prices.

1.27 Thus, the rate of gross domestic saving is estimated to have improved marginally from 22.1 per cent in 1984-85 to 22.3 per cent in 1985-86. The net capital inflow from abroad was, however, signi-

ficantly higher, viz., 1.8 per cent of GDP. As a result, the rate of investment in 1985-86 is estimated at 24.1 per cent against 23.4 per cent in the previous year.

# ANNUAL PLAN 1986-87—STRATEGY AND PROGRAMMES OF DEVELOPMENT

1.28 Consistent with the objectives of the Seventh Plan, the accent in the Annual Plan 1986-87 will continue to be on food, employment and productivity. Since infrastructure is a pre-requisite to economic growth, high priority has been given to its development and about 44 per cent of the total Plan outlay has been allocated for energy and transport. In view of the Government's commitment towards the alleviation of poverty and availability of substantial food stocks, it is proposed to give added attention to anti-poverty programmes. Substantial provisions have also been made for human resource development, agriculture and allied activities, irrigation, fertilizer production, etc. Besides, reasonable provisions have been made, within the overall availability of resources, for development programmes in other areas. Furthermore, due attention will be given to the control of inflation and prudent management of balance of payments.

## Agriculture

1.29 Table 1.3 shows the targets of production for foodgrains and other major crops as also of vital

inputs for 1986-87, together with the actuals for 1984-85 and the anticipated performance for 1985-86.

1.30 In order to achieve the crop production targets, emphasis will continue to be placed on intensifying and accelerating the various development programmes. Efforts will be made to increase the area under high yielding and improved varieties through timely distribution of certified improved quality seeds. The use of chemical fertilizer will be promoted through efficient movement, timely delivery, larger number of sale points and setting up of more soil testing laboratories. The use of pesticides and other plant protection material will be encouraged. Besides ground spraying and aerial spraying of pesticides, steps will be taken to control pests and diseases through biological methods. The various on-going schemes, including the scheme for the Control and Eradication of Pests and Diseases in Endemic Areas, will continue and the quality control of pesticides will be strengthened. As a part of efforts to introduce cost effective and newer technologies, the use of better and modern agricultural equipment and machinery will be promoted through quality control on equipment, training of farmers, technicians and others in operating the equipment and machinery, establishment of farmers' agro-service centres and organisation of demonstrations.

TABLE 1.3

*Production of selected crops and use of Inputs in 1984-85, 1985-86 and 1986-87*

Crops	Unit	1984-85	Anticipated Achievement for 1985-86	Target for 1986-87
1	2	3	4	5
<b>I. Agricultural Production</b>				
Foodgrains	Million tonnes	146.22	150.50	160.00
Oilseeds	-do-	13.10	11.20	14.80
Sugarcane	-do-	173.57	175.00	185.00
Cotton	Million bales (170 kgs each)	8.47	8.60	8.80
Jute & Mesta	Million bales (180 kgs each)	7.98	12.40	8.50
<b>II. Inputs :</b>				
Distribution of certified/quality seeds	Million quintals	4.85	5.50	6.57
Consumption of chemical fertilizers (NPK)	Million tonnes	8.21	9.03	10.30
Pesticides (technical grade material)	'000 tonnes	56.00	66.00	70.00
Area under High Yielding Varieties	Million hectares	52.64	55.18	60.61

1.31 Accelerated transfer of new technology and wider adoption of improved technological practices are essential pre-requisites for a rapid and sustainable growth in agriculture. This is sought to be achieved mainly through strengthening and more efficient use of the agricultural extension machinery. The National Agricultural Extension Project will be continued to further strengthen the agricultural extension machinery and, in particular, the Training and Visit (T&V) System, which helps and motivates the farmer in

diversifying the cropping pattern, adopting new crop rotations, increasing the cropping intensity, etc.

1.32 With a view to increasing production and productivity, reducing regional imbalances and alleviating poverty and unemployment, emphasis has been placed on the implementation of certain special agricultural programmes. For stepping up production of rice in the Eastern Region, a Special Rice Production Programme was taken up in 1985-86 so as to lay

emphasis on the development of basic physical and infrastructural facilities in this region. The major components of the Programme consist of training, distribution of input mini-kits, raising of community nurseries and supply of pesticides, irrigation and drainage facilities. During 1986-87, besides continuing the Special Rice Production Programme with added force, it is proposed to forge effective linkages between the research and development agencies and to pay more attention to the coordinated working of the various agencies connected with land reforms, irrigation, institutional credit and adequate and timely supply of essential inputs.

1.33 High priority has been accorded to the production of pulses, which are a major source of protein for the masses in India. The development of new technology for cereal crops and the consequent shift of better areas from pulses to these crops has acted as a major obstacle in increasing the yield per hectare of pulses, despite high level of prices prevailing in the market. In view of this, it is proposed to launch a new National Pulses Development Project by integrating the various on-going Centrally Sponsored Pulses Development Programmes so as to propagate crop-specific and location-specific technologies for achieving a sustained growth in pulses.

1.34 Oilseeds, particularly edible oilseeds, present another case of supply lagging behind demand, necessitating imports and putting a heavy burden on the country's scarce foreign exchange resources. It is proposed to recast the National Oilseeds Project so as to lay emphasis on strengthening the key institutions responsible for providing various services such as inputs, extension, credit, etc., to the farmers. Location-specific strategies will be formulated for each of the major oilseeds. Emphasis will be laid on the use of improved, disease-resistant and early maturing varieties and on the cultivation of oilseeds on irrigated lands. In order to allay farmers' fear of fall in prices as a result of increase in production, the National Agricultural Marketing Federation has been entrusted with the task of undertaking effective price support operations, which are so important for generating and sustaining the tempo of growth in oilseeds production.

1.35 Since about 70 per cent of the total cultivated area is dryland/rainfed area, special attention has to be given to the development of dryland farming and raising the productivity in un-irrigated areas. With this end in view, it is proposed to launch a new National Watershed Development Programme for Rainfed Agriculture to step up agricultural production in dryland areas through introduction of appropriate technology to utilize the limited availability of moisture, adequately supported by input supply and marketing arrangements. Emphasis will be placed on the development of area-specific technologies, inter-cropping and multiple cropping.

1.36 Under the Small and Marginal Farmers' Programme, the distribution of seed mini-kits has made good progress. The other two components viz. minor

irrigation and land development have also proved to be important factors in increasing production. Steps will be taken to further intensify and effectively implement the programme.

1.37 Due attention will be given to soil and water conservation so as to help in maintaining the quality of land and sustaining its productivity. The schemes of Soil Conservation in the Catchment of River Valley Projects, Integrated Watershed Management in the Indo-Gangetic Basin and Reclamation of Alkali Soils in the Northern States will be continued.

#### *Irrigation*

1.38 It is proposed to create an additional irrigation potential of 2.42 million hectares in 1986-87 and increase the utilization of irrigation potential by 1.84 million hectares.

1.39 In the case of major and medium irrigation, priority will be given to the on-going projects which can be completed quickly. New projects will be taken up only in respect of medium irrigation in drought-prone, tribal and backward areas.

1.40 The programme for minor irrigation in 1986-87 would, inter alia, include completion of the on-going projects on priority basis, stepping up of institutional investment, improving the availability of power for pumpsets, subsidies to small and marginal farmers and other weaker sections for creating private minor irrigation sources, strengthening of surface and groundwater organizations, improving the efficiency of public tubewells and installation of diesel pumpsets in areas devoid of electric power.

#### *Rural Development*

1.41 The anti-poverty programmes will continue to receive special attention. Under the Integrated Rural Development Programme (IRDP), which aims at asset endowment for the rural poor for generating self-employment ventures, it is proposed to cover about 4 million families in 1986-87. Under the scheme of Training of Rural Youth for Self-Employment (TRYSEM), which is a component of the IRDP, the training infrastructure is being substituted by Composite Rural Training and Technology Centres (CRTTCs) in each district as nodal institutions within a larger system of training and technology dissemination. Besides, steps will be taken to improve and streamline the implementation of the scheme of Development of Women and Children (DWCRA), which is also a component of the IRDP. The aim of this scheme is mainly to organise women in socio-economic activity groups with the dual objective of providing employment opportunities and social strength to them.

1.42 Under the National Rural Employment Programme (NREP), which aims at creating additional wage employment opportunities in rural areas while

simultaneously creating community assets, it is proposed to provide employment for 250 million man-days during 1986-87. The Rural Landless Employment Guarantee Programme (RLEGP)—which is another important component of the anti-poverty strategy and aims to provide guaranteed employment to at least one member of every rural household upto 100 days in a year and create durable assets to strengthen the rural infrastructure—is expected to generate additional employment for 236 million man-days. Efforts are being made to provide continuous employment to the target households under this programme. Meanwhile, the State Governments have been requested to take up, on a pilot basis, works in each RLEGP project where employment upto 100 days a year can be provided to landless labour and issue identification cards which would be valid for employment under both the NREP and RLEGP. Depending upon the success of this scheme, the approach will be replicated in other areas.

1.43 To enhance the contribution of NREP and RLEGP to poverty alleviation, the weightage given to the incidence of poverty in the allocation of funds to the States under these programmes has been increased from 25 per cent to 50 per cent. Besides, in view of the need to encourage afforestation and take up a massive programme of fuelwood and fodder plantation, the proportion of funds to be earmarked for social forestry under both programmes has been raised to 25 per cent. A beginning has also been made in the direction of earmarking some funds under the NREP for maintenance purposes.

1.44 While special attention will be given to Scheduled Castes and Scheduled Tribes in the implementation of the anti-poverty programmes mentioned above, the special socio-economic programmes for them under the Special Components Plan for Scheduled Castes and Tribal Sub-Plan will also continue to be implemented vigorously. Besides, the tempo of activities under area-specific programmes like the Drought Prone Area Programme, Desert Development Programme, Hill Area Development Programme and the Programme of the North Eastern Council will be stepped up.

#### *Infrastructure*

1.45 High priority will continue to be given to infrastructural development. In the case of oil, the exploratory as well as development activities will be further stepped up in both on land and off-shore areas. The crude oil production in 1986-87 is, however, expected to be of the same order as in the preceding year. The capacity for petroleum refining is expected to increase marginally. However, the crude throughput is expected to go up from 42.91 million tonnes in 1985-86 to 44.94 million tonnes in 1986-87, or by 4 per cent.

1.46 Keeping in view the estimated demand for coal and taking into account the need for reducing pit-head stocks, which amounted to 27.21 million tonnes

at the end of 1985-86, as also the anticipated imports of superior coking coal, the target of coal production for 1986-87 has been fixed at 166.6 million tonnes. This would represent an increase of 8 per cent over the actual production in 1985-86. 17 major coal handling plants are also expected to be completed in 1986-87. Besides, it is proposed to take up work on new prime-coking coal washeries. Movement of coal by railways is proposed to be increased from 110 million tonnes in 1985-86 to 120 million tonnes in 1986-87 in order to ensure adequate and timely availability of coal to the consumers.

1.47 The total electricity generation in utilities in 1986-87 is expected to be 190 billion units, representing an increase of 11.8 per cent over the 1985-86 level. The share of thermal generation would be 127.8 billion units, of hydel generation 57.0 billion units and of nuclear generation 5.2 billion units. An additional capacity of 3,396.3 MW is expected to be installed during the year. This would comprise thermal capacity of 2,192 MW and hydel capacity of 1,204.3 MW. The thermal plant load factor is expected to improve further to 53 per cent. In respect of transmission, the targets for 400 KV and 220 KV lines are 2,060 CKM and 2,707 CKM respectively. Emphasis on rural electrification will also continue and it is proposed to electrify 21,592 additional villages and energise 3.92 lakh additional pump sets in 1986-87. The Centrally Sponsored Renovation and Modernisation schemes covering 32 thermal stations having 156 generating units, whose performance had been unsatisfactory, will also be continued. It is estimated that an additional generation of 9 billion units would be achieved with the implementation of these schemes.

1.48 Besides, the programmes for promotion and utilisation of renewable energy sources, including biogas, solar energy, wind energy, incineration of urban waste etc., would be pursued vigorously.

1.49 In the railway sector, the main thrust will be on optimisation of capacity utilisation at the operational level through replacement of overaged assets, modernisation and technological upgradation, higher productivity of assets, prioritization of essential on-going projects for time bound completion etc. In 1986-87, the railways propose to acquire 20,000 wagons as against 12,369 in 1985-86. Qualitative change in research and adoption of modern technology will also continue to form part of the overall development strategy. The revenue earning freight traffic is expected to increase from 258.1 million tonnes in 1985-86 to 271-273 million tonnes in 1986-87.

1.50 In the case of roads, high priority will continue to be given to the on-going works and emphasis will be placed on upgradation of road construction technology. Increase in the capacity through widening of roads and strengthening of road surface according to the requirements of traffic intensity will also continue to get special attention. Rural roads under the Minimum Needs Programme are expected to provide linkage to 3016 villages during 1986-87 against 2,944 villages during 1985-86.

1.51 As for road transport, the main thrust will be on improving performance of State Road Transport Corporations/Undertakings through consolidation of their existing operations. Phasing out of the overaged vehicles will continue to receive priority. Besides, technological upgradation is being encouraged both for the maintenance of fleet and manufacture of new buses.

#### Industry

1.52 The Annual Plan for 1986-87 lays considerable emphasis on improving the performance of the public sector enterprises where large investments have already been made so that surpluses could be generated for further investment. Productivity indices have been identified for various public sector industries and these will be monitored along with the physical production targets. Greater emphasis has been laid on programmes for modernisation, upgradation of products as well as process technologies, replacement, renewals and installation of balancing facilities wherever necessary so as to maximise production from the existing capacity. Suitable outlays have been provided for on-going projects in order to ensure their timely completion. In view of the constraint of resources, a highly selective approach has been adopted in regard to new starts in the public sector. However, taking into account the long term development requirements and need for timely entry into "sun-rise industries" and areas of future growth, provision has been made for selected new starts in such areas.

1.53 In the Central sector, almost two-thirds of the outlay provided for industries and minerals is accounted for by steel, non-ferrous metals and fertilizers. In the State sector, a major portion of the outlay provided for industries and minerals is towards the augmentation of share capital of State level institutions like industrial development corporations, financial corporations etc. concerned with the promotion and development of industries. Furthermore, special attention would be given to employment-oriented, short-gestation projects based on local raw materials and skills.

1.54 In line with the Long Term Fiscal Policy, the Union Budget for 1986-87 has announced a number

of incentives and concessions to give a further stimulus to industrial production and investment. Apart from streamlining the system of direct taxes, a major overhaul of the existing system of excise taxation is aimed at so as to reduce the cascading effects of multi-point excise levies and thereby help in reducing costs and prices of industrial products. A scheme of Modified Value Added Tax (Modvat) is being introduced in stages from 1st March, 1986 whereby the present system of proforma credit would be extended to all excisable commodities excepting a few like petroleum, tobacco and textiles. Certain concessions in excise and customs duties have also been announced. Besides, a 'Venture Fund' is proposed to be set up to promote indigenous technology.

1.55 Taking into account the favourable effects of the liberalisation policies, augmentation of infrastructural facilities, fiscal incentives etc., a growth rate of at least 7 per cent in industrial production is envisaged for 1986-87. The targets of production for selected industries for 1986-87 along with the anticipated production for 1985-86 are given in Table 1.4.

#### Village and Small Industries

1.56 The support policies and programmes being continued for the growth of village and small industries include reservation of items for exclusive production, supply of raw materials, improvement in marketing infrastructure, reservation and price preference under Government purchase programme, priority in the disbursement of loans, fiscal concessions, etc. Besides, the scheme for modernisation of selected small scale industries will be strengthened. In order to realise the full potential of handlooms, the new Textile Policy envisages shifting of the entire production of controlled cloth to the handloom sector by the end of the Seventh Plan. Efforts for their development through greater coverage by co-operatives, modernisation, supply of raw materials etc. will be further intensified. The production of village and small industries is expected to increase from Rs. 72,280 crores in 1985-86 to Rs. 76,786 crores in 1986-87 and exports from Rs. 4,950 crores to Rs. 5,567 crores. Employment in these industries is expected to increase from 30.3 million persons at the end of 1985-86 to 32.2 million persons at the end of 1986-87.

TABLE 1.4

#### Production of Selected Industries

Sl. No.	Name of Industry	Unit	1985-86 Actual/Anticipated Production	1986-87 Production Targets	Percentage Increase in 1986-87 over 1985-86
1	2	3	4	5	6
1.	Coal	Million tonnes	154.29	166.80	8.1
2.	Crude Oil	-do-	30.18	30.21	—
3.	Saleable Steel	-do-	9.82	10.84	10.4
4.	Aluminium	'000 tonnes	265	290	9.4

1	2	3	4	5	6
5. Cement		Million tonnes	32.50	36.00	10.8
6. Petroleum Products		-do-	42.91	44.94	4.7
7. Soda Ash		'000 tonnes	918	980	6.7
8. Nitrogenous Fertilizers		-do-	4328	5175	19.6
9. Phosphatic Fertilizers		-do-	1420	1775	25.0
10. Vanaspati		-do-	1000	1100	10.0
11. Jute Manufacturing		-do-	1400	1450	3.6
12. Paper and Paper Board		-do-	1500	1600	6.7
13. Newsprint		-do-	265	265	—
14. Industrial Machinery@		Rs. crores	1432	1635	14.2
15. Tractors		'000 Nos.	78	86	2.6
16. Commercial Vehicles		-do-	105	110	4.8
17. Earth Moving Equipment		Nos	1750	1850	5.7
18. Consumer Electronics		Rs. crores	1100	1350	22.7
19. Industrial Electronics		-do-	410	480	17.1
20. Communication Equipment		-do-	635	800	26.0
21. Computer Systems		-do-	210	280	35.3

@Excludes Textile Machinery

### Science and Technology

1.57 High priority has been accorded to the programmes of harnessing science and technology for increasing production and efficiency, reducing costs, improving the quality of goods and services and making these competitive in international markets. Specific science and technology mission projects in selected priority areas will be taken up with a view to consolidating the gains from research already conducted and establishing close organic linkages between research organisations, economic ministries and users. Research efforts would be strengthened in thrust areas, such as micro-electronics, informatics, telematics, biotechnologies and new materials, particularly to generate know-how for the future.

### Environment, Ecology and Forestry

1.58 Emphasis has also been placed on eco-regeneration and eco-development. The aim is to restore the damaged eco-system through application of S&T and by ensuring public participation and mobilisation of ex-servicemen in ecological task forces as also organisation of eco-development camps involving students and voluntary organisations. Under the Action Plan for clearing the polluted stretches of the river Ganga, a Central Ganga Authority has been set up under the Chairmanship of the Prime Minister. The major works programme in 1986-87 would relate to diversion, sewer cleaning and renovation of pumping stations. For selected areas, schemes under the Ganga Action Plan will be combined with those of urban development to form Integrated Urban Development Projects. In addition, environmental guidelines will be brought out for setting up new cantonments, industrial plants and location of development projects in industrially backward or ecologically fragile areas. Both air and water pollution control and prevention activities would be strengthened.

1.59 The programmes relating to forest conservation and development will be further intensified. A

National Wasteland Development Board has been set up to coordinate and catalyse the afforestation programmes. Guidelines have been issued to State Governments for the protection of forests in the identified areas. The forest research programme is proposed to be extended to non-traditional areas like wastelands, farm lands and use of tissue culture techniques and modern biology. The Annual Plan envisages setting up of an apex body "Indian Council of Forestry Research" to identify the research problems, allocate resources and coordinate and monitor research efforts. The Tropical Forestry Research Institute, Peechi (Kerala) is also proposed to be developed as a Centre of Excellence.

### Education

1.60 The National Policy on Education, 1986 lays emphasis on developing a national system of education based on a national curricular framework with a view to promoting certain values such as common cultural heritage, egalitarianism, democracy and secularism, equality of the sexes, protection of the environment, removal of social barriers, observance of small family norms and the inculcation of the scientific temper. The elementary system of education will be restructured and adequate arrangements to provide non-formal education for the drop-outs, working children and girls who cannot attend whole day schools will be made. Special attention will be given to Scheduled Castes/Tribes, Anganwaris and Adult Education Centres will be opened on priority basis in areas inhabited by Scheduled Tribes. The language and culture of the minorities will be safeguarded. Some of the other important measures envisaged in the new Education Policy are with respect to examination reforms, teacher training, curriculum development and improvement of management system in educational institutions and delinking of degrees from jobs.

### Financing the Plan

1.61 The size of Annual Plan for 1986-87 has been fixed at Rs. 39,052 crores comprising Rs. 22,300

crores for the Central Plan (an increase of 20.5 per cent over the approved outlay and 11 per cent over the revised estimate for 1985-86), Rs. 873 crores for Union Territories (step-up of 36 per cent over the previous year) and Rs. 15,879 crores for States (21 per cent step-up over the approved outlay and 15 per cent step-up over the revised estimate for 1985-86). It is expected that domestic resources would finance 80.8 per cent of the Plan outlay while the net inflow from abroad would take care of another 9.8 per cent. The remaining 9.4 per cent of Plan outlay would be met through deficit financing.

1.62 The Central Government while financing its Plan and the bulk of the Union Territories' Plan outlay will also transfer Rs. 6,317 crores to the States as assistance for their Plans. This is in addition to the transfer of Rs. 8,060 crores from the Centre to States by way of their share of Central Taxes.

1.63 The balance from current revenues of the Centre and the States taken together, after meeting their current non-Plan revenue expenditure, has been estimated at Rs. 682 crores at the 1984-85 rates of taxation. Out of the Central Governments' non-Plan expenditure of about Rs. 3,000 crores, the major portion (75 per cent) will go towards defence expenditure, interest payments necessitated by the increasing resort to borrowing for financing public sector outlays and subsidies mainly on food, fertilizers and export promotion.

1.64 The contribution of public enterprises to Plan has been estimated at Rs. 5,905 crores (Centre Rs. 6,276 crores and States minus Rs. 371 crores) at the 1984-85 level of fares, freight rates, tariffs and product prices. This includes internal resources (depreciation provisions and retained profits) and extra budgetary resources (domestic). The other resources for financing the Annual Plan will come from market borrowings of the Government, public enterprises and local bodies (Rs. 7,101 crores), small savings (Rs. 5,300 crores), provident funds (Rs. 1,353 crores), term loans from financial institutions to the States (Rs. 887 crores), issue of bonds without Government guarantee by Central enterprises (Rs. 1,191 crores), and miscellaneous capital receipts (Rs. 3,253 crores net). Additional Resource Mobilisation (ARM) measures taken by the Centre and the States in 1985-86 are

estimated to contribute Rs. 3,394 crores and those taken or proposed for 1986-87, another Rs. 2,502 crores, i.e. total ARM contribution to Plan resources of the order of Rs. 5,896 crores (Centre Rs. 2,376 crores and States Rs. 3,520 crores).

1.65 To promote development in conditions of relative price stability, it will be of the utmost importance to finance the Plan in a non-inflationary manner. Every effort will have to be made to maximise receipts from taxes and other sources, restrain the growth of non-Plan expenditure and prevent any erosion of resources. Monetary policy will also have to be so operated as to help in curbing inflationary pressures and facilitate orderly financing of the investment programme.

#### *Balance of Payments*

1.66 Sustained and well directed efforts will be necessary for maintaining the viability of balance of payments without constraining output growth or capital formation. The trade deficit will need to be adequately contained by a more rapid growth of exports; export development, in fact, acquires particular importance as means of sustaining adequate and uninterrupted supplies of imported inputs for the smooth functioning of the economy, activating idle capacity and requiring industries gradually to attain international competitive standards. At the same time, the diversification and deepening of efficient import substitution will require continued support; besides replacing imports in specific areas at a relatively low cost in terms of domestic resources, this will facilitate improvements in productivity generally.

1.67 The Annual plan 1986-87, accordingly, envisages measures to improve expected long-term profitability of exports, so as to induce well equipped firms to plan for accelerated growth of their export operations. It also calls for the continuation of the high priority accorded to exports and further efforts to improve and expand export related infrastructure facilities. Along with specific measures to facilitate efficient import substitution, it places emphasis on better utilisation of capacity in steel, fertilizers and other key industries. Finally, the Annual Plan underscores the importance of counter-inflationary demand management policies for ensuring viable balance of payments position.



## CHAPTER 2

### PUBLIC SECTOR PLAN OUTLAY

The Annual Plan for 1986-87 envisages a total public sector outlay of Rs. 390,51.53 crores. This represents an increase of 21.1 per cent over the approved outlay of Rs. 32238.56 crores for 1985-86. The maximum step up over the 1985-86 outlay is under the Rural Development Sector (51.2 per cent) followed by Transport (36.2 per cent), Social Services (21.4 per cent), Science & Technology (19.0 per cent), Energy (17.0 per cent) and Industry and Minerals (16.1 per cent). The outlay for the Central Sector is Rs. 22300 crores as against Rs. 18500 crores in 1985-86. For States and Union Territories, the 1986-87 outlays are respectively Rs. 15878.85 crores and Rs. 872.68 crores as against Rs. 13097 crores and Rs. 641.56 crores in the previous year.

2.2 The step up over 1985-86 in the outlay for the Central Sector is 20.5 per cent. For the States and Union Territories, the respective increases are 21.2 per cent and 36.0 per cent. The largest

increase in the Central Plan is in respect of the Rural Development Sector (64.4 per cent) followed by Transport (42.3 per cent), Social Services (20.7 per cent), Science and Technology (18.3 per cent), Industry & Minerals (14.5 per cent), Communications, Information and Broadcasting (14.3 per cent) and Energy (13.9 per cent).

2.3 In the States' and Union Territories' Plans, the maximum step up among major heads of development is under Rural Development (34.9 per cent), Science and Technology (29.1 per cent), Industry & Minerals (26.4 per cent), and Energy (22.7 per cent), Social Services (21.7 per cent) and Transport (20.8 per cent).

2.4 The approved outlays for the Centre, States and Union Territories for 1986-87 together with the approved outlays for 1985-86 and percentage step up are given in Table 2.1 :

TABLE 2.1  
*Annual Plan Outlay 1986-87*

Heads of Development	Annual Plan 1985-86			Annual Plan 1986-87			% Increase		
	Centre	States & UTs.	Total	Centre	States & UTs.	Total	Col. 5 over Col. 2	Col. 6 over Col. 3	Col. 7 over Col. 4
1	2	3	4	5	6	7	8	9	10
1. Agriculture	917.93	1079.60	1997.53	917.28	1285.49	2202.77	(—)0.1	19.1	10.3
2. Rural Development	917.75	738.80	1656.55	1509.00	996.34	2505.34	64.4	34.9	51.2
3. Special Area Programmes	—	540.44	540.44	—	597.06	597.06	—	10.5	10.5
4. Irrigation & Flood Control	168.60	2612.76	2781.36	157.50	3035.23	3192.73	(—)6.6	16.2	14.8
5. Energy	6569.00	3617.89	10186.89	7481.25	4440.89	11922.14	13.9	22.7	17.0
6. Industry & Minerals	4023.04	640.16	4663.20	4605.83	809.03	5414.86	14.5	26.4	16.1
7. Transport	2727.60	1089.06	3816.66	3882.40	1315.29	5197.69	42.3	20.8	36.2
8. Communications, Information & Broadcasting	1072.50	15.15	1087.65	1226.32	26.27	1252.59	14.3	73.4	15.2
9. Science & Technology	417.45	27.30	444.75	493.81	35.24	529.05	18.3	29.1	19.0
10. Social Services	1646.47	3140.17	4786.64	1987.49	3822.20	5809.69	20.7	21.7	21.4
11. Others	39.66	237.23	276.89	39.12	388.49	427.61	(—)1.4	63.8	54.4
TOTAL	18500.00	13738.56	32238.56	22300.00	16751.53	39051.53	20.5	21.9	21.1

2.5 The allocation of 1986-87 Plan outlay among the different sectors has been made keeping in view the objectives and priorities indicated in the Seventh Plan 1985—90 and performance of the economy during 1985-86. Accordingly, it takes into consideration

the imperative need to increase production, productivity and the growth potential of the economy as well as the need to provide adequate outlays for poverty alleviation programmes which form an important segment of the Plan. However, in view of resources

constraint, emphasis has been placed, while deciding sectoral priorities, on completing the projects already under implementation rather than taking up new starts and on providing more for projects which are in an advanced stage of execution and which can be commissioned speedily for the benefits to start flowing to the economy as early as possible.

2.6 The allocation for the energy sector (including power, coal and petroleum) amounts to 30.5 per cent of the total public sector Plan outlay for 1986-87. About 66 per cent of the total public sector outlay is accounted for by four sectors, viz., Energy, Industry & Minerals, Transport and Irrigation & Flood Control. The outlay on Social Services constitutes 14.9 per cent and that on Rural Development 12.1 per cent of the total outlay.

2.7 Table 2.2 below indicates the figures of the approved Plan outlay and the revised estimates for 1985-86. Against an approved outlay of Rs. 32238.56 crores, the revised estimates for the year place the expenditure at Rs. 34218.25 crores. The Centre's expenditure exceeded the approved outlay by Rs. 1593.97 crores, while the expenditure of the States and Union Territories exceeded by Rs. 385.72 crores. Also, a sum of Rs. 361.19 crores was released to the States for expenditure on works for relief from natural calamities. The sectors where the revised estimates fell short of the approved outlay were Special Area Programmes (by 14.1 per cent), Science & Technology (by 5.3 per cent) and Energy (by 2.3 per cent).

TABLE 2.2

*Annual Plan 1985-86 and Revised Estimates for Centre, States & Union Territories*

(Rs. in crores)

Heads of Development	Annual Plan 1985-86			Revised Estimates for 1985-86		
	Centre	States & UTs.	Total	Centre	States & UTs.	Total
1	2	3	4	5	6	7
1. Agriculture . . . . .	917.93	1079.60	1997.53	861.86	1145.02	2006.88
2. Rural Development . . . . .	917.75	738.80	1656.55	1241.90	894.88	2136.78
3. Special Area Programmes . . . . .	..	540.44	540.44	..	464.34	464.34
4. Irrigation & Flood Control . . . . .	168.60	2612.76	2781.36	138.24	2700.30	2838.54
5. Energy . . . . .	6569.00	3617.89	10186.89	6415.82	3535.52	9951.34
6. Industry & Minerals . . . . .	4023.04	640.16	4663.20	4913.48	701.87	5615.35
7. Transport . . . . .	2727.60	1089.06	3816.66	3232.43	1169.61	4402.04
8. Communications, Information & Broadcasting . . . . .	1072.50	15.15	1087.65	1171.13	18.12	1189.25
9. Science & Technology . . . . .	417.45	27.30	444.75	391.86	29.35	421.21
10. Social Services . . . . .	1646.47	3140.17	4786.64	1692.89	3213.29	4906.18
11. Others . . . . .	39.66	237.23	276.89	34.36	251.98	286.34
<b>TOTAL . . . . .</b>	<b>18500.00</b>	<b>13738.56</b>	<b>32238.56</b>	<b>20093.97</b>	<b>14124.28</b>	<b>34218.25</b>
Central Assistance for relief against Natural Calamities . . . . .					361.19	361.19

2.8 The actual expenditure for 1984-85, the last year of the Sixth Five Year Plan comes to Rs. 29878.02 crores against the approved outlay of Rs. 30169.37 crores and revised estimates of Rs. 30232.08 crores. With this the actual expenditure for the Sixth Plan 1980-85 (at current prices)

comes to Rs. 109291.74 crores against the approved outlay of Rs. 97,500 crores (at 1979-80 prices). Besides, an amount of Rs. 1175.51 crores was released to the States for expenditure on works for relief from natural calamities. Approved outlays in all the sectors were utilised in nominal terms except

in Irrigation & Flood Control where there was a shortfall of about 10.1 per cent even in nominal

terms. The details of Sixth Plan expenditure are given in Table 2.3 below :

TABLE 2.3

*Progress of Sixth Plan Expenditure 1980—85*

(Rs. in crores)

Sl. No.	Heads of Development	Sixth Plan Outlay	1980-81 (Actuals)	1981-82 (Actuals)	1982-83 (Actuals)	1983-84 (Actuals)	1984-85 (Actuals)	Sixth Plan (Actuals) 1980—85
1	2	3	4	5	6	7	8	9
1.	Agriculture . . . . .	5695.07	981.54	1129.43	1260.96	1427.01	1824.57	6623.51
2.	Rural Development . . . . .	5363.73	1040.19	1100.85	1295.86	1497.89	2062.01	6996.80
3.	Special Area Programmes . . . . .	1480.00	206.41	258.47	335.07	356.85	423.56	1580.36
4.	Irrigation & Flood Control . . . . .	12160.03	1777.30	1948.44	2105.26	2445.35	2653.58	10929.93
5.	Energy . . . . .	26535.44	3828.01	5064.86	6409.64	7276.60	8172.17	30751.28
6.	Industry & Minerals . . . . .	15017.57	2194.45	2777.93	3075.27	3916.37	4986.30	16950.32
7.	Transport . . . . .	12411.97	2162.96	2583.12	2752.78	3075.82	3633.67	14208.35
8.	Communications, Information & Broadcasting . . . . .	3134.26	356.75	576.13	674.80	864.52	997.38	3469.58
9.	Science & Technology . . . . .	865.20	97.40	148.26	208.09	228.48	335.29	1017.52
10.	Social Services . . . . .	14035.26	2074.65	2487.15	2950.16	3834.70	4569.92	15916.58
11.	Others . . . . .	801.47	112.78	136.21	215.01	163.94	219.57	847.51
TOTAL . . . . .		97500.00	14832.44	18210.85	21282.90	25087.53	29878.02	109291.74
Central Assistance for relief against Natural Calamities . . . . .			191.00	162.00	441.96	226.10	154.45	1175.51

2.9 Annexures 2.1 to 2.5 give details of Plan outlay for 1986-87, Revised Estimates for 1985-86 and Actual expenditure for 1984-85, year-wise and

by heads of development, for the Centre, States and Union Territories.

*Annual Plan 1986-87—Plan Outlays  
Centre, States & UTs*

(Rs. in crores)

Sl. No.	Heads of Development	Centre	States	UTs	Total
1	2	3	4	5	6
<i>I. Agriculture</i>		<i>917.28</i>	<i>1234.62</i>	<i>50.87</i>	<i>2202.77</i>
	Agricultural research & education . . . . .	81.00	59.20	0.49	140.69
	Crop husbandry . . . . .	205.00	389.38	11.19	605.57
	Soil and Water Conservation . . . . .	43.81	111.20	5.95	160.96
	Animal husbandry . . . . .	12.50	89.92	7.21	109.63
	Dairy Development . . . . .	80.00	38.28	0.57	118.85
	Fisheries . . . . .	31.00	61.03	4.87	96.90
	Forestry & Wildlife . . . . .	75.00	292.02	13.68	380.70
	Management of natural disasters . . . . .	0.50	1.35 <sup>1</sup>	—	1.85
	Agricultural marketing and rural godowns . . . . .	15.00	10.78	0.73	26.51
	Food, Storage and warehousing, food processing . . . . .	89.81	7.91	0.18	97.90
	Investment in agricultural financial institutions . . . . .	160.00	25.41	0.01	185.42
	Cooperation . . . . .	87.10	147.72	5.99	240.81
	Plantations . . . . .	36.56	0.42	—	36.98
<i>II. Rural Development</i>		<i>1509.00</i>	<i>990.38</i>	<i>5.96</i>	<i>2505.34</i>
	Integrated rural development and related programmes . . . . .	427.65	411.30	—	838.95
	National rural employment Programme . . . . .	442.65	248.49	—	691.14
	Community development and panchayat institutions	Included under IRDP & related Prog.	77.76	4.04	81.80
	Special Employment programme . . . . .	—	179.11	—	179.11
	Rural Landless employment guarantee schemes . . . . .	633.65	—	—	633.65
	Land reforms . . . . .	4.05	67.61	0.81	72.47
	Integrated rural energy programme . . . . .	1.00	6.11	1.11	8.22
<i>III. Special Area Programmes</i>		<i>—</i>	<i>595.91</i>	<i>1.15</i>	<i>597.06</i>
	Hill Areas . . . . .	—	187.85	1.15	189.00
	Border Area Development Prog. . . . .	—	40.00	—	40.00
	Development of Backward Areas <sup>2</sup> . . . . .	—	—	—	—
	Tribal Areas . . . . .	—	155.00	—	155.00
	North Eastern Council . . . . .	—	145.00 <sup>3</sup>	—	145.00 <sup>3</sup>
	Other Area Development Programme . . . . .	—	68.06	—	68.06
<i>IV. Irrigation &amp; Flood Control</i>		<i>157.50</i>	<i>3000.92</i>	<i>34.31</i>	<i>3192.73</i>
	Major and medium irrigation . . . . .	10.00	2121.87	11.52	2143.39
	Minor irrigation . . . . .	28.20	537.59	10.27	576.06

<sup>1</sup> For 'Cyclonic shelter in Andhra Pradesh'.<sup>2</sup> Included under 'Other Area Development Programme'.<sup>3</sup> Includes Rs. 20 crores LIC Loans.

ANNEXURE : 2.1 *Contd.*

(Rs. in crores)

1	2	3	4	5	6
	Command area development . . . . .	93.00	213.16	0.96	307.12
	Flood control including anti-sea erosion . . . . .	26.30	128.30	11.56	166.16
	<i>Energy</i> . . . . .	7481.25	4254.59	186.30	11922.14
	Power . . . . .	2984.73	4236.46	184.52	7405.71
	New and renewable sources of energy . . . . .	100.00	18.13	1.78	119.91
	Petroleum . . . . .	3216.00	—	—	3216.00
	Coal . . . . .	1179.77	—	—	1179.77
	Energy Development . . . . .	0.75	—	—	0.75
VI.	<i>Industry and Minerals</i> . . . . .	4605.83	786.13	22.90	5414.86
	Village & small scale industry . . . . .	327.75	261.73	16.62	606.10
	Large and medium industry . . . . .	4243.08	524.40 <sup>4</sup>	6.28 <sup>5</sup>	4773.76
	Export-Import Bank of India . . . . .	35.00	—	—	35.00
VII.	<i>Transport</i> . . . . .	3882.40	1122.03	193.26	5197.69
	Railways . . . . .	2650.00	0.10 <sup>6</sup>	..	2650.10
	Roads . . . . .	300.00	719.93	124.93	1144.86
	Road Transport . . . . .	70.90	327.19	8.85	406.94
	Ports . . . . .	322.99	22.26	8.83	359.08
	Light-Houses . . . . .	5.00			
	Shipping . . . . .	172.71	1.75	43.00	217.46
	Inland Water Transport . . . . .	31.50	16.56	1.66	49.72
	Civil aviation . . . . .	295.00	3.47	1.14	299.61
	Tourism . . . . .	26.30	30.77	4.85	61.42
	Farakka Barrage . . . . .	8.00	..	..	8.00
VIII.	<i>Communications, Information and Broadcasting</i> . . . . .	1226.32	24.57	1.70	1252.59
	Posts . . . . .	40.00	..	..	40.00
	Telecommunication . . . . .	915.00	2.01 <sup>7</sup>	0.03 <sup>8</sup>	917.04
	Broadcasting . . . . .	107.00	..	..	107.00
	Doordarshan . . . . .	124.30	..	..	124.30
	Information & Publicity . . . . .	4.00	22.56	1.67	28.23
	Films . . . . .	7.00	..	..	7.00
	INSAT—space segment . . . . .	29.02	..	..	29.02
IX.	<i>Science &amp; Technology</i> . . . . .	493.81	34.22	1.02	529.05
	Atomic energy . . . . .	58.00	..	..	58.00
	Scientific research incl. Meteorology Component of INSAT—space segment . . . . .	108.48	16.33	0.56	125.37
	Scientific and industrial research . . . . .	67.50	..	..	67.50
	Environment and ecology/prevention and control of air and water pollution and Ganga Action Plan . . . . .	75.00	17.89	0.46	93.35
	Ocean development . . . . .	20.00	..	..	20.00
	Space . . . . .	161.00	..	..	161.00
	Forensic science labs and police wireless . . . . .	3.83	..	..	3.83

<sup>4</sup> Includes a provision of Rs. 1.90 crores for 'Weights and Measures'.<sup>5</sup> Includes a Provision of Rs. 0.28 crore for 'Weights and Measures'.<sup>6</sup> For 'Konkan Railway'.<sup>7</sup> Includes Rs. 0.01 crore for 'Communication in Himachal Pradesh' and Rs 2.00 crores for modernisation of wireless in Gujarat.<sup>8</sup> For Radio-Telephone Link in Lakshadweep.

ANNEXURE 2.1 *Contd.*

(Rs. in crores)

1	2	3	4	5	6
<i>X. Social Services</i>		1987.49	3460.27	361.93	5809.69
Education, culture & sports		461.09	738.69	97.61	1297.39
Health incl. medical		200.00	446.00	48.24	694.24
Family Welfare		530.00	..	..	530.00
Housing & Urban development		65.40	685.31	108.48	859.19
Water supply and sanitation		329.70	912.26	87.84	1329.80
Welfare of scheduled castes/scheduled tribes and other backward classes		42.00	261.93	4.05	307.98
Special Central additive for scheduled castes component plans		175.00	..	..	175.00
Social and Women's Welfare		165.00	66.72	4.68	236.40
Nutrition		0.80	303.21	7.57	311.58
Labour and labour welfare		18.50	46.15	3.46	68.11
<i>XI. Others</i>		39.12	375.21	13.28	427.61
Statistics		10.85	9.57	1.23	21.65
Rehabilitation of displaced persons		23.07	..	..	23.07
Planning machinery		1.50	10.46	0.57	12.53
District Planning		..	90.82	0.36	91.18
Stationery and printing		2.00	9.29	1.30	12.59
Public distribution system		0.50	10.55	0.67	11.72
Public works		..	206.40	8.28	214.68
Training for development		0.80	1.78	0.59	3.17
Official language/Hindi		0.40	..	..	0.40
Others		..	36.34 <sup>a</sup>	0.28	36.62
GRAND TOTAL (I TO XI)		22300.00	15878.85	872.68	39051.53

<sup>a</sup> Includes Rs. 32.96 crores for up-gradation of Administration.

## ANNEXURE 2.2

## Annual Plan 1986-87—Approved Outlays—States

(Rs. Lakhs)

Head/Sub-Head of Development	Andhra Pradesh	Assam	Bihar	Guja-rat	Hary-ana	Him-achal Pra-des	Jammu & Kash-mir	Karna-taka	Kerala	Mad-hya Pra-des	Maha-rash-tra	Mani-par
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>A. ECONOMIC SERVICES</b>												
<b>I. AGRICULTURE &amp; ALLIED SERVICES</b>												
Crop Husbandry	1671	2440	3200	1460	980	700	1196	1616	2000	2968	3750	280
Soil & Water Conservation	105	354	448	278	281	220	240	897	162	902	2630	180
Animal Husbandry	475	790	475	340	415	120	525	220	250	574	805	100
Dairy Development	170	270	300	30	103	75	100	279	190	98	980	16
Fisheries	651	296	230	500	168	55	100	280	600	184	450	100
Forestry & Wild Life Plantations	1424	1771	900	2355	1145	1800	840	1220	1265	3000	2800	190
Food, Storage & Warehousing	40	35	8	5	65	—	80	20	10	13	70	27
Agricultural Research & Education	170	840	375	430	350	135	307	200	225	235	635	58
Investment in Agricultural Financial Institutions	375	25	150	80	280	13	5	227	150	84	150	2
Marketing & Quality Control	129	101	200	20	—	37	110	6	10	20	1	3
Cooperation	520	805	600	800	685	150	130	1055	338	1800	2020	65
Cyclone Shelters	135	—	—	—	—	51 <sup>9</sup>	—	—	—	—	—	—
<b>Total (I)</b>	<b>5865</b>	<b>7727</b>	<b>6886</b>	<b>6298</b>	<b>4472</b>	<b>3305</b>	<b>3633</b>	<b>6020</b>	<b>5200</b>	<b>9878</b>	<b>14290</b>	<b>1053</b>

**II. RURAL DEVELOPMENT***Special Programme for Rural Development :*

(a) Integrated Rural Development Programme (IRDP) <sup>a</sup>	2236	900	4071	1080	394	163	310	1327	843	2914	8544 <sup>a</sup>	90
(b) Drought Prone Area Programme (DPAP)	517	—	405	323	67	—	98	630	—	374	633	—
(c) Integrated Rural Energy Programme (IREP)	15	16	50	25	30	40	10	30	30	35	30	8

*Rural Employment*

(a) National Programmes like National Rural Employment Programme (NREP)	2270	500	4030	600	232	138	275	1080	940	2047	1991	42
Other State Employment Programmes	—	—	—	—	28	—	—	125	—	—	15000	—
Land Reforms	120	230	1300	230	20	274	100	100	12	430	87	30
Community Development & Panchayats	68	458	715	142	315	120	180	30	220	1100	11	74
<b>Total (II)</b>	<b>5226</b>	<b>2104</b>	<b>10541</b>	<b>2400</b>	<b>1086</b>	<b>735</b>	<b>973</b>	<b>3322</b>	<b>2045</b>	<b>6900</b>	<b>26296</b>	<b>244</b>

## ANNEXURE 2. 2 (contd.)

(Rs. Lakhs)

Head/Sub-Head of Development	Andhra Pradesh	Assam	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>III. SPECIAL AREA PROGRAMMES</b>	—	200	1500	—	250	—	2080	—	100	—	22	—
<b>IV. IRRIGATION &amp; FLOOD CONTROL</b>												
Major & Medium Irrigation	20530	2480	26688	17985	13056	165	1385	11447	5300	24400	29295	1180
Minor Irrigation	3702	3068	4611	1832	207	850	995	3189	700	8000	6390	180
Command Area Development	1000	120	740	1013	2474	36	110	1293	200	2500	6785	50
Flood Control Projects (including anti-sea erosion, etc.)	550	645	2500	170	1200	70	425	65	350	100	15	140
<b>Total (IV)</b>	<b>25782</b>	<b>6313</b>	<b>34539</b>	<b>21000</b>	<b>16937</b>	<b>1121</b>	<b>2915</b>	<b>15994</b>	<b>6550</b>	<b>35000</b>	<b>42485</b>	<b>1550</b>
<b>V. ENERGY</b>												
Power	18000	12307	23500	24775	16269	6233	7060	17487	7689	47411	47260	671
Non-Conventional Sources of Energy	25	19	225	225	45	77	30	13	20	215	70	9
<b>Total (V)</b>	<b>18025</b>	<b>12326</b>	<b>23725</b>	<b>25000</b>	<b>16314</b>	<b>6310</b>	<b>7090</b>	<b>17500</b>	<b>7709</b>	<b>47626</b>	<b>47330</b>	<b>680</b>
<b>VI. INDUSTRY &amp; MINERALS</b>												
Village & Small Industries	1756	962	1585	2185	506	195	826	3179	953	2200	1320	220
Industries (Other than Village & Small Industries)	3200	1362	3468	5315	342	350	459	1800	2337	1867	5790	220
Mining	623	76	550	500	15	20	96	56	60	173	80	12
<b>Total (VI)</b>	<b>5579</b>	<b>2400</b>	<b>5603</b>	<b>8000</b>	<b>863</b>	<b>565</b>	<b>1381</b>	<b>5035</b>	<b>3350</b>	<b>4240</b>	<b>7190</b>	<b>452</b>
<b>VII. TRANSPORT &amp; COMMUNICATIONS<sup>10</sup></b>												
Ports & Light Houses	62	—	—	522	—	—	—	547	220	—	155	—
Shipping	—	—	—	—	—	—	—	—	—	—	—	—
Civil Aviation	—	—	30	—	39	59	—	—	—	50	35	—
Roads & Bridges	2152	3000	8100	2999	1450	2634	1811	2540	3600	4694	7130	1100
Road Transport	4675	450	1000	2679	1200	398	425	1600	550	892	6715	115
Inland Water Transport	39	170	20	—	—	5	1000	11	160	—	30	—
Communication & others	23	—	—	200	—	1	—	—	—	—	10 <sup>a</sup>	—
<b>Total (VII)</b>	<b>6928</b>	<b>3620</b>	<b>9150</b>	<b>6400</b>	<b>2689</b>	<b>3097</b>	<b>3236</b>	<b>4698</b>	<b>4530</b>	<b>5636</b>	<b>14075</b>	<b>1215</b>
<b>VIII. SCIENCE, TECHNOLOGY &amp; ENVIRONMENT</b>												
Scientific Research (incl. S & T)	55	48	45	7	25	17	20	90	479	160	50	30
Ecology & Environment	100	42	26	20	130	5	22	30	71	856	135	8
<b>Total (VIII)</b>	<b>155</b>	<b>90</b>	<b>71</b>	<b>27</b>	<b>155</b>	<b>22</b>	<b>42</b>	<b>120</b>	<b>550</b>	<b>1016</b>	<b>185</b>	<b>38</b>
<b>IX. GENERAL ECONOMIC SERVICES</b>												
Secretariat Economic Services	63	22	77	28	19	12	30	88	89	45	30	5



ANNEXURE 2.2 (contd.)  
(Rs. Lakhs)

Head/Sub-Head of Development	Andhra Pradesh	Assam	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur
1	2	3	4	5	6	7	8	9	10	11	12	13
Tourism	104	70	200	100	138	140	510	138	150	172	130	24
Survey & Statistics	33	25	50	18	13	6	—	28	96	48	65	10
Civil Supplies	9	12	278	11	—	57	—	—	15	—	—	18
Weights & Measures	6	15	12	26	6	4	5	1	20	3	—	3
District Planning	—	—	1517	3300	550	100	—	400	—	31*	195	65
Training	—	18	6	20	30	12	22	—	—	—	15	—
Total (IX)	215	162	2140	3503	756	331	567	655	370	268	435	125
<b>B. SOCIAL SERVICES</b>												
<b>X. EDUCATION, SPORTS, ART &amp; CULTURE</b>												
General Education	5441	4700	5700	1178	2007	837	1517	1817	672	5600	4570	475
Technical Education	450	380	275	430	310	100	235	150	370	652	1855	30
Art & Culture	394	295	75	64	50	120	58	268	150	178	235	55
Sports & Youth Services	175	90	75	49	100	120	95	120	100	80	185	100
Sub-Total: Education												
Sports, Art & Culture	6460	5465	6125	1721	2467	1177	1905	2355	1292	6510	6845	660
<b>XI. HEALTH</b>												
Medical & Public Health	2416	1920	4100	1569	1228	575	1400	2596	1200	3550	6520	260
<b>XII. WATER SUPPLY, HOUSING &amp; URBAN DEVELOPMENT</b>												
Water Supply & Sanitation	4500	2881	3700	4390	2610	1700	3200	3925	2100	5400	28805	783
Housing (including Police Housing)	6375	1032	2185	1933	729	604	1214	3360	800	1800	5812	225
Urban Development (incl. State Capital Projects)	1650	280	425	1534	400	165	821	494	340	1850	3170	180
<b>XIII. INFORMATION &amp; PUBLICITY</b>												
	370	40	48	245	120	25	35	103	80	76	145	25
<b>XIV. WELFARE OF SCHEDULED CASTES, SCHEDULED TRIBES &amp; OTHER BACKWARD CLASSES</b>												
	7488	588	1270	2255	446	141	137	1420	450	2800	2055	84
<b>XV. LABOUR &amp; LABOUR WELFARE</b>												
(a) Labour & Labour Welfare	196	124	110	1025	209	31	86	328	97	212	760	25
(b) Special Employment Schemes	400	—	—	140	—	—	50	500	—	38	235	100
<b>XVI. SOCIAL WELFARE &amp; NUTRITION</b>												
Social Security & Welfare	1185	87	80	160	137	52	70	2014	104	175	200	41
Nutrition	540	418	650	7400	262	83	165	4131	1333	750	930	33

## ANNEXURE 2.2 (contd.)

(Rs. Lakhs)

Head/Sub-Head of Development	Andhra Pradesh	Assam	Bihar	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Karnataka	Kerala	Madhya Pradesh	Maharashtra	Manipur
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>XVII. OTHER SOCIAL SERVICES</b>	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total (B) (SOCIAL SERVICES)</b>	31580	12835	18693	22372	8608	4553	9083	21226	7796	23161	55477	2416
<b>C. GENERAL SERVICES</b>												
<b>XVIII. GENERAL SERVICES</b>												
Stationery & Printing	45	31	22	—	45	90	35	30	100	25	—	10
Public works (excluding jails)	600	287	2100	—	325	365	465	1900	700	2269	2215	250
Jails	—	125	—	—	—	—	—	—	—	—	1791	—
Others	—	1780*	307	—	—	6*	—	—	—	290	—	667*
<b>TOTAL(C)—GENERAL SERVICES</b>	645	2223	2152	—	370	461	500	1930	800	4375	2215	927
<b>GRAND TOTAL</b>	100000	50000	115000	95000	52500	20500	31500	76500	39000	138100	210000	8700

## ANNEXURE 2.2 (Contd.)

(Rs. lakhs)

Head/Sub-Head Development	Megha- laya	Naga- land	Orissa	Punjab	Rajasthan	Sikkim	Tamil- Nadu	Tripura	Uttar Pradesh	West Bengal	Total All States
	14	15	16	17	18	19	20	21	22	23	24
<b>A. ECONOMIC SERVICES</b>											
<b>I. AGRICULTURE &amp; ALLIED SERVICES</b>											
Crop Husbandry	312	320	1633	1202	856	280	4819	520	4976	1759	38938
Soil & Water Conservation	340	199	250	920	70	185	600	160	1490	209	11120
Animal Husbandry	130	140	400	600	430	145	440	210	865	543	8992
Dairy Development	20	20	75	74	220	15	49	40	485	219	3828
Fisheries	41	51	500	90	45	20	430	200	302	810	6103
Forestry & Wild Life	567	267	1280	525	851	170	2181	400	3251	1000	29202
Plantations	..	..	..	..	..	..	..	..	10	..	42
Food, Storage & Warehousing	6	6	16	28	10	5	30	30	226	61	791
Agricultural Research & Edu.	10	36	125	275	90	13	532	20	531	328	5920
Investment in Agricultural											
Financial Institutions	1	..	75	350	125	..	50	10	350	39	2541
Marketing & Quality Control	23	2	23	5	3	10	48	90	32	206	1078
Cooperation	120	44	1135	1187	765	40	265	200	1298	750	14772
Cyclone Shelter	..	..	..	..	..	..	..	..	..	..	135
<b>Total (I)</b>	<b>1570</b>	<b>1085</b>	<b>5512</b>	<b>5256</b>	<b>3465</b>	<b>883</b>	<b>9444</b>	<b>1880</b>	<b>13816</b>	<b>5924</b>	<b>123462</b>
<b>II. RURAL DEVELOPMENT</b>											
<i>Spécial Programme for Rural Development</i>											
(a) Integrated Rural Development (IRDP) <sup>a1</sup>	130	123	1650	552	1744	19	1978	110	5536	1700	36414
(b) Drought Prone Area Programme (DPAP)	..	..	300	..	225	..	322	..	567	255	4716
(c) Integrated Rural Energy Programme (IREP)	10	10	15	17	35	10	60	10	100	25	611
<i>Rural Employment</i>											
(a) National Programme like National Rural Employment Programme (NREP)	40	31	1100	247	978	25	1968	65	4400	1880	24849
(b) Other State Employment Programmes	..	..	500	..	..	..	..	180	..	..	15833
Land Reforms	35	31	835	..	60	22	10	130	1950	765	6761
Community Development & Panchayats	60	340	142	535	350	15	461	175	2012	263	7776
<b>Total (II)</b>	<b>275</b>	<b>535</b>	<b>4542</b>	<b>1351</b>	<b>3392</b>	<b>91</b>	<b>4789</b>	<b>670</b>	<b>14565</b>	<b>4878</b>	<b>96960</b>

ANNEXURE 2.2 (Contd.)  
(Rs. lakhs)

Head/Sub-Head of Development	Megha- laya	Naga- land	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Total All States
1	14	15	16	17	18	19	20	21	22	23	24
<b>III. SPECIAL AREA PRO- GRAMMES</b>	190	140	..	..	..	..	..	..	1065	1259	6806
<b>IV. IRRIGATION &amp; FLOOD CONTROL</b>											
Major & Medium Irrigation	10	..	10900	5164	9776	..	4773	450	23107	4096	212187
Minor Irrigation	175	259	2500	723	950	205	2074	400	10099	2650	53759
Command Area Development	..	..	300	400	1516	..	519	10	2100	150	21316
Flood Control Project (incl. anti-sea erosion etc.)	20	..	350	811	258	25	428	130	2491	2087	12830
<b>Total (IV)</b>	<b>205</b>	<b>259</b>	<b>14050</b>	<b>7098</b>	<b>12500</b>	<b>230</b>	<b>7794</b>	<b>990</b>	<b>37797</b>	<b>8983</b>	<b>300092</b>
<b>V. ENERGY</b>	<b>2114</b>	<b>560</b>	<b>15446</b>	<b>28900</b>	<b>17950</b>	<b>855</b>	<b>38586</b>	<b>1000</b>	<b>69017</b>	<b>20556</b>	<b>423646</b>
Power											
Non-conventional Sources of Energy	12	10	83	7	50	18	150	40	450	20	1813
<b>Total (V)</b>	<b>2126</b>	<b>570</b>	<b>15529</b>	<b>28907</b>	<b>18000</b>	<b>873</b>	<b>38736</b>	<b>1040</b>	<b>69467</b>	<b>20576</b>	<b>425459</b>
<b>VI. INDUSTRY &amp; MINERALS</b>											
Village & Small Industries	115	180	904	722	765	82	2400	245	3288	1585	26173
Industries (Other than Village Small Industries)	250	210	2450	2090	1200	90	2578	125	7460	4648	47611
Mining	35	160	515	6	485	32	460	2	600	83	4639
<b>Total (VI)</b>	<b>400</b>	<b>550</b>	<b>3869</b>	<b>2818</b>	<b>2450</b>	<b>204</b>	<b>5438</b>	<b>372</b>	<b>11348</b>	<b>6316</b>	<b>78423</b>
<b>VII. TRANSPORT &amp; COMMU- NICATIONS<sup>10</sup></b>											
Ports & Light Houses	..	..	620	..	..	..	100	..	..	..	2226
Shipping	..	..	..	..	..	..	175	175	..	..	175
Civil Aviation	..	..	70	24	..	..	..	..	20	20	347
Roads & Bridges	1150	1400	2380	1361	1504	825	3000	1033	16230	1900	71993
Road Transport	160	160	900	1211	525	164	2500	126	3480	2794	32719
Inland Water Transport	..	..	25	..	..	..	Neg.	..	10	186	1656
Communication & Others											211 <sup>8</sup>
<b>Total (VII)</b>	<b>1310</b>	<b>1560</b>	<b>3995</b>	<b>2596</b>	<b>2029</b>	<b>989</b>	<b>5775</b>	<b>1159</b>	<b>19740</b>	<b>4900</b>	<b>109327</b>
<b>VIII. SCIENCE, TECHNOLOGY &amp; ENVIRONMENT</b>											
Scientific Research (Incl. S&T)	15	10	65	40	30	4	100	45	238	60	1633
Ecology & Environment	3	1	35	15	35	11	68	10	122	44	1789
<b>Total (VIII)</b>	<b>18</b>	<b>11</b>	<b>100</b>	<b>55</b>	<b>65</b>	<b>15</b>	<b>168</b>	<b>55</b>	<b>360</b>	<b>104</b>	<b>3422</b>
<b>IX. GENERAL ECONOMIC SERVICES</b>											
Secretariat Economic Services	6	12	22	25	38	14	12	10	355	44	1046
Tourism	45	35	150	26	175	41	25	24	565	115	3077
Survey & Statistics	6	14	35	28	67	7	19	8	372	9	957
Civil Supplies	11	29	55	..	..	10	350	20	178	2	1055
Weights & Measures	5	10	10	2	4	5	..	5	33	15	190
District Planning	55	..	500	..	..	..	..	..	..	2400	9082
Training	..	25	..	30	..	..	..	..	..	..	178
<b>Total (IX)</b>	<b>128</b>	<b>125</b>	<b>772</b>	<b>111</b>	<b>284</b>	<b>77</b>	<b>406</b>	<b>67</b>	<b>1503</b>	<b>2585</b>	<b>15585</b>

## ANNEXURE 2.2 (contd.)

(Rs. lakhs)

Head/Sub-Head of Development	Megha- laya	Naga- land	Orissa	Punjab	Rajasthan	Sikkim	Tamil Nadu	Tripura	Uttar Pradesh	West Bengal	Total All States
1	14	15	16	17	18	19	20	21	22	23	24
<b>B. SOCIAL SERVICES</b>											
<b>X. EDUCATION, SPORTS, ART &amp; CULTURE</b>											
General Education . . . . .	347	344	3051	1150	3706	630	500.5	1200	4545	4066	58558
Technical Education . . . . .	23	30	390	440	300	..	700	14	1500	448	9082
Art & Culture . . . . .	18	71	100	100	94	60	160	45	213	191	2994
Sports & Youth Services . . . . .	35	45	300	145	36	35	150	70	554	576	3235
Sub-Total : Education, Sports, Art & Culture . . . . .	423	490	3841	1835	4136	725	6015	1329	6812	5281	73869
<b>XI. HEALTH</b>											
Medical & Public Health . . . . .	300	320	1265	1484	1839	132	2676	320	6350	2580	44600
<b>XII. WATER SUPPLY, HOUSING &amp; URBAN DEVELOPMENT</b>											
Water Supply & Sanitation . . . . .	850	500	1700	1636	2675	385	12500	625	4761	1600	91226
Housing (incl. Police Housing) . . . . .	320	396	920	1593	700	88	4710	317	5205	2864	43182
Urban Development (incl. State Capital Projects) . . . . .	64	177	720	911	128	49	3300	171	2500	6020	25349
<b>XIII. INFORMATION &amp; PUBLICITY</b>											
.. . . .	12	25	100	72	35	25	60	35	477	103	2256
<b>XIV. WELFARE OF SCHE- DULED CASTES, SCHE- DULED TRIBES &amp; OTHER BACKWARD CLASSES</b>											
.. . . .	1	..	510	500	221	30	1550	962	2123	1162	26193
<b>XV. LABOUR &amp; LABOUR WELFARE</b>											
Labour & Employment:											
(a) Labour & Labour Welfare . . . . .	14	50	290	90	71	8	199	21	590	79	4615
(b) Special Employment Schemes . . . . .	..	35	..	..	..	..	200	..	..	380	2078
<b>XVI. SOCIAL WELFARE &amp; NUTRITION</b>											
Social Security & Welfare . . . . .	35	32	105	430	40	11	230	37	1140	307	6672
Nutrition . . . . .	54	156	350	245	200	45	10812	338	926	500	30321
<b>XVII. OTHER SOCIAL SERVICES</b>											
.. . . .	..	..	..	..	..	..	..	..	..	..	..
<b>TOTAL (B) — (SOCIAL SERVICES)</b>	<b>2073</b>	<b>2181</b>	<b>9801</b>	<b>8796</b>	<b>10045</b>	<b>1498</b>	<b>42252</b>	<b>4155</b>	<b>30884</b>	<b>20876</b>	<b>350361</b>
<b>C. GENERAL SERVICES</b>											
<b>XVIII. General Services</b>											
Stationery & Printing . . . . .	40	22	70	50	22	5	25	22	220	20	929
Public Works (excluding Jails) . . . . .	250	418	1618	395	248	135	473	90	2135	763	18001
Jails . . . . .	..	..	142	65	..	..	..	..	100	416	2639
Others . . . . .	515 <sup>a</sup>	344 <sup>a</sup>	..	211	..	..	..	..	..	..	3634
<b>TOTAL (C) — (GENERAL SERVICES)</b>	<b>805</b>	<b>784</b>	<b>1830</b>	<b>512</b>	<b>270</b>	<b>140</b>	<b>498</b>	<b>112</b>	<b>2455</b>	<b>1199</b>	<b>25703</b>
<b>GRAND TOTAL</b>	<b>9100</b>	<b>7800</b>	<b>60000</b>	<b>57500</b>	<b>52500</b>	<b>5000</b>	<b>115300</b>	<b>10500</b>	<b>203000</b>	<b>77600</b>	<b>1535100<sup>1,2</sup></b>

## Foot Notes :—

<sup>1</sup>Included under 'Food, Storage & Warehousing'.<sup>2</sup>Includes Training of Rural Youth for Self-Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), etc.<sup>3</sup>Includes Rs. 8 lakhs for 'Share Capital of Regional Rural Banks' and Rs. 6400 lakhs for 'Felt Needs Programme of Districts'.<sup>4</sup>For 'Konkon Railways'.<sup>5</sup>Includes Rs. 10 lakhs for 'Konkon Railway'.

## ANNEXURE 2.2 (Contd.)

\*Includes Rs. 2 lakhs for 'Grants-in-aid to Voluntary Organisations in Hill Areas', Rs. 1774 lakhs for 'Upgradation of Administration' and Rs. 4 lakhs for 'Public Enterprises Organisation'.

\*For 'Monitoring of 20-Point Programme'.

\*For 'Financial Institute & Public Enterprises Organisation'.

\*For 'Upgradation of Administration'.

<sup>10</sup>Excludes 'Tourism' which is shown under 'General Economic Services' and 'Information & Publicity' which is shown under 'Social Services'.

<sup>11</sup>For 'Economic Coordination & 20-Point Programme'.

<sup>12</sup>Does not include Rs. 20.78 crores shown against 'Special Employment Schemes' under Labour & Labour Welfare.

<sup>13</sup>Excludes an amount of Rs. 52785 lakhs on account of:

	Rs. Lakhs
(i) Hill Areas	18785
(ii) Border Area Development Programme	4000
(iii) Tribal Areas	15500
(iv) North Eastern Council (NEC)	14500
	<u>52785</u>

## ANNEXURE—2.3

## Annual Plan 1986-87—Approved Outlays—Union Territories

(Rs. lakhs)

Head/Sub-Head of Development	Andaman & Nicobar Islands	Arunachal Pradesh	Chandigarh	Dadra & Nagar Haveli	Delhi	Goa, Daman & Diu	Lakshadweep	Mizoram	Pondicherry	Total All UTs
1	2	3	4	5	6	7	8	9	10	11
<b>A. ECONOMIC SERVICES</b>										
<b>I. AGRICULTURE &amp; ALLIED SERVICES</b>										
Crop Husbandry	65.00	365.00	1.63	35.61	133.80	115.00	66.00	258.00	79.25	1119.29
Soil & Water Conservation	25.00	300.00	3.30	36.15	2.00	30.00	..	172.32	26.25	595.02
Animal Husbandry	50.00	146.00	17.00	18.73	117.00	85.00	45.00	174.00	68.17	720.90
Dairy Development	..	20.50	..	3.60	..	15.00	..	11.00	6.61	56.71
Fisheries	50.00	42.75	4.94	1.25	14.20	100.00	81.00	29.75	163.00	486.89
Forestry & Wild Life	150.00	530.00	27.00	75.65	55.00	110.00	..	400.00	20.00	1367.65
Food, Storage & Warehousing	..	..	..	..	..	18.00	..	..	0.15	18.15
Agricultural Research & Education	..	15.00	..	..	..	22.00	..	3.00	9.00	49.00
Investment in Agricultural Financial Institutions	..	..	..	..	..	1.00	..	..	..	1.00
Other Agricultural Programmes :										
Marketing & Quality Control	..	35.00	..	..	8.00	4.00	..	20.00	6.00	73.00
Cooperation	10.00	111.00	31.00	8.00	130.00	75.00	22.00	52.00	160.00	599.00
Total (I)	350.00	1565.25	84.87	178.99	460.00	575.00	214.00	1120.07	538.43	5086.61
<b>II. RURAL DEVELOPMENT</b>										
<i>Special Programme for Rural Development :</i>										
Integrated Rural Energy Programme (IREP)	8.00	12.00	..	3.50	50.00	15.50	4.00	12.00	6.00	111.00
Land Reforms	3.00	20.00	..	2.00	10.00	18.50	0.20	20.00	7.00	80.70
Community Development & Panchayats	4.00	97.00	30.11	11.75	40.00	31.00	24.80	80.00	85.20	403.86
Total (II)	15.00	129.00	30.11	17.25	100.00	65.00	29.00	112.00	98.20	595.56
<b>III. SPECIAL AREA PROGRAMME</b>										
..	..	..	..	..	..	..	..	..	..	..
<b>IV. IRRIGATION &amp; FLOOD CONTROL</b>										
Major & Medium Irrigation	..	15.00	..	90.00	2.00	1015.00	..	5.00	25.00	1152.00
Minor irrigation	30.00	465.00	20.00	50.00	112.00	150.00	..	100.00	100.00	1027.00

## ANNEXURE 2.3—(Contd.)

(Rs. lakhs)

Head/Sub-Head of Development	Andaman & Nicobar Islands	Arunachal Pradesh	Chandigarh	Dadra & Nagar Haveli	Delhi	Goa, Daman & Diu	Lakshadweep	Mizoram	Pondicherry	Total All UTs
1	2	3	4	5	6	7	8	9	10	11
Command Area Development	..	..	..	5.56	..	90.00	..	..	..	95.56
Flood Control Projects (incl. anti-sea erosion, etc.)	..	40.00	..	1.00	1000.00	20.00	25.00	20.00	50.00	1156.00
Total (IV)	30.00	520.00	20.00	146.56	1114.00	1275.00	25.00	125.00	175.00	3430.56
<b>V. ENERGY</b>										
Power	383.00	780.00	627.00	88.00	14830.00	650.00	81.50	737.35	275.00	18451.85
Non-conventional Sources of Energy	22.00	22.00	0.20	4.50	70.00	25.00	5.00	20.00	9.00	177.70
Total (V)	405.00	802.00	627.20	92.50	14900.00	675.00	86.50	757.35	284.00	18629.55
<b>VI. INDUSTRY &amp; MINERALS</b>										
Village & Small Industries	35.00	110.00	30.00	25.80	992.00	65.00	20.00	264.00	120.00	1661.80
Industries (Other than Village & Small Industries)	..	23.00	..	..	90.00	230.00	..	30.00	86.00	459.00
Mining	..	2.50	..	..	118.00	5.00	1.00	15.00	..	141.50
Total (VI)	35.00	135.50	30.00	25.80	1200.00	300.00	21.00	309.00	206.00	2262.30
<b>VII. TRANSPORT</b>										
Ports & Light Houses	370.00	..	..	..	..	6.00	91.00	..	415.85	882.85
Shipping	4300.00	..	..	..	..	..	..	..	..	4300.00
Civil Aviation	..	81.00	..	..	..	..	28.00	..	5.00	114.00
Roads & Bridges	500.00	2706.00	25.00	157.00	7030.00	800.00	45.00	1000.00	230.00	12493.00
Road Transport	100.00	120.00	200.00	..	110.00	154.00	2.00	174.00	25.00	885.00
Inland Water Transport	..	..	..	..	..	160.00	..	6.00	..	166.00
Communications	..	..	..	..	..	..	3.00	..	..	3.00
Total (VII)	5270.00	2907.00	225.00	157.00	7140.00	1120.00	169.00	1180.00	675.85	18843.85
<b>VIII. SCIENCE, TECHNOLOGY &amp; ENVIRONMENT</b>										
Scientific Research (incl. S & T)	3.50	2.50	4.00	2.00	11.00	20.00	5.50	3.90	3.00	55.40
Ecology & Environment	1.50	1.80	..	1.50	31.00	5.00	2.00	1.10	2.50	46.40
Total (VIII)	5.00	4.30	4.00	3.50	42.00	25.00	7.50	5.00	5.50	101.80
<b>IX. GENERAL ECONOMIC SERVICES</b>										
Secretariat Economic Services	0.80	5.75	..	1.30	30.00	6.50	1.00	7.00	5.03	57.38
Tourism	20.00	16.00	87.00	7.00	145.00	140.00	17.00	30.00	23.00	485.00



ANNEXURE 2.3—(Contd.)  
(Rs. lakhs)

Head/Sub-Head of Development	Andaman & Nicobar Islands	Arunachal Pradesh	Chandigarh	Dadra & Nagar Haveli	Delhi	Goa, Daman & Diu	Lakshadweep	Mizoram	Pondicherry	Total All UTs
1	2	3	4	5	6	7	8	9	10	11
Survey & Statistics	0.70	10.00	0.40	1.25	56.00	18.00	..	9.50	27.45	123.30
Civil Supplies	20.00	16.20	..	0.30	2.00	..	..	27.10	1.60	67.20
Weights & Measures	..	6.00	0.80	..	10.00	4.00	1.00	4.00	2.00	27.80
District Planning	..	..	..	..	..	..	..	36.00	..	36.00
Training	..	10.00	..	..	39.00	..	..	10.00	..	59.00
Total (IX)	41.50	63.95	88.20	9.85	282.00	168.50	19.00	123.60	59.08	855.68
<b>B. SOCIAL SERVICES</b>										
<b>X. EDUCATION, SPORTS, ART &amp; CULTURE</b>										
General Education	264.00	1225.00	305.00	87.22	3800.00	675.00	52.00	339.00	353.00	7100.22
Technical Education	35.00	20.00	130.00	1.50	900.00	115.00	..	30.00	350.00	1581.50
Art & Culture	2.00	80.00	30.00	3.61	250.00	105.00	10.00	25.00	50.00	555.61
Sports & Youth Services	14.00	50.00	110.00	7.67	150.00	60.00	20.00	30.00	82.00	523.67
Sub-Total : Education Sports, Art & Culture	315.00	1375.00	575.00	100.00	5100.00	955.00	82.00	424.00	835.00	9761.00
<b>XI. HEALTH</b>										
Medical & Public Health	65.00	270.00	186.65	27.30	3400.00	415.00	19.80	290.00	150.00	4823.75
<b>XII. WATER SUPPLY HOUSING &amp; URBAN DEVELOPMENT</b>										
Water Supply & Sanitation	140.00	675.00	501.41	25.00	5573.00	975.00	40.00	715.00	140.00	8784.41
Housing (inc. Police Housing)	100.00	400.00	610.00	16.30	2736.00	195.00	92.00	187.00	267.00	4603.30
Urban Development (incl. State Capital Projects)	40.00	2.00	1135.50	1.00	4562.00	151.00	..	208.00	145.00	6244.50
<b>XIII. INFORMATION &amp; PUBLICITY</b>										
	7.00	22.00	8.00	3.25	56.00	20.00	12.00	25.00	14.00	167.25
<b>XIV. WELFARE OF SCHEDULED CASTES, SCHEDULED TRIBES &amp; OTHER BACKWARD CLASSES</b>										
	1.50	..	12.40	..	296.00	15.00	..	..	80.35	405.25
<b>XV. LABOUR &amp; LABOUR WELFARE</b>										
	5.00	17.00	20.76	26.10	112.00	115.00	2.00	13.46	34.90	346.22

ANNEXURE 2.3—(Contd.)  
(Rs. lakhs)

Head/Sub-Head Development	Andaman & Nicobar Islands	Arunachal Pradesh	Chandigarh	Dadra & Nagar Haveli	Delhi	Goa, Daman & Diu	Lakshadweep	Mizoram	Pondicherry	Total All UTs
1	2	3	4	5	6	7	8	9	10	11
<b>XVI. SOCIAL WELFARE &amp; NUTRITION</b>										
Social Security & Welfare	7.00	19.00	40.00	1.55	313.00	12.00	6.00	37.00	33.00	468.55
Nutrition	13.00	47.00	48.90	14.00	439.00	62.00	8.00	56.52	68.69	757.11
<b>XVII. OTHER SOCIAL SERVICES</b>	..	..	..	..	..	..	..	..	..	..
<b>TOTAL (B)—(SOCIAL SERVICES)</b>	693.50	2827.00	3138.62	214.50	22587.00	2915.00	261.80	1955.98	1767.94	36361.34
<b>C. GENERAL SERVICES</b>										
<b>XVIII. General Services</b>										
Stationery & Printing	5.00	20.00	..	4.05	15.00	2.00	7.00	47.00	30.00	130.05
Public Works (Excluding Jails)	50.00	..	..	15.00	400.00	178.00	..	65.00	60.00	768.00
Jails	..	..	..	..	60.00	..	0.20	..	..	60.20
Others	..	26.00 <sup>1</sup>	..	..	..	1.50 <sup>2</sup>	..	..	..	27.50
<b>Total (C) : (GENERAL SERVICES)</b>	55.00	46.00	..	19.05	475.00	181.50	7.20	112.00	90.00	985.75
<b>GRAND TOTAL</b>	6900.00 <sup>3</sup>	9000.00	4248.00	865.00	48300.00 <sup>4</sup>	7300.00	840.00	5800.00	3900.00	87153.00 <sup>5</sup>

## Foot Notes :

<sup>1</sup>Includes Rs. 25 lakhs for 'Resettlement of Villages' and Rs. 1 lakh for 'Small Saving Scheme'.<sup>2</sup>Includes Rs. 0.50 lakh for 'Goa Gazetteers' and Rs. 1.00 lakh for 'Strengthening of Accounts & Audit Cadre in Directorate of Accounts'.<sup>3</sup>Includes Rs. 3400 lakhs for 'Purchase of 3 ships'.<sup>4</sup>Includes Rs. 8300 lakhs for 2 power projects—'Nangal Gas Turbines & Rajghat Turbines'.<sup>5</sup>Excludes an amount of Rs. 115 lakhs on account of Hill Areas.

## ANNEXURE—2.4

Annual Plan 1985-86—Revised Estimates—Centre, States and UTs

(Rs. in crores)

Sl. No.	Heads of Development	Centre	States	UTs	Total
1	2	3	4	5	6
I.	<i>Agriculture</i>	861.86	1100.01	45.01 <sup>1</sup>	2006.88
	Agricultural Research & Education	68.86	45.04	0.49	114.39
	Crop husbandry	204.53	374.64	9.53	588.70
	Soil and Water conservation	36.83	114.76	4.97	156.56
	Animal husbandry	96.57	75.84	7.00	210.97
	Dairy Development		31.06	0.50	
	Fisheries	28.49	49.19	4.70	82.38
	Forestry & Wild Life	52.43	235.49	11.54	299.46
	Management of natural disasters	0.25	..	..	0.25
	Agricultural marketing and rural godowns	13.57	9.63	0.49	23.69
	Food, Storage and Warehousing, Food processing	115.36	4.10	0.16	119.62
	Investment in agricultural financial institutions	156.00	23.22	0.01	179.23
	Co-operation	60.42	136.74	5.62	202.78
	Plantations	28.55	0.30	..	28.85
II.	<i>Rural Development</i>	1241.90	889.31	5.57	2136.78
	Integrated rural development and related programmes	294.65	331.64 <sup>2</sup>	..	626.29
	National rural employment programme	337.21	259.43	..	596.64
	Community development and panchayat institutions	Included under IRDP & related programmes.	65.59	3.52	69.11
	Special Employment programme		160.07	..	160.07
	Rural landless employment guarantee scheme	606.34	..	..	606.34
	Land reforms	3.70	69.34	0.97	74.01
	Integrated rural energy programme	..	3.24	1.08	4.32
III.	<i>Special Area Programmes</i>	..	463.24	1.10	464.34
	Hill Areas	..	166.95	1.10	168.05
	Border Area Development programme	..	..	..	..
	Development of backward areas <sup>3</sup>	..	..	..	..
	Tribal Areas	..	140.00	..	140.00
	North Eastern Council	..	113.90 <sup>4</sup>	..	113.90 <sup>4</sup>
	Other Area Development programmes	..	42.39	..	42.39
IV.	<i>Irrigation &amp; Flood Control</i>	138.24	2666.52	33.78	2838.54
	Major and medium irrigation	10.94	1846.27	11.20	1868.41
	Minor irrigation	12.90	507.70	9.62	530.22
	Command area development	82.00	190.16	1.92	274.08
	Flood control including Anti-sea erosion	32.40	122.39	11.04	165.83
V.	<i>Energy</i>	6415.82	3441.13	94.39	9951.34
	Power	2197.49	3428.03	93.27	5718.79
	New and renewable sources of energy	119.35	13.10	1.12	133.57
	Petroleum	3101.35	..	..	3101.35
	Coal	997.38	..	..	997.38
	Energy Development	0.25	..	..	0.25

<sup>1</sup> The figures of Anticipated Expenditure/Revised Approved outlays for all UTs are not available. Therefore, approved outlays treated as Anticipated Expenditure.

<sup>2</sup> Includes Rs. 55.70 crores for 'Felt Needs Programme' of Districts in Maharashtra.

<sup>3</sup> Included under other Area Development Programmes.

<sup>4</sup> Includes Rs. 10 crores LIC Loans.

ANNEXURE 2.4—Contd.  
(Rs. in crores)

Sl. No.	Heads of Development	Centre	States	UTs	Total
1	2	3	4	5	6
VI.	<i>Industry and Minerals</i>	4913.48	682.35	19.52	5615.35
	Village & Small scale industry	297.41	228.99	14.07	540.47
	Large & medium industry	4576.07	453.36 <sup>a</sup>	5.45 <sup>a</sup>	5034.88
	Export—Import Bank of India	40.00	..	..	40.00
VII.	<i>Transport</i>	3232.43	1049.05	120.56	4402.04
	Railways	2050.00	0.01 <sup>7</sup>	..	2050.01
	Roads	251.38	677.25	95.10	1023.73
	Road Transport	78.57	304.66	8.64	391.87
	Ports and Light houses	248.77	28.18	5.57	282.52
	Shipping	210.23	..	5.43	215.66
	Inland Water Transport	26.13	10.17	0.66	36.96
	Civil aviation	334.68	1.69	0.76	337.13
	Tourism	23.92	27.09	4.40	55.41
	Farakka Barrage	8.75	..	..	8.75
VIII.	<i>Communications, Information and Broadcasting</i>	1171.13	16.73	1.39	1189.25
	Posts	40.00	..	..	40.00
	Telecommunication	996.00	..	0.04 <sup>8</sup>	996.04
	Broadcasting	43.11	..	..	43.11
	Doordarshan	57.87	..	..	57.87
	Information & Publicity	2.99	16.73	1.35	21.07
	Films	7.41	..	..	7.41
	INSAT-Space segment	23.75	..	..	23.75
IX.	<i>Science &amp; Technology</i>	391.86	28.25	1.10	421.21
	Atomic energy	45.39	..	..	45.39
	Scientific research incl. Meteorology component of INSAT-space segment	91.78	14.53	0.71	107.02
	Scientific and industrial research	69.70	..	..	69.70
	Environment and ecology/prevention and control of air and water pollution and Ganga Action Plan	28.20	13.72	0.39	42.31
	Ocean development	12.90	..	..	12.90
	Space	140.93	..	..	140.93
	Forensic science labs and police wireless	2.96	..	..	2.96
X.	<i>Social Services</i>	1692.89	2899.61	313.68	4906.18
	Education, culture & sports	324.93	573.06	85.13	983.12
	Health incl. medical	190.72	356.25	41.78	588.75
	Family welfare	499.94	..	..	499.94
	Housing & Urban Development	61.17	597.05	93.48	751.70
	Water supply and sanitation	299.98	830.37	76.01	1206.36
	Welfare of scheduled castes/scheduled tribes and other backward classes	37.87	224.02	3.20	265.09
	Special Central Additive for scheduled castes component plans	165.00	..	..	165.00
	Social and Women's welfare	98.81	48.41	3.77	150.99
	Nutrition	0.44	235.92	7.21	243.57
	Labour and labour welfare	14.03	34.53	3.10	51.66
XI.	<i>Others</i>	34.36	245.42	6.56	286.34
	Statistics	10.45	7.38	1.04	18.87
	Rehabilitation of displaced persons	19.77	..	..	19.77
	Planning machinery	1.76	7.25	0.50	9.51
	District Planning	..	58.50	0.25	58.75
	Stationery and printing	0.68	11.04	1.19	12.91
	Public distribution system	0.30	6.39	0.39	7.08
	Public works	..	118.62	2.61	121.23
	Training for development	0.65	1.61	0.55	2.81
	Official language—Hindi	0.75	..	..	0.75
	Others	..	34.63 <sup>9</sup>	0.03	34.66
	<i>Grand Total (I to XI)</i>	20093.97	13481.62	642.66	34218.25
	Advance Plan assistance for relief against natural calamities	..	361.19	..	361.19

(5) Includes Rs. 1.43 crores for 'Weights and Measures'.

(6) Includes Rs. 0.28 crore for 'Weights and Measures'.

(7) For Konkan Railway.

(8) For Radio-Telephone Link in Lakshadweep.

(9) Includes Rs. 3.48 crores for Up-gradation of Administration

## ANNEXURE 2.5

*Annual Plan 1984-85—Actual Expenditure*  
(Centre, States and Union Territories)

(Rs. in crores)

Sl. No.	Heads of Development	Centre	States	UTs	Total
1	2	3	4	5	6
I.	<i>Agriculture</i>	845.59	947.56	31.42	1824.57
	Agricultural Research & Education	76.18	44.82	0.41	121.41
	Crop Husbandry	162.23	312.58	7.72	482.53
	Soil and Water Conservation	33.25	113.35	4.19	150.79
	Animal Husbandry	8.41	114.77	5.74	216.68
	Dairying	87.76			
	Fisheries	27.03	45.47	2.90	75.40
	Forestry	36.74	202.81 <sup>1</sup>	9.45	249.00
	Land Reforms	5.38	71.45	0.71	77.54
	Management of natural disasters	..	..	..	..
	Agricultural Marketing	13.25	14.11	0.25	27.61
	Food, Storage and warehousing	80.35	3.39	0.05	83.79
	Investment in Agricultural financial institutions	315.01	24.81	..	339.82
II.	<i>Rural Development</i>	989.77	1062.52	9.72	2062.01
	Integrated Rural Development and related programmes	271.95	342.21 <sup>2</sup>	0.06 <sup>3</sup>	614.22
	National Rural Employment Programme	240.12	270.39	..	510.51
	Community Development & Panchayat Institutions	..	95.26	3.83	99.09
	Cooperation	78.19	132.64	5.37	216.20
	Integrated rural energy programme	..	1.34	0.46	1.80
	Special Employment Programme	..	220.68	..	220.68
	Rural Landless Employment Guarantee scheme	399.51	..	..	399.51
III.	<i>Special Area Programmes</i>	..	423.56	..	423.56
	Hill Areas	..	161.57	..	161.57
	Tribal Areas	..	126.62	..	126.62
	North Eastern Council	..	101.66	..	101.66
	Development of Backward Areas	..	33.71	..	33.71
IV.	<i>Irrigation and Flood Control</i>	129.72	2490.72	33.14	2653.58
	Major and Medium Irrigation	8.11	1742.10	12.71	1762.92
	Minor Irrigation	13.62	461.34	8.85	483.81
	Command Area Development	69.18	173.10	0.56	242.84
	Flood Control including anti-sea erosion	38.81	114.18	11.02	164.01
V.	<i>Energy</i>	5159.34	2940.00	72.83	8172.17
	Power	1653.26	2932.70	72.55	4658.51
	New and Renewable sources of energy	81.12	7.30	0.28	88.70
	Petroleum	2521.17	..	..	2521.17
	Coal	903.79	..	..	903.79
VI.	<i>Industry &amp; Minerals</i>	4224.81	738.03	23.46	4986.30
	Village and Small scale industry	336.26	264.28	19.74	620.28
	Large and Medium industries	3846.55 <sup>4</sup>	473.75 <sup>5</sup>	3.72 <sup>6</sup>	4324.02
	Export—Import Bank of India	42.00	..	..	42.00

(1) Includes outlay for wild life also.

(2) Includes Rs. 55.04 crores for 'Felt Needs Programme' of districts in Maharashtra.

(3) For re-settlement of villagers in Arunachal Pradesh.

(4) Includes Rs. 23.23 crores for plantations and Rs. 2.85 Crores for National Test Houses.

(5) Includes Rs. 1.49 crores for 'weights &amp; measures' and Rs. 3.26 crores for plantations.

(6) Includes Rs. 0.22 crore for 'weights &amp; measures'.

ANNEXURE 2.5—Contd.  
(Rs. in crores)

1	2	3	4	5	6
VII.	<i>Transport</i>	2525.29	1013.78	94.60	3633.67
	Railways.	1664.31	0.257	..	1664.56
	Roads	186.26	680.60	77.43	944.29
	Road Transport	62.94	282.29	4.78	350.01
	Ports	138.51	18.23	3.29	162.90
	Light Houses & Light Ships	2.87			
	Shipping	100.23	0.20	5.00	105.43
	Inland Water Transport	11.98	5.82	0.58	18.38
	Civil Aviation	306.69	1.58	0.62	308.89
	Meteorology	7.39	..	..	7.39
	Tourism	16.46	24.81	2.90	44.17
	Farakka Barrage	9.10	..	..	9.10
	INSAT-Space segment	18.55	..	..	18.55
VIII.	<i>Communications, Information and Broadcasting</i>	979.73	16.37	1.28	997.38
	Communications	860.99	0.018	0.01 <sup>a</sup>	861.01
	INSAT-Space Segment	18.56	..	..	18.56
	Broadcasting & Television	94.65	—	—	94.65
	Information & Publicity	5.53	16.36	1.27	23.16
IX.	<i>Science and Technology</i>	324.57	10.61	0.11	335.29
	Science and Technology	30.44	7.71	0.08	38.23
	Atomic Energy	96.92	..	..	96.92
	Space	106.43	..	..	106.43
	Scientific and Industrial Research	60.54	..	..	60.54
	National Test Houses	Included under Large and Medium industry			
	Ocean Development	16.25	..	..	16.25
	Ecology and Environment	13.99	2.90	0.03	16.92
X.	<i>Social Services</i>	1439.02	2860.95	269.95	4569.92
	Education	227.28	664.43	73.70	965.01
	(a) General Education	160.29	565.16	61.65	787.10
	(b) Art and Culture	16.51	15.60	2.41	34.52
	(c) Technical Education	42.08	55.62	5.79	103.49
	(d) Youth Welfare & sports	8.40	28.05	3.45	39.90
	Health incl. Medical	167.33	352.42	32.30	552.05
	Family Planning	389.99	..	..	389.99
	Housing	36.99	347.68	34.67	419.34
	Urban Development	29.22	211.28	49.67	290.17
	Water Supply & Sanitation	292.66	760.06	64.36	1117.08
	Welfare of scheduled castes, scheduled tribes and other backward classes	64.30	295.62 <sup>10</sup>	3.27	363.19
	Special Central Additive for scheduled castes component plans	140.00	..	..	140.00
	Social Welfare	77.83	54.66	4.82	137.31
	Nutrition	0.19	122.98	4.29	127.46
	Labour & Labour Welfare	13.23	51.82	3.27	68.32

(7) For 'Konkan Railway' in Maharashtra.

(8) For 'tele-communication' in Himachal Pradesh.

(9) For 'Radio-telephone link' in Lakshadweep.

(10) Including provision for Tribal Welfare Programmes.

## ANNEXURE 2.5—Concl'd.

(Rs. in crores)

1	2	3	4	5	6
XI. Others . . . . .		32.16	177.72	9.69	219.57
Statistics . . . . .		9.02	6.24	0.36	15.62
Rehabilitation of displaced persons . . . . .		20.04	..	..	20.04
Planning Machinery . . . . .		1.33	6.23	0.57	8.13
District Planning . . . . .		..	50.31	0.21	50.52
Stationery and Printing . . . . .		0.96	25.12	0.88	26.96
Public works . . . . .		..	57.40 <sup>11</sup>	6.29	63.69
Public Distribution System . . . . .		0.28	8.12	1.04	9.44
Training for Development . . . . .		0.53	0.89	0.15	1.57
Other unclassified services . . . . .		..	23.41 <sup>12</sup>	0.19	23.60
Grand Total . . . . .		16650.00	12681.82	546.20	29878.02
Advance Plan assistance for relief against natural calamities. . . . .		..	154.45	..	154.45

11. Includes Rs. 0.64 crore for jails.

12. Includes Rs. 23 crores for crucial balance investments in Districts of Andhra Pradesh and remaining for other unclassified services.

## CHAPTER 3

### FINANCIAL RESOURCES

#### Review of 1985-86

The approved Plan outlay for 1985-86 was Rs. 32,239 crores. As per the latest estimates, the expenditure for 1985-86 is placed at Rs. 34,580 crores—Rs. 20,094 crores for the Centre, Rs. 643 crores for the Union Territories and Rs. 13,843 crores for the States. The latest estimates thus

indicate an increase of Rs. 1595 crores in the public sector outlay at the Centre (including Union Territories) and Rs. 746 crores in the States. The detailed scheme of financing the original and the revised Plan outlay for 1985-86 is given in Annexure 3.1. The summary position is indicated in Table 3.1 below :

TABLE 3.1  
*Financing of the Plan outlay 1985-86—Summary Position*

(Rs. crores)

	Plan Estimates			Latest Estimates		
	Centre (Including UTs)	States	Total	Centre (Including UTs)	States	Total
<b>I. Domestic Resources</b>						
(i) Balance from Current revenues at 1984-85 rates	(—)738*	1260	522	(—)730*	2073	1343
(ii) Additional Resource Mobilisation by Govt.	344	2128@	2472	468	1014	1482
TOTAL (i+ii)	(—)394	3388	2994	(—)262	3087	2825
(iii) Contribution of Enterprises at 1984-85 rates	5507	(—)88	5419	5561	(—)293	5268
(iv) Additional Resource Mobilisation by Public Enterprises	981	@	981	816	264	1080
TOTAL (iii+iv)	6488	(—)88	6400	6377	(—)29	6348
(v) Borrowings and Miscellaneous Capital Receipts (net)	12406	3798	16204	13106	4540	17646
II. Net inflow from abroad.	3375	..	3375	3271	..	3271
III. Deficit financing	3316	..	3316	4490	..	4490
IV. Aggregate Resources :	25191	7098	32289	26982	7598	34580
V. Assistance for State Plans	(—)5999	5999	..	(—)5884	5884	..
VI. Assistance to States for relief from Natural Calamities	(—)50	..	(—)50	(—)361	361	..
VII. Resources for the Plan :	19142	13097	32239	20737	13843	34580

\*Includes about Rs. 903 crores on account of cess in indigenous crude oil in the Annual Plan estimates and Rs. 898 crores in the latest estimates which is accruable to OIDB.

@Rs. 2128 crores is the combined target of ARM by States and their Enterprises.

3.2 At 1984-85 rates of taxes, the Centre's balance from current revenues (BCR) shows only a marginal improvement over the Annual Plan estimates. Although the Central revenues have been exceptionally buoyant and the revised estimates of receipts from taxes are higher by 18.5 per cent over the actuals of 1984-85 and by more than 9 per cent

over the Annual Plan estimates, there has also been a substantial increase in the non-plan revenue expenditure mainly on account of higher subsidies and interest payments, thus off-setting the advantage of buoyancy in revenue receipts. The broad details of the BCR are given below :—



TABLE 3.2

Balance from Current Revenues of the Centre for 1985-86

(Rs. crores)

	1985-86	
	Annual Plan Estimates	Latest Estimates
1	2	3
<b>I. Revenue Receipts (at 1984-85 rates)</b>		
1. Tax Revenues* (Gross)	25476*	27820*
2. Less : States share of Central Taxes	6592	7348
3. Tax Revenues (Net) (1-2)	18884	20472
4. Non-tax Revenues	6091**	6231**
<b>Total-I : Revenue Receipts</b>	<b>24975</b>	<b>26703</b>
<b>II. Non-Plan Revenue Expenditure</b>		
1. Interest Payments	7545	7830
2. Defence	7686	7862
3. Major Subsidies	3466***	4470***
4. Grants to States & Union Territories	1778	1911
5. Grants to Foreign Governments	88	99
6. Border Roads	64	46
7. Other non-development expenditure	5086	5215
<b>Total-II : Non-Plan Revenue Expenditure</b>	<b>25713</b>	<b>27433</b>
<b>III. Balance from Current Revenues (I-II) (—)738 (—)730</b>		

\* Includes about Rs. 903 crores (Annual Plan Estimate) and Rs. 893 crores (Latest Estimates) on account of Cess on indigenous crude oil accruable to Oil Industry Development Board.

\*\*Excludes receipts of the Commercial Departments which have been netted on the expenditure side as per 1986-87 Budget classification.

\*\*\*Excludes subsidies on imported fertilizer which are included in capital account

3.3 During the year, the yield from Centre's additional resource mobilisation measures, net of States' share, amounted to Rs. 468 crores as against the Plan estimate of Rs. 344 crores. Thus, at 1985-86 rates of taxes, the Centre's balance from current revenues worked out to (—) Rs. 262 crores as against the original estimate of (—) Rs. 394 crores.

3.4 In the States' sector, the surplus from the current revenues available for financing the Plan outlay is likely to be higher by Rs. 813 crores over the Annual Plan estimate mainly on account of additional devolution of Rs. 796 crores as share in Central taxes. The broad details of the current account balance are given in Table 3.3 below :—

TABLE 3.3

Balance from Current Revenues of the States for 1985-86

(Rs. crores)

1985-86

	Annual Plan Estimates	Latest Estimates
<b>I. Revenue Receipts (At 1984-85 Rates)</b>		
1. Tax revenue including share in Central taxes.	20169	21122
2. Non-tax Revenue	3171	3551
3. Grants from the Centre, including those for Centrally Sponsored Schemes, etc.	1563*	3264*
<b>Total-I : Revenue Receipts :</b>	<b>24903</b>	<b>27939</b>
<b>II. Revenue Expenditure :</b>		
1. Debt Service	3410	3383
2. Other non-development expenditure	4965	6048
3. Non-Plan development expenditure including Centrally Sponsored Schemes, etc.	13399	15264
4. Cost of additional dearness allowance and pay revision not included under the above items.	1869	1169
<b>Total-II : Revenue Expenditure</b>	<b>23643</b>	<b>25864</b>
<b>III. Balance from Current Revenues (I-II)</b>	<b>1260</b>	<b>2073</b>

\*Includes upgradation grants.

3.5 During the year, the State Governments also mobilised Rs. 872 crores through fresh tax measures. Including the States' share of Rs. 142 crores in Centre's additional resource mobilisation, the balance from current revenues at 1985-86 rates of taxes thus works out to Rs. 3087 crores.

3.6 The contribution from Central public sector enterprises at 1984-85 rates of fares, freight charges, etc., is likely to be marginally higher by about Rs. 54 crores mainly on account of higher contribution by Railways. However, the yield from additional resource mobilisation measures taken by these enterprises during the year is estimated at Rs. 816 crores against Rs. 981 crores in Plan estimate. Thus, at current prices, the contribution of Central public sector enterprises is likely to be lower by Rs. 111 crores than the Plan estimate.

3.7 The contribution of State Electricity Boards and State Road Transport Corporations at 1984-85 rates is estimated at (—) Rs. 293 crores. However, taking into account the net yield of Rs. 264 crores from revision of tariff and fares, the contribution of these enterprises at current rates works out to (—) Rs. 29 crores.

3.8 The overall yield from additional resource mobilisation (ARM) by the Central and State Governments and their enterprises together is estimated to fall short of the Annual Plan estimate by Rs. 891

crores. The yield from additional resource mobilisation at the Centre is likely to show a deterioration of Rs. 41 crores. In the case of States, the yield is estimated at Rs. 1136 crores (net) against the target of Rs. 1994 crores (excluding the share of States from Centre's additional resource mobilisation).

3.9 An important feature of Plan financing in 1985-86 has been the decision to allow the Central public sector enterprises on a selective basis to raise funds from the market without government guarantee. During the year, an amount of Rs. 315 crores was mobilised through the issue of public bonds.

3.10 The total domestic borrowings of the Centre, including deficit financing, have gone up by Rs. 1595 crores (small savings Rs. 375 crores, provident funds Rs. 46 crores and deficit financing Rs. 1174 crores). The Centre's recourse to higher borrowings was largely to meet the higher Central Plan expenditure of Rs. 1594 crores and provide additional Central assistance of Rs. 311 crores to the States towards meeting the expenditure on natural calamities. In the State sector also, the share of small savings was higher by Rs. 525 crores mainly on account of an increase in total collections.

3.11 The Central assistance released to the States during 1985-86 was Rs. 6245 crores compared to the Annual Plan provision of Rs. 5999 crores. The increase has been due to higher Central assistance towards meeting the expenditure on relief from natural calamities. However, on account of shortfall in the approved outlay under the earmarked sectors, a cut of Rs. 9.79 crores in the normal Central assistance had to be effected in the case of seven States.

#### *Annual Plan 1986-87*

3.12 The total resources for financing the 1986-87 Annual Plan have been estimated at Rs. 39,052 crores, viz., Rs. 23,173 crores for the Centre including Union Territories, and Rs. 15,879 crores for the States. The Annual Plan outlay of the Centre has been fixed at Rs. 22,300 crores, which represents an increase of 20.5 per cent over the approved Plan outlay and 11 per cent over the revised Plan outlay for 1985-86. The Union Territories' Plan at Rs. 873 crores shows an increase of 36 per cent over the previous year. In the case of the States, the 1986-87 outlay represents an increase of about 21 per cent over 1985-86 approved Plan outlay and about 15 per cent over the revised outlay.

3.13 The detailed scheme of financing the approved Plan outlay is given in Annexure 3.2. The summary position is indicated in Table 3.4.

TABLE 3.4  
*Financing of the Plan Outlay—1986-87*

(Rs. crores)			
	Centre (including UTs)	States	Total
1	2	3	4
<b>I. Domestic Resources:</b>			
(i) Balance from current revenues at 1984-85 rates (—)1470		2152	682
(ii) Additional Resource Mobilisation by Government . . . . .	905	3520*	4425
<i>Total (i+ii)</i> . . . . .	(—)565	5672	5107
(iii) Contribution by Enterprises at 1984-85 rates	6276	(—)371	5905
(iv) Additional Resource Mobilisation by Enterprises . . . . .	1471	*	1471
<i>Total (iii+iv)</i> . . . . .	7747	(—)371	7376
(v) Borrowings and Miscellaneous Capital Receipts (Net). . . . .	14824	4261	19085
II. Net Inflow from Abroad.	3831	—	3831
III. Deficit Financing . . . . .	3703	—	3703
IV. <i>Aggregate Resources</i>	29540	9562	39102
V. Assistance for State Plans (—)6317		6317	—
VI. Assistance to States for natural calamities. . . . .	(—)50	—	(—)50
VII. <i>Resources for the Plan</i>	23173	15879	39052

\*Rs. 3520 crores is the combined target of Additional Resource Mobilisation by States and their enterprises.

It will be seen that domestic resources would finance 80.8 per cent of the total Plan outlay. Net inflow from abroad would contribute 9.8 per cent. The balance 9.4 per cent would be met through deficit financing. Brief comments on individual items of financing are given below :

#### *Balance from Current Revenues :*

3.14 The balance from current revenues of the Centre and the States taken together, after meeting their current non-Plan revenue expenditure, has been estimated at Rs. 682 crores at 1984-85 rates of taxation. The revenue receipts of the Centre are estimated at Rs. 28,594 crores after providing for transfer to the States of their share in Central taxes. The non-Plan revenue expenditure of the Centre is estimated at Rs. 30,064 crores, thus indicating :

negative balance of Rs. 1470 crores for the Plan as shown below :—

TABLE 3.5

*Balance from Current Revenues of the Centre for 1986-87*

	(Rs. crores)
	1986-87 Annual Plan Estimate
<i>I. Revenue Receipts (at 1984-85 rates)</i>	
1. Tax Revenues (Gross)	29,808*
2. Less : States' share of Central Taxes	8,060
3. Tax Revenues (Net) (1—2)	21,748
4. Non-Tax Revenues	6,846**
5. Total I : Revenue Receipts	28,594
<i>II. Non-Plan Revenue Expenditure :</i>	
1. Interest Payments	9,304
2. Defence	8,728
3. Major subsidies	4,491***
4. Grants to States & Union Territories	1,790
5. Grants to Foreign Governments	112
6. Border Roads	63
7. Other Non-development Expenditure	5,576
Total II : Non-Plan Revenue Expenditure	30,064
III. Balance from Current Revenues (I—II)	(—)1,470

\*Net of assignments to local bodies in Union Territories. The figure, however, includes Rs. 911 crores on account of Cess on indigenous crude oil.

\*\* Excludes receipts of the Commercial Departments which have been netted on the expenditure side as per 1986-87 budget classification.

\*\*\* Excludes subsidies on imported fertilizers.

3.15 It may be observed that interest payments, defence and subsidies account for 75 per cent of the total non-Plan revenue expenditure. The large out-go on interest payments has been necessitated on account of the increasing resort to borrowings for financing public sector outlays. The major subsidies are on food, fertilizers and export promotion.

3.16 The surplus from current revenues, including upgradation grants for capital works, of all the States taken together for 1986-87 has been estimated at Rs. 2152 crores. The total revenue receipts of the States, including their share in Central taxes, have been assessed at Rs. 28,344 crores. The States' total non-Plan expenditure is estimated at Rs. 26,192 crores. The details of the estimates under broad heads are shown in Table 3.6.

TABLE 3.6

*Balance from Current Revenues of the States for 1986-87*

	(Rs. crores)
	1986-87 Annual Plan Estimates
<i>I. Revenue Receipts (At 1984-85 rates)</i>	
1. Tax revenue, including share in Central Taxes	23,189
2. Non-tax Revenue	3,793
3. Grants from the Centre, including those for Centrally Sponsored Schemes, etc.	1,362
Total I : Revenue Receipts	28,344
<i>II. Revenue Expenditure</i>	
1. Debt Services	4,071
2. Other non-development expenditure	6,142
3. Non-Plan development expenditure, including Centrally Sponsored Schemes, etc.	14,475
4. Cost of additional dearness allowance and pay revision not included under the above items	1,504
Total II : Revenue Expenditure	26,192
III. Balance from Current Revenues (I—II)	2,152

The estimates of receipts from State taxes, such as sales tax, excise duty, tax on motor vehicles and tax on goods and passengers have been made keeping in view the growth rates assumed for the Seventh Plan. The estimates of non-plan expenditure have been worked out having regard to the need for containing its growth within reasonable limits. Adequate provision has been made for the maintenance of assets created upto the end of the Sixth Plan. Besides, provision has been made for meeting additional expenditure equivalent to twenty-four months' liability on account of additional instalments of dearness allowance likely to fall due during 1986-87.

#### *Contribution of Public Enterprises*

3.17 The contribution of public enterprises, both departmental and non-departmental, on the basis of 1984-85 rates of tariffs and product prices, has been estimated at Rs. 5905 crores viz., Rs. 6276 crores in respect of Central enterprises and (—) Rs. 371 crores in respect of State Electricity Boards and State Road Transport Corporations. Out of the total contribution estimated for the Central enterprises, Rs. 5509 crores represent their internal resources and Rs. 767 crores extra budgetary resources, excluding foreign commercial borrowings. The unit-wise estimates of internal resources and extra budgetary resources as well as budgetary support in respect of

Central enterprises are given in Annexure 3.3. The contributions of the departmental and non-departmental enterprises are briefly discussed below :

### *Railways*

3.18 The Railways' Plan outlay of Rs. 2650 crores is expected to be financed to the extent of Rs. 1370 crores by their own internal resources, including net additional resource mobilisation of Rs. 335 crores from 1985-86 and 1986-87 measures. The Railways would also raise Rs. 250 crores through the issue of public bonds. The balance of Rs. 1030 crores would be met through budgetary support from the general revenues. The components of internal resources are as follows : (i) Appropriation from Depreciation Reserve Fund Rs. 1250 crores ; (ii) Accident Compensation, Safety and Passenger Amenities Fund Rs. 35 crores ; (iii) Open line works Rs. 25 crores ; and (iv) Development Fund Rs. 60 crores.

### *Telecommunications*

3.19 The Plan outlay of Rs. 915 crores for Telecommunications for 1986-87 is expected to be financed to the extent of Rs. 562 crores from their own internal resources. Telecommunications are also expected to mobilise Rs. 330 crores through the issue of public bonds. In addition, necessary budgetary support would be forthcoming to finance their Plan outlay.

### *Other Central Non-Departmental Enterprises*

3.20 The contribution of other Central enterprises consisting of depreciation and retained profits and extra budgetary resources (excluding loans, credits etc., from abroad) has been estimated at Rs. 4679 crores at 1984-85 product prices. Out of the 141 Central undertakings, about 50 per cent are expected to generate internal resources to finance their Plan outlay while the remaining enterprises would depend fully or partly on budgetary and extra budgetary resources.

3.21 The total contribution of State Electricity Boards for the Annual Plan 1986-87 has been estimated at (—) Rs. 259 crores. Eight Boards are expected to make a positive contribution of Rs. 233 crores as indicated in Annexure 3.4. Although revision of tariffs and adjustment of fuel surcharge by the SEBs in 1985-86 is expected to yield substantial revenue in 1986-87, a major part of this is estimated to be neutralised by increase in the working expenses.

3.22 The overall contribution of the State Road Transport Corporations has been estimated at (—) Rs. 115 crores for 1986-87, comprising Rs. 65 crores by four Corporations and (—) Rs. 180 crores by fifteen Corporations as shown in Annexure 3.5. The yield from revision of bus fares during 1985-86 undertaken by some of the Corporations would be mostly absorbed by higher cost of operation and increase in emoluments.

### *Market Borrowings*

3.23 The net market borrowings during 1986-87 have been estimated at Rs. 7101 crores, viz., Rs. 5300 crores for the Centre and Rs. 1801 crores for the States and their enterprises. The estimates of market borrowings for the Annual Plan 1986-87 have been made taking into account the rate of growth of bank deposits, Statutory Liquidity Ratio (SLR) for the commercial banks and also the estimated net accretion to the investible resources of the Life Insurance Corporation and Employees Provident Fund.

### *Small Savings*

3.24 The buoyancy in the collection of small savings is expected to continue. The net collection of small savings during 1986-87 has been estimated at Rs. 5300 crores out of which the share of the Central Government and Union Territories would be Rs. 2100 crores. The balance amount of Rs. 3200 crores would be available for financing the State Plans.

### *Provident Funds*

3.25 On the basis of the past trends, the net accretion to the Provident Fund of the Central Government has been estimated at Rs. 431 crores and that to State Provident Funds at Rs. 922 crores.

### *Term Loans from Financial Institutions*

3.26 For financing the States' Annual Plan 1986-87, an amount of Rs. 887 crores by way of term loans is estimated to be available from financial institutions. The Life Insurance Corporation of India (LIC) and the General Insurance Corporation (GIC) would provide term loans to finance outlays in respect of socially-oriented sectors, such as housing, water supply and sewerage, transport and power. Besides, the Industrial Development Bank of India will extend loan facility under its Bill Rediscounting Scheme to State Electricity Boards and State Road Transport Corporations. The Rural Electrification Corporation and the National Bank for Agriculture & Rural Development will continue to extend their assistance to States for the rural electrification programme and for meeting the credit requirements of the Apex Cooperative Banks.

### *Miscellaneous Capital Receipts (Net)*

3.27 The miscellaneous capital receipts (net) of the Centre have been estimated at Rs. 5802 crores. The receipts include recovery of loans and advances, special deposits of LIC, GIC, etc., other inflow under deposits and the collection under the National Deposit Scheme. The non-plan capital disbursements include loans and advances to the State Governments and Union Territories, public sector undertakings, Government employees, agriculturists and foreign Governments.

3.28 The net miscellaneous capital receipts of the States for 1986-87 are estimated at (—) Rs. 2549 crores.

### Additional Resource Mobilisation

3.29 The additional resource mobilisation measures taken by the Central Government and its enterprises during 1985-86 are expected to yield Rs. 1364 crores during 1986-87. The estimated yield from fresh proposals of the Central Government and Central enterprises during 1986-87 has been placed at Rs. 1012 crores. The additional resource mobilisation measures announced in the Central Budget 1986-87 are expected to give a net yield (i.e. exclusive of States' share) of Rs. 402 crores, as shown below :—

(Rs. crores)

(1) Customs . . . . .	404
(2) Union Excise Duties . . . . .	(—)13
(3) Corporation Tax . . . . .	3
(4) Income Tax . . . . .	8
<b>TOTAL</b> . . . . .	<b>402</b>

The Railways and the enterprises in the Oil sector are expected to mobilise Rs. 76 crores and Rs. 534 crores respectively during 1986-87 from fresh measures.

### Issue of Public Bonds

3.30 As in the previous year, the Central public undertakings, including Railways and Telecommunications, have been allowed to raise funds through the issue of public bonds for financing part of their Plan outlays. It is estimated that an amount of Rs. 1191 crores would be raised in this manner by selected enterprises.

3.31 The additional resource mobilisation measures adopted by the State Governments and their undertakings in 1985-86 are estimated to yield Rs. 2542 crores (gross) in 1986-87. After meeting part of the anticipated deterioration in the normal contribution by State Electricity Boards and State Road Transport Corporations at 1984-85 tariffs and fares, the net yield available for financing the Plan is estimated at Rs. 1873 crores. The tax and non-tax measures of the State Governments would yield Rs. 1120 crores while the net yield from increase in electricity tariffs

and bus fares is estimated at Rs. 753 crores. Besides, the State Governments have agreed to undertake fresh additional resource mobilisation of Rs. 1492 crores in 1986-87. The State-wise targets are shown in Annexure 3.6.

### Net Inflow from Abroad

3.32 The net inflow from abroad in the form of grants and loans to the Central Government is estimated at Rs. 2950 crores. In addition, an amount of Rs. 881 crores is expected to be raised by the public sector undertakings through commercial borrowings, foreign equity participation, etc., thus taking the total net inflow from abroad to Rs. 3831 crores.

### Deficit Financing

3.33 The budgetary deficit for 1986-87 has been estimated at Rs. 3703 crores after taking credit for the yield from fresh measures announced by the Central Government in the 1986-87 Budget. The State Plans have been fully funded leaving no gap in resources.

### Central Assistance

3.34 The Central assistance allocated for State Plans for 1986-87 amounts to Rs. 6317 crores as shown in Table 3.7.

TABLE 3.7

Central Assistance to States for 1986-87

(Rs. crores)

(i) Allocation under Modified Gadgil Formula (net) . . . . .	5,071
(ii) Assistance for the externally aided projects . . . . .	738
(iii) Tribal Sub-Plan . . . . .	155
(iv) Hill Areas . . . . .	188*
(v) North Eastern Council Plan . . . . .	125
(vi) Border Area Programme . . . . .	40
<b>Total</b> . . . . .	<b>6,317</b>

\*Excludes Rs. 1.15 crores for Goa.

## ANNEXURE 3.1

## Estimates of Financial Resources for the Annual Plan 1985-86

(Rs. crores)

	Annual Plan Estimates			Latest Estimates		
	Centre (including UTs)	States	Total	Centre (including UTs)	States	Total
I. Plan Outlay . . . . .	19142	13097	32239	20737	13843	34580
Financing of the Plan :						
II. Domestic resources at 1984-85 rates of taxes tariffs & fares:						
1. Balance from Current Revenues . . . . .	(—)738*	1260	522	(—)730*	1840	1110
2. Upgradation grant for capital works . . . . .	..	..	..	..	233	233
3. Contribution of Public Enterprises :						
(a) Centre: (i) Railways . . . . .	569	..	569	845	..	845
(ii) Tele-Communication . . . . .	560	..	560	535	..	535
(iii) Other Central Enterprises						
— Internal resources . . . . .	3616**	..	3616	3350	..	3350
— Extra-Budgetary Resources (domestic)	762	..	762	831	..	831
Total (A) . . . . .	5507	..	5507	5561	..	5561
(b) States :						
(i) State Electricity Boards . . . . .	..	(—)49	(—)49	..	(—)202	(—)202
(ii) State Road Transport Corporations . . . . .	..	(—)42	(—)42	..	(—)94	(—)94
(iii) Other State Enterprises— . . . . .	..	(+ )3	(+ )3	..	(+ )3	(+ )3
Total (b) . . . . .	..	(—)88	(—)88	..	(—)293	(—)293
Total (a + b) : . . . . .	5507	(—)88	5419	5561	(—)293	5268
4. Issue of Bonds by Public Enterprises . . . . .	..	..	..	315	..	315
5. Market borrowings of the Governments/Public Enterprises and Local Bodies . . . . .	5100	1600	6700	5100	1591	6691
6. Small Savings . . . . .	1525	2375	3900	1900	2900	4800
7. Provident Funds . . . . .	370	858	1228	416	860	1276
8. Term Loans from Financial Institutions :						
(a) Life Insurance Corpn. of India/General Insurance Corpn. . . . .	..	377***	377***	..	391***	391***
(b) Rural Electrification Corpn. . . . .	..	163	163	..	163	163
(c) National Bank for Agricultural & Rural Development . . . . .	..	37	37	..	35	35
(d) Industrial Development Bank of India . . . . .	..	225	225	..	225	225
Total 8 . . . . .	..	802	802	..	814	814
9. Miscellaneous Capital Receipts (Net) . . . . .	5411**	(—)1837	3574	5375	(—)1625	3750
TOTAL II . . . . .	17175	4970	22145	17937	6320	24257

\*Includes about Rs. 903 crores of O.I.D.B. Funds in Annual Plan Estimates and Rs. 898 crores in the latest Estimates.

\*\*Adjusted.

\*\*\*Includes Rs 10 crores LIC loan for N.E.C.

## ANNEXURE 3.1 (Contd.)

(Rs. crores)

	Annual Plan Estimates			Latest Estimates		
	Centre (including UTs)	States	Total	Centre (including UTs)	States	Total
III. Additional Resource Mobilisation 1985-86 measures :						
(a) Centre :						
(i) Central Government . . . . .	344	134	478	468	142	610
(ii) Central Public Enterprises . . . . .	981	..	981	816	..	816
TOTAL (a) . . . . .	1325	134	1459	1284	142	1426
(b) (i) State Governments . . . . . } .. 1994 } 1994 }						
(ii) State Public Enterprises . . . . . }					872 264	872 264
TOTAL (b). . . . .	..	1994	1994	..	1136	1136
TOTAL III : . . . . .	1325	2128	3453	1284	1278	2562
IV. Total Domestic Resources at Current Rates . . . . .	18500	7098	25598	19221	7598	26819
V. Net Inflow from Abroad . . . . .	3375	..	3375	3271@	..	3271@
VI. Budgetary Deficit . . . . .	3316	..	3316	4490	..	4490
VII. Aggregate Resources : . . . . .	25191	7098	32289	26982	7598	34580
VIII. Assistance for State Plans						
(a) State Plans (Normal) . . . . .	(—)5119	5119	..	(—)5150	5150	..
(b) Adjustment of Advance Plan Assistance . . . . .	140	(—)140	..	140	(—)140	..
(c) Net normal assistance . . . . .	(—)4979	4979	..	(—)5010	5010	..
(d) Externally Aided Projects . . . . .	(—)595	595	..	(—)463	463	..
(e) Total Central assistance for State Plans : . . . . .	(—)5574	5574	..	(—) 5473	5473	..
(f) Central Assistance for Area Programmes : . . . . .						
(i) Hill Areas . . . . .	(—)170	170	..	(—)167	167	..
(ii) Tribal Sub-Plans . . . . .	(—)140	140	..	(—)140	140	..
(iii) North East Council Plan . . . . .	(—)115	115		(—)104	104	..
TOTAL (f) . . . . .	(—)425	425	..	(—)411	411	..
(g) Provision of Central assistance for relief against natural calamities . . . . .	(—)50	..	(—)50	(—)361	361	..
TOTAL VIII . . . . .	(—)6049	5999	(—)50	(—)6245	6245E	..
IX. Resources available for the Plan (VII + VIII) : . . . . .	19142	13097	32239	20737	13843	34580

@Includes Rs. 771 crores on account of public enterprises.

£Central assistance released.

## ANNEXURE 3.2

## Estimates of Financial Resources for the Annual Plan 1986-87

(Rs. Crores)

	1986-87 (Annual Plan Estimates)		
	Centre (Including UTs)	States	Total
I. Plan Outlay . . . . .	23173	15879	39052
<i>Financing of the Plan</i> . . . . .			
II. Domestic Resources at 1984-85 rates of taxes, tariffs and fares :			
1. Balance from Current Revenues . . . . .	(—)1470*	1947	477*
2. Upgradation grant for capital works . . . . .	..	205	205
3. Contribution of Public Enterprises :			
(a) Centre :			
Railways . . . . .	1035	..	1035
Tele-Communication . . . . .	562	..	562
(iii) Other Central Enterprises :			
— Internal resources . . . . .	3912	..	391
— Extra-Budgetary resources (domestic) . . . . .	767	..	767
TOTAL (a) . . . . .	6276		6276
(b) States :			
(i) State Electricity Boards . . . . .	..	(—)259	(—)259
(ii) State Road Transport Corporations . . . . .	..	(—)115	(—)115
(iii) Other State Enterprises . . . . .	..	(+)3	(+)3
TOTAL (b) . . . . .	..	(—)371	(—)371
TOTAL (a + b) : . . . . .	6276	(—)371	5905
4. Issue of Bonds by Public Enterprises . . . . .	1191	..	1191
5. Market borrowings of the Government/Public Enterprises and Local Bodies . . . . .	5300	1801	7101
6. Small Savings . . . . .	2100	3200	5300
7. Provident Funds . . . . .	431	922	1353
8. Term loans from Financial Institutions :			
(a) Life Insurance Corpn. of India/General Insurance Corporation/Others . . . . .	..	442**	442**
(b) Rural Electrification Corporation . . . . .	..	180	180
(c) National Bank for Agricultural & Rural Development . . . . .	..	40	40
(d) Industrial Development Bank of India. . . . .	..	225	225
TOTAL 8 . . . . .	..	887	887
7. Misc. Capital Receipts (Net) . . . . .	5802	(—)2549	3253
TOTAL II : . . . . .	19630	6042	25672

\*Includes Rs 911 crores of O.I.D.B. funds

\*\*Includes Rs 20 crores of L.I.C. loans to N.E.C.



ANNEXURE 3.2 (Contd.)  
(Rs. crores)

1986-87 (Annual Plan Estimates)			
	Centre (including UTs)	States	Total
<b>III. Additional Resource Mobilisation :</b>			
(1) 1985-86 Measures :			
(a) Centre :			
(i) Central Government . . . . .	503	157	660
(ii) Central Public Enterprises . . . . .	861	..	861
TOTAL (a) . . . . .	1364	157	1521
(b) States :			
(i) State Governments . . . . .	..	1120	1120
(ii) State Public Enterprises . . . . .	..	753	753
TOTAL (b) . . . . .	..	1873	1873
TOTAL (a + b) . . . . .	1364	2030	3394
(2) 1986-87 Measures :			
(a) Centre :			
(i) Central Government . . . . .	402	(—)2	400
(ii) Central Public Enterprises . . . . .	610	..	610
TOTAL (a) . . . . .	1012	(—)2	1010
(b) State Government including State Public Enterprises . . . . .	..	1492	1492
TOTAL (a + b) . . . . .	1012	1490	2502
TOTAL III . . . . .	2376	3520	5896
IV. Total Domestic Resources at current rates : . . . . .	22006	9562	31568
V. Net Inflow from Abroad . . . . .	3831*	..	3831*
VI. Budgetary Deficit . . . . .	3703	..	3703
VII. Aggregate Resources . . . . .	29540	9562	39102
VIII. Assistance for State Plans :			
(a) State Plans (normal) . . . . .	(—)5359	5359	..
(b) Adjustment of advance plan assistance . . . . .	148	(—)148	..
(c) Adjustment of relief assistance . . . . .	140	(—)140	..
(d) Net normal assistance . . . . .	(—)5071	5071	..
(e) Externally aided projects . . . . .	(—)738	738	..
(f) Total Central Assistance for State Plans . . . . .	(—)5809	5809***	..
(g) Central Assistance for Area Programmes :			
(i) Hill Areas . . . . .	(—)188	188	..
(ii) Tribal Sub-Plans . . . . .	(—)155	155	..
(iii) North East Council Plan . . . . .	(—)125	125	..
(iv) Border Area Programmes . . . . .	(—)40	40	..
TOTAL (g) . . . . .	(—)508	508	..
(v) Provision of Central assistance for relief against natural calamities . . . . .	(—)50	..	(—)50
TOTAL VIII . . . . .	(—)6367**	6317**	(—)50
IX. Resources available for the Plan (VII + VIII) : . . . . .	23173	15879	39052

\*Includes Rs. 881 crores on account of public sector undertakings.

\*\*\*Includes Rs. 274 crores of development loan to Punjab.

\*\*Excludes Rs. 180 crores for REC and Rs. 1.15 crores as Hill Area assistance to Goa.

## ANNEXURE 3.3

## Plan Outlay of Central Enterprises and its financing 1986-87

(Rs. crores)

Ministry/Department/Project	Annual Plan Outlay	Financed by		
		Internal Resources	Extra Budgetary resources.**	Budgetary Support
(1)	(2)	(3)	(4)	(5)
<i>I. Ministry of Agriculture &amp; Co-operation</i>				
1. Krishak Bharathi Co-operative Ltd. and New IFFCO Projects.	60.00		36.00 <sup>1</sup>	24.00
2. Aonala (IFFCO)	205.00		68.00 <sup>1</sup>	137.00
<b>TOTAL</b>	<b>265.00</b>		<b>104.00</b>	<b>161.00</b>
<i>II. Department of Fertilisers</i>				
1. Fertilizer Corporation of India	33.89			33.89
2. Fertilizers and Chemicals Travancore Ltd.	93.67	12.00		81.67
3. Pyrites Phosphate and Chemicals Ltd.	11.00			11.00
4. Rashtriya Chemicals and Fertilizers Ltd.	54.35	53.69		0.66
5. Hindustan Fertiliser Corporation Ltd.	70.11			70.11
6. Projects and Development India Ltd.	11.25			11.25
7. Paradeep Phosphates Ltd.	90.00	35.00		55.00
8. Madras Fertilizers	10.00	10.00		
9. National Fertilisers	230.62	100.00		130.62
<b>TOTAL</b>	<b>604.89</b>	<b>210.69</b>		<b>394.20</b>
<i>III. Department of Commerce</i>				
1. Tea Board	6.89	0.96		5.93
2. Coffee Board	8.00	1.55		6.45
3. Rubber Board	14.98	0.20		14.78
4. Cardamom Board	3.30	0.28		3.02
5. Agrl. Products Exp. Devpt. Authority.	23.14	0.50		22.64
6. Tobacco Board	3.39	1.86		1.53
7. MITCO	5.80	5.80		
8. Other Undertakings	4.50	0.99		3.51
<b>TOTAL</b>	<b>70.00</b>	<b>12.14</b>		<b>57.86</b>
<i>IV. Ministry of Communications</i>				
1. Telecommunications	835.00	535.00	280.00 <sup>2</sup>	20.00
2. Indian Telephone Industries	55.00	5.00	50.00 <sup>2</sup>	
3. Hindustan Teleprinters Ltd.	3.00	3.00		
4. Indian Overseas Communication Corporation	19.00	19.00		
<b>TOTAL</b>	<b>912.00</b>	<b>562.00</b>	<b>330.00</b>	<b>20.00</b>
<i>V. Department of Coal</i>				
1. Coal India Ltd.	972.01		7.33 <sup>3</sup>	964.68
2. Singareni Collieries Co. Ltd.	105.59			105.59
3. Neyveli Lignite Corporation Ltd.	265.40	69.79	50.00 <sup>4</sup>	145.61
<b>TOTAL</b>	<b>1343.00</b>	<b>69.79</b>	<b>57.33</b>	<b>1215.88</b>

<sup>1</sup> Loans from Financial Institutions & equity participation by Cooperative.<sup>2</sup> Includes issue of bonds and external borrowings which are included under item II-4 and V in Annexure-3.2.<sup>3</sup> Issue of bonds.<sup>4</sup> U.K. assistance for Amlori.<sup>5</sup> Rs. 50 crores bonds.

## ANNEXURE 3.3—(Contd.)

(1)	(2)	(3)	(4)	(5)
<b>VI. Department of Power</b>				
1. N.H.P.C. . . . .	372.59	35.00	253.49 <sup>6</sup>	84.10
2. Damodar Valley Corporation . . . . .	132.66	72.10	60.56 <sup>6</sup>	..
3. N.T.P.C. . . . .	1731.09	270.54	531.65 <sup>7</sup>	928.90
4. N.P.C.C. . . . .	7.00	4.00	..	3.00
TOTAL . . . . .	2243.34	381.64	845.70	1016.00
<b>VII. Department of Food</b>				
1. Central Warehousing Corporation . . . . .	18.00	18.00	..	..
2. Food Corporation of India . . . . .	68.00	..	..	68.00
3. Modern Food Industries & other Programmes . . . . .	3.81	1.26	..	2.55
TOTAL . . . . .	89.81	19.26	..	70.55
<b>VIII. Department of Chemicals and Petrochemicals</b>				
1. Hindustan Organic Chemicals Ltd. . . . .	11.50	11.50	..	..
2. Hindustan Insecticides Ltd. . . . .	3.85	1.00	..	2.85
3. Indian Drugs and Pharmaceuticals Ltd. . . . .	4.00	..	..	4.00
4. Hindustan Anti-Biotics Ltd. . . . .	4.00	..	..	4.00
5. Smith startistreet Pharmaceuticals Ltd. . . . .	0.50	..	..	0.50
6. Bengal Chemicals and Pharmaceuticals Ltd. . . . .	2.00	..	..	2.00
7. Bengal Immunity Ltd. . . . .	1.50	..	..	1.50
8. Indian Petro-Chemicals Corporation Ltd. . . . .	186.87	90.87	50.00 <sup>8</sup>	46.00
9. Petrofils Corporation Ltd. . . . .	0.10	0.10	..	..
TOTAL . . . . .	214.32	103.47	50.00	60.85
<b>IX. Department of Public Enterprises</b>				
1. Bharat Heavy Electricals Ltd. . . . .	50.00	50.00	..	..
2. Hindustan Machine Tools . . . . .	35.00	35.00	..	..
3. Heavy Engineering Corporation . . . . .	10.00	..	..	10.00
4. Bharat Heavy Plates and Vessels . . . . .	6.00	0.18	..	5.82
5. Bharat Pumps and Compressors Ltd. . . . .	2.90	..	..	2.90
6. Braithwaite & Co. Ltd. . . . .	2.00	..	..	2.00
7. Burn Standard . . . . .	10.00	3.13	..	6.87
8. Bharat Brakes and Valves Ltd. . . . .	0.65	..	..	0.65
9. Bharat Wagons and Engineering Ltd. . . . .	1.50	1.02	..	0.48
10. Engineering Projects India Ltd. . . . .	0.60	..	..	0.60
11. Hooghly Dock . . . . .	0.80	..	..	0.80
12. Jogappa . . . . .	2.45	..	..	2.45
13. Lagan Jute . . . . .	1.00	1.00	..	..
14. Mining and Allied Machinery Corp. . . . .	2.50	..	..	2.50
15. Maruti Udyog Ltd. . . . .	60.00	13.34	4.86 <sup>9</sup>	41.80
16. Richardson & Crudes . . . . .	3.00	..	..	3.00
17. Triveni Structutrals Ltd. . . . .	1.00	..	..	1.00
18. Scooters India Ltd. . . . .	0.70	..	..	0.70
19. Tungabhadra Steel Products . . . . .	0.75	..	..	0.75
20. National Instruments Ltd. . . . .	1.25	..	..	1.25
21. Hindustan Cables Ltd. . . . .	16.00	8.00	..	8.00
22. Instrumentation Ltd. . . . .	6.60	2.00	..	4.60
23. Bharat Ophthalmic Glass Ltd. . . . .	3.50	..	..	3.50
24. Cycle Corporation of India Ltd. . . . .	1.00	..	..	1.00
25. National Bicycle Corp. of India Ltd. . . . .	1.00	..	..	1.00
26. Andrew Yule & Co. Ltd. . . . .	4.00	4.00	..	..
27. Bharat Leather Corp. of India . . . . .	0.40	..	..	0.40
28. Tannery and Footwear Corp. of India . . . . .	0.80	..	..	0.80
29. Cement Corp. of India . . . . .	83.00	7.00	26.43 <sup>10</sup>	49.57
30. Hindustan Paper Corp. . . . .	60.00	10.00	..	50.00
31. National Newsprint & Paper Mills Ltd. . . . .	22.50	3.98	..	18.52

<sup>5</sup> Rs. 150 crores issue of bonds and Rs. 103.49 crores external assistance.

<sup>6</sup> Market borrowing.

<sup>7</sup> Rs. 300 crores issue of bonds and Rs. 231.65 crores foreign borrowing.

<sup>8</sup> Issue of bonds.

<sup>9</sup> Equity participation by Suzuki.

<sup>10</sup> Institutional finance.

## ANNEXURE 3.3 (Contd.)

(1)	(2)	(3)	(4)	(5)
32. Hindustan Salts Ltd. . . . .	0.35	..	..	0.35
33. Hindustan Photo Films Manufacturing Co. Ltd. . . . .	11.00	7.00	..	4.00
34. Tyre Corporation of India Ltd. . . . .	1.70	..	..	1.70
<b>TOTAL</b> . . . . .	<b>403.95</b>	<b>145.65</b>	<b>31.29</b>	<b>227.01</b>
<i>X Ministry of Information and Broadcasting</i>				
1. National Film Development Corporation . . . . .	2.60	2.60	..	..
<i>XI Department of Tourism</i>				
1. Indian Tourism Development Corporation . . . . .	7.30	3.00	..	4.00
<i>XII Ministry of Petroleum and Natural Gas</i>				
<i>Petroleum :</i>				
1. Oil and Natural Gas Commission . . . . .	2250.00	1716.00	458.00 <sup>11</sup>	76.00
2. Oil India Ltd. . . . .	200.62	195.62	5.00 <sup>11</sup>	..
3. Gas Authority of India Ltd. . . . .	316.26	..	120.47 <sup>12</sup>	195.79
4. Indian Oil Corp. . . . .	205.45	142.92	62.53 <sup>13</sup>	..
5. Hindustan Petroleum Corporation . . . . .	102.63	67.28	16.46 <sup>14</sup>	18.89
6. Bharat Petroleum Corporation . . . . .	101.18	56.70	23.48 <sup>15</sup>	21.00
7. Madras Refineries Ltd. . . . .	15.94	4.94	..	11.00
8. Cochin Refineries Ltd. . . . .	11.66	..	6.09 <sup>16</sup>	5.57
9. Bongaion Refineries and Petrochemicals Ltd. . . . .	0.20	0.20	..	..
10. Lubrizol India Ltd. . . . .	4.01	2.14	1.87 <sup>15</sup>	..
11. Engineers India Ltd. . . . .	8.45	8.12	0.32 <sup>16</sup>	..
<i>Petro-Chemicals</i>				
12. Bongaion Refineries and Petrochemicals Ltd. . . . .	40.00	3.45	27.53 <sup>16</sup>	9.00
13. Bharat Petroleum Corporation . . . . .	4.00	..	4.00 <sup>16</sup>	..
14. Cochin Refineries Ltd. . . . .	12.00	..	12.00 <sup>16</sup>	..
15. Indian Oil Corporation . . . . .	0.40	0.40	..	..
16. Madras Refineries Ltd. . . . .	6.00	0.78	5.22	..
17. Hindustan Petroleum Corpn. . . . .	2.60	..	2.60 <sup>16</sup>	..
<i>Explosive/Engineering Units</i>				
18. Indo Burma Petroleum . . . . .	8.26	4.83	3.43 <sup>17</sup>	..
19. Balmar Lawrie . . . . .	5.75	3.75	1.99 <sup>18</sup>	..
20. Bridge and Roof . . . . .	5.00	0.89	4.11 <sup>16</sup>	..
<b>TOTAL</b> . . . . .	<b>3300.40</b>	<b>2208.03</b>	<b>755.12</b>	<b>337.25</b>

<sup>11</sup>. Commercial borrowing and suppliers credit from abroad.

<sup>12</sup>. OIDB, OCC and FSP

<sup>13</sup>. Rs. 10.00 crores public deposits and Rs. 52.53 crores OCC and FSP.

<sup>14</sup>. Rs. 2.12 crores public deposits and Rs. 14.34 crores OIDB.

<sup>15</sup>. Rs. 3.00 crores public deposits and Rs. 20.48 crores OIDB.

<sup>16</sup>. OIDB

<sup>17</sup>. Public Deposits

<sup>18</sup>. Rs. 1.60 crores OIDB and Rs. 39 lakhs suppliers credit.

## ANNEXURE 3.3 (Contd.)

(1)	(2)	(3)	(4)	(5)
<i>XIII Department of Scientific and Industrial Research</i>				
1. Central Electronics Ltd.	4.50	1.50	..	3.00
<i>XIV. Département of Steel</i>				
1. Steel Authority of India Ltd.*	584.96	240.96	300.00 <sup>19</sup>	44.00
2. Rashtriya Ispat Nigam	700.00	—	70.00 <sup>20</sup>	630.00
3. Vijay Nagar Steel Plant Ltd.	0.87	—	—	0.87
4. Sponge Iron India Ltd.	3.34	—	—	3.34
5. Neelachal Ispat Nigam	0.61	—	—	0.61
6. Hindustan Steel Works Construction Ltd.	4.00	—	—	4.00
7. Bharat Refractories Ltd.	7.00	—	—	7.00
8. Metallurgical and Engineering Consultants India Ltd.	1.03	1.03	—	—
9. Metal Scrap Trading Corporation Ltd.	8.10	8.10	—	—
10. National Mineral Development Corporation Ltd.	20.00	—	—	20.00
11. Kudremukh Iron Ore Ltd.	2.01	1.00	—	1.01
12. Manganese Ore Ltd.	4.32	—	—	4.32
13. Mineral Development Board	0.87	—	—	0.87
14. Bird Group of Companies	1.00	—	—	1.00
TOTAL	1338.11	251.09	370.00	717.02
<i>XV. Department of Mines</i>				
1. Bharat Gold Mines	3.55	—	—	3.55
2. Mineral Exploration Corporation Ltd.	33.00	8.00	—	25.00
3. Bharat Aluminium Co. Ltd.	144.97	—	—	144.97
4. National Aluminium Co. Ltd.	380.40	—	—	380.40
5. Hindustan Copper Ltd.	17.42	—	—	17.42
6. Hindustan Zinc Ltd.	24.80	19.00	—	5.80
TOTAL	604.14	27.00	—	577.14
<i>XVI Department of Textile</i>				
1. National Textile Corpn.	25.00	—	—	25.00
2. British India Corporation	16.00	—	7.50 <sup>21</sup>	8.50
3. National Jute manufacture corporation	3.00	—	2.00 <sup>21</sup>	1.00
TOTAL	44.00	—	9.50	34.50
<i>XVII Department of Civil Aviation</i>				
1. Air India	137.79	137.79	—	—
2. Indian Airlines	74.68	74.68	—	—
3. International Airport Authority of India	31.20	31.20	—	—
4. Vayudoot	0.80	0.80	—	—
5. National Airport Authority	35.50	—	35.50 <sup>22</sup>	—
TOTAL	279.97	244.47	35.50	—

<sup>19</sup>. SDF<sup>20</sup>. Suppliers credit.

\* The Plan outlays of Bhilai (Rs. 222.90 crores), Rourkela (Rs. 74.50 crores) Durgapur (Rs. 79 crores), Alloy (Rs. 18 crores), Bokaro (Rs. 121.56 crores), and Salem Steel Plant (Rs. 3 crores) under SAIL are financed by internal and extra budgetary resources. The Plan outlays in respect of IISCO (Rs. 43.90 crores) and Visvesvaraya Iron & Steel Co. Ltd. (Rs. 0.10 crore) are financed by budgetary support.

<sup>21</sup>. Institutional finance.<sup>22</sup>. Inter-corporate loan from Indian Airlines.

## ANNEXURE 3.3 (Contd.)

(1)	(2)	(3)	(4)	(5)
<i>XVIII Department of Surface Transport</i>				
1. Hindustan Shipyard . . . . .	19.50	—	—	19.50
2. Cochin Shipyard Ltd. . . . .	3.50	—	—	3.50
3. Delhi Transport Corpn. . . . .	18.08	—	—	18.08
4. Port Trusts . . . . .	293.09	206.50	—	86.59
5. Dredging corporation of India (Ports Light House and Ship Building)	16.15	15.50	—	0.65
6. Central Inland Water Transport Corporation . . . . .	18.12	—	—	18.12
TOTAL . . . . .	368.44	222.00	—	146.44
<i>XIX Ministry of Urban Development</i>				
1. Housing and Urban Development Corporation . . . . .	11.00	—	—	11.00
<i>XX Department Atomic of Energy</i>				
1. Indian Rare Earth Ltd. . . . .	5.67	—	—	5.67
2. Electronics Corporation of India Ltd. . . . .	14.12	2.00	—	12.12
3. Uranium Corporation of India Ltd. . . . .	13.71	—	—	13.71
TOTAL . . . . .	33.50	2.00	—	31.50
<i>XXI Department of Electronics</i>				
1. Electronics Trade and Technology Development Corporation Ltd. . . . .	3.30	2.30	—	1.00
2. Computer Maintenance Corporation Ltd. . . . .	11.00	6.00	—	5.00
3. Semi-conductors complex Ltd. . . . .	15.00	—	—	15.00
TOTAL . . . . .	29.30	8.30	—	21.00
<i>XXII Railways</i> . . . . .	2650.00	1370.00	250.00 <sup>23</sup>	1030.00
GRAND TOTAL . . . . .	14819.57	5844.63	2838.44	6136.50

<sup>23</sup>. Issue of Bonds

## ANNEXURE 3.4

## Contribution of State Electricity Boards in 1985-86 at 1984-85 Rates of Tariffs

(A) State Electricity Boards making positive contribution		(B) State Electricity Boards making negative contribution	
	(Rs. crores)		(Rs. crores)
1. Andhra Pradesh	68.07	1. Assam	(—)53.52
2. Gujarat	21.10	2. Bihar	(—)64.97
3. Kerala	10.87	3. Haryana	(—)29.39
4. Madhya Pradesh	71.93	4. Himachal Pradesh	(—)9.47
5. Maharashtra	6.29	5. Jammu & Kashmir	(—)24.57
6. Orissa	41.82	6. Karnataka	(—)117.39
7. West Bengal	12.53	7. Meghalaya	(—)7.72
8. Uttar Pradesh	0.45	8. Punjab	(—)16.25
		9. Rajasthan	(—)63.78
		10. Tamilnadu	(—)105.32
TOTAL	233.06	TOTAL	(—)492.38

# ANNEXURE 3.5

Contribution of State Road Transport Corporations in 1985-87 at 1984-85 Bus Fares

(A) Road Transport Corporations making positive contribution		(B) Road Transport Corporations making negative contribution	
STATES	(Rs. crores)	STATES	(Rs. crores)
1. Andhra Pradesh	3.67	1. Assam	(—)3.19
2. Maharashtra	24.70	2. Bihar	(—)2.28
3. Tamil Nadu	36.05	3. Gujarat	(—)22.98
4. Rajasthan	0.14	4. Himachal Pradesh	(—)2.49
		5. Jammu & Kashmir	(—)2.24
		6. Kerala	(—)32.58
		7. Karnataka	(—)31.13
		8. Madhya Pradesh	(—)1.10
		9. Manipur	(—)1.33
		10. Meghalaya	(—)1.05
		11. Orissa	(—)7.94
		12. Punjab	(—)13.67
		13. Tripura	(—)1.34
		14. West Bengal	(—)47.50
		15. Uttar Pradesh	(—)8.83
TOTAL	64.56	TOTAL	(—)179.65



## ANNEXURE 3.6

## Target of Additional Resource Mobilisation For the Annual Plan 1986-87

		(Rs. Crores)
<i>States</i>		
<i>I. Special Category</i>		
1. Assam		35.00
2. Himachal Pradesh		3.00
3. Jammu & Kashmir		10.80
4. Manipur		2.39
5. Meghalaya		0.30
6. Nagaland		0.25
7. Sikkim		0.51
8. Tripura		0.25
<b>TOTAL I</b>		<b>52.50</b>
<i>II. Non-Special Category States</i>		
1. Andhra Pradesh		110.00
2. Bihar		121.18
3. Gujarat		110.00
4. Haryana		60.00
5. Karnataka		56.25
6. Kerala		130.20
7. Madhya Pradesh		54.43
8. Maharashtra		203.51
9. Orissa		100.36
10. Punjab		75.00
11. Rajasthan		84.34
12. Tamil Nadu		93.94
13. Uttar Pradesh		160.00
14. West Bengal		79.86
<b>TOTAL II</b>		<b>1439.07</b>
<b>GRAND TOTAL (I+II)</b>		<b>1491.57</b>

## CHAPTER 4

### AGRICULTURE AND ALLIED SECTORS

4.1 During the Seventh Plan, the agriculture sector is expected to grow at an average annual rate of 4.0 per cent in terms of gross output, the targeted growth rate for foodgrains production being 3.5—4.1 per cent. Continued self-sufficiency in foodgrains at rising levels of per capita consumption is a major objective of agricultural development in the Seventh Plan. The Plan also envisages special efforts for extending the benefit of the Green Revolution to the Eastern Region and to the dryland/rainfed areas, diversification of the cropping pattern with increased production of pulses and oilseeds and for enhancing the productivity and incomes of small and marginal farmers. The programme content of the Annual Plan for 1986-87 is designed to contribute to the realisation of these objectives.

#### *Agricultural Production—Review*

4.2 Table 4.1 sets forth the crop production targets fixed for the Sixth Plan, targets and achievements of

the Annual Plans 1983-84 and 1984-85, targets for the Seventh Plan and targets and anticipated achievements for the Annual Plan 1985-86.

#### *Performance in 1985-86*

4.3 During kharif 1985, the onset of South-West monsoon was delayed over the Central and Northern States. The delay was particularly pronounced in Gujarat where the monsoon broke only on 14th July, 1985, i.e., more than a month behind the normal date. Besides, the behaviour of the monsoon during the season was erratic over many States. The total rainfall received during the monsoon season (June to September 1985) was in excess or normal in 26 meteorological sub-divisions (i.e. same as in kharif 1984) and deficient/scanty in the remaining 9 sub-divisions. Rainfall was particularly deficient in the States of Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Gujarat and Rajasthan.

TABLE 4.1  
*Crop Production Targets and Performance*

Crop	Unit	Sixth Plan					Seventh Plan		
		Sixth Plan target 1984-85	1983-84		1984-85		1989-90 Target	1985-86	
			Annual Plan Target	Achievement	Annual Plan target	Achievement		Annual Plan Target	Anti. Ach.
1	2	3	4	5	6	7	8	9	10
<b>1. Foodgrains</b>									
(i) Rice	Million tonnes	63.00	57.00	60.10	61.50	58.64	73.00— 75.00	63.50	63.70
(ii) Wheat	"	44.00	41.00	45.48	45.60	44.23	56.00— 57.00	49.20	47.20
(iii) Coarse Grains	"	32.10	31.00	33.90	33.50	31.16	34.00— 35.00	33.00	26.70
(iv) Pulses	"	14.50	13.00	12.89	13.00	12.19	15.00— 16.00	13.50	12.90
<b>TOTAL—FOODGRAIN</b>	<b>"</b>	<b>153.60</b>	<b>142.00</b>	<b>152.37</b>	<b>153.60</b>	<b>146.22</b>	<b>178.00— 183.00</b>	<b>159.20</b>	<b>150.50</b>
2. Oilseeds (all)	"	13.00	12.50	12.69	13.00	13.10	18.00	13.60	11.20
3. Sugarcane (cane)	"	215.00	180.00— 185.00	174.08	180.00— 185.00	173.57	217.00	191.00	175.00
4. Cotton (Lint)	Million bales of 170 kg. each	9.20	8.20— 8.50	6.39	8.50— 8.80	8.47	9.50	8.50— 8.60	8.60
5. Jute & Mesta	Million bales of 180 kg. each	9.08	8.20— 8.50	7.72	8.50	7.98	9.50	8.65	12.40

Tamil Nadu experienced inadequate availability of irrigation water in the reservoir systems and this affected the paddy crop. As a result, there was a shrinkage of area under kharif crops, particularly under coarse grains and oilseeds. The yield levels of the rainfed crops were also affected. On the other hand, the performance of crops in irrigated areas and areas unaffected by drought conditions was good. The main kharif crop, i.e. paddy, fared better than in kharif 1984. In the case of oilseeds, production of groundnut suffered a severe set-back in Gujarat and Andhra Pradesh as a result of unfavourable weather conditions during kharif. However, soyabean output showed further improvement over the record gains achieved in the recent past. The performance of fibre crops was excellent.

4.4 The performance of rabi crops in 1985-86 was quite good. Rains during September-October 1985 in the Northern States provided adequate soil moisture for rabi sowings. Subsequent rainfall during October to December 1985 over the Northern and Central States was also quite satisfactory. During January 1986, fairly scattered rains were received in the Southern and Eastern States, though the rainfall was deficient in the Northern States. Rainfall during February 1986 too was satisfactory in all the important rabi growing areas. On the whole, the weather conditions during the rabi season were very favourable to crop production. As a result, foodgrain production during rabi 1985-86 rose to a new record level as compared to the previous peak of 63.1 million tonnes achieved in 1983-84. Production of rapeseed and mustard, which is the principal rabi oilseed crop was also quite satisfactory. However, sugarcane production was around the levels achieved during the last two years.

#### Crop Productions Targets for 1986-87

4.5 The targets envisaged for the Annual Plan 1986-87 for the principal crops are indicated in the following Table :—

TABLE 4.2  
Crop Production Targets for 1986-87

Crop	Unit	Target
1. Foodgrains		
(a) Rice . . . .	Million tonnes	65.00
(b) Wheat . . . .	"	49.00
(c) Coarse Grains . . . .	"	32.00
(d) Pulses . . . .	"	14.00
Total . . . .	"	160.00
2. Oilseeds . . . .	"	14.80
3. Sugarcane . . . .	"	185.00—190.00
4. Cotton . . . .	Million bales of 170 kg. each	8.60
5. Jute & Mesta . . . .	Million bales of 180 kg. each	8.50

#### Agricultural Inputs

4.6 In order to achieve the various crop production targets fixed for 1986-87, emphasis will be placed on measures such as expansion of the area under high yielding varieties, increased distribution of improved quality seeds, increased fertiliser consumption and better plant protection. The all-India targets of selected physical programmes envisaged for 1986-87 are given in Table 4.3.

TABLE 4.3  
Progress of Selected Physical Programmes during the Sixth and Seventh Plan and Targets for 1986-87

Programme	Unit	Sixth Plan 1984-85 Target	1983-84		1984-85		Seventh Plan 1989-90 Target	1985-86		1986-87 Target
			Target	Achievement	Target	Achievement		Target	Ant. Ach.	
1	2	3	4	5	6	7	8	9	10	11
<b>A. H. Y. V. Programme</b>										
1. Paddy . . . .	Million ha.	25.00	22.50	21.74	25.00	21.47	32.00	26.50	23.80	25.80
2. Wheat . . . .	"	19.00	18.20	19.39	19.00	18.95	22.00	19.50	19.72	20.67
3. Maize . . . .	"	2.00	1.83	1.91	2.00	1.97	3.00	2.20	2.20	2.35
4. Bajra . . . .	"	5.00	4.70	5.42	5.00	5.17	6.50	5.30	4.58	5.94
5. Jowar . . . .	"	5.00	4.80	5.28	5.00	5.08	6.50	5.30	4.88	5.85
TOTAL . . . .	"	56.00	52.00	53.74	56.00	52.64	70.00	58.80	55.18	60.61
<b>B. Distribution of Certified Seed</b>										
Million qtls.		5.40	4.80	4.50	7.70	4.85	11.74	8.00	5.50	6.57

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>C. Consumption of Chemical Fertilizers</b>											
1. Nitrogenous (N) Million tonnes			6.00	4.80	5.20	5.65	5.49	9.10 to 9.30	6.35	5.98	6.80
2. Phosphatic (P) „			2.34	1.60	1.73	1.90	1.88	3.00 to 3.20	2.20	2.15	2.40
3. Potassic (K) „			1.31	0.80	0.78	0.85	0.84	1.40 to 1.50	1.00	0.90	1.10
<b>TOTAL</b> „			<b>9.65</b>	<b>7.20</b>	<b>7.71</b>	<b>8.40</b>	<b>8.21</b>	<b>13.50 to 14.00</b>	<b>9.55</b>	<b>9.03</b>	<b>10.30</b>
<b>D. Plant Protection</b>											
Consumption of Technical Grade Material (TGM) Thousand tonnes			80.00	72.00	55.00	75.00	56.00	75.00	55.70	66.00	70.00
<b>E. Area Covered under Soil Conservation (Cumulative) Million ha.</b>											
			30.50	27.60	27.92	30.50	29.38	..	30.86	30.46	31.20*

\*Representing an additional area target of 0.74 million ha.

### High Yielding Varieties (HYV) Programme

4.7 Expansion of area under HYVs continues to be an important plank of the strategy for increasing crop production and productivity. During 1985-86, the anticipated achievement is about 55.2 million ha., indicating a shortfall in relation to the target of 58.8 million ha. The targets set for HYV paddy, bajra and jowar could not be achieved mainly due to adverse seasonal conditions in kharif 1985. The area coverage target of 60.6 million ha, fixed for 1986-87 reflects a substantial step up over the anticipated achievement in 1985-86 and is in line with the Seventh Plan target of 70 million ha. for 1989-90.

### Fertilisers and Manures

4.8 The consumption of chemical fertilisers (in terms of nutrients) during 1985-86 is estimated at about 9.0 million tonnes, showing a marginal shortfall in relation to the target of 9.5 million tonnes due to unfavourable weather conditions in kharif 1985. In view of the key importance of chemical fertilisers in stepping up the productivity of crops, the target for 1986-87 has been fixed at 10.30 million tonnes.

4.9 Government have taken a number of steps for promoting the use of fertilisers. A target of establishing 15,000 additional fertiliser sale points was fixed for 1985-86. This number would be raised to 18,000 during 1986-87. Continuous efforts are being made for ensuring efficient fertiliser movement and timely delivery. The Intensive Fertiliser Promotion Campaign, launched in 1982-83, was continued in 104 selected districts during 1985-86. The main activities of the Campaign included block demonstrations, training of farmers and dealers, kisan melas and advising farmers in respect of soil testing etc. This work in these 104 districts would be further intensified during 1986-87.

4.10 For ensuring judicious, cost effective and efficient use of fertilisers, 4 more soil testing laboratories were established during 1985-86, raising the total number of such laboratories to 426. With this, the annual capacity of testing soil samples went up to 5.98 million samples in 1985-86. Efforts were intensified to enforce the legal provisions more effectively for ensuring right quality, proper weight and prices of fertilisers supplied to the farmers.

4.11 During 1986-87, it is proposed to pay special attention to promote the use of chemical fertilisers in the dryland areas. The pace of implementation of the National Project on Bio-Fertilisers will be accelerated. Work on various continuing schemes such as Fertilisers Quality Control measures will also be intensified.

### Seeds

4.12 With a view to increasing the production and distribution of breeder, foundation and certified seeds, Government have taken a number of measures. According to provisional estimates, the production of breeder seeds went up from 28,800 quintals in 1984-85 to 32,200 quintals in 1985-86. In the case of foundation seeds, however, the production target for 1985-86, which was originally fixed at 0.30 million quintals, was lowered in view of the large carry-over stock. During 1985-86, the distribution of certified quality seeds aggregated to 5.5 million quintals as compared to 4.85 million quintals in 1984-85. With the successful implementation of Phases I and II of the World Bank aided National Seed Programme in nine States, an additional seed processing capacity of 1.27 million quintals was created in 1985-86. As a result, the total seed processing capacity in the organised sector went up to 4.95 million quintals. The total seed storage capacity in the organised sector at the end of 1985-86 is estimated to be of the order of 1.30 million quintals.

4.13 In order to lend effective support to the crop production targets, the production of breeder and foundation seeds during 1986-87 is envisaged at 34,000 quintals and 4,60,000 quintals respectively. The target for distribution of certified/quality seeds during 1986-87 has been fixed at 6.57 million quintals, which includes a target of 0.57 million quintals for bufferstock and export of certified/quality seeds. During 1986-87, it is proposed to launch Phase III of the National Seed Programme with the aim of creating an additional capacity of 1.00 million quintals for seed processing and 1.5 million quintals for seed storage.

#### *Plant Protection*

4.14 The crop year 1985-86 was generally free from any major out-break of plant disease/pest attack, except for an attack of 'pyrilla' on sugarcane crop in Uttar Pradesh, Punjab and Haryana; of 'white fly' on cotton crop in Andhra Pradesh, and of 'white rust' attack on mustard crop in Rajasthan, Uttar Pradesh and Haryana. Under the Central Sector Pest and Disease Surveillance Scheme, an area of 0.65 million ha. was covered and the results were communicated to the concerned State Governments for initiating timely control measures. Besides ground spraying and aerial spraying of pesticides, steps were intensified to control pests and diseases through biological methods. Against the consumption of 56,000 tonnes of pesticides (Technical Grade Material) in 1984-85, the anticipated consumption is about 66,000 tonnes during 1985-86.

4.15 For strengthening the quality control infrastructure in the States, substantial progress was made during 1985-86 in establishing 5 Regional Pesticides Testing Laboratories at Kanpur, Calcutta, Chandigarh, Bombay and Hyderabad. These laboratories are expected to start functioning from 1986-87. Suitable training courses were organised at the Central Plant Protection Training Institute, Hyderabad, with a view to improving the technical competence of the personnel engaged in pest management and other plant protection work.

4.16 The pesticides consumption target for 1986-87 has been fixed at 70,000 tonnes. All the on-going schemes, including that for Control and Eradication of Pests and Diseases in Endemic Areas, will be continued during 1986-87. It is also proposed to strengthen the facilities for quality control of pesticides as well as the scheme for Control of Insects, Pests and Weeds by Biological Methods.

#### *Agricultural Implements and Machinery*

4.17 The Regional Farm Machinery Training and Testing Institutes located at Hissar (Northern Region) Budni (Central Region) and Anantapur (Southern Region) continued their activities during 1985-86. While the Northern and Central Institutes are engaged in testing of agricultural equipment and machinery for ensuring quality control as well as for imparting training to the farmers, technicians and State Officials in operating the machinery and equipment, the Southern Regional Institute, being at a formative stage, has confined its activities to the training program-

mes. Against the target of training 1500 persons, the Institutes imparted training to 1637 persons during 1985-86. The target of testing 50 agricultural implements and machinery was achieved fully. However, under the Centrally Sponsored scheme of Establishment of Agro-Service Centres, the progress during 1985-86 was reported to be unsatisfactory in relation to the targets fixed. This scheme was launched in December 1983 and the first release of funds was made in January 1984. Thus, the slow progress of the scheme was due to the short period available to the States for implementing this scheme; only 152 farmers' agro-service centres were established and 15,000 demonstrations were organised against the target of 48,000 demonstrations. However, the States have indicated that they have taken preparatory steps to accelerate the progress during 1986-87.

4.18 During 1986-87, it is proposed to provide the necessary equipment, staff and other infrastructure to the Southern Regional Institute so as to make it fully operational. It is also proposed to initiate work for establishing two more Institutes—one for the Eastern Region and the other for the Western Region during 1986-87. It is proposed to establish 373 agro-service centres, organise 17,900 demonstrations and distribute 65,800 improved agricultural hand-tools and implements during 1986-87 under the Centrally Sponsored Scheme of Agro-Service Centres.

#### *Agricultural Extension and Training*

4.19 With a view to ensuring quick transfer of technology and motivating the farmers for the adoption of improved technological practices the agricultural extension machinery has been reorganised and strengthened on the basis of the Training and Visit (T&V) System. Despite several difficulties associated with such innovative measures, the T&V System, which covered 13 States during the Sixth Plan period, played a significant role and made perceptible contribution in the form of diversification of the cropping pattern, introduction of new crop rotations and increased intensity of cropping, etc. Greater attention was also given to improve the technical competence of the extension functionaries and to bring about close linkages between the agricultural universities, research institutions, State Agricultural Departments and the farming community. A new project entitled the National Agricultural Extension Project (NAEP), was taken up initially in the three States of Orissa, Madhya Pradesh and Rajasthan with World Bank assistance. Under the first phase of NAEP, the Centrally sponsored component consisting of special sub-projects for bridging the existing gaps and rectifying weaknesses in the on-going projects was also taken up during the Sixth Plan period. It is proposed to streamline and further strengthen the extension services during the Seventh Plan period.

4.20 During 1985-86, based on the thrusts envisaged in the Seventh Plan, the on-going Central and Centrally Sponsored Schemes were continued. Phase II of NAEP was taken up with the objective of sustaining and further strengthening the T&V System, in Gujarat, Haryana and Karnataka and introducing the system for the first time in Jammu & Kashmir.

Preparatory action on some new programmes like NAEP III alongwith reorganisation and strengthening of agricultural extension is smaller States|Union Territories was also initiated.

4.21 During 1986-87, the on-going Central and Centrally Sponsored schemes would be continued. In addition, various programmes under Phase III of NAEP would be taken up for implementation with a view to improving the functioning of the extension projects in the States. These programmes include (i) strengthening of agricultural communication services by augmenting media support to agriculture through a series of video softwares for transfer of technology; (ii) establishment of centres of advanced training in selected State Agricultural Universities-ICAR Institutes so as to take care of specialised subject-matter courses for upgrading the technical competence of the subject-matter specialists working in the field of extension; (iii) preparation and production of manuals on crop extension methodologies; (iv) conducting special studies in extension including R&D; and (v) installation of a mini-computer in the Directorate of Extension. It is also proposed to set up during 1986-87 the National Centre for Management of Agricultural Extension (Manage) at the National Institute of Rural Development, Hyderabad and an Extension Education Institute for the benefit of the North-Eastern States. An outlay of Rs. 3.00 crores has been provided in 1986-87 Central Plan against the anticipated expenditure of Rs. 1.42 crores during 1985-86.

#### *Special Programmes*

4.22 For achieving the objectives of increasing crop production and productivity, reduction in regional imbalances and alleviation of poverty and unemployment, the Seventh Plan lays particular emphasis on implementing a few special agricultural programmes, namely, the Special Rice Production Programme in the Eastern Region, National Programmes for Development of Oilseeds, Pulses and Dryland|Rainfed Agriculture and assistance to Small and Marginal Farmers. The progress made and measures required for effective implementation of these programmes are outlined in the succeeding paragraphs :

#### *Special Rice Production Programme in the Eastern Region*

4.23 The Special Rice Production Programme aims at increasing the production and productivity of rice in the Eastern Region comprising Assam, Bihar, Orissa, West Bengal, Eastern Uttar Pradesh and Eastern Madhya Pradesh. Based on the experience gained through the implementation of a pilot project during 1984-85 in 51 selected blocks, a comprehensive Centrally Sponsored programme was taken up from 1985-86 in 420 blocks. The expenditure is being shared by the Central and concerned State Governments on 50 : 50 basis. Under the scheme, emphasis is being laid on the development of basic physical and infrastructural facilities such as exploitation of groundwater, improvement of irrigation and drainage, water use efficiency, land development and reclamation, arrangements for timely supply of the required agricultural inputs, provision of adequate storage and

marketing facilities as well as tackling of land tenurial problems and consolidation of holdings.

4.24 As the constraints vary from block to block, the programme allows flexibility to the State Governments in taking up work components appropriate to local conditions. Block-wise Plans have already been prepared to provide the basis for the work programme to be executed. Efforts are being made to integrate the Rice Production Programme with other Central| Centrally Sponsored schemes such as Integrated Rural Development Programme (IRDP), Rural Landless Employment Guarantee Programme (RLEGP), National Rural Employment Programme (NREP) Assistance to Small and Marginal Farmers for Increasing Agricultural Production and also with relevant State sector schemes being implemented in the blocks covered by the Rice Production Programme.

4.25 During 1986-87, the programme will be implemented in 430 blocks (Assam-37, Bihar-118, Madhya Pradesh-40, Orissa-63, Uttar Pradesh-102 and West Bengal-70) as against 420 blocks covered during 1985-86. The increase in the number of blocks to be covered in 1986-87 is due to the expanded coverage in the State of Assam. Against the provision of Rs. 20 crores made in the Central budget for 1985-86, the anticipated expenditure is about Rs. 12 crores, the shortfall being mainly due to the inability of some States to provide the required matching funds. For 1986-87, a provision of Rs. 23 crores has been made as the Centre's share. The position regarding the provision of matching funds by the States is expected to improve significantly from 1986-87.

4.26 For the successful implementation of the programme, greater attention is to be paid to various aspects such as the establishment of effective linkages between the research and development agencies, co-ordinated functioning of the concerned line departments for implementing long term measures like consolidation of holdings, land reforms and development of irrigation and drainage, improvement in water use efficiency, strengthening of institutional framework for timely and adequate supply of credit and inputs and building up of an appropriate system for assessing the impact of the programme on production and productivity with reference to carefully worked out base level performance and targets.

#### *National Oilseeds Development Project*

4.27 The various on-going Centrally Sponsored schemes for Oilseeds Development have been re-oriented and integrated into a compact National Oilseeds Development Project which was implemented during 1984-85 and 1985-86 on 100 per cent Central assistance basis. In order to accelerate the growth of oilseeds production during the Seventh Plan, it was felt necessary to revise the approach and build up long term capabilities. As a result, it has been decided to recast the project for implementation during the period 1986-87 to 1989-90. The thrust of the revised programme is on strengthening the key institutions responsible for providing to the farmers various services such as inputs, extension, credit, etc. so as to assist them in increasing the production of oilseeds.

The important components of the Project include production, distribution and buffer stocking of seeds, distribution of minikits, strengthening of fertiliser distribution channels, more effective farm mechanisation as well as marketing and price support. For implementing the scheme, 180 districts, which have adequate potential for the cultivation of oilseeds, have been selected. Guidelines and formats have already been issued to the States for undertaking diagnostic analysis of the constraints inhibiting production and for identifying the managerial and other remedies required for over-coming these constraints. The project allows flexibility to the State Governments in the matter of availing assistance under those components which are of particular relevance in the context of specific constraints prevalent in the districts covered. Greater emphasis is also being laid on coordinating the cognate activities of different agencies such as the National Cooperative Development Corporation (NCDC), the National Dairy Development Board (NDDB) and the Indian Council of Agricultural Research (ICAR) so as to promote sustained growth in oilseeds production.

4.28 Under the revised project, which will be implemented as a Centrally Sponsored scheme on 50 : 50 basis, the State Governments will prepare district-wise action plans/sub-projects in accordance with the guidelines and quantify the component-wise fund requirement for the approval of the Central Government. A provision of Rs. 17.5 crores has been made in the Central budget for 1986-87 towards the share of the Central Government. For efficient implementation of the project, the steps required include coordinated functioning of the research and development agencies, streamlining of the delivery system for supply of quality seeds & other key inputs, effective extension network for quick transfer of technology, effective marketing and price support and close monitoring at various levels.

4.29 In order to make the country self-reliant as early as possible in edible and non-edible oils and to reduce imports of vegetable oils through an integrated approach involving different developmental, scientific, input, banking and marketing agencies, the Technology Mission on Oilseeds Production has been set up in early 1986. The Mission will concentrate first on the major crops which contribute substantially to the edible oil economy of India. Crops that would receive priority are groundnut, rapeseed/mustard, soyabean, sunflower, safflower, linseed, sesame and niger. The Mission will also give priority to non-edible oilseed crops to meet the requirements of the industry. The Mission has divided the operational responsibility among four Sub-Missions dealing with technology, production, inputs and marketing-cum-processing support. Each of the Sub-Missions will chalk out its plan of operation in pursuance of the common objectives and contribute to further development of the programme through monthly reviews.

#### National Pulses Development Project

4.30 Shortage of pulses has been an area of concern. The Seventh Plan envisages a substantial step up in the production of pulses from an assumed base

level of 13 million tonnes in 1984-85 to 15-16 million tonnes by 1989-90. It has, therefore, been decided to launch a new National Pulses Development Project during the Seventh Plan by integrating the ongoing Centrally Sponsored scheme of Pulses Development Programme and the Central Sector scheme of Minikit Demonstration of Pulses and by re-orienting the approach. This Project will be implemented from 1986-87 as a Centrally Sponsored scheme, and it aims at propagating crop-specific and location-specific technologies for achieving a sustained growth in the production of pulses. Its major components include minikit and adaptive trials, demonstrations, production of breeder and foundation seeds, biological control of pests, strengthening of micro-biological laboratories, providing market support and establishment of processing units. The estimated cost of the Project during the Seventh Plan is Rs. 46 crores, of which the share of the Central Government is Rs. 29 crores and the balance will be provided by the concerned State Governments. During 1986-87, the Central Government is likely to spend about Rs. 4 crores on this Project.

#### National Watershed Development Programme for Rainfed Agriculture

4.31 The Seventh Plan lays considerable stress on stabilising and augmenting agricultural production and productivity in the dryland/rainfed areas. In order to supplement the efforts of the States, it is proposed to launch a new National Watershed Development Programme for Rainfed Agriculture from 1986-87. It will be implemented as a Centrally Sponsored scheme during the four-year period from 1986-87 to 1989-90 at an estimated cost of Rs. 239 crores, of which the Centre's share will be Rs. 120 crores. For 1986-87, an outlay of Rs. 54.5 crores is envisaged as the share of the Central Government. The programme components include land and moisture management, introduction of appropriate cropping systems, development of dryland horticulture, fodder production and farm forestry as also other important measures such as contingency seed stocking, adaptive research, training and improved tools and equipments. For achieving the desired objectives of the programme, it is necessary to pay close attention to certain important measures such as preparation of watershed management plans on scientific lines, creation/strengthening of the delivery system for input supplies, training of the project functionaries and administrative arrangements for efficient implementation and monitoring.

#### Small and Marginal Farmers' Programme

4.32 The Centrally Sponsored programme for extending assistance to the small and marginal farmers for increasing agricultural production was taken up in 1983-84 and continued thereafter in all the development blocks. The programme envisages an annual outlay of Rs. 5 lakhs per block to be shared equally by the Central and State Governments. The component-wise allocation of the annual outlay is in the ratio of 7 : 1 : 2 between minor irrigation, seed minikits of oilseeds, pulses and coarse grains and land

development, including staff cost. A provision of Rs. 100 crores was made in the Central Budget for 1985-86. According to the revised guidelines issued recently, the components of plantation of fuel and fruit trees and free supply of fertilisers, which were hitherto covered under the programme, have been dropped. The distribution of seed minikits under the programme has recorded very good progress and it has contributed to the growth of productivity of the farms of the beneficiaries. Since the other two major components, namely, minor irrigation and land development, are of vital importance for helping the small and marginal farmers in their production efforts, steps need to be taken to ensure their efficient implementation and close monitoring. It is also necessary to identify the constraints, if any, impeding the progress of these components and take appropriate remedial measures.

### Horticulture

4.33 Besides intensifying various measures for productivity improvement, area expansion and supporting services for stepping up the production of horticultural crops such as fruits, vegetables, coconut, cashew-nut, flowers and spices, the Seventh Plan aims at integrating horticulture with agriculture in hilly/tribal areas, dryland areas and coastal saline areas for diversifying agricultural production and raising farm incomes in those areas. For 1985-86, the following production targets were fixed : 24.4 million tonnes of fruits; 35.2 million tonnes of vegetables, 7100 million coconuts and 2.41 lakh tonnes of cashewnuts. The anticipated achievement is close to the targets. For 1986-87, the production targets envisaged are : 25.3 million tonnes of fruits, 36.4 million tonnes of vegetables, 7300 million coconuts and 2.62 lakh tonnes of cashewnuts. An outlay of Rs. 4 crores has been allocated in the Central sector for 1986-87.

### Plantation Crops

4.34 The following Table indicates the production targets for plantation crops :—

TABLE 4.4  
*Production Targets of Plantation Crops*

	Unit	1980-90 Seventh Plan Target	1985-86 Target	1986-87 Target
1	2	3	4	5
Tea	Million Kgs.	766	651	677
Coffee	'000 tonnes	180	146	154
Rubber	'000 tonnes	265	196	217
Cardamom	Tonnes	6500	3450	4650

According to present indications, the production of rubber during 1985-86 is placed at 201 thousand tonnes and of cardamom at 4000 tonnes. The estimated production of coffee and tea also shows considerable improvement over the previous year. The targets

for 1986-87 have been fixed keeping in view the past trends in production.

4.35 Against an approved outlay of Rs. 40.46 crores for plantation crops in 1985-86, the anticipated expenditure is Rs. 28.55 crores. The shortfall in utilising the Plan outlay is mainly due to non-finalisation of certain schemes by the Tea Board, Coffee Board and Rubber Board, availability of internal resources with the Tobacco Board by way of service charges from the auction system of tobacco introduced in Andhra Pradesh and non-utilisation of funds under some schemes. For the Annual Plan 1986-87, the Central Plan outlay for plantation crops aggregates to Rs. 36.56 crores.

### Agricultural Research and Education

#### Crop Sciences

4.36 Under Crop Sciences, a number of high yielding varieties were evolved during 1985-86. Particular reference may be made of the new rice varieties released in Kerala and 4 soyabean varieties, namely, PK-416, DS-76-1-36-1 for the Northern Plain Zone, PK-473 for the Central Zone and KHSB-2 for Southern Zone. Companion cropping of soyabean with crops like sorghum, arhar or cotton in the Central Zone and with rice or ragi in Bihar were successfully tried. New sorghum hybrid varieties were identified for release. A few other improved varieties of different pearl millets were recommended for release and minikit testing during the year. In respect of vegetables and plantation crops, a new selection (KT-9) of snowball type Cauliflower was evolved.

#### Soil Sciences

4.37 Under the Soil and Water Management programme, research schemes have been taken up under the All India Coordinated Research Project (AICRP) on Water Management. The activities under Central Soil Salinity Research Institute included evolving cheaper and alternative method of land reclamation, and screening and identification of tolerant varieties of food crops suited to salinity and acidity. In view of the high priority accorded to dryland agriculture, a new Central Research Institute for Dryland Agriculture, was established during 1985-86. The Central Arid Zone Research Institute (CAZRI) identified new varieties of promising crops for kharif cultivation in desert areas. The National Bureau of Soil Survey and Land Use Planning completed reconnaissance surveys in the States of Uttar Pradesh, Jammu & Kashmir, West Bengal, Maharashtra, Madhya Pradesh and Andhra Pradesh. Field surveys were to be completed in about 80 thousand hectares during the year 1985-86.

#### Animal Sciences

4.38 The National Bio-technology Centres for Animal Production and Animal Health have been set up at National Dairy Research Institute (NDRI) and Indian Veterinary Research Institute (IVRI) respectively. The Centre at NDRI will have the two major programmes, i.e., bio-conversion of organic wastes and immunological bio-techniques in respect of fertility



The new programmes in the field of bio-technology to be applied to agriculture and allied sectors in view of immediate need for breaking yield barriers in major food crops has been started during 1985-86 at the Indian Agricultural Research Institute (IARI).

4.39 In respect of poultry and animal development, a number of exotic strains have been introduced and utilised for increasing livestock production in different agro-ecological conditions. Special emphasis was laid during 1985-86 on improved fodder and seed production, particularly legumes and pulses production, in a system of paddy-wheat rotations at NDRI. More than 10,000 animals were vaccinated against Haemorrhagic Septicaemia. The Central Sheep and Wool Research Institute at Avikanagar in Rajasthan continued its activity. The Studies in sheep improvement for apparel and carpet wool and mutton production as well as investigation into rabbit production to develop package of management practices were undertaken. Action was taken for establishment of the Central Institute for Research on Buffalo, National Research Centre on Yak, National Research Centre on Mithun, National Research Centre on Equines and strengthening of the National Research Centre on Camel. In case of research schemes on animal health, activities at IVRI and under All India Coordinated Research Projects for Animal Diseases were continued.

#### *Fisheries*

4.40 The on-going schemes on Fisheries Research and Education were continued at the Central Inland Fisheries Research Institute (CIFRI), Central Marine Fisheries Research Institute (CMFRI), Central Institute on Fisheries Technology and Central Institute of Fisheries Education. During 1985-86, the CIFRI successfully developed the use of synthetic hormone as a substitute of fish pituitary glands. At CMFRI, the work done mainly related to fisheries resources development, fisheries environment management, pelagic fisheries, crustacea fisheries, molluscan fisheries and other areas like physiology, nutrition, pathology, fisheries economics and extension. The Central Institute for Fisheries Education has started M.Sc. courses in fisheries management.

#### *Agricultural Education*

4.41 The ICAR continued to support development of agricultural universities, including the recently set up University of Agriculture in Jammu & Kashmir and Birsā Agricultural University (BAU) in Bihar. Other activities, i.e., assistance for development of affiliated colleges of general universities, development of agricultural colleges of Central Universities and scholarship to agricultural graduates and post-graduates were continued.

#### *Agricultural Extension*

4.42 For transfer of technology, activities under the National Demonstration Project, Operational Research projects and Krishi Vigyan Kendras were strengthened during 1985-86. National Demonstrations in 48 districts were continued under the guidance of 4 Regional Coordinators located in four different regions of the country. Under Operational

Research Projects, the main approach of selection of a cluster of 4-5 villages on a watershed area representing typical agro-climatic conditions and development of crops and other related research facilities, was continued.

#### *Programme for 1986-87*

4.43 The priority areas identified respect of different areas in Agricultural Sciences for 1986-87 are:—

##### *Crop Sciences*

- (i) Development of semi-tall varieties of rice of less than 100 days duration, possessing resistance/tolerance to rust, gundhibug and mealybug for up-lands. Development of photo sensitive semi-tall varieties possessing resistance/tolerance to pests, such as, stem borer, hispa and leaf folder diseases, such as sheath blight and tungro virus for water logged areas;
- (ii) Undertaking coordinated varietal trials for high yielding varieties of wheat and barley incorporating high protein and lysine contents;
- (iii) In case of commercial crops, it is proposed to set up genetic resources unit and undertake collection and evaluation and maintenance of germplasm of jute, flax and linseed. Application of embryo and tissue-culture techniques in fibre crops, and studies on hooghly wilt with special reference to the role of pathogens will be undertaken during 1986-87; and
- (iv) In respect of vegetables, fruit and plantation crops, priority in research has been decided on katte disease of cardamom, rhizome rot of ginger, nutritional requirement of pepper, cardamom, ginger and turmeric and working out of suitable cropping systems for spices and vegetables. Research on fruits, like banana, citrus etc. will be strengthened under the guidance of new National Research Centres for these fruits.

##### *Soil Sciences*

4.44 In regard to dryland agriculture, research in priority areas like plant physiology, crop breeding, soil and water conservation and soil fertility management will be undertaken under the Central Institute for Dryland Agriculture, the Institute of Soil Sciences Research and Central Arid Zone Research Institute (CAZRI). Priority attention will be given to increasing crop production on farmers' fields at least by 100 per cent, stabilisation of crop production by reducing the effects of aberrations in the monsoon rains and optimising the use of the environment by efficient management of available land and water. During 1986-87, soil survey activities would be continued by the Institute of Soil Sciences Research while the on-going activities like, multiplication of fast growing species for hacking fodder trees and grasses would be continued under CAZRI. It is expected

that all the above mentioned Institutes concerned with dryland farming would lend the required research support to the major programme of dryland farming on the watershed basis launched by the Ministry of Agriculture.

4.45 High priority has been given in the Plan programme for efficient and adequate utilisation of water potential created in Command Areas and emphasis is being laid on research on management of water in high rainfall areas of the Eastern Region in the country to mitigate effects of floods by suitable drainage research. The up-graded Project Directorate of Water Management Resources will be strengthening a few more Centres of AICRP on Water Management for high rainfall areas. It is expected that these Centres will lend research support in water management particularly to the blocks selected for special Rice Production Scheme in the Eastern States.

#### *Animal Sciences*

4.46 The livestock improvement programme for 1986-87 includes the establishment of a Centre of Excellence in Bio-technology. The other schemes under NDRI and AICRP on Cattle Development will be continued. The Central Sheep and Wool Research Institute will continue research in improving sheep for apparel and carpet wool, meat and pelt and fur animals for meat and wool. The research programme of the Institute for Research on Buffaloes will continue to lay emphasis on progeny testing at the Nabha sub-Station and the two Regional Stations, one in Gujarat and the other in Andhra Pradesh. The AICRP on Buffaloes will start functioning at Hissar and other Centres like Ludhiana, Udaipur and Dharwar.

#### *Fisheries*

4.47 In areas of fisheries research and education, new projects are to be taken in Riverine Fisheries and studies on ecology and stock assessment in rivers. Bio-monitoring of pollution with special reference to its effect on fish will be undertaken in the Ganga and Brahmaputra Rivers. The Central Marine Fisheries Research Institute would focus attention on new approaches to the assessment of marine fish and prawn stocks during 1986-87. The Fisheries education scheme under the Central Institute of Fisheries Education includes initiation and completion of Courses for various disciplines of fisheries education and extension transfer of the technology to Extension Workers and fish farmers. It is proposed to conduct extensive ecological and taxonomic surveys of natural habitats to identify genetically distinct population and conservation of exploited and endangered species by National Bureau of Fish Genetic Resources in collaboration with the Department of Environment and State Governments.

#### *Agricultural Education*

4.48 In Agricultural Research and Education, the programme relating to orientation course in Agricultural Research and Management for Scientists, training programme for Senior Scientists, organisation of summer Institute and Workshop for Staff of Agricultural Universities will be taken up during 1986-87.

Other activities for assisting State Agricultural Universities, affiliated colleges of general universities and Central universities would be continued. Under the National Agricultural Research Project (NARP), 18 new projects would be taken up during 1986-87.

#### *Agricultural Extension and Education*

4.49 For Agricultural Extension and Transfer of Technology, the schemes of National Demonstrations, Operational Research Projects and expansion of Krishi Vigyan Kendras (KVKs) will continue, KVKs sanctioned/set up during the Sixth Plan and later will be further strengthened by way of staff and equipment, and some of the older KVK's mobile training vans will provide facility for on the spot training to farmers and rural youth and general guidance for various activities allied to agriculture.

#### *Soil and Water Conservation*

4.50 Soil and Water Conservation Programmes have a crucial role in preserving and improving soil health which is essential for the success of production-oriented development efforts. A total area of 29.38 million hectares is estimated to have been treated with various soil conservation measures by the end of the Sixth Plan period (1984-85). The anticipated coverage during 1985-86 is 1.08 million hectares of additional area comprising 0.94 million hectares under the State Sector Programmes and 0.14 million hectares under the Central Sector Programmes. Compared to the approved outlay of Rs. 96 crores and revised estimates of about Rs. 119 crores for 1985-86, an outlay of Rs. 117 crores has been provided for the State|U.T. Sector programmes relating to soil and water conservation during 1986-87. As regards Central and Centrally Sponsored Schemes pertaining to soil and water conservation, an outlay of Rs. 43.8 crores (Rs. 31.8 crores for the on-going schemes and Rs. 12.00 crores for the new Centrally Sponsored Schemes of Reclamation and Development of Ravinous Areas) has been provided for 1986-87 as compared with the approved outlay of Rs. 37.5 crores and anticipated expenditure of Rs. 36.8 crores for 1985-86. Steps that have already been initiated for monitoring and evaluation of the soil and water conservation programmes have to be intensified, both at the Central and State levels, so as to ensure effective implementation of the schemes and optimum use of the available resources.

#### *Land Reclamation and Development*

4.51 Out of the total net cultivated area of about 140 million hectares, an area of about 80 million hectares is estimated to be suffering from various forms of soil degradation. Consistent with the availability of resources and technologies, it is proposed to make efforts for bringing the problematic areas to productive uses through reclamation and development measures during the Seventh Plan. The strategy proposed for this purpose includes a systematic survey of different categories of degraded and waste land and appropriate technical support from the ICAR and the State Agricultural Universities. Besides, the organisational capabilities both at the Centre and in the States have to be strengthened for preparing and implementing the perspective plans in this regard.

4.52 In line with the priorities of the Seventh Plan, a new Centrally Sponsored Scheme for the reclamation of alkali soils in Punjab, Haryana and Uttar Pradesh was launched during 1985-86. This scheme aims at reclaiming an area of 1.51 lakh hectares during the Seventh Plan period. Another Centrally sponsored scheme for the Reclamation & Development of Ravinous Areas is proposed to be implemented from 1986-87 in the three dacoit-infested States of Uttar Pradesh, Madhya Pradesh and Rajasthan.

4.53 It has been decided in principle to take-up a new Central sector project for the control of shifting cultivation with an allocation of Rs. 45 crores for the three year period from 1987-88 to 1989-90. Preparatory work for the formulation of this project will be undertaken during 1986-87.

### Animal Husbandry

4.54 Development of Animal Husbandry has been envisaged as an integral part of a sound system of and diversified agriculture. Livestock development programmes are capable of generating employment potential, particularly amongst the rural poor in the shortest possible time and comparatively at a low cost since the gestation period of the programmes is short. The Animal Husbandry programmes are aimed at meeting the requirement of milk, eggs, meat and wool, draught power and rural transport.

4.55 The targets for 1986-87 and anticipated achievements for 1985-86 in respect of selected programmes of Animal Husbandry are given in the Table below :—

TABLE 4.5  
Targets for 1986-87 and Anticipated achievements for 1985-86

Sr. No.	Item	Unit	1985-86		1986-87 Target
			Target	Anti. achiev.	
1.	Milk . . . . .	Million Tons	40.90	42.30	44.30
2.	Eggs . . . . .	Million Nos.	14560	14527	15508
3.	Wool . . . . .	Million Kgs.	38.40	39.80	40.98
4.	Intensive cattle Development Projects . . . . .	Nos.	132	130	134
5.	Frozen semen bull stations . . . . .	Nos.	50	51	58
6.	Inseminations with exotic bull semen . . . . .	Million Nos.	9 23	9 27	10.54
7.	Cross-bred female animals . . . . .	-do-	5.03	5.02	5.58
8.	Liquid milk Plants . . . . .	Nos.	176	170	178
9.	Milk products factories . . . . .	Nos.	26	28	32
10.	Intensive egg and poultry production-cum-marketing centres . . . . .	Nos.	112	112	115
11.	Intensive Sheep Development Projects . . . . .	Nos.	32	28	29
12.	Sheep and Wool Extension Centres . . . . .	Nos.	1506	1599	1645
13.	Veterinary hospitals and dispensaries . . . . .	Nos.	15771	15728	16327
14.	Veterinary First aid-centres . . . . .	Nos.	19709	19653	20130

4.56 For rapid enhancement of milk production, cross-breeding of indigenous cattle with exotic breeds was continued and 9.27 million inseminations were done with semen of high genetic merit bulls during 1985-86. The Central scheme to develop infrastructure for use of frozen semen technology outside the Operation Flood II Project areas was implemented in 14 States. Four frozen semen stations during 1985-86 were established, one each in Andhra Pradesh, Tripura and two in Uttar Pradesh. The Central Frozen Semen Production and Training Institute, Hessarghatta produced 7.10 lakh doses of high quality frozen semen of cattle/buffalo and imparted training to technical personnel of the various States in frozen semen technology for improving the productivity of cattle and buffalo. The scheme on systematic production of progeny tested cross-bred bulls

continued to operate in the States of Kerala, Punjab and Assam. Under this scheme, Brown Swiss, Holstein and Jersey cross-bred bulls were evaluated for their breeding value under field conditions and the proven bulls were utilised for inter-se breeding under the cross-breeding programmes. A centrally sponsored scheme "Assistance to Selected Gaushalas for production of high quality indigenous/cross-bred heifers" was taken up in the latter part of the Sixth Plan. As many as 35 gaushalas were taken up for improvement in 1985-86 in the States of Gujarat, Haryana, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

4.57 The Seven regional Forage Production-cum-Demonstration stations and the Central Fodder Seed Farm together produced over 3500 quintals of seeds

of high-yielding fodder varieties, pasture grasses and legumes during 1985-86 for use by the various State Governments as well as by the farmers. During the year, the regional forage production-cum-demonstration stations conducted 9200 demonstrations using high-yielding varieties of fodder crops and many of the sites were used as training centres for farmers where discussion groups were arranged. Through this programme, over 76,250 minikits were supplied in the Kharif and Rabi seasons during 1985-86 and the programme has proved to be very popular.

4.58 In order to achieve further genetic improvements in the poultry stocks, the infrastructural facilities at the four Central poultry breeding farms at Bombay, Bhubneshwar, Chandigarh and Hessarghatta (Bangalore) continued to be strengthened for taking up scientific breeding programme in egg and meat type strains. The achievement during 1985-86 is reported to be nearly 4.6 lakhs of egg-type chicks and 5 lakhs of meat-type chicks. The objective of this programme is to supply parent stock and hybrid chicks to the State farms and farmers respectively. The Central Duck Breeding Farm Hessarghatta and the N.E.C. Duck Breeding Farm, Tripura continued the production and supply of improved Khaki Campbell ducklings to the various State Farms for further multiplication. The four Central Regional Feed Analytical Laboratories at Hessarghatta, Chandigarh, Bombay and Bhubaneshwar provided feed analytical facilities to the various poultry production organisations and farmers during 1985-86.

4.59 Keeping in view the demand for supply of fine wool sheep, it has been decided that corriedale breed of sheep be replaced with Rambouillet breed of sheep at the Central Sheep Breeding Farm, Hissar. Accordingly, 665 sheep of Rambouillet breed, a fine wool breed, were imported during 1985-86 for this farm to produce fine wool rams for distribution to the various States to augment the production of quality wool. As many as 90 sheep and wool extension centres were started in various States during the year, making a total of 1599 centres by the end of 1985-86.

4.60 The extensive livestock production programmes launched in the country cannot possibly succeed unless an efficient animal health service is also built up simultaneously. The scheme for the systematic control of livestock diseases of National importance like Brucellosis, Contagious Bovine Pleuro-pneumonia, T. B., Swine fever, canine rabies, Marek's disease and Pullorum was continued during the year. Under this scheme, a modest beginning was made for the creation of a 'Disease-free Zone' comprising the three southernmost districts of Kanyakumari, Trivandrum and Quilon so as to help boost the country's foreign trade in livestock and livestock products. Efforts were also made for setting up of a laboratory for the production of Theileria vaccine in collaboration with the Government of Punjab. As many as 1025 veterinary hospitals and dispensaries were set up in the States and Union Territories during 1985-86, making a total of 15,728 such institutions by the end of 1985-86, 668 veterinary first aid centres were set up in various

States and Union Territories during 1985-86, making a total of 19,653 such centres by the end of 1985-86.

4.61 The Indian meat industry has made significant advances in recent years. The programme for the modernisation of slaughter houses through the State slaughter house corporations was continued during the year with the objective of supplying hygienic and wholesome meat to the public. Modern slaughter houses have been set up at Bomaby, Goa and Durgapur.

#### *Programmes for 1986-87*

4.62 The programmes of cross-breeding of cattle with exotic dairy breeds of cattle and upgrading of buffaloes would be intensified in all the States during 1986-87. It is expected to reach a level of 10.54 million inseminations with exotic bull semen by the end of 1986-87. The scheme of progeny testing of cross-bred bulls under the field conditions would be continued to support cattle development programmes by supplying good quality progeny tested bulls. It is proposed to establish four intensive cattle development projects, two in Madhya Pradesh and one each in Assam and Kerala, during 1986-87. The Centrally sponsored scheme "Assistance to Selected Gaushalas for production of high quality indigenous/cross-bred heifers" would be continued and 25 new more gaushalas will be brought under this scheme. The Scientific breeding programmes under a Centrally sponsored scheme would be continued during 1986-87 so as to conserve and develop important indigenous breeds of cattle and buffaloes such as Gir, Rathi, Kankrej, Haryana, Ongole, Hallikar, Amrit Mahal, Kangayam, Nagore, some of which are also internationally recognised for their draught power and disease and heat resistant qualities. In this connection, certain selected State cattle and buffalo breeding farms having these breeds would be strengthened. It is expected that facilities of frozen semen stations would be available in 20 States during 1986-87. Besides this, the Central Sector scheme of introduction of frozen semen technology in areas outside Operation Food II Project will be extended to 62 districts and it will have 14 bull stations, 42 semen banks and 4000 A.I centres. Both the Central and State Cattle Breeding Farms would continue to produce superior germplasm to meet the artificial insemination requirement of different cattle and buffalo breeds in the country.

4.63 Strengthening of the existing All-India Co-ordinated Research Project on Buffaloes would be carried out with respect to infrastructural facilities. The programme of research in this project will be suitably linked with the facilities being created at the Central Institute for Research on Buffaloes started recently at Hissar. This Institute will undertake Research work on important breeds of buffaloes like Murrah, Nili Ravi and Surti.

4.64 Feed and fodder constitute 60-70 per cent of the cost of various livestock products like milk, eggs, wool and meat. To augment fodder resources the seven Regional Stations for Forage Production and Demonstration functioning in the different agro-climatic zones, which seek to provide both technology

transfer as well as a source of elite seeds of improved varieties of fodder crops, will be continued during 1986-87. A target of producing 3900 quintals of seed has been fixed for 1986-87. These stations proved instrumental in producing 3 species of stylosanthes used for grassland development and large scale seed production for further distribution to the State agencies. In view of the emphasis laid on the revegetation of wastelands in the country and the importance of pasture legume seeds such as stylosanthes under this programme, large scale multiplication of this seed will be continued in order to provide basic seed material for use by the different agencies. The Fodder minikit demonstration programme will be extended to cover all the States and Union Territories. The State Forest Departments have been asked to take up social forestry programme in the marginal and degraded areas.

4.65 The Scientific Poultry Breeding Programme would be continued at the four Central Poultry Breeding Farms at Bombay, Bhubneshwar, Chandigarh and Hessarghatta (Bangalore). This would lead to further genetic improvements in the poultry stock and thereby increased supply of parent stock and hybrid chick to the State farms and farmers to the tune of 6 lakh egg-type. Besides, broiler strains would continue to be evolved and supplied to the State Farms to the tune of 6 lakhs for further multiplication to meet the growing requirements of farmers in various States. For duck development in Eastern and Northern Regions, two Duck Multiplication Stations would be established in the premises of Central Poultry Breeding Farms at Bhubneshwar and Chandigarh. Taking into consideration the progress made by the poultry industry in the country, it is proposed to strengthen the infrastructural and other facilities at the Central Training Institute for Poultry Production and Management, Hessarghatta (Bangalore). The four Central Feed Analytical Laboratories at Hessarghatta, Chandigarh, Bombay and Bhubneshwar would continue to analyse poultry feed samples for the public and private sector organisations to the tune of 500 samples. As many as three intensive egg and poultry production-cum-marketing centres would be established in 1986-87 in Rajasthan. Adequate financial support would be provided under a Centrally sponsored scheme to the National and State Poultry corporations/Federations for taking up marketing of eggs and poultry and manufacture and supply of poultry feed.

4.66 Negotiations are being held with the Netherlands Government for setting up of the National Veterinary Biological Products Quality Control Centre, Gurgaon. This Centre would ensure the production of vaccines and diagnostic reagents of international standards. The programme for the control of diseases of national importance would be continued. Further action would be taken for the creation of disease free zone comprising the three southernmost districts of Kanyakumari, Trivandrum and Quilon so as to help boost the country's external trade in respect of live-stock and livestock products. Steps would also be taken for the setting up of five Regional Disease Diagnostic Laboratories as a Central scheme in order to provide speedy diagnosis and expert consultation

in matters of diagnosis of the various diseases. Besides, action would be taken for the establishment strengthening of a few poultry disease diagnostic laboratories in the areas of intensive poultry production in the country. As many as 599 new veterinary hospitals and dispensaries would be established, making a total of 16327 such institutions by the end of 1986-87.

4.67 The programme for the modernisation of slaughter houses at Madras, Bangalore, Srinagar, Gangtok Hyderabad, Delhi and Calcutta would be continued/taken up during 1986-87. Besides, improvement of slaughter houses in certain cities located near the air-ports would be initiated.

4.68 It is proposed to develop an area of about 1700 acres at Central Sheep Farm, Hissar in order to maintain larger size of sheep flock during the Seventh Plan. Keeping in view the demand for supply of fine wool sheep, it has been decided that corriedale breed of sheep be replaced with fine wool Rambouillet breed of sheep at this farm. Rambouillet breed of sheep would be imported from U.S.A. during 1986-87. It is proposed to revive and strengthen some of the existing sheep breeding farms in different states with the objective of producing quality rams for sheep development work in the field. It is proposed to set up one intensive sheep development project in Jammu and Kashmir. Besides, as many as 46 sheep and wool extension centres would be set up in various States in 1986-87 making a total of 1645 such Centres. There are no organised markets for sheep and sheep products in the country. In order to give relief to sheep breeders, it is proposed to establish/strengthen sheep and wool marketing federations in the major sheep producing States during 1986-87.

#### Dairy Development

4.69 Under the Operation Flood II Project Rs. 263.24 crores were generated by the Indian Dairy Corporation (IDC) since January, 1980 to December 1985 through of gift commodities, i.e. butter oil/butter and skim milk powder. The Indian Dairy Corporation disbursed till December 1985 about Rs. 332.81 crores for the implementation of the various project activities in different States and Union Territories.

4.70 By the end of September, 1985, 21 States (all-except Meghalaya) and the four Union Territories of Andamans, Goa, Pondicherry and Mizoram, proposed for coverage under Operation Flood Project, had signed the basic agreement with the Indian Dairy Corporation for implementation of this programme. The perspective State dairy development plans have been finalised in the case of 24 States/Union Territories, (except for the dairy plan for the State of Manipur). Efforts would also be made to start field programmes in the remaining States of Meghalaya and Manipur during 1986-87. Under this project, procurement has reached 6.6 million litres of milk per day from the rural areas by the end of 1985-86. Similarly, the number of farm families covered and dairy co-operatives organised are estimated at about 4.5 million and 38,000 respectively by the end of March, 1986.

4.71 It is proposed to cover 173 milk sheds in the various States and four Union Territories by 1989-90. It is targetted to procure 7.76 million litres of milk per day by the end of 1986-87. Similarly, it is envisaged to organise 3,000 dairy cooperatives during 1986-87 making a cumulative total of 41,000 cooperatives. It is also proposed to cover 6.30 million (cumulative) farm families by 1986-87. As many as 9.62 million milch animals would be brought under the cooperative ambit of this programme.

4.72 The Jha Committee appointed by the Government of India to evaluate the Operation Flood II Project have indicated the following measures to enhance the effectiveness of the Operation Flood Project :—

- (i) Revision of pattern of assistance by the IDC to the dairy cooperatives;
- (ii) review of pricing policy for procurement and marketing of milk;
- (iii) merger of IDC/NDDB,
- (iv) providing more funds for technical inputs, specially animal health cover and breeding; and
- (v) setting up of dairy councils in each State to monitor, review and coordinate the various activities.

4.73 The States have been requested to provide adequate funds for margin money so that the State Federations may raise working capital for making milk purchase payments to the farmers in time and to make the project economically viable.

4.74 The Centrally sponsored on-going integrated dairy development projects in Assam and Jammu and Kashmir would be continued during 1986-87. In the State sector, the dairy development programme would be mainly confined to the consolidation and strengthening of existing dairy plants with a view to making them economically viable. It is proposed to take up work on 8 new milk plants in the various States during 1986-87. Similarly, work would be taken up on as many as four milk products factories. Assistance will be given to the farmers in the remote areas, where milk transportation is not easy, to convert their fluid milk into traditional products like khoa, paneer etc. This would help the farmers to secure remunerative price for their produce. It is also proposed to undertake distribution of milch animals on a cluster basis under the Integrated Rural Development Programme. Facilities in respect of animal health and breeding coverage would be provided at the farmer's door steps, besides arranging training of farmers especially their womenfolk, during 1986-87.

#### Fisheries

4.75 The fish production obtained from both inland and marine sources is estimated to have reached a level of 28.10 lakh tonnes during 1985-86 against a target of 31.00 lakh tonnes. The value of sea food export is placed at around Rs. 400 crores during 1985-86 against Rs. 384 crores during 1984-85.

4.76 The fish production from inland waters is showing better performance and now India is the second largest producer of inland fish in the world. The bulk of marine fish production, however, is still contributed by traditional and mechanised boats operating on the coastal belt of the country. About 23,000 mechanised boats were in operation against the target of 21,000 during 1985-86. In spite of the incentives given to increase the number of deep sea fishing vessels, the marine fish production showed a marginal fall due to normal fluctuations during the period. The marine fish production is estimated to have reached a level of only 16.92 lakh tonnes during 1985-86 against 17.77 lakh tonnes in 1984-85.

4.77 Inland fish production in 1985-86 is estimated at only 11.18 lakh tonnes against the target of 12.00 lakh tonnes. However, there was an increase in production as compared to the preceding year due mainly to successful implementation of the inland Fisheries Project with World Bank assistance and introduction of scientific fish farming in tanks and ponds by the the Fish Farmers Development Agencies (FFDA). The phenomenal increase in fish seed production, specially in West Bengal, has also helped the inland fish production in the country. The programme of popularising fish farming both in tanks and ponds and fish seed production was further accelerated during 1985-86.

4.78 To ensure increase in marine fish production, the strengthening of Fishery Survey of India was taken up and the policy of introduction of deep sea fishing vessels was reviewed. The Fishery Survey of India is being reorganized into six zonal bases to take up development of manpower-planning, fishery programme, cruise participation and data collection and processing. This agency is also in the process of acquiring deep sea survey vessels to extend the survey programme upto the edge of continental slope and in-depth range of 50 to 300 metres. This will ensure more information on deep sea fishery resources to the fishing industry.

4.79 To introduce more fishing vessels for deep sea fishing, the Department of Agriculture and Cooperation (through the Shipping Development Fund Committee) continued to provide soft loan upto 90-95 per cent of the cost of indigenously built and imported trawlers. Channelising of this assistance through National Bank for Agriculture and Rural Development (NABARD) was considered during the period. The construction of two wooden hull trawlers was also taken up under the Integrated Marine Fisheries Project with World Bank assistance in Andhra Pradesh to test their suitability for deep sea fishing.

4.80 Development of fish products from unconventional species of fish caught from deep sea and test marketing the same to find out consumers preference has been initiated under the Integrated Fisheries Project. This will ensure catch utilisation and give better returns to deep sea vessel operators. The Central Institute of Fisheries, Nautical and Engineering Training is being strengthened to meet the growing need of trained manpower of the fishing industry.

4.81 The deep sea fishing harbours at Madras, Cochin, Roychowk (Calcutta) and Visakhapatnam have become functional to provide landing and berthing facilities to deep sea fishing vessels. In addition to this, dry-dock facilities for fishing vessels are being developed at Visakhapatnam on the East Coast. Similar facilities for dry dock are also planned on the West Coast. A botanical garden, to give green belt cushion between fishing harbour at Sessoon Dock and residential area, is being developed under the programme.

4.82 In the Inland Sestor, the Programme of Fish Farmers Development Agency was further enlarged and it is proposed to avail World Bank assistance through NCDC for development of culture-cum-capture fisheries in medium and major irrigation reservoirs in a few elected States.

#### *Targets and Programmes for 1986-87*

4.83 The physical targets fixed for 1986-87 for fish production, introduction of mechanised boats, area to be brought under scientific fish culture and fish seed production are indicated below :—

TABLE 4.6  
*Physical Targets—Fisheries*

Item	Target		Anti. Ach. 1985-86	Target for 86-87
	1989-90	1985-86		
1. Fish Production (Lakh tonnes)				
Marine . . . . .	22.00	19.00	16.92	18.5
Inland . . . . .	18.00	12.00	11.18	12.5
Total . . . . .	40.00	31.00	28.10	31.0
2. Mechanised boats (in Nos.) . . . . .	25,000	21,000	23,000	25,000
3. Fish Seed Production (in million) . . . . .	12,000	7,000	6,531	7,815
4. Water area under Scientific Fish Farming (‘000 hec.) . . . . .	300	150	136	150

4.84 The Exclusive Economic Zone (EEZ) of 2.01 million sq. km. of the country will be further exploited by encouraging investment in deep sea Fishing vessels. To reduce pressure on coastal fishing and to upgrade the traditional sector, new-improved designs of mechanised boats and gear will be introduced. Ferro-cement and Fibre-Reinforced Plastic will be popularised as alternative boat material to replace costly timber.

4.85 The Construction of three more minor fishing harbours and three more landing centres will be completed by the end of 1986-87. Minor fishing harbours at 9 sites and landing centres at 73 sites have already been completed. These harbours and centres

will be able to provide landing facilities to about 12,500 mechanised boats and traditional crafts.

4.86 The Fishery Survey of India will continue demersal fishery survey with six large vessels in the depth range 50 to 500 between lat. 8° and 16°N along the West Coast and East Coast deploying vessels for mid water trawling, purse-seining and demersal trawling. Tuna-resources in Bay of Bengal will also be extensively surveyed. The information gathered from these surveys will encourage commercial investment in deep sea fishing.

4.87 The Integrated Fisheries Project will continue processing of diversified fish products from deep sea and unconventional species. To popularise consumption of marine fish and fish products, a “Sea-food” drive will be conducted in urban centres by the Marine Product Export Development Authority (MPEDA) at Cochin. The Central Institute of Fisheries Nautical and Engineering will be upgraded to meet the demand of techno-managerial manpower of the fishing industry.

4.88 The National Welfare Fund for Fishermen will be established to provide civic amenities to selected villages and the Group Accident Insurance Scheme for Active Fishermen will be continued and expanded. More than 2.5 lakh fishermen have been insured under this scheme. The expenditure on these welfare schemes will be shared on 50 : 50 basis between the Centre and the State Governments.

4.89. A “National Fishery development Board” will be set up on the pattern of National Dairy Development Board to coordinate development activities in the field of fisheries and take up development of both inland and marine fisheries.

4.90 The Techno-socio-economic survey of fishermen will be completed. Efforts will be made to group small fish landing Centres to provide them with all the infrastructure facilities by setting up a “Fishing Industrial Estate” on pilot basis.

4.91 On the inland side, the programme of Fish Farmers’ Development Agencies will progressively bring fallow tanks and ponds under intensive fish production, provide training in fish farming and extension support. The programme will provide additional employment in rural areas and produce nutritive food at village level. Attempts will also be made to integrate fish farming with piggyery, poultry and duck—keeping to give economic returns to fish farmers. A Fish Farming Estate will also be set up to utilise fallow land (unsuitable for agriculture) to provide half to one hectare of pond area to landless family as a means of livelihood.

4.92 Fish seed is a basic input for fish farming in tanks and ponds as well as for fish production from small reservoirs. The five fish farms/hatcheries under construction with World Bank assistance will be completed and made operational. The programme of National Fish Seed production will be further expanded to make available fish seed in all States and U.Ts.



Under this programme also, 5 hatcheries will be completed. Total hatcheries by the end of 1986-87 will be 19.

4.93 The fish yield from medium and minor reservoirs is very low at present. This can be easily raised to 30 to 50 kg/ha by introducing proper stocking and management practices. An integrated project through fishermen's cooperative societies will be taken up with NCDC/World Bank assistance in selected States to utilise these water bodies for fish production and to rehabilitate fishermen near dams.

4.94 Conservation of fish and fisheries in rivers and man-made lakes and reservoirs will be regulated to give sustained yield and preserve the fish fauna.

### Cooperation

4.95 The progress in the achievement of the targets laid down in the Annual Plan 1985-86 in respect of important cooperative programmes and the corresponding targets envisaged for 1986-87 are given below :—

TABLE 4.7

*Targets & Achievements—Cooperation*

Item	(Rs. in crores)		1986-87 Target
	1985-86 Target	Ant. Ach.	
1. Short term loans . . .	2800	2600	3000
2. Medium term loans . . .	300	225	300
3. Long Term loans . . .	600	480	650
4. Marketing of agricultural produce . . . . .	3000	3400	3950
5. Value of retail sale of fertilisers . . . . .	1700	1700	2200
6. Value of consumer goods distributed in rural areas	1700	1625	1900
7. Value of consumer goods distributed in urban areas	1700	1600	1900

4.96 The shortfall anticipated in the disbursement of cooperative credit against the targets laid down for the Annual Plan 1985-86 is due to the occurrence of widespread natural calamities like floods, drought etc. in several States which impaired the recovery of cooperative loans, resulting in mounting overdues and reduced eligibility for refinance facilities from the NABARD. In spite of inadequate availability of fertilisers in some States and drought conditions in some other States, the distribution of fertilisers through cooperatives is estimated to have reached the target of Rs. 1700 crores during 1985-86. The consumer goods distributed by the cooperatives in urban as well as rural areas lagged behind the Annual Plan expectations mainly because the Civil Supplies Corporations in some States carried out the distribution of consumer goods through their own branches and did not fully involve the cooperatives in this activity.

The marketing of agriculture produce witnessed a big spurt on account of involvement of the cooperatives in the price support/market intervention operations of the National Agricultural Cooperative Marketing Federation (NAFED).

4.97 Considerable expansion in the disbursement of short-term, medium term and long term loans through the cooperatives is envisaged during 1986-87, particularly under the programmes of dry-land farming, oilseeds production and intensive development of rice production in six Eastern States. In some States, notably in Maharashtra, selected primary agricultural credit societies have been involved in the distribution of long term loans. The Andhra Pradesh Government propose to take up the integration of short term and long term credit structure in a big way from 1986-87. Steps would be taken to improve the recovery position of the cooperative credit institutions, improve the credit delivery system, streamline the policies and procedures for disbursement of loans and bring about effective arrangements for close monitoring of credit flow at various levels. Efforts would be continued to ensure substantial increase in the flow of institutional credit to small and marginal farmers and other weaker sections of the society, including Scheduled Castes and Scheduled Tribes, tenants, share croppers, agricultural labourers, rural artisans and selfemployed.

4.98 The cooperatives would be increasingly involved in the distribution of fertilisers during 1986-87 so as to bring about progressive increase in the share of cooperatives in the overall distribution of fertilisers in the country. To raise the sale of fertilisers through the cooperatives, 5000 more cooperative retail fertiliser outlets are estimated to have been set up in 1985-86 and the target for 1986-87 is another 5000 cooperative retail outlets. It is also proposed to forge effective links between the marketing cooperatives and public sector corporations like the Food Corporation of India, the Cotton Corporation of India and the Jute Corporation of India. The cooperatives would be increasingly involved in the price support operations of the NAFED in respect of coarse grains, pulses and oilseeds and also market intervention operations of the NAFED for potatoes, onions, etc. when their prices fall below the announced level. The cooperative marketing societies would also ensure better prices to the farmers. To facilitate marketing of agricultural produce and distribution of agricultural inputs, it is proposed to take up larger programmes for construction of cooperative godowns and cold storage in 1986-87 under the normal State Plans and International Development Agency (IDA)/European Economic Community (EEC) assisted projects.

4.99 There would be greater thrust on comprehensive development of cooperatives in the coming years. Some of the Eastern States, notably Bihar and West Bengal, propose to draw up comprehensive plans for rice production, which would inter-alia include provision of larger facilities of credit, marketing, supply of fertilisers and other agricultural inputs and extension work. It is also proposed to introduce from



1986-87 Integrated Cooperative Development Projects (I.C.D.P.) in selected districts. These projects would aim at comprehensive development of primary cooperatives for increased disbursement of short term, medium term and long term credit, marketing of produce and distribution of entire range of agricultural inputs, including chemical fertilisers, improved seeds and pesticides. Attention will be given in development of not only agriculture but also allied sectors like horticulture, sericulture, piggery, poultry, fisheries; etc. as well as non-farm sectors like handloom and rural industries. Assistance would be provided for development of primary societies in the selected blocks in the districts as well as for district federations to ensure appropriate business linkages for supplies and services.

4.100 The consumer cooperatives in urban areas as well as in rural areas would be suitably strengthened to enable them to play a larger role in the public distribution system.

#### *Agricultural Marketing*

4.101 During 1985-86, action was initiated to integrate the three Central Sector schemes for establishment/development of regulated markets rural markets and grading centres into one scheme for development of agricultural produce markets. This scheme envisages coverage of all markets handling the produce of agriculture, horticulture, pisciculture, sericulture, floriculture, poultry and livestock. During 1986-87, assistance would be provided under the scheme for development of 100 principal Rural Markets, 13 Regulated Markets and 4 Terminal Markets for Fruits and Vegetables. Besides development of regulated markets, a number of associated programmes like market survey and investigation, strengthening of Agmark grading facilities, extension and training were continued during 1985-86. Activities under these schemes would be further expanded during 1986-87. It is also proposed to set up a Centre for Agricultural Marketing at Jaipur to take care of planning, research, survey and other aspects of agricultural marketing.

#### *Rural Godowns*

4.102 The Centrally Sponsored scheme of National Grid of Rural Godowns for providing storage facilities in the rural areas, particularly to benefit small and marginal farmers for storing their agricultural produce, inputs, seasonal vegetables, fish and minor forest produce would be continued. A target of construction of 4 lakh tonnes of storage capacity was laid down for 1985-86 against which construction of 3 lakh tonnes is anticipated. It is proposed to create additional storage capacity of 3 lakh tonnes during 1986-87.

#### *Storage & Warehousing*

4.103 A target for construction of additional storage capacity of 27.25 lakh tonnes was laid down for 1985-86, against which it is anticipated that a capacity of 19.60 lakh tonnes had been constructed. It was contemplated to construct storage capacity of

15.25 lakh tonnes by Food Corporation of India and 6 lakh tonnes each by Central Warehousing Corporation and State Warehousing Corporations during 1985-86, against which the anticipated achievement is 11.10 lakh tonnes, 4 lakh tonnes and 4.50 lakh tonnes respectively. For 1986-87, the target has been fixed at 22.1 lakh tonnes. Agency-wise details are given in the Table below :—

TABLE 4.8  
*Targets & Achievements of Additional Storage Capacity*  
(Capacity—lakh tonnes)

	F.C.I.	C.W.C.	S.W.Cs	Total
1984-85				
Target . . .	7.25	3.12	4.00	14.37
Achievement . .	7.31	3.25	3.75	14.31
<i>Seventh Plan (1985-90)</i>				
Target . . .	50.00	20.00	30.00	100.00
1985-86				
Target . . .	15.25	6.00	6.00	27.25
Anticipated Achievement . .	11.10	4.00	4.50	19.60
1986-87				
Target . . .	11.40	4.00	6.70	22.10
Budgetary Support (Rs. crores)	68.00	..	..	68.00
Extra Budgetary Resources (Rs. in crores)	..	18.00	..	18.00

#### *Food Processing*

4.104 In order to promote food processing, the ongoing projects/research and development schemes were continued during 1985-86. The Modern Food Industries Ltd. established a Fruit and pulp unit at Bhagalpur. This unit was commissioned in August 1985 and regular production started by the end of 1985. The Pineapple Juice concentrate Plant at Silchar, which was taken up during 1985-86, would be completed during 1986-87. The Modern Food Industries (India) Ltd. had completed the modification of the Soyabean Preparatory Sections in the Solvent Extraction unit at Ujjain during 1985-86. The Company is expanding the capacity of the fruit juice bottling plant and is planning to set up more such supporting units in other metropolitan cities, for which funds would have to be found by it from its internal resources or from institutional finance etc. The other schemes under 'Food Processing' relating to rice milling industry and National Sugar Institute would be continued during 1986-87.

#### *Crop Insurance*

4.105 A Comprehensive Crop Insurance Scheme had been introduced in the country from kharif 1985 season. The scheme is being implemented by the General Insurance Corporation of India in collaboration with the State Governments as co-insurers in

the ratio of 2:1. The objectives of the Scheme are : (i) to provide a measure of financial support to farmers in the event of a crop failure as a result of drought, flood etc; (ii) to restore the credit eligibility of farmers, after a crop failure, for the next crop season; and (iii) to support and stimulate production of cereals, pulses and oilseeds. Cereal crops viz. paddy, wheat and millets and dryland crops, namely, pulses and oilseeds have been covered under the scheme. The Scheme is area-based and linked to crop loans disbursed to the farmers by all the institutional agencies namely, Cooperatives, Commercial Banks and Regional Rural Banks. Accordingly, all farmers availing of crop loans from these institutions are covered under the scheme. By the end of 1985-86, 16 State Governments and 3 Union Territories had agreed to implement the scheme. Of these, 11 State and 1

Union Territory are reported to have sent proposals to the General Insurance Corporation to the extent of Rs. 540.49 crores, covering 23.25 lakh farmers and an area of 41.79 lakh hectares, in respect of kharif 1985 season.

4.106 During 1986-87, efforts would be made to introduce the Crop Insurance Scheme in all the remaining States and Union Territories and cover some additional crops under the scheme.

#### *Plan Outlay*

Scheme-wise details of Plan outlay in the Central Sector for 1985-86 and 1986-87 are given in Annexure 4.1.

## ANNEXURE 4.1

*Plan outlay for Agriculture and Allied Activities in the Central Sector*

(Rs. crores)

Ministry/Department	1985-86 Budgeted Outlay	1985-86 Revised Estimates	1986-87 Budgeted Outlay
1	2	3	4
<b>I. Department of Agriculture &amp; Coop.</b>			
<b>(a) Crop Husbandry</b>			
1. Agricultural Extension & Training	3.68	2.29	3.00
2. Agricultural Statistics	7.00	6.78	6.00
3. Seed (Public sector and other undertakings)	6.50	5.27	6.13
4. Fertilisers and Manures	1.25	0.89	3.37
5. Plant Protection	7.37	5.35	5.40
6. Implements & Machinery	3.40	3.34	3.50
7. Crop Oriented Programmes			
(i) Dryland Farming and other related activities	14.00	15.76	18.96
(ii) Small & Marginal Farmers	100.00	100.00	50.00
(iii) National Oilseeds Development Project	30.00	27.25	17.50
(iv) Special Programmes for increasing Production & Productivity of Rice in Eastern States	20.00	12.16	23.00
(v) Loans to NAFED	..	5.00	..
(vi) National Watershed Development Programme for Dryland Agriculture	..	..	54.54
<b>TOTAL</b>	<b>164.00</b>	<b>160.17</b>	<b>164.00</b>
8. Horticulture	4.92	3.81	4.00
9. Crop Insurance	4.00	16.00	9.00
<b>TOTAL—CROP HUSBANDRY</b>	<b>202.12</b>	<b>203.90</b>	<b>204.40</b>
<b>(b) Soil &amp; Water Conservation</b>			
1. Ravine Reclamation Programme for the Dacoit infested area	0.10	0.10	12.00
2. Other programmes	37.60	36.73	31.81
<b>TOTAL</b>	<b>37.10</b>	<b>36.83</b>	<b>43.81</b>
<b>(c) Animal Husbandry &amp; Dairying</b>			
1. Animal Husbandry	10.57	10.01	11.64
2. Dairy Development	2.88	1.26	4.09
3. Operation Flood II Project	82.00	82.00	75.20
<b>TOTAL:</b>	<b>95.45</b>	<b>93.27</b>	<b>90.93</b>
<b>(d) Fisheries</b>			
1. Fisheries Scheme	24.40	21.90	24.50
2. Trawler Development Fund	6.50	6.50	6.50
<b>TOTAL</b>	<b>30.90</b>	<b>28.40</b>	<b>31.00</b>
<b>(e) Management of Natural Disasters</b>	<b>0.50</b>	<b>0.25</b>	<b>0.50</b>
<b>(f) Investment in Financial Institutions</b>	<b>26.00</b>	<b>26.00</b>	<b>25.00</b>

	1	2	3	4
<b>(g) Cooperation</b>				
1. Cooperation Schemes . . . . .		8 49	6 22	12.35
2. Cooperative Storage Programme with IDA/EEC Assistance . . . . .		20.00	20.00	20.00
3. Cold-storage Programme and Soyabean Project with IDA/EEC assistance . . . . .		16 76	12 50	16.00
4. Other internally aided projects . . . . .		10 00	..	4.90
5. Cooperative Marketing, Processing Storage etc. in under-developed States and Union Territories . . . . .		6 75	6 75	6.75
6. Agriculture Credit Schemes . . . . .		12 00	2 95	13.25
7. Cooperative Credit Institutions . . . . .		5 00	5 00	4 75
<b>TOTAL</b> . . . . .		<b>79.00</b>	<b>53.42</b>	<b>78.00</b>
<b>(h) Expenditure met by CPWD</b>				
1. Crop Husbandry . . . . .		0 88	0.88	0.60
2. Animal Husbandry & Dairying . . . . .		3 05	3.30	1.58
<b>TOTAL</b> . . . . .		<b>3.93</b>	<b>4.18</b>	<b>2.18</b>
<b>TOTAL : Department of Agriculture (excluding IFFCO, Krishak Bharti Coop. Ltd. &amp; Aonala)</b> . . . . .		<b>474.63</b>	<b>446.09</b>	<b>490.82</b>
<b>II. Department of Agricultural Research and Education</b>				
1. Institutes & National Research Centres . . . . .		28 50	21.27	27.00
2. Coordinated Projects, including Project Directorates . . . . .		15.78	17.00	20.35
3. World Bank and other externally aided Projects . . . . .		13.50	14.67	15.00
4. Agricultural Education . . . . .		12.50	11.34	12.50
5. Other Programmes . . . . .		4.72	4.58	6.15
<b>TOTAL</b> . . . . .		<b>75.00</b>	<b>68.86</b>	<b>81.00</b>
<b>III. Department of Rural Development</b>				
1. Agricultural Marketing and Quality Control . . . . .		8.25	7.57	9.00
2. Establishment of National Grid of Rural Godowns . . . . .		6.00	6.00	6.00
<b>TOTAL</b> . . . . .		<b>14.25</b>	<b>13.57</b>	<b>15.00</b>
<b>IV. Department of Commerce</b>				
1. Tea . . . . .		9.78	5.95	6.89
2. Coffee . . . . .		12.23	9.31	8.00
3. Rubber . . . . .		12.26	9.56	14.98
4. Cardamum . . . . .		3.13	2.78	3.30
5. Tobacco . . . . .		3.06	0.94	3.39
<b>TOTAL</b> . . . . .		<b>40.46</b>	<b>28.55</b>	<b>36.56</b>
<b>V. Department of Economic Affairs</b>				
1. Subscription to the share capital of Regional Rural Banks . . . . .		5.00	5.00	5.00
2. Loan to NABARD . . . . .		150.00	125.00	130.00
<b>TOTAL</b> . . . . .		<b>155.00</b>	<b>130.00</b>	<b>135.00</b>
<b>VI. Department of Food</b>				
<i>Food Storage, Warehousing Processing</i>				
1. Central Warehousing Corporation . . . . .		22.52	22.30	18.00
2. Food Corporation of India . . . . .		68.00	90.00	68.00
3. Other Programmes . . . . .		4.70	3.06	3.81
<b>TOTAL</b> . . . . .		<b>95.22</b>	<b>115.36</b>	<b>89.81</b>
<b>VII. Department of Civil Supplies</b>				
Co-operation . . . . .		8.75	7.00	9.10
<b>GRAND TOTAL</b> . . . . .		<b>863.68</b>	<b>809.43</b>	<b>842.28</b>

## CHAPTER 5

### RURAL DEVELOPMENT

Removal of poverty remains a central concern of Planning in India. Consistent with this objective, the Seventh Plan development strategy, and the pattern of growth emerging from it, are expected to lead to reduction in poverty. The emphasis on accelerated agricultural growth, increased productivity of rice in the eastern region, developing the potential of dry land agriculture, adoption of special measures to increase productivity and incomes of small and marginal farmers and expansion of irrigation facilities will make a substantial contribution to the reduction in poverty. In addition, the Plan includes a number of antipoverty and employment generation programmes specifically designed to raise incomes and productivity of people below the poverty line.

5.2 The Seventh Plan provides for substantially higher outlays on the poverty alleviation programmes. It is, however, necessary to take further steps for their effective implementation at all levels. The administrative machinery needs to be reoriented to suit the requirements of the programme and strengthened, wherever necessary. The Committee set up to review the existing administrative arrangements for rural development and poverty alleviation programmes has submitted its report, which is being examined in consultation with the State Governments.

5.3 The progress made under the major poverty alleviation programmes during 1985-86 and the targets for 1986-87 are indicated in the following paragraphs :

#### *Integrated Rural Development Programme (IRDP)*

5.4 This programme aims at asset endowment to the rural poor for generating self-employment ventures which are financed by a combination of subsidy and credit. Based on some of the shortcomings noticed in its implementation during the Sixth Plan, the programme has been modified suitably. The criteria of making uniform allocation to the blocks has been changed to one of selectivity based on incidence of poverty. The programme will aim at the poorest among the poor who will be identified by an annual household income of Rs. 4800, which is lower than the poverty line fixed at Rs. 6400. People's representatives will be involved more closely in the identification of the beneficiaries. A higher investment per family, including a package of assistance, has been envisaged. A decision has also been taken to give a supplementary dose to those families which were assisted during the Sixth Plan but could not cross the poverty line. Besides, it is proposed to give coverage to women beneficiaries upto 30 per cent

of the total. Proper coordination of the training effort will be achieved through the establishment of Composite Rural Training and Technology Centres. (CRTTCs). For creating a better climate of awareness amongst the beneficiaries, a new scheme for "organisation of beneficiaries" has been introduced. Lastly, efforts are being made to improve linkages through identifying existing bodies at district level for the supply of raw materials and marketing of finished product.

5.5 In 1985-86, Rs. 212.50 crores were provided for this programme in the Central sector. Initially, the target was to assist 4 million households, out of which 3 million were to be old households assisted during the Sixth Plan and one million new. However, the actual survey undertaken for providing supplementary dose of assistance revealed that only 25 to 30 per cent of the households assisted during the first two years of the Sixth Plan were becoming eligible for assistance. Taking this into account and other relevant factors, the target was revised to 2.47 million families, of which 1.15 million were to be old and 1.32 million new. The available information indicates that the total number of families assisted during the year was 3.02 million. The coverage of Scheduled Caste (SC) and Scheduled Tribe (ST) beneficiaries was 42.3 per cent and that of women 9.1 per cent. The following Table gives the physical and financial achievements under the Programme :

TABLE 5.1  
*IRDP—Physical Achievements*

Items	Unit	Achievements
1. Central allocation	(Rs. crores)	205.93
2. Central release	(Rs. crores)	207.09
3. Total utilisation	(Rs. crores)	402.36
4. Total term credit mobilised	(Rs. crores)	661.26
5. Total families assisted	(million)	3.02
6. SC&ST beneficiaries covered	(million)	1.28
7. No. of Women assisted	(million)	0.27

5.6 The Concurrent Evaluation Report reveals that there are delays in the processing of cases, particularly at the block and the bank levels. Moreover,

after care support was made available in about 30 per cent cases only. The difference between the cost of assets as perceived by the beneficiaries and as per official records points to leakages under the programme.

5.7 The Seventh Plan has provided for a closer linkage between the IRDP and the allied programmes on the one hand and the special wage employment programmes on the other. The Concurrent Evaluation Report brings out that the desired linkage of the IRDP with other poverty alleviation programmes like National Rural Employment Programme (NREP) Rural Landless Employment Guarantee Programme (RLEGP) or even with Training of Rural Youth for self-employment (TRYSEM) Development of Women and Children in Rural Areas (DWCRA), which are components of IRDP, is yet to be achieved. Arrangements at district and block level for supply of raw materials and marketing of products also need to be improved and strengthened.

5.8 An outlay of Rs. 287.50 crores has been provided for the programme in the Central sector during 1986-87 and it is proposed to cover 4 million families.

*Training of Rural Youth for Self-employment (TRYSEM)*

5.9 The scheme of Training of Rural Youth for Self-Employment is being continued during the Seventh Plan with the main objective of equipping rural youth in the age group of 18-35 years with necessary skills and technology to enable them to take up vocations of self-employment. The accepted modes of training are through institutes and master trainers or craftsmen. The process of skill endowment to the members of target group would be considered as an integral part of the IRDP. The training would be provided on the basis of actual need and requirement. At the end of December, 1985, 91285 youth were trained and 44,129 were self-employed.

5.10 The Seventh Plan has provided for replacement of the scheme of TRYSEM infrastructure by Composite Rural Training and Technology Centres (CRTTCs) in each district as nodal institutions within a larger system of training and technology dissemination. The scheme was approved during 1985-86 and 30 such centres will be opened to begin with.

5.11 An outlay of Rs. 5 crores has been provided for TRYSEM and Rs. 2.50 crores for setting up of CRTTCs during 1986-87.

*Development of Women and Children in Rural Areas (DWCRA)*

5.12 This programme was introduced during the Sixth Plan on a pilot basis in 50 districts and is proposed to be expanded during the Seventh Plan. The aim of the programme is mainly to organise women in socio-economic activity groups with dual objective of providing employment opportunities and social strength.

5.13 A budget provision of Rs. 5.05 crores had been made for 1985-86. Rs. 1.45 crores and Rs. 0.50 crores were released as Central and UNICEF shares respectively upto November, 1985. The target was to organise 5000 groups including 1 lakh women beneficiaries. Upto September, 1985, 2274 groups were formed.

5.14 The performance of the programme in the past has not been commensurate with the targets fixed. The evaluation\* conducted in a few States during 1985 at the instance of Planning Commission has brought out, *inter-alia* that the coverage of women beneficiaries is low on account of the fact that the posts of women functionaries like *Gram Sevika* and Assistant Project Officer (women) are not filled up in most of the States covered by the studies. Women functionaries at the field level are essential for the success of the programme.

5.15 The Seventh Plan document also envisages integration of the DWCRA with the Integrated Child Development Scheme (ICDS) Special Input for Area Development (SIAD) and similar programmes for women in the State sector. Such integration has not been achieved as yet. A strategy needs to be developed jointly by the Departments of Rural Development and Women Welfare for this purpose so as to reduce duplication and increase the cost effectiveness of the total effort.

5.16 A sum of Rs. 10.05 crores has been provided in the Central sector for the DWCRA.

*Special Livestock Production Programme (SLPP)*

5.17 This programme has been merged with the IRDP during the Seventh Plan. Hence, no new activities are proposed to be taken up under the programme from 1-4-1986. During 1985-86, Rs. 1 crore had been provided for the continuing activities under the programme. In 1986-87, Rs. 5 crores have been provided to meet the committed liabilities.

5.18 In order to meet the substantial demands for quality heifers and other milch animals, a new breeding programme, the Special Livestock Breeding Programme (SLBP), is being taken up. This would enable the farmers to produce good quality animals and increase the total availability of animals for sale.

*National Rural Employment Programme (NREP)*

5.19 The National Rural Employment Programme is being continued in the Seventh Plan as an important component of the anti-poverty strategy. The programme envisages creation of additional wage employment opportunities for unemployed/underemployed persons in the rural areas while simultaneously creating productive community assets for direct and continuing benefits to poverty group and for strengthening the rural economy as well as improving the overall quality of life in the rural areas.

5.20 During 1985-86, an outlay of Rs. 230 crores was initially provided, which was to be matched equally by the States. Subsequently, the Central share was raised to Rs. 337.21 crores to provide for the cost of foodgrains and the subsidy involved in the distribution of foodgrains. In addition, the State Government were permitted to utilise the unspent balance of Rs. 92.22 crores carried over from the previous years. The reported utilisation during the year (provisional) is Rs. 451.28 crores.

\*Two studies conducted:

- (i) DWCRA in Punjab by Punjab State Institute of public Administration, and
- (ii) DWCRA in Orissa, Tripura, West Bengal and Sikkim by the centre for Regional Ecological and Science Studies in development Alternatives.

5.21 A total quantity of 7.3 lakh tonnes (2.3 lakh tonnes normal and 5 lakh tonnes additional foodgrains) was allocated to the States. As against this, the reported utilisation is 3.72 lakh tonnes (Provisional). The per capita distribution of foodgrains works out to 1.29 kg. per manday.

5.22 For 1985-86, an employment target of 228 million mandays was initially fixed which was revised to 253 million mandays keeping in view the additional foodgrains provided under the Programme. The achievement is of the order of 288.7 million mandays, i.e. 114 per cent. 44.1 per cent of the employment generation has been for Scheduled Castes and Scheduled Tribes and 23 per cent for landless labourers.

5.23 The following Table indicates the physical achievements under the programme:

TABLE 5.2

*NREP—Physical Achievements*

Key indicators	Unit	Achievement*
1. Physical assets created		
(a) Area covered under social forestry . (Hects)		52410.17
(b) Trees planted . (Lakhs)		2350.76
(c) Works benefiting SCs/STs . (Nos.)		32563
(d) Construction of village tanks . (Nos.)		2034
(e) Area covered by minor irrigation . (Hects)		12555.33
(f) Area covered by soil conservation . (Hects.)		4890.09
(g) Drinking water wells . (Nos.)		4514
(h) Rural roads . (Kms.)		13395.13
(i) Schools, Balwadis, Panchayat Ghars etc. . (Nos.)		28807
(j) Other works . (Nos.)		23774
2. Mandays of employment generated		
Total Mandays . (Million)		288.7
(a) Mandays for SCs -do-		92.1
(b) Mandays for STs -do-		35.6
(c) Mandays for landless labourers . -do-		66.4
(d) Mandays for others -do-		94.6
3. Unit cost of employment (Rupees)		15.36
4. Wage/non-wage ratio . -do-		59.41
5. Per capita utilisation of foodgrains . (Kg.)		1.29

\*Provisional

During 1986-87, a sum of Rs. 442.65 crores has been provided for the programme and it is proposed to generate 250 million mandays of employment.

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### *Rural Landless Employment Guarantee Programme (RLEGP)*

5.24 The Rural Landless Employment Guarantee Programme was introduced as a Central sector programme from 15th August, 1983 with the objective of improving and expanding employment opportunities for the rural landless and providing guarantee of employment to at least one member of every household upto 100 days in a year, while, at the same time, creating durable assets for strengthening the rural infrastructure so as to meet the growing requirements of the rural economy.

5.25 A provision of Rs. 400 crores had been made for 1985-86 in the budget for this programme. Subsequently, Rs. 100 crores were provided separately for projects to be taken up for construction of houses and micro-habitats for the Scheduled Castes and Scheduled Tribes. In addition Rs. 106.33 crores were provided for the cost of foodgrains and subsidy, taking the total outlay to Rs. 606.33 crores. The Revised Estimate of the expenditure during the year is close to this level. The information available in respect of 84 projects sanctioned during the year which involved an outlay of Rs. 372.8 crores indicates that the sectoral break-up was : houses for SC/ST (40.77 per cent), social forestry (23.52 per cent), road projects (18.22 per cent), others including projects of minor irrigation, drainage, soil and water conservation and school buildings/Mahila Mandals/Ponds, etc. (17.49 per cent).

5.26 A target of 205.73 million mandays of employment had been fixed for 1985-86 against which the achievement reported is 211.86 million mandays out of which 44.73 per cent has been provided to Scheduled Castes and Scheduled Tribes, 35.05 per cent to the landless and the rest to others. The position regarding the creation of physical assets is as follows :

TABLE 5.3

*Physical Assets Under RLEGP*

Key Indicators	Unit	Achievement
1	2	3
1. Road . . . . (Nos.)		71
	(Kms.)	2203.57
2. Minor Irrigation works . Hects.		
Drainage/Tail escape . (Kms)		16373
		473.40
3. Houses for SC/ST . (Nos.)		4345
4. Soil & Water conservation . (Hects)		6737
Reservoirs . (Nos.)		80
5. Social forestry works . (Hects.)		7860.07
Trees Planted . (Nos.)		7879500
6. Flood protection works (Hects)		7
River embankments . (Nos.)		109
7. Construction of school buildings . . . . (Nos.)		594
8. Others—Ponds/Storage/Dams etc. . . . (Nos.)		564

For 1986-87, a sum of Rs. 633.65 crores has been provided for the programme and it is proposed to generate 236.4 million mandays of employment.

5.27 It has not been possible to achieve the objective of providing 100 days of guaranteed employment to the landless labour households and the extent of continuous employment provided under the programme is yet to be assessed adequately. Efforts are being made to provide continuous employment to the target households. Meanwhile, the States and Union Territories have been asked to take up on a pilot basis works in each RLEGP project where employment up to 100 days a year can be provided to landless labour and issue identification cards which will be valid for employment under both NREP/RLEGP. Depending upon the success of this scheme, the approach will be replicated in other areas also.

5.28 Another important change has been made in regard to the criteria for allocation of funds to the State Governments under both the NREP and RLEGP. Equal weightage will not be given to the incidence of poverty and the population of agricultural labourers/marginal farmers and marginal workers instead of 25 per cent weightage to incidence of poverty and 75 per cent to the population of agricultural labourers and marginal farmers followed earlier.

5.29 In view of the need to encourage afforestation and taking up of a massive programme of fuelwood and fodder plantation, it was decided to earmark 20 per cent of the funds under the NREP/RLEGP for social forestry with effect from 1985-86. This percentage has been increased to 25 from 1986-87. This is expected to lead to increased availability of fuelwood and fodder for the rural poor. There is also a greater emphasis on the involvement of people, voluntary organisations, identification of specific beneficiaries, grant of tree *pattas*, and setting up of *kisan* nurseries involving small and marginal farmers.

5.30 The Seventh Plan envisaged that the question of providing funds to the extent of 10 per cent of the overall outlay for maintenance purposes will be considered and detailed maintenance plans prepared for each district. A beginning has been made in this regard and some amount is being earmarked for this purpose during the year. Suitable action will be initiated for the preparation of detailed maintenance plans.

### Land Reforms

5.31 Land Reform measures, such as abolition of intermediary tenures, provision of security to tenants with the ultimate objective of conferment of ownership rights, imposition of land ceiling and distribution of ceiling surplus land, preparation and maintenance of land records and consolidation of agricultural land holdings are being taken as a part of the anti-poverty strategy. States have been asked to take up vigorous implementation of the laws and plug the loopholes.

5.32 A Centrally Sponsored Scheme for financial assistance to the assignees of ceiling surplus land is being implemented since 1975-76. Assistance by

way of grant is given at the rate of Rs. 2500 per hectare for various purposes like land development, provision of inputs as well as immediate consumption needs of the beneficiaries, who are mostly poor. The amount is shared equally by the Centre and the States. During 1985-86, Rs. 3.1 crores were released by way of Centre's share under the scheme against the budget provision of Rs. 3.60 crores. Releases to the States are being made on the basis of utilisation. The scheme is being dovetailed with other programmes of rural development like; IRDP, NREP, RLEGP, DPAP and DDP by entrusting the implementation to the District Rural Development Agencies. It is also contemplated that the assignees of surplus land would be given priority in the enlistment of beneficiaries under IRDP. Assistance from the different programmes mentioned above would be so channelised as to help the assignees of surplus land to develop his land for agriculture and allied activities and enable him to build around this part of land a variety of economic activities that can provide him a viable source of income round the year. A sum of Rs. 3 crores has been provided for the scheme in the Central sector for 1986-87.

5.33 In the Seventh Plan, a new Centrally sponsored scheme for updating of land records and strengthening of revenue machinery has been introduced. For 1985-86 a provision of Rs. 1 crore was made. The scheme has been formulated but no expenditure was incurred on it in 1985-86. A sum of Rs. 1 crore has been provided for 1986-87. The scheme will have a special emphasis on States and Union Territories which have unsurveyed lands and do not have land and crop based records.

### Drought Prone Area Programme (DPAP)

5.34 The Drought Prone Area Programme is in operation in 615 blocks in 90 districts of 13 States. The main objective of the programme is to have an integrated area development on a mini and micro watershed basis for optimal development of land, water, livestock and human resources and restoration of ecological balance so as to mitigate the effect of drought. For achieving the objective, stress is to be laid on activities such as afforestation, soil conservation, efficient utilisation of scarce water through surface and ground water exploitation, conservation of scanty rainfall and arresting its run off through moisture conservation measures, introduction of dry land farming technology and suitable agronomic practices, fodder pasture and livestock development and diversified activities of horticulture, sericulture, fisheries, etc. The allocations per block are made at the rate of Rs. 15 lakhs a year which are shared by the Centre and the concerned States on 50:50 basis.

5.35 During 1985-86, the allocation of Central assistance for the programme was Rs. 37 crores, against which an amount of Rs. 36.67 crores was released. The total expenditure on the scheme, inclusive of the States share, until January 1986 was Rs. 64.32 crores. The programme is being implemented by the State Governments through the district



level agencies. The physical achievements are summarised below :

TABLE 5.4  
*Physical Achievements under DPAP*

Key Indicators	Unit	Achievement upto Dec. 1985
1	2	3
1. Area treated under soil and moisture conservation . . . .	(*000 Hects.)	29.5
2. Irrigation potential created . . . .	(*000 Hects)	23.3
3. Afforestation and pasture development . . . .	(*000 Hects.)	45.2
4. Employment generated	(million mandays)	11.0

5.36 A sum of Rs. 46 crores has been provided for Central assistance for the programme in 1986-87. Emphasis is being laid on preparation of a shelf of projects, inventory of resources, including soil surveys and geo-hydrological surveys, and development of infrastructure which can promote and induce sustained development of highly degraded and arid areas. Further, the programme is being integrated with other State and Central rural development schemes.

#### *Panchayati Raj*

5.37. *Panchayati Raj* institutions in different forms have been in existence in almost all the States/UTs. But elections to one or more tiers are overdue in many States. The need to conduct timely elections to the Panchayati Raj bodies as well as to review the adequacy of their resources and identify measures for improving their viability has been stressed from time to time. During 1985-86, the State Governments were requested to hold elections to these bodies wherever overdue or when due, strengthen their resource base commensurate with their responsibilities and to involve them in the implementation of programmes of IRDP/NREP/DPAP/DDP and in the selection of beneficiaries so as to make them vibrant instruments of popular participation in the development process.

#### *Training Programmes*

5.38 The Seventh Plan has recognised the importance of training in bridging the gap between the formulators of policy and those who are implementing the programmes in the field. Accordingly, a number of training schemes have been taken up/intensified, for upgrading the professional competence of the functionaries at the district, block and village levels and bringing about attitudinal changes among them. The training schemes and the outlays provided for them are summarised below :

TABLE 5.5

#### *Training Schemes*

Scheme	(Rs. crores)	
	Annual Plan 1985-86	Annual Plan 1986-87
1. National Institute of Rural Development . . . .	1.30	1.30
2. Establishment/Strengthening of State Centres for Training and Research . . . .	3.50	1.70
3. Organisation of training courses, seminars and workshops . . . .	0.30	0.30
4. Strengthening of Extension Training Centres . . . .	1.00	1.00

5.39 The National Institute of Rural Development (NIRD) at Hyderabad is the apex institute for conducting training and research in the field of rural development. Training programmes, conferences, seminars and workshops are organised on various aspects of rural development which help in identifying not only the bottlenecks in the implementation of the programmes, but also in analysing them from the point of view of remedial measures. Until the middle of December, 1985, 24 national and regional training programmes were organised.

5.40 In order to impart training to the personnel in the field, i.e., Collectors, Project Directors, Assistant Project Officers, Block Development Officers, Extension Officers and Village Level Workers, the State Institutes for Training and Research in Rural Development (SIRD) and Extension Training Centres (ETCs) are being strengthened. Assistance is being provided to the States to the extent of 100 per cent for non-recurring expenditure and 50 per cent for recurring expenditure.

#### Council for Advancement of Rural Technology (CART)

5.41 The Council has been set up with the objective of acting as the national nodal point for coordination of all efforts for the development of technology relevant for rural areas and its dissemination. The more immediate concerns of the Council are—post harvest technologies, water supply and water management, energy, rural housing, village industries, health care and sanitation, transportation and technologies for women. So far, 66 projects worth Rs. 347.07 lakhs for technology transfer have been assisted by the Council as a means to field test and disseminate suitable technologies. The CART is also preparing a national directory of rural technologies in 14 major areas. During 1985-86, a sum of Rs. 2 crores was provided for the Council, against which Rs. 99.28 lakhs had been spent till the end of November, 85. For 1986-87 also, the allocation for the Council is Rs. 2 crores.

### *Monitoring and Evaluation*

5.42 A Central scheme for the establishment of a computerised District Rural Information System in each district with the ultimate objective of providing data base for planning and monitoring has been formulated. A sum of Rs. 2.50 crores has been provided for the scheme during 1986-87. Concurrent evaluation of the IRDP has also been started since October, 1985 in 72 blocks of 36 districts in 19 States with the objective of continuous follow up and application of correctives.

### *Communication strategy*

5.43 The Seventh Plan envisages a suitable communication strategy involving Doordarshan, Akashwani and Directorate of Audio Visual Publicity (DAVP) for creating awareness among the beneficiaries and the people at large about the rural development programmes. For working out the strategy, an Inter-Ministerial Group together with non-officials belonging to different organisations deliberated and formulated the broad outline regarding the target group, content of the programmes and the media for communication, based on which the operational details are being worked out.

### *Integrated Rural Energy Planning Programme*

5.44 The Integrated Rural Energy Planning Programme, which was started on pilot basis in 9 States during the Sixth Plan period, is being extended to all the States and UTs in the Seventh Plan. The programme involves developing planning capabilities in the States and UTs for preparing and implementing area based integrated rural energy plans and projects through which the optimum mix of all types of energy sources, conventional and non-conventional, would be provided to the rural areas for meeting the diverse energy needs for domestic purposes as well as productive activities. This programme was implemented with funds provided from the State/UT outlays up to 1985-86. From 1986-87 onwards, a Centrally sponsored scheme has been started with a provision of Central funds to the States/UTs for setting up IREPP Cells at the State and District/Block levels, consisting of professional staff for preparing integrated rural energy plans.

### *Review for 1985-86*

5.45 The programme was implemented on a pilot basis in 8 States up to 1984-85. As part of the programme, 20 Block level IREP projects were set up by the end of the Sixth Plan and State level IREP Cells were operational in 7 States. During 1985-86, the programme was extended to 13 additional States/UTs, thus taking the total number of States/UTs covered by the programme to 20. In the remaining 11 States/UTs, the programme took much longer to get off the ground than expected, largely because of the lack of a proper institutional set up for preparing and implementing area based integrated rural energy plans and the lack of training for staff.

5.46 The programme in 1985-86 consisted of the following components :—

- (1) Setting up of the institutional mechanism in the States/UTs for planning and implementing the programme through the setting up of State and District/Block level IREP Cells.
- (2) Training of the Staff at the State and District/Block level.
- (3) Preparation of IREP Projects.
- (4) Project implementation, which included the sub-components of demonstration, extension, provision of additional financial incentives to users and provision of grants to institutions and manufacturers etc.
- (5) Computer Modelling for investment planning of the rural energy sector at the national level on the basis of inputs from the State cells and block projects.
- (6) Monitoring of the programme.

An outlay of Rs. 6.52 crores was provided for the IREP programme in the State/UTs Plans. The anticipated expenditure, however, is about Rs. 4.32 crores.

5.47 A significant innovation made in 1985-86 was the design, development and testing of a large computer model for the rural energy sector in the Planning Commission, which would be based on the inputs being provided from the block level IREP Projects as well as the State IREP Cells, for preparing optimal integrated rural energy plans at the block, district, State and national level upto the year 2000. An integer programming computer model has been developed and tested for IREP Block level Project for Mohanlal Ganj block in Lucknow district and has been made operational for processing data from other blocks and for the preparation of block level IREP Plans. This model is being augmented and developed for preparing optimal district, State and national level IREP Plans.

### *Programme for 1986-87*

5.48 For 1986-87, a provision of Rs. 1 crore has been made for the Centrally sponsored scheme for Integrated Rural Energy Planning Programme. The scheme also envisages training for the staff at the national and State levels. For this purpose, a Central training centre is being set up in 1986-87 at Delhi.

5.49 It is expected that with the provision of staff and organising their training, the problems encountered in implementing the programme in some of the States in 1985-86 would be largely overcome and the programme can be developed and extended at an accelerated pace during 1986-87. It is proposed to set up one State/UT level IREPP Cell in each of the 22 States and 9 Union Territories and to set up at least 50 district/block level IREPP Cells in all the States/UTs during 1986-87. Steps will be taken to organise regular symposia, seminars, workshops etc. in each IREP block. Besides, it is proposed to organise 34 National Workshops in different parts

of the country during 1986-87 to share and review experiences in developing and implementing IREPP in the States. One such National Workshop has already been organised in Lucknow in April, 1986.

5.50 The Computer modelling project under IREPP, which was started in 1985-86, would be enlarged and developed during 1986-87. As part of this project, a macro level computer model for the rural energy sector for the whole country is being developed along with a micro level model which is based on IREP Block level projects. Results from the macro and the micro level models would be compiled to prepare guidelines for investment planning for the Rural Energy Sector upto the year 2000 A.D.

5.51 A provision of Rs. 6.11 crores for the States and Rs. 1.11 crores for the UTs has been made for the IREP in the 1986-87 Annual Plan. The amount would be utilised for implementing the IREP Block level projects, which would include demonstration, extension, provision of appropriate funds for various energy technologies, training and grants to local institutions, manufactures etc. The IREP Block level projects would be based on the block-level integrated rural energy plan as prepared by the Block level IREP Cell under the guidance of the State IREP Cell. The preparation of the IREP Project document would be funded from the Central grant for staff and training etc., while the implementation of these plans would be carried out with the resources from the State/UT Plans.

5.52 As recommended by the National workshop on IREP at Lucknow, the IREP Projects would be typically implemented under the guidance of the District Magistrate by the District Rural Development Agencies and the District/Block Integrated Rural Energy Planning Cells would be set up in the District Rural Development Agencies but would function under the guidance of the District Magistrate/District Collector and a district level working committee consisting of different departmental heads and eminent non-officials. The State level IREP Cell would be set up in the State Planning Department and a State level committee would be formed under the Secretary, Planning and include Secretaries of various concerned departments to review, assess and guide the IREPP in the concerned State. A steering committee is being formed at the national level under the chairmanship of Member, Energy, Planning Commission and consisting of Secretaries from the different concerned Departments to provide policy guidelines for the IREP Programme.

5.53 Appropriate inputs in the IREP Projects would be provided by the different concerned Departments in the State Governments and by the State Electricity Boards.

5.54 It is expected that with this rationalised institutional arrangement, the programme would develop the framework for planned and cost effective inputs of rural energy for the development of rural areas in the Seventh Plan and beyond.

#### *Involvement of Voluntary Agencies*

5.55 The Seventh Plan indicates the broad outline of the role and functions of village based voluntary agencies. Criteria for identifying grass root agencies to be involved in the planning and implementation of anti-poverty and Minimum Needs programmes in the rural areas have also been laid down.

5.56 In 1985-86, certain Central sector/Centrally sponsored schemes, which could be implemented in active collaboration with the voluntary agencies, were identified. An attempt was also made to simplify procedures so that the small groups could receive funds quickly without too many formalities.

5.57 In the Rural Development sector, in addition to the scheme of 'Promotion of Voluntary Schemes and Social Action Programme', voluntary organisations will be associated with the implementation of DWCRA, RLEGP, low cost sanitation in rural areas, accelerated water supply and organisation of beneficiaries. The funds are to be channelised through the People's Action for Development India (PADI) to the village level groups for implementing programmes with the help of the community.

5.58 In 1986-87, an allocation of Rs. 1.85 crores has been made for the scheme of 'Promotion of Voluntary Schemes and Social Action Programme'. Besides, an amount of Rs. 1 crore has been provided for the new scheme of organisation of beneficiaries, which is intended to increase the awareness and strengthen the bargaining position of the beneficiaries by organising awareness generating camps. In addition, a percentage of the outlays from DWCRA, RLEGP, low cost sanitation and accelerated water supply shall also be routed through the PADI to the voluntary agencies.

#### *Plan Outlay*

5.59 Scheme-wise details of Plan outlay for 1986-87 are given in Annexure 5.1

## ANNEXURE 5.1

## Outlays under Rural Development Programmes (1986-87)

(Rs. crores)

Name of the scheme	Centre	States	UTs	Total
<b>I. Special Programmes of Rural Development</b>				
<b>1. IRDP and Allied Programmes</b>				
(a) IRDP . . . . .	287.30	364.14*		706.79
(b) TRYSEM . . . . .	5.00			
(c) DWCRA . . . . .	10.05			
(d) Strengthening of Extension Trg. Centres . . . . .	1.00			
(e) District Composite Rural Trg. & Technology centres . . . . .	2.50			
(f) Strengthening of Dev. Admn. . . . .	2.00			
(g) Computerised Distt. Information System . . . . .	1.00			
(h) SLPP . . . . .	5.00			
(i) Rural Roads . . . . .	20.00			
(j) Organisation of Beneficiaries . . . . .	1.00			
(k) Other Programmes . . . . .	7.60			
2. D.P.A.P. . . . .	46.00	47.16	..	93.16
3. D.D.P. . . . .	39.00	..	..	139.00
4. N.R.E.P. . . . .	442.65	248.49	..	691.14
5. R.L.E.G.P. . . . .	633.65	..	..	1633.65
6. I.R.E.P. . . . .	1.00	6.11	1.11	18.22
II. C.D. & Panchayats . . . . .	..	77.76	4.04	81.80
III. Land Reforms . . . . .	4.05	67.61	0.81	72.47
IV. Special Employment Programmes . . . . .	..	179.11**	..	179.11
<b>GRAND TOTAL . . . . .</b>	<b>1509.00</b>	<b>990.38</b>	<b>5.96</b>	<b>2505.34</b>

\*This includes the outlays of IRDP and its related programmes (Rs. 286.20 crores), other R.D. Programmes (Rs. 10.57 crores), other programmes (Rs. 3.37 crores) and Felt Needs Programme of Districts in Maharashtra (Rs. 64.00 crores).

\*\*Includes outlays of Rs. 20.78 crores for Special Employment Schemes and Rs. 158.33 crores for other Employment Programmes.

## CHAPTER 6

### IRRIGATION, COMMAND AREA DEVELOPMENT, AND FLOOD CONTROL

#### IRRIGATION

Irrigation projects are classified into three categories viz. major, medium and minor projects. Projects which have a culturable command area (CCA) of more than 10,000 hectares are classified as major projects, projects which have a CCA of less than 10,000 hectares but more than 2,000 hectares are classified as medium projects and projects with CCA of 2,000 hectares or less are classified as minor projects.

6.2 The Annual Plan for 1985-86 envisaged creation of an additional potential of 2.33 million ha. and utilisation of 1.92 million ha. with an outlay of Rs. 2331.92 crores. The anticipated expenditure is Rs. 2398.63 crores. An additional potential of 2.22 million ha. is estimated to have been created with additional utilisation of 1.69 million ha. during the year as per details shown below :

TABLE 6.1  
*Annual Plan 1985-86*

Sl. No.	Item	Plan Provision (Rs. crores)	Revised Estimates (Rs. crores)	Additional benefits (million ha.)			
				Targets		Achievements	
				Potential	Utilisation	Potential	Utilisation
1.	Major and medium irrigation . . . . .	1847.41	1868.41	0.633	0.624	0.564	0.513
2.	Minor irrigation . . . . .	484.51	530.22	1.700	1.300	1.660	1.180
	<b>TOTAL . . . . .</b>	<b>2331.92</b>	<b>2398.63</b>	<b>2.333</b>	<b>1.924</b>	<b>2.224</b>	<b>1.693</b>

Taking into account the additional potential indicated above, the total irrigation potential created by the end of 1985-86 is placed at 69.76 million ha. and utilisation at 62.23 million ha. The increasing gap between the creation of irrigation potential and its utilisation calls for more vigorous effort for the implementation of the Command Area Development programme and other allied activities.

6.3 The position in respect of major and medium as well as minor irrigation is reviewed in detail in the following paragraphs.

#### MAJOR AND MEDIUM IRRIGATION

##### *Review for 1985-86*

6.4 In respect of major and medium irrigation programme, against a target of 0.63 million ha. of additional potential envisaged for 1985-86, there is a slippage of about 10 per cent. The shortfall is mainly due to inadequate funding owing to overall constraint of resources, increase in cost of some projects resulting in delay in fulfilment of benefits, problems of land acquisition and forest clearance and thin spreading of available resources on a number of projects etc.

6.5 The expenditure on major and medium irrigation in 1985-86 is estimated to have been a little in excess of the original approved outlay. There were, however, marginal shortfalls in some States due to constraint of resources. The earmarked outlays, particularly for the externally aided projects, were also not spent fully in some States. In the case of some inter-State projects, the earmarked outlays could not be fully spent, even though the construction programme approved by the project control boards envisaged higher outlays. There were problems of arrears payment in respect of inter-State projects which need to be tackled.

##### *Programme for 1986-87*

6.6 The main objective of the irrigation plan in 1986-87 is to facilitate speedy completion of ongoing projects. New starts are to be restricted to medium irrigation projects in drought-prone, tribal and backward areas. As regards funding of unfinished projects, the order of priority would be as under :

- (i) Adequate funding of externally aided projects commensurate with funding commit-

ments/programme agreed to with the external agencies;

- (ii) Early completion of medium projects by providing adequate outlays;
- (iii) Completion of pre-Fifth Plan and Fifth plan projects by providing adequate funds;
- (iv) Inter-State multi-purpose projects to be funded as per construction programme approved by the Control Boards. Payment of arrears by the participating States to be made promptly;
- (v) Acceleration or completion of major projects taken up during 1978—80;
- (vi) Provision of funds for modernisation of existing irrigation works where these are necessary; and
- (vii) Provision of adequate outlays for construction of water course from 40 ha. blocks to 5/8 ha. block as part of irrigation project cost.

6.7 Funds for all ongoing major and medium projects which have been lingering for a long time, projects tied up with external assistance and Inter-State projects have been earmarked, besides funds for major and medium projects which can yield benefits during the year. In the long lingering projects like Nagarjunasagar and Sarda Sahayak projects, even funds for specific priority items like lining of canal etc. have been earmarked.

6.8 The Central Water Commission (CWC) is engaged in the task of monitoring 66 selected major projects. Most of the important projects are covered in this programme. The officials of CWC periodically visit the projects and personally look into the deficiencies and bottlenecks. They also liaise with State officials and concerned Central Ministries etc. Assistance is also given in procuring essential scarce construction materials like cement, steel, explosives etc. There is, however, considerable scope for improving the monitoring and information system and a thorough review of the system is called for. Monitoring arrangements need to be strengthened to carry out satisfactory monitoring for the sector as a whole.

6.9 Suitable measures, wherever necessary, both at the Central and State level, are proposed to be taken to firm up the existing statistics.

6.10 Expansion of the area under irrigation and efficient utilisation of the created irrigation potential have been assigned high priority in the Seventh Plan. During 1986-87, it is proposed to spend Rs. 2143.39 crores for major and medium irrigation projects and create an additional potential of 0.69 million ha. The target for additional utilisation is 0.58 million ha.

6.11 Losses on irrigation works are mounting. To reduce these losses, the water rates structure needs to be reviewed and rationalised so that the revenues cover not only operation and maintenance charges

but also a part of the interest on capital. Monitoring arrangements for adequate maintenance also need to be strengthened at both State and Central levels.

#### *Minor irrigation*

#### *Review for 1985-86*

6.12 As against the approved outlay of Rs. 484.51 crores for the minor irrigation programme in 1985-86, the anticipated expenditure is Rs. 530.22 crores. The physical achievements, however, show a marginal shortfall. Against a target of creating an irrigation potential of 1.70 million ha., the anticipated achievement is, 1.66 million ha. This is due to increase in the cost of the schemes, proliferation of schemes and thin spreading of resources, shortage of power for pumping of ground water and surface water, lesser flow of institutional funds and inadequate allocation of resources for externally aided projects. The expenditure on externally aided projects could not come upto the level of earmarked outlays due to inadequacy of resources in the States, delay in preparation of projects, etc.

6.13 The Centrally sponsored schemes for strengthening of ground water and surface water (minor irrigation) organisations in the States/UTs and for encouraging irrigation through the use of sprinklers, drip irrigation, hydrams and man and animal operated pumps continued during the year and Central assistance on a matching basis was released to the States. In addition a new Centrally sponsored scheme viz. pilot scheme for rectification-cum-demonstration of 4400 diesel pumpsets was introduced. Under this scheme also, Central assistance on matching basis was released to the States.

#### *Programme for 1986-87*

6.14 The main considerations in the formulation of the minor irrigation programme for the year are :

- (i) Completion of on-going surface water schemes on priority basis to derive full benefits as early as possible;
- (ii) Adequate provision of funds for the externally-aided projects according to the schedule of constructions agreed to with the external agencies;
- (iii) Stepping up of institutional investment to the maximum extent possible;
- (iv) Encouraging timely availability of required power for pumpsets, besides giving priority to new connections for pumpsets;
- (v) Providing subsidies to small and marginal farmers and other weaker sections to encourage private investment in minor irrigation;
- (vi) Stepping up ground water development in the States/UTs especially in the eastern and north-eastern region;

- (vii) Encouraging minor irrigation programme in the tribal, backward and drought-prone areas and areas having predominantly scheduled caste and scheduled tribe farmers ;
- (viii) Encouraging irrigation through non-conventional sources of energy like hydrams, man and animal operated lifting devices, etc.;
- (ix) Strengthening of surface and ground water organisation in the States and UTs by providing equipments;
- (x) Improving efficiency of diesel pumps through pilot schemes and installation of diesel pumpsets in areas devoid of electric power ;
- (xi) Improving performance of public tube-wells which are suffering from inadequate supply of power and lack of field channels;
- (xii) Initiating action for conducting census of minor irrigation units in the States and UTs; and
- (xiii) Initiating action for setting up nodal agencies in the States/UTs for coordinating the programme.

6.15 The following Table gives an abstract of the outlays and targets of benefits for 1986-87.

TABLE 6.2

*Annual Plan 1986-87—Outlays and Targets*

S.No.	Item	Outlays for 86-87	Targets of benefits during 1986-87 (million hectare)	
			Potential	Utilisation
1.	Major and Medium	2143.39	0.69	0.58
2.	Minor Irrigation	576.06	1.73	1.26
	<b>TOTAL</b>	<b>2719.45</b>	<b>2.42</b>	<b>1.84</b>

6.16 The outlay on major and medium irrigation, minor irrigation, command area development and flood control by programme for the Centre and each State/Union Territory is given in Annexure 6.1. Scheme-wise break-up of the outlay on major and medium irrigation is given in Annexures 6.2 and 6.3. The benefits under major, medium and minor irrigation schemes are shown in Annexures 6.4 and 6.5.

#### COMMAND AREA DEVELOPMENT

6.17 The Command Area Development Programme was initiated in 1974-75 for bringing about speedier utilisation of irrigation potential and increasing agricultural production in the areas served by selected major and medium irrigation projects. The programme aims at improving the productivity in irrigated commands by stepping up utilisation of

the potential created and making available agricultural inputs like seeds, fertilizers, pesticides, credit, etc. At the beginning of the Sixth Plan, 76 projects in the commands of major and medium irrigation projects were under implementation. Additional projects were included in the Sixth Plan and in the Annual Plan 1985-86. The Programme now covers about 133 selected major and medium irrigation projects in 18 States and 1 Union Territory.

Keeping in view the Seventh Plan strategy for deriving maximum benefit from assets already created, the emphasis is on completion of the projects taken up under the CAD Programme before 1980. High priority in allocation of both physical and financial resources is being given to these projects and greater stress is being laid on better management of the water distribution system, more efficient on-farm water application, training of field staff and farmers and involvement of farmers under the command areas in the management of water distribution system below the minor and outlet level.

#### *Review of progress in 1985-86*

6.18 For 1985-86, the total allocation for the CAD Programme was Rs. 295 crores, which included an outlay of Rs. 107 crores in the Central Sector. However, the total anticipated expenditure is Rs. 274.08 crores, the shortfall being mainly due to inability of the States to provide their share of funds for getting the Central share. Nevertheless, the physical performance is quite encouraging as indicated below :—

TABLE 6.3

*Targets and Achievements*

Item	Targets for 1985-86 (Million ha.)	Anticipated achievements for 1985-86 (million ha.)
Field channels	0.85	1.0
Land levelling	0.23	0.22
Warabandi	0.98	0.95

#### *Plan for 1986-87*

6.19 The Programme would be continued during 1986-87 in all the 133 projects. Some new projects may also be taken up during the year. Adequate outlays would be provided for externally aided CAD projects according to the schedule agreed with the external agencies. Monitoring arrangements, however, need to be strengthened at the Central as well as State level.

6.20 The States have been urged to prepare detailed item-wise project reports for each project indicating its total cost, phasing of the requirement of funds and the targets to be achieved and submit the same to the Ministry of Water Resources for approval in order to facilitate the timely release of funds by the Centre. In order to involve the farmers in the distribution and management of water, the

States have been advised to take up one minor channel in at least one project for involving farmers on a pilot basis. The outlay provided for the CAD programme during 1986-87 is Rs. 214.12 crores in the States and Union Territories and Rs. 93 crores at the Centre. The targets for the area to be covered through the construction of field channels, land levelling and warabandi are 1.3 million ha., 0.22 million ha. and 1.77 million ha. respectively. The State-wise break-up of the outlays provided in the State sector is shown in Annexure 6.1. Similar break-up of targets for construction of field channels, land levelling and warabandi is shown in Annexures 6.6, 6.7 and 6.8 respectively.

#### *Flood Control*

6.21 Against the approved outlays of Rs. 154 crores for the programme in 1985-86, the anticipated expenditure is Rs. 165.83 crores. In view of the heavy relief expenditure incurred in chronically flood affected states from year to year, there is need to give priority attention to completion of the works in hand. Many a times irrigation works like construction of tanks etc. taken up under relief programme have their components like earth work complete but not to the designed height and width or important components like spillway remained incomplete. It is necessary that such incomplete works are brought

to a safe stage by providing for the balance work in the plan.

#### *Plan for 1986-87*

6.22 The outlay provided for the programme for 1986-87 is Rs. 166 crores, of which Rs. 26.3 crores is in the Central sector. The Central sector outlay includes Rs. 13.5 crores for flood control works in the Brahmaputra Valley and Rs. 6 crores for the Brahmaputra Board for preparation of a Master Plan, Rs. 1.8 crores for flood control component of the Rengali Dam and Rs. 3.5 crores for anti-sea erosion works in Kerala.

6.23 In respect of Inter-State schemes, it is necessary that coordinated efforts are made by the concerned States to complete the long-lingering on-going schemes. Research and development activities in the area of flood control need to be intensified. It is also necessary to collect regularly the information on benefits from flood control schemes.

6.24 The State-wise outlays provided for Flood Control in 1986-87 are given in Annexure 6.1. It is expected that an additional area of about 0.25 million ha. would be afforded reasonable degree of protection during 1986-87.



## ANNEXURE 6.1

*Outlays on Major and Medium Irrigation, Minor Irrigation, Command Area Development and Flood Control Programme for the Annual Plan 1986-87*

(Rs. crores)

Sl. No.	States	Major & Medium Irrigation	Minor Irrigation	Command Area Development	Flood Control	Total
1	2	3	4	5	6	7
1.	Andhra Pradesh	205.30	37.02	10.00	5.50	257.82
2.	Assam	24.80	30.68	1.20	6.45	63.13
3.	Bihar	266.88	46.11	7.40	25.00	345.39
4.	Gujarat	179.85	18.32	10.13	1.70	210.00
5.	Haryana	130.56	2.07	24.74*	12.00	169.37
6.	Himachal Pradesh	1.65	8.50	0.36	0.70	11.21
7.	Jammu & Kashmir	13.85	9.95	1.10	4.25	29.15
8.	Karnataka	114.47	31.89	12.93	0.65	159.94
9.	Kerala	53.00	7.00	2.00	3.50	65.50
10.	Madhya Pradesh	244.00	80.00	25.00	1.00	350.00
11.	Maharashtra	292.95	63.90	67.85	0.15	424.85
12.	Manipur	11.80	1.80	0.50	1.40	15.50
13.	Meghalaya	0.10	1.75	—	0.20	2.05
14.	Nagaland	—	2.59	—	—	2.59
15.	Orissa	109.00	25.00	3.00	3.50	140.50
16.	Punjab	51.64	7.23	4.00	8.11	70.98
17.	Rajasthan	97.76	9.50	15.16	2.58	125.00
18.	Sikkim	—	2.05	—	0.25	2.30
19.	Tamil Nadu	47.73	20.74	5.19	4.28	77.94
20.	Tripura	4.50	4.00	0.10	1.30	9.90
21.	Uttar Pradesh	231.07	100.99	21.00	24.91	377.97
22.	West Bengal	40.96	26.50	1.50	20.87	89.83
<i>Total (States)</i>		2121.87	537.59	213.16	128.30	3000.92
<i>Union Territories</i>						
23.	A & N Islands	—	0.30	—	—	0.30
24.	Arunachal Pradesh	0.15	4.65	—	0.40	5.20
25.	Chandigarh	—	0.20	—	—	0.20
26.	Dadra & Nagar Haveli	0.90	0.50	0.0556	0.01	1.4656
27.	Delhi	0.02	1.12	—	10.00	11.14
28.	Goa, Daman & Diu	10.15	1.50	0.90	0.20	12.75
29.	Lakshadweep	—	—	—	0.25	0.25
30.	Mizoram	0.05	1.00	—	0.20	1.25
31.	Pondicherry	0.25	1.00	—	0.50	1.75
<i>Total (UTs)</i>		11.52	10.27	0.9556	11.56	34.3056
<i>Total</i>		2133.39	547.86	214.1156	139.86	3035.2256
<i>Central Sector</i>		10.00	28.20	93.00	26.30	157.50
<i>Grand Total</i>		2143.39**	576.06	307.1166	166.16	3192.7256

\*Includes Rs. 22.60 crores for CAD works executed by Haryana State Minor Irrigation Tubewell Corporation.

\*\*Exclude outlay of Rs. 25 lakhs for major and medium irrigation scheme of N.E.C.

## ANNEXURE 6.2

## Details of Plan Outlay for Central Sector

(Rs. crores)

Sl No.	Name of scheme	Anticipated expenditure 1985-86	Outlay for 1986-87
<i>A. Major &amp; Medium Irrigation</i>			
1.	Central Water Commission	1.39	2.11
2.	Central Water & Power Research Station, Pune	3.91	3.65
3.	National Institute of Hydrology	0.65	0.52
4.	Sone River Commission	0.62	0.50
5.	Central Soil and Materials Research Station, New Delhi	0.38	0.80
6.	Project Preparation Cell	0.06	0.02
7.	Grant in-aid for Research connected with River Valley Projects (C.B.I.P.)	0.56	0.73
8.	National Water Development Agency	1.98	1.67
	<i>Sub-Total(A)</i>	<u>9.55</u>	<u>10.00</u>
<i>B. Flood Control</i>			
9.	Brahmaputra Board	8.00	7.00
10.	Flood Control Works in Brahmaputra Valley	15.00	13.50
11.	Assistance for Rengali Dam in Orissa	4.00	1.80
12.	Other programmes	3.521	4.00
	<i>Sub-Total (B)</i>	<u>30.521</u>	<u>26.30</u>
<i>C. Minor Irrigation</i>			
13.	Central Ground Water Board	11.44	19.25
14.	Other Programmes	4.04	8.95
	<i>Total (C)</i>	<u>15.48</u>	<u>28.20</u>
<i>D. Command Area Development Programme</i>			
	<i>Grand Total A+B+C</i>	<u>125.361</u>	<u>157.50</u>

## ANNEXURE 6.3

## Scheme-wise Details of Plan outlay for Irrigation—States and Union Territories\*

## 1. ANDHRA PRADESH

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	(Rs. crores) Outlay for 1986-87	
Major and Medium Irrigation				
A. Earmarked Projects/Schemes				
1.	Nagarjunasagar			
(a)	Lining	20.00	3.00	19.00
(b)	Other works		16.00	
2.	Sriram Sagar Stage-I	40.00	45.00	
3.	Godavari Barrage Project	3.00	2.00	
4.	Vamsadhara Stage-I	2.50	2.50	
5.	Tungabhadra HLC stage-II	6.00	6.00	
6.	Yelleru	18.40	14.00	
7.	Medium Schemes	20.73	23.05	
TOTAL (A)		110.63	111.55	
B. Non Earmarked Projects/Schemes				
(i)	Major projects	54.25	69.08	
(ii)	Medium projects			
(iii)	Other schemes, including Survey, Investigation, Research etc.	7.86	24.67	
TOTAL (B)		62.11	93.75	
GRAND TOTAL		172.74	205.30	

\*There is no major and medium irrigation programme in Meghalaya, Nagaland, Sikkim and the Union Territories of Andaman Nicobar, Arunachal Pradesh, Chandigarh, Lakshadweep and Mizoram.

## 2. ASSAM

			(Rs. crores)
Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>Major &amp; Medium Irrigation</i>			
<i>A. Earmarked Projects</i>			
1.	Dhansiri . . . . .	6.50	7.80
2.	Medium Schemes . . . . .	8.80	9.99
TOTAL—A . . . . .		15.30	17.79
<i>B. Non Earmarked Projects/Schemes</i>			
(i)	Major Projects (Champawati) . . . . .	2.49	3.35
(ii)	Medium Projects . . . . .	0.36	0.60
(iii)	Other Schemes including Survey, investigation research etc. . . . .	2.85	3.06
TOTAL—B . . . . .		5.70	7.01
GRAND TOTAL A+B . . . . .		21.00	24.80

## 3. BIHAR

		(Rs. crores)	
Sl. No.	Project/Schemes	Anticipated Expenditure 1985-86	Outlay for 1986-87
Major and Medium Irrigation			
A. Earmarked Projects			
1.	Subarnarekha . . . . .	50.00	71.00
2.	W. Kosi Canal . . . . .	20.90	35.00
3.	North Koel . . . . .	39.88	40.00
4.	Upper Kiul . . . . .	6.00	8.00
5.	Bansagar (Dam Share) . . . . .	8.29	8.50
6.	Medium Schemes . . . . .	56.65	49.13
TOTAL—A . . . . .		181.72	211.63
B. Non-Earmarked Projects/Schemes			
(i)	Major Projects . . . . .	19.26	28.55
(ii)	Medium Projects . . . . .	6.50	12.70
(iii)	Other schemes including Survey, Investigation, research etc. . . . .	12.72	14.00
TOTAL—B . . . . .		38.48	55.25
GRAND TOTAL . . . . .		220.20	266.88

## 4. GUJARAT

		(Rs. in crores)	
Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
Major and Medium Irrigation			
A. Earmarked Projects			
1.	Karjan . . . . .	19.16	17.30
2.	Damanganga . . . . .	7.16	6.00
3.	Saurashtra Coastal Development Project . . . . .	3.45	5.00
4.	Modernisation of Ukai Kakrapar . . . . .	4.85	5.10
5.	Panam . . . . .	2.75	1.60
6.	Watrak . . . . .	3.68	5.00
7.	Sukhi . . . . .	7.32	6.00
8.	Sipu . . . . .	4.21	2.75
9.	Sabarmati . . . . .	2.24	2.50
10.	Mahi Bajaj Sagar . . . . .	Nil	0.50
11.	Sardar Sarovar Project . . . . .	27.59	68.52
Medium Projects . . . . .		47.55	47.24
TOTAL—A . . . . .		129.96	167.31
B. Non Earmarked Projects/Schemes			
(i)	Major Projects . . . . .	Nil	Nil
(ii)	Medium Projects . . . . .	Nil	9.54
(iii)	Others, includes survey, Investigation, Research etc. . . . .	21.17	3.00
TOTAL—B . . . . .		21.17	12.54
GRAND TOTAL . . . . .		151.13	179.85

## 5. HARYANA

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Schemes</i>			
<i>A. Earmarked Projects</i>			
1.	Modernisation of existing channels in Haryana (Phase II)	26.00	32.52
3.	Jawahar Lal Nehru Lift Irrigation schemes	4.00	3.00
3.	Sutlej Yamuna Link	70.00	90.00
4.	Loharu Lift Irrigation	1.50	0.34
	<b>TOTAL—A</b>	<b>101.50</b>	<b>125.86</b>
<i>B. Non-earmarked Projects/Schemes</i>			
(i)	Major schemes	6.68	4.48
(ii)	Medium schemes	0.48	0.22
(iii)	Other schemes, including Survey, Investigation, Research etc.	2.34	..
	<b>TOTAL—B</b>	<b>9.50</b>	<b>4.70</b>
	<b>GRAND TOTAL</b>	<b>111.00</b>	<b>130.57</b>

## 6. HIMACHAL PRADESH

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Irrigation</i>			
<i>A. Earmarked Projects</i>			
		Nil	
<i>B. Non-earmarked Projects/Schemes</i>			
(i)	Shahnahar Project	0.50	0.51
(ii)	Medium schemes	1.06	1.04
(iii)	Other schemes, including Survey, Investigation, Research etc.	0.08	0.10
	<b>TOTAL—B</b>	<b>1.64</b>	<b>1.65</b>
	<b>GRAND TOTAL</b>	<b>1.64</b>	<b>1.65</b>

## 7. JAMMU &amp; KASHMIR

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Irrigation</i>			
<i>A. Earmarked Projects</i>			
1.	Ravi Canal	6.00	6.00
2.	Medium schemes	4.00	4.50
	<b>TOTAL—A</b>	<b>10.00</b>	<b>10.50</b>
<i>B. Non-earmarked Projects/Schemes</i>			
(i)	Major schemes	0.19	0.20
(ii)	Medium schemes	1.39	1.20
(iii)	Other schemes including Survey, Investigation, Research, etc.	1.27	1.95
	<b>TOTAL—B</b>	<b>2.85</b>	<b>3.35</b>
	<b>GRAND TOTAL</b>	<b>12.85</b>	<b>13.85</b>

## 8. KARNATAKA

		(Rs. crores)	
Sl. No.	Project/Scheme	Anticipated expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Irrigation</i>			
<b>A. Earmarked Projects</b>			
1.	Upper Krishna Stage-I . . . . .	56.25	59.00
2.	Ghataprabha Stage-III . . . . .	9.50	11.00
3.	Malaprabha . . . . .	12.50	12.50
4.	Medium Schemes . . . . .	2.19	3.04
<b>TOTAL—A</b>		<b>80.44</b>	<b>85.54</b>
<b>B. Non Earmarked Projects/Schemes</b>			
(i)	Major . . . . .	7.23	8.85
(ii)	Medium . . . . .	2.38	5.73
(iii)	Other schemes, including Survey, Investigation, Research etc. . . . .	7.33	14.35
<b>TOTAL—B</b>		<b>16.94</b>	<b>28.93</b>
<b>GRAND TOTAL</b>		<b>97.38</b>	<b>114.47</b>

## 9. KERALA

		(Rs. crores)	
Sl. No.	Project/Scheme	Anticipated expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Irrigation</i>			
<b>A. Earmarked Projects</b>			
1.	Kallada . . . . .	35.00	35.00
2.	Periyar Valley . . . . .	3.25	4.00*
3.	Kuttiadi . . . . .	3.60	0.30*
4.	Pazhassi . . . . .	5.00	3.36*
<b>TOTAL—A</b>		<b>46.85</b>	<b>42.66</b>
<b>B. Non Earmarked Projects/Schemes</b>			
(i)	Major . . . . .	11.03	8.31
(ii)	Medium . . . . .	2.52	1.18
(iii)	Other schemes, including Survey, Investigation, Research etc. . . . .	0.45	0.85
<b>TOTAL—B</b>		<b>14.00</b>	<b>10.34</b>
<b>GRAND TOTAL (Major &amp; Medium)</b>		<b>60.85</b>	<b>53.00</b>

\*Not earmarked.

## 10. MADHYA PRADESH

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>Major and Medium Irrigation</i>			
<b>A. Earmarked Projects</b>			
1.	Hasdeo Bango . . . . .	30.00	40.00
2.	Mahanadi Res. Project . . . . .	22.89	30.00
3.	Arpa and other components of World Bank aided project . . . . .	1.70	1.10
4.	Chambal . . . . .	2.00	1.00
5.	Rajghat —Unit-I . . . . .	5.00	9.00
	—Unit-II . . . . .	3.00	5.00
6.	Bansagar —Unit-I . . . . .	17.50	8.00
	—Unit-II . . . . .	5.00	6.00
7.	Bargi —Unit-I . . . . .	11.60	12.00
	—Unit-II . . . . .	7.00	10.00
8.	Upper Wainganga . . . . .	6.00	10.00
9.	Medium Schemes . . . . .	69.23	79.65
TOTAL—A . . . . .		180.92	211.75
<b>B. Non Earmarked Projects/Schemes</b>			
1.	Major Schemes . . . . .	12.07	9.35
2.	Medium Schemes . . . . .	1.61	2.00
3.	Other schemes, including survey, investigation, Research etc. . . . .	21.10	20.90
TOTAL—B . . . . .		34.78	32.25
GRAND TOTAL - (Major & Medium) . . . . .		215.70	244.00

## ANNEXURE 6.3 (Contd.)

## 11. MAHARASHTRA

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated expenditure 1985-86	Outlay for 1986-87
1	2	3	4
<i>Major and Medium Irrigation</i>			
<b>A. Earmarked Projects</b>			
1.	Jayakwadi Stage I & II . . . . .	9.58	12.00
2.	Jayakwadi Stage II (Majalgaon) . . . . .	13.18	20.00
3.	Warna . . . . .	10.14	14.60
4.	Krishna . . . . .	8.37	9.00
5.	Kukadi . . . . .	13.51	14.55
6.	Bhima . . . . .	16.63	14.33
7.	Upper Penganga . . . . .	14.20	15.40
8.	Upper Wardha . . . . .	12.31	14.32
9.	Upper Tapi Stage I . . . . .	3.83	4.50
10.	Khadakwasla . . . . .	4.10	4.86
11.	Pench (Irrigation) . . . . .	10.14	11.25
12.	Vishnupuri (Lonur Godawari) . . . . .	4.10	5.40
13.	Dudhganga . . . . .	4.10	6.80
14.	Kalisarar . . . . .	0.69	1.85
15.	Surya . . . . .	3.83	7.10
16.	Bhatse . . . . .	1.61	2.14
17.	Lower Thirna . . . . .	2.77	7.75
18.	Medium Projects . . . . .	23.97	38.13
<b>TOTAL - A</b> . . . . .		157.06	204.00
<b>B. Non Earmarked Projects/Schemes</b>			
(i)	Major Projects . . . . .	28.53	30.36
(ii)	Medium Projects . . . . .	26.45	26.19
(iii)	Other schemes, including Survey, Investigation, Research etc. . . . .	33.07	32.40
<b>TOTAL - B</b> . . . . .		88.05	88.95
<b>GRAND TOTAL</b> . . . . .		245.11	292.95

## 12. MANIPUR

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<i>I. Major and Medium Irrigation</i>			
<b>A. Earmarked Projects</b>			
1.	Thoubal . . . . .	3.70	5.60
2.	Singda . . . . .	1.20	1.20
3.	Loktak LI . . . . .	2.20	0.90
4.	Medium Projects . . . . .	2.34	1.25
<b>TOTAL - A</b> . . . . .		9.44	8.95
<b>B. Non Earmarked Projects/Schemes</b>			
(i)	Major Schemes (Khuga) . . . . .	1.58	2.35
(ii)	Medium Scheme . . . . .	..	..
(iii)	Other schemes, including Survey, Investigation, Research etc. . . . .	0.08	0.50
<b>TOTAL - B</b> . . . . .		1.66	2.85
<b>GRAND TOTAL—(Major &amp; Medium Irrigation)</b> . . . . .		11.10	11.80



## 13. ORISSA

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major &amp; Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Upper Indravati—Dam	1.00	1.00
	—Irrigation	2.50	1.00
2.	Mahanadi Birupa Barrage	20.00	26.00
3.	Subarnarekha	10.00	31.00
4.	Rangali—Dam	1.50	0.62
	—Irrigation	4.00	4.00
5.	Upper Kolab—Dam	6.00	2.00
	—Irrigation	1.00	2.00
6.	Medium Schemes		
(i)	Externally aided	37.00	33.05
(ii)	Other ongoing schemes	0.15	1.00
	<b>TOTAL—A</b>	<b>83.15</b>	<b>101.67</b>
<b>B. Non-Earmarked Projects/Schemes</b>			
(i)	Major Schemes	1.04	0.66
(ii)	Medium Schemes	2.70	5.33
(iii)	Other Schemes, Including survey, investigation, Research etc.	3.81	1.34
	<b>TOTAL—B</b>	<b>7.55</b>	<b>7.33</b>
	<b>GRAND TOTAL (Major &amp; Medium Irrigation)</b>	<b>90.70</b>	<b>109.00</b>

## 14. PUNJAB

(Rs. Crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major and Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Dholbaha Dam	2.00	1.50
2.	Lining of channels	21.46	20.00
3.	Sutlej Yamuna Link		
(a)	Main Canal	14.00	18.00
(b)	Distribution system in Punjab Territory	1.60	5.84
4.	Extension and Improvement of Shahnahar Canal	3.00	3.29
	<b>TOTAL—A</b>	<b>41.46</b>	<b>48.63</b>
<b>B. Non-earmarked Projects/Schemes</b>			
(i)	Major schemes	1.15	1.05
(ii)	Medium schemes	0.42	0.17
(iii)	Other schemes, including Survey, Investigation, Research, etc.	4.61	1.79
	<b>TOTAL—B</b>	<b>6.18</b>	<b>3.01</b>
	<b>GRAND TOTAL—(Major and Medium)</b>	<b>47.64</b>	<b>51.64</b>

## 15. RAJASTHAN

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major and Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Mahi Bajajsagar Units I & II . . . . .	15.00	15.51
2.	Indira Gandhi Nahar Project I & II. . . . .	50.00	50.00
3.	Jakham . . . . .	5.00	3.76
4.	Okhla Barrage . . . . .	0.32	0.20
5.	Narmada . . . . .	0.20	1.00
6.	Externally aided schemes . . . . .	16.32	20.74
<b>TOTAL—A</b> . . . . .		<b>87.02</b>	<b>91.21</b>
<b>B. Non-Earmarked Projects/Schemes</b>			
(i)	Major schemes . . . . .	3.21	1.14
(ii)	Medium schemes . . . . .	0.95	0.40
(iii)	Other schemes, including Survey, Investigation Research etc. . . . .	5.95	5.02
<b>TOTAL—B</b> . . . . .		<b>10.11</b>	<b>6.56</b>
<b>GRAND TOTAL—(Major and Medium)</b> . . . . .		<b>97.13</b>	<b>97.76</b>

## 16. TAMIL NADU

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major and Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
<i>Major</i>			
	Modernisation of Periar Vaigai . . . . .	14.00	18.42
	Medium . . . . .	8.03	12.78
<b>TOTAL—A</b> . . . . .		<b>22.03</b>	<b>31.20</b>
<b>B. Non-Earmarked Projects</b>			
(i)	Major schemes . . . . .	3.34	2.36
(ii)	Medium schemes . . . . .	17.07	9.47
(iii)	Other schemes including Survey Investigation, Research etc. . . . .	8.53	4.70
<b>TOTAL—B</b> . . . . .		<b>28.94</b>	<b>16.53</b>
<b>GRAND TOTAL</b> . . . . .		<b>50.97</b>	<b>47.73</b>

## 17. TRIPURA

(Rs. crores)

Sl. No.	Project/Schemes	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major &amp; Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Gumti . . . . .	1.30	1.50
2.	Khowai . . . . .	1.70	1.90
3.	Manu . . . . .	0.50	0.50
<b>TOTAL—A</b>		<b>3.50</b>	<b>3.90</b>
<b>B. Non-Earmarked Projects</b>			
1.	Major Projects . . . . .	..	..
2.	Medium Project . . . . .	..	..
3.	Other schemes including Survey Investigation, Research etc. . . . .	0.85	0.60
<b>TOTAL—B</b>		<b>0.85</b>	<b>0.60</b>
<b>GRAND TOTAL</b>		<b>4.35</b>	<b>4.50</b>

## 18. UTTAR PRADESH

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
1	2	3	4
<b>I. Major and Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Modernisation of Upper Ganga Canal . . . . .	11.00	22.85
2.	Tehri Dam (Irrgn.) . . . . .	5.00	10.00
3.	Lakhwar Vyasi (Irrgn.) . . . . .	5.00	10.00
4.	Gandak Canal . . . . .	4.00	3.70
5.	Sarda Sahayak . . . . .	26.00	35.00
6.	Madhya Ganga . . . . .	20.00	20.00
7.	Saryu Mehar Pariyojana . . . . .	20.00	22.00
8.	Okhala Barrage . . . . .	1.00	2.00
9.	Eastern Ganga Canal . . . . .	14.00	18.00
10.	Remodelling of Bhimgoda . . . . .	4.50	1.00
11.	Rajghat Dam . . . . .	7.00	12.50
12.	Shahzad Dam . . . . .	3.50	4.00
13.	Bansagar Dam . . . . .	5.00	11.75
14.	Narainpur Pump Canal . . . . .	3.00	3.00
15.	Sone Pump Canal . . . . .	3.00	3.00
16.	Medium Schemes . . . . .	17.00	14.13
<b>TOTAL—A</b>		<b>144.50</b>	<b>192.93</b>
<b>B. Non earmarked Projects/schemes</b>			
(i) Major Schemes . . . . .		31.39 16 (nos)	23.14 (17 nos)
(ii) Medium Schemes . . . . .		0.16 (1 no)	0.50 (1 no)
(iii) Other schemes including Survey Investigation, Research etc. . . . .		14.43	14.50
<b>TOTAL—B</b>		<b>45.98</b>	<b>42.14</b>
<b>GRAND TOTAL—(Major and Medium)</b>		<b>190.48</b>	<b>231.07</b>

## 19. WEST BENGAL

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major &amp; Medium Irrigation</b>			
<b>A. Earmarked Projects</b>			
1.	Barrage & Irrigation System of D.V.C.	0.50	0.75
2.	Kangsabati	3.50	4.00
3.	Teesta Barrage (First sub-stage)	27.00	30.00
4.	Pre- Sixth Plan Medium Scheme	1.95	2.00
<b>TOTAL—A</b>		<b>32.93</b>	<b>36.75</b>
<b>B. Non-Earmarked Projects</b>			
(i)	Major Schemes	0.05	0.05
(ii)	Medium Scheme (Futiyari)	0.30	0.45
(iii)	Other schemes, including Investigation, research, etc.	2.87	3.46
<b>TOTAL—B</b>		<b>3.27</b>	<b>4.21</b>
<b>GRAND TOTAL</b>		<b>36.20</b>	<b>40.96</b>

## 20. GOA DAMAN &amp; DIU

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated expenditure 1985-86	outlay for 1986-87
<b>A. Earmarked Projects</b>			
1.	Daman Ganga	0.70	0.30
2.	Salauli	3.50	4.25
3.	Anjunem	3.00	2.30
<b>TOTAL—A</b>		<b>7.20</b>	<b>6.85</b>
<b>B. Non-earmarked projects</b>			
(i)	Major	2.10	2.74
(ii)	Medium	..	0.30
(iii)	Other schemes, including Survey, Investigation, Research, etc.	0.30	0.26
<b>TOTAL—B</b>		<b>2.40</b>	<b>3.30</b>
<b>GRAND TOTAL</b>		<b>9.60</b>	<b>10.15</b>

## 21. DADRA &amp; NAGAR HAVELI

(Rs. crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>A. Earmarked Projects</b>			
1.	Damanganga	1.00	0.90
<b>TOTAL</b>		<b>1.00</b>	<b>0.90</b>

## 22. PONDICHERRY

(Rs. Crores)

Sl. No.	Project/Scheme	Anticipated Expenditure 1985-86	Outlay for 1986-87
<b>I. Major/Medium Irrigation</b>			
A.	<i>Earmarked Projects</i>	Nil	Nil
B.	<i>Non-earmarked Projects</i>		
(i)	Major Projects	Nil	Nil
(ii)	Medium Projects	0.40	0.25
(iii)	Other schemes, including Survey, investigation, Research, etc. }		
<b>TOTAL—B</b>		0.40	0.25
<b>GRAND TOTAL</b>		0.40	0.25

## ANNEXURE 6.4

## Benefits from Major and Medium Irrigation Scheme

(000 ha.)

(Rs. crores)

Sl. No.	States	Ultimate Irrigation Potential	Potential created upto 1984-85		Target during 1985-86		Antod. achievement during 1985-86		Target during 1986-87 (Tentative)	
			Pot	Util.	Pot	Util.	Pot	Util.	Pot	Util.
1	2	3	4	5	6	7	8	9	10	11
1.	Andhra Pradesh	5000	3242	3006	59	39	45	17	62	17
2.	Assam	970	101	57	14	28	5	6	16	15
3.	Bihar	6500	2879	2175	76	80	58	80	65	90
4.	Gujarat	3000	1094	696	20	30	35	25	38	40
5.	Haryana	3000	1923	1745	35	27	35	11	30	29
6.	Himachal Pradesh	50	6	4	..	..	0.4	0.1	0.4	..
7.	Jammu & Kashmir	250	137	114	4	5	1	6	1	4
8.	Karnataka	2500	1253	1112	64	42	64	51	65	48
9.	Kerala	1000	535	515	24	30	26	26	44	40
10.	Madhya Pradesh	6000	1823	1316	79	65	48	48	60	50
11.	Maharashtra	4100	1693	958	65	103	65	67	70	38
12.	Manipur	155	40	24	13	10	13	7	7	4
13.	Meghalaya	20	..	..	..	..	..	..	..	..
14.	Nagaland	10	..	..	..	..	..	..	..	..
15.	Orissa	3600	1553	1508	21	16	16	7	30	15
16.	Punjab	3000	2463	2448	28	26	28	28	31.6	26
17.	Rajasthan	2750	1795	1425	60	29	57	20	60	20
18.	Sikkim	20	..	..	..	..	..	..	..	..
19.	Tamil Nadu	1500	1244	1225	20	16	20	15	17.8	5
20.	Tripura	100	..	..	..	..	1	..	..	0.5
21.	Uttar Pradesh	12500	6633	5517	30	50	30	80	70	100
22.	West Bengal	2310	1579	1470	19	26	15	16	22.56	33
TOTAL (States)		58315	29993	25315	631	622	562.4	511.1	690.36	574.05
U.T.s		160	20	15	2	2	2	2	3.44	2
GRAND TOTAL		58475	30013	25330	633	624	564.4	513.1	693.80	576.05

Pot—Potential Util.—Utilisation

## ANNEXURE 6.5

## Benefits from Minor Irrigation

('000 ha. gross)

Sl. No.	States	Ultimate Potential	Benefits to end of 1984-85		Benefits During 1985-86			Benefits During 1986-87		
			Pot.	Utl.	Target		Ant.	Achi.	Targets	
					Pot.	Utl.			Pot.	Utl.
1	2	3	4	5	6	7	8	9	10	11
1.	Andhra Pradesh	4200	2341	2196	49	30	90	61	117	86
2.	Assam	1700	391	349	30	22	26.5	20	31	26
3.	Bihar	5900	3412	3145	250	190	238	190	250	190
4.	Gujarat	1750	1674	1609	41.7	31	35	22.8	32	25
5.	Haryana	1550	1387	1361	30	25.5	21.5	21.5	28	28
6.	Himachal Pradesh	285	117	105	1.32	0.7	1.32	0.79	2.2	0.8
7.	Jammu & Kashmir	550	337	327	5.36	3.2	3.45	3.80	5.7	4.0
8.	Karnataka	2100	1148	1115	14.50	9.5	16.4	11.0	15.3	10
9.	Kerala	1100	390	365	18.5	14.2	18.5	14.2	20	14.5
10.	Madhya Pradesh	4200	1992	1870	112	79	122.7	104	120	105
11.	Maharashtra	3200	1997	1832	55	38.75	43	29	56.4	39
12.	Manipur	105	39	34	2	1.2	2	1.2	1.5	1.2
13.	Meghalaya	100	35	32	2.8	1.7	2.8	1.7	2.0	1.7
14.	Nagaland	80	51	47	2.7	2.7	2.03	1.05	2.0	1.25
15.	Orissa	2300	1060	980	61	58	61	58	59	50
16.	Punjab	3550	3174	3139	49.8	45	33.8	31	34.2	34.2
17.	Rajasthan	2400	1987	1937	58	26	34	31.8	38	35
18.	Sikkim	22	14	10	1	0.6	1	1	1.35	1.30
19.	Tamil Nadu	2400	1950	1943	17	14.8	17	14.8	18.2	15
20.	Tripura	115	58	50	2.6	1.4	3.3	2.0	3.0	1.8
21.	Uttar Pradesh	13200	12131	11077	805	643	805	511	805	53.8
22.	West Bengal	3800	1702	1600	88.3	61	75.6	45.3	84.4	55
TOTAL (States)		54607	37387	35123	1677.58	1298.16	1653.90	1176.94	1726.25	1254.51
<i>Union Territories</i>										
23.	A & N Islands		0.45	0.35	0.1	0.05	0.13	0.08	0.112	0.08
24.	Arunachal Pradesh		40.2	34.2	4.1	2.45	4.0	2.40	4.50	2.50
25.	Chandigarh		1.2	1.18	0.09	0.06	0.09	0.08	0.04	0.04
26.	Dadra & Nagar Haveli		0.63	0.60	0.02	0.01	0.02	0.16	0.04	0.04
27.	Delhi		41.17	40.72	1.20	1.00	1.20	1.00	0.70	0.70
28.	Goa, Daman & Diu		14.30	13.60	0.85	0.55	0.85	0.55	0.80	0.71
29.	Lakshadweep		..	..	..	..	..	..	..	..
30.	Mizoram		6.44	5.84	1.5	1.0	0.59	0.45	0.65	0.50
31.	Pondicherry	*	28.73	28.70	0.1	0.08	0.10	0.107	0.10	0.10
Total (UTs.)		250	133.17	125.19	7.96	5.20	6.98	4.827	6.942	4.670
Total—All State/UTs.		54857	37520.12	35248.19	1685.54	1303.36	1660.88	1181.767	1733.192	1259.181
OR say		55000	37520	35250	1700	1300	1660	1180	1730	1260

## Construction of Field Channels Targets/Achievement

('000 ha.)

Sl. No.	Name of State	Target for 1985-86	Anticipated Achievements 1985-86	Targets for 1986-87
1	2	3	4	5
1.	Andhra Pradesh	80	80.00	113
2.	Assam	5	4.40	7.20
3.	Bihar	50	122.00	150.00
4.	Gujarat	28	72.27	96.6
5.	Haryana	8	8	20.80
6.	Himachal Pradesh	0.6	0.6	2.50
7.	Jammu & Kashmir	0.5	2.0	8.00
8.	Karnataka	55.67	53.0	58.00
9.	Kerala	3	3	10.00
10.	Madhya Pradesh	115	67.0	150.00
11.	Maharashtra	135	110	70
12.	Manipur	4	4	6.0
13.	Orissa	23	30	60
14.	Rajasthan	30	51	55.00
15.	Tamil Nadu	48	41.6	66.00
16.	Uttar Pradesh	240	351	422.00
17.	West Bengal	25	14	20.00
TOTAL—States		856.77	1013.87	1315.1
<i>Union Territories</i>				
	Goa Daman & Diu	2.0	2.00	3.0
	Dadra and Nagar Haveli	3.48	3.48	4.8
GRAND TOTAL		858.77	1019.35	1322.9



## ANNEXURE 6.7

## Land Levelling Targets/Achievements

('000 ha.)

Sl. No.	Name of States	1985-86		1986-87
		Target	Anticipated Achievement	Targets
1	2	3	4	5
1.	Andhra Pradesh	37.0	67.50	80.0
2.	Assam	0.5	0.14	0.55
3.	Bihar	2.0	0.50	0.50
4.	Gujarat	18.0	..	..
5.	Haryana	3.5	3.5	7.00
6.	Himachal Pradesh	0.3	8.30	0.25
7.	Jammu & Kashmir	3.7	2.0	4.00
8.	Karnataka	53.76	29	40.00
9.	Kerala	0.20	..	..
10.	Madhya Pradesh	1.0	6.0	5.00
11.	Maharashtra	107.0	80.0	80.00
12.	Manipur	0.5	1	1.00
13.	Orissa	6.0	..	3.20
14.	Rajasthan	4.00	4	4.00
15.	Tamil Nadu	..	..	..
16.	Uttar Pradesh	..	..	..
17.	West Bengal	0.50	0.50	0.5
Total—States		237.96	194.44	226.00
Union Territories				
Goa Daman & Diu		..	..	..
Dadra and Nagar Haveli		—	—	0.05
Grand Total		237.96	194.44	226.05

## ANNEXURE 6.8

*Warabandi—Targets/Achievements*

Sl. No.	Name of State	('000 ha.)		
		1985-86		1986-87
		Target	Anticipated Achievement	Targets
1	2	3	4	5
1.	Andhra Pradesh	135	270.0	310.0
2.	Assam	10	5.0	5.00
3.	Bihar	1.8	21.0	25.00
4.	Gujarat	28.6	171.45	125.60
5.	Haryana	21.6	21.6	19.50
6.	Himachal Pradesh	0.6	—	2.40
7.	Jammu & Kashmir	10.6	1.45	7.00
8.	Karnataka	26.69	21.4	175.00
9.	Kerala	0.50	3.0	10.00
10.	Madhya Pradesh	10	33.5	100.00
11.	Maharashtra	120	—	134.00
12.	Manipur	2	2	6.0
13.	Orissa	20	—	30.00
14.	Rajasthan	29.2	52.5	56.5
15.	Tamil Nadu	50	3	74.00
16.	Uttar Pradesh	445	340	680.00
17.	West Bengal	5	3	5.00
Total States		982.79	948.90	1765.00
<i>Union Territories</i>				
	Goa, Daman & Diu	0.50	2.00	3.00
	Dadra & Nagar Haveli	—	—	2.00
GRAND TOTAL		983.29	950.90	1770.00

## CHAPTER 7 ENERGY

### POWER

#### Review for 1985-86

7.1 The generation of electricity in 1985-86 was slightly in excess of the target. In the case of thermal generation, the achievement was 103.7 per cent of the target while in the case of nuclear and hydro, it was 124.6 per cent and 91.0 per cent respectively. The total generation during 1985-86 was higher than that in the previous year by 8.6 per cent. While hydro generation was less than that of the preceding year by 5.3 per cent, thermal and nuclear generation was higher by 15.5 per cent and 22.2 per cent respectively. The main reason for shortfall in hydro generation was lower reservoir levels in most of the storage-based hydel stations.

7.2 The sourcewise generation targets and achievements in respect of utilities are as under:

TABLE 7.1

*Source-wise Electricity generation*

1	(Million units)			
	1984-85		1985-86	
	Target	Actual	Target	Actual
2	3	4	5	
1. Hydro . . .	52000	53785	56000	50940
2. Thermal . . .	98500	98770	110000	114120
3. Nuclear . . .	3500	4078	4000	4985
<b>TOTAL :</b>	<b>154000</b>	<b>156633</b>	<b>170000</b>	<b>170045</b>

The region-wise break-up of actual generation in 1985-86 is given in Annexure 7.1.

7.3 The all-India thermal Plant Load Factor (PLF) improved from 50.1 per cent in 1984-85 to 52.4 per cent in 1985-86. The following Table gives the sector-wise targets and achievements for 1985-86 :

TABLE 7.2

*Sector-wise Plant Load Factor*

1	Targets	(%)
		Achievements
2	3	
1. Central Sector . . .	53.3	61.9
2. State Sector . . .	48.4	49.2
3. Private Sector . . .	54.4	57.5
4. All -India . . .	50.1	52.4

7.4 The targets and achievements in regard to the PLF for all State Electricity Boards and Central Power Organisations are indicated in Annexure 7.2. It would be seen therefrom that the performance was below the targets in certain States.

7.5 The target for additional new generating capacity for 1985-86 was 4459.5 MW against which the achievement was 4223MW. The scheme-wise targets and achievements are given in Annexure 7.3.

7.6 The following Table indicates the projects which slipped during the year 1985-86 together with the reasons :

TABLE 7.3

*Project slippages in 1985-86*

S. No.	Name of the Scheme	Installed Capacity (MW)	Reasons
(1)	(2)	(3)	(4)
<i>Hydel</i>			
1.	Western Yamuna Canal Unit No. 2 . . .	8	Delay in erection of unit.
2.	Tillari . . . . .	60	Due to last minute problems in the thrust bearing requiring rectification works. The erection of the unit slipped to April, 1986.

1	2	3	4	5	6	7
3.	Idamalayer unit-2	37.5	Unit-1 was rotated on 15-7-1985. However, due to development of some cracks in the concrete lining of the tunnel, it had to be closed. To strengthen the tunnel, steel lining was being extended by another 80 metres. This was expected to be completed in June, 1986.			
4.	Maharani Micro	1	Installation of barrage gates was yet to be taken up. Units were expected to be commissioned by end of April, 1986.			
5.	Kopili	50	Due to slow progress of penstock and valve house works, the unit slipped to 1986-87.			
<i>Thermal</i>						
1.	Lakwa Gas Turbine	15	Main plant equipment was partly received at site and balance was being transported from Calcutta.			
2.	Bongaigaon	60	Delay in various project inputs by ASEB and release of funds by the State Government to ASEB, pending supplies by BHEL.			
3.	Baramura Gas Turbine Unit -2	5	During check up, it was found that this unit needed complete readjustment under supervision of suppliers' Engineers. This work was in progress.			
TOTAL :		236.5				

7.7 As on 31-3-1986, the total installed capacity was 46714 MW comprising 15325 MW of hydel, 30059 MW of thermal and 1330 MW of nuclear. The share of the Central Sector, including nuclear, was 7622.5 MW. In the total generation of 170.045 billion units, the share of the Central sector was 16.0 per cent.

7.8 The progress regarding important transmission lines was as under :

TABLE 7.4

	Target	Acheivement	Percentage
	(CKM)	(CKM)	
400 KV . . . . .	2428	2335	96.2
220 KV . . . . .	3598	2601	72.3

The slippages were mainly due to delay in forest clearances, lack of funds and unsatisfactory work by contractors.

7.9 Villages totalling 19909 were electrified during 1985-86 as against the target of 20698 villages. The number of pumpsets energised was 4.43 lakhs against the target of 3.96 lakhs.

7.10 The total expenditure in the power sector during 1985-86 is estimated around Rs. 5718.79

crores as against the approved outlay of Rs. 5999.84 crores, as per details below :

TABLE 7.5  
Plan Outlay and Expenditure  
(Rs. crores)

	Approved Outlay	Revised Estimates
1	2	3
1. States . . . . .	3511.57	3428.03
2. Union Territories . . . . .	93.27	93.27
3. Central Sector . . . . .	2395.00	2197.49
TOTAL :	5999.84	5718.79

In addition to above, certain other provisions were available for development programmes in the power sector. The Budget and Revised estimates thereof are indicated below :

	Approved outlay	Revised Estimates
1. Power component of Special Area Programme of North Eastern Council . . . . .	44.41	41.81
2. Special Project Agriculture (1/3rd share of REC) . . . . .	102.00	102.00
3. Rural Co-operatives (through REC) . . . . .	15.00	15.00
TOTAL :	161.41	158.81

## Annual Plan 1986-87

7.11 The total electricity generation in utilities is estimated at 190 billion units, as indicated below :

TABLE 7.6

## Generation Target for 1986-87

	(billion units)
1. Hydro . . . . .	57.0
2. Thermal . . . . .	127.8
3. Nuclear . . . . .	5.2
<b>TOTAL</b>	<b>190.0</b>

Region-wise details are given in Annexure 7.1.

7.12 The total generation envisaged for 1986-87 is 11.8 per cent higher than the target for the preceeding year. The overall Plant Load Factor envisaged is 53 per cent.

7.13 The additions to installed capacity envisaged during 1986-87 are as follows :

TABLE 7.7

## Additional Generating Capacity

	(MW)
1. Hydro . . . . .	1204.30
2. Thermal . . . . .	2192.00
3. Nuclear . . . . .	—
<b>TOTAL</b>	<b>3396.30</b>

The above includes a capacity of 236.5 MW which has slipped from 1985-86. The Scheme-wise details of additions to installed capacity during 1986-87 are in Annexure 7.4.

7.14 The role of the Centre in power development will increase further and an additional capacity of 1535 MW is expected to be commissioned in the Central sector during 1986-87. Besides, an additional capacity of 100 MW would be commissioned at Kopili under the NEC project.

7.15 The targets for 1986-87 for 400 KV and 220 KV transmission lines are 2060 CKM and 2707 CKM respectively. The details are indicated in Annexure 7.5.

7.16 The target for 1986-87 for electrification of villages is 21592 and for energisation of pumpsets 3.92 lakhs. These items are included in the 20 Point Programme. The total allocation for rural electrification and energisation of pumpsets for 1986-87 is Rs. 525.28 crores, including Rs. 311.74 crores to be funded through the Rural Electrification Corporation. Of the total allocation, Rs. 92.59 crores are for the works included under the Minimum Needs Programme. State-wise targets for village electrification and energisation of pumpsets are given in Annexure 7.6.

7.17 The Centrally Sponsored Renovation and Modernisation schemes cover 32 thermal power stations having 156 generating units of various sizes.

The performance of these generating units had been unsatisfactory. The funds for core activities for improving the power stations are advanced as Central assistance to the State Electricity Boards/Organisations in the form of loans. The associated activities are approved for funding in the State Plans. With the implementation of these schemes, an additional generation of 9 billion units would be achieved. The implementation of the schemes is being monitored by the Steering Committee under the Department of Power.

7.18 For 1985-86, a budget provision of Rs. 90.26 crores was made for Central assistance, which was spent. For 1986-87, a provision of Rs. 100 crores has been made. In addition, the State Plans had an allocation of Rs. 91.0 crores for 1985-86. For 1986-87, the provision in State Plans is Rs. 105.2 crores.

7.19 There were initial delays in the implementation of the Renovation and Modernisation schemes but with the tightening of the monitoring procedures the tempo of the works has picked up.

7.20 The total outlay for the power sector for 1986-87 is Rs. 7405.71 crores as shown below :

TABLE 7.8

## Plan Outlay 1986-87

	(Rs. in crores)
Sl. No.	Outlay
1. States . . . . .	4236.46
2. Union Territories . . . . .	184.52
3. Central Sector . . . . .	2984.73
<b>TOTAL</b>	<b>7405.71</b>

7.21 The outlay for 1986-87 is 29.5 per cent higher than the anticipated expenditure for 1985-86. The break-up of the outlay for the States/Union Territories and Central sector is given in Annexure 7.7. Scheme-wise details of the outlay for power generation are given in Annexures 7.8 to 7.10.

7.22 In addition to above, the following provisions would be available for the power sector.

	(Rs. in crores)
1	2
Special area . . . . .	56.81
Programme of North Eastern Council	
Special Project Agriculture . . . . .	105.00
(1/3rd Share of REC)	
Rural Co-operatives . . . . .	15.00
(through REC)	
Research and Development . . . . .	1.00
(through REC)	
System Improvement . . . . .	10.00
(through REC)	
<b>TOTAL</b>	<b>187.81</b>

7.23 The addition to installed capacity in captive power plants during 1985-86 is placed at 580 MW. With this addition, the total installed capacity of such plants is estimated to have gone up to 4770 MW. The addition during 1986-87 may be about 640 MW. The generation from captive plants in 1985-86 and 1986-87 is placed at 10.90 and 11.50 billion units respectively.

#### COAL AND LIGNITE

##### Review for 1985-86—Coal

7.24 The demand for coal in 1985-86 was projected at 163.80 million tonnes (excluding 5.10

million tonnes of middlings). As against this, the offtake during the year is estimated at only 156.0 million tonnes (indigenous : 154.0 mt.; imported : 2.0 mt.). Though this marked an improvement over 1984-85 by 15.8 million tonnes (11.3 per cent), the shortfall in relation to the projected demand was 7.8 mt. (4.8 per cent). This was partly due to movement constraints and some qualitative mis-matches, especially in the steel sector. While the offtake of the power sector, which accounted for 47.7 per cent of the total offtake, was higher than the projected demand, there was a shortfall in the case of steel, cement and fertilizer. The consumer-wise break-up is given in Table 7.9.

TABLE 7.9

*Consumer-wise break-up of Coal Offtake*

Sl. No.	Consumer	(million tonnes)			
		1984-85 (Actual)	1985-86 Target	1985-86 Actual (Provisional)	1986-87 Target
1	2	3	4	5	6
1.	Steel & coke ovens	24.63 +0.70*	30.40	23.88 +2.00*	30.35
2.	Power	61.98 (2.25)	72.35 (3.64)	74.47 (1.95)	83.41 (4.17)
3.	Railways	9.52	9.60	9.06	8.70
4.	Cement	7.07	8.75	7.75	9.33
5.	Fertilizers	3.89	5.00	3.87	5.20
6.	Others including captive power, soft coke, export	28.41 (1.33)	33.70 (1.46)	30.89 (1.45)	35.61 (1.54)
7.	Colliery consumption	4.02	4.00	4.08	4.00
	TOTAL	140.22 (3.58)	163.80 (5.10)	156.00 (3.40)	176.60 (5.71)

Note : —\*Imported coal.

Figures in brackets relate to washery middlings.

7.25 At the time of the formulation of the Annual plan for 1985-86, the target for coal production was fixed at 158.50 million tonnes, anticipating the pithead stocks of around 24 million tonnes. The year actually began with a stock of 29.24 million tonnes (CIL : 28.31 mt.; SCCL : 0.72 mt.; Others : 0.21 mt.). The production target was, therefore, subsequently revised downwards to 154.50 million tonnes to enable Coal India to reduce the pithead stocks. Apart from the reduction in pithead stocks, some import of coking coal was envisaged to match

the supply with demand. The actual production at 154.22 million tonnes was marginally (0.28 mt; 0.1 per cent) short of the revised target but represented an increase of 6.80 mt. (4.67 per cent) over the previous year (147.42 mt.). While on an overall basis Coal India marginally exceeded its target, the shortfall in production from Bharat Coking Coal Co. Ltd. (BCCCL), the main source of coking coal supplies to steel industry, was significant. A notable feature was the vast improvement in the performance of Singareni Collieries; although there was a marginal shortfall

(0.3 mt.) against the target, the production at 15.70 million tonnes was 27.3 per cent more than the preceding year's level (12.33 million tonnes). Com-

pany wise break-up of production is given in the Table below :

TABLE 7.10  
Raw Coal Production

Company	(million tonnes)			
	1984-85	1985-86		1986-87
	(Actuals)	Target	Actual (Provisional)	(Target)
1	2	3	4	5
Eastern Coalfields Ltd. (ECL)	23.12	24.00	24.03	25.60
Bharat Coking Coal Ltd. (BCCL)	21.84	23.00	21.09	25.00
Central Coalfields Ltd. (CCL)	24.85	23.85	24.13	24.80
Northern Coalfields Ltd. (NCL)	10.71	11.80	11.61	13.80
Western Coalfields Ltd. (WCL)	16.62	17.51	18.15	18.43
South Eastern Coalfields Ltd. (SECL)	32.87	32.54	34.25	34.97
North Eastern Coalfields (NEC)	0.81	0.80	0.83	0.90
SUB-TOTAL—Coal India Ltd. (CIL)	130.82	133.50	134.09	143.50
Singareni Collieries Co. Ltd. (SCCL)	12.33	16.00	15.70	18.00
Others (TISCO-IISCO/DVC):	4.27	5.00	4.43	5.30
TOTAL	147.42	154.50	154.22	166.80

7.26 The railways planned for a movement of 115 million tonnes of coal in 1985-86 as compared with the actual movement of 101.9 million tonnes (11,817 wagons/day) in 1984-85. The estimated movement in 1985-86 is however, of the order of 110 million tonnes (12,722 wagons/day). Nevertheless, the performance in 1985-86 was a marked improvement over the previous year when an incremental movement of only 1.3 million tonnes was achieved. The shortfall was mostly due to mis-match between movement and supply plans. While considerable loss in movement took place in the first 8 months, this could not be made up in the balance period. As coal production increased significantly in the last quarter of the year (nearly 1/3rd of annual production), the pithead stocks, which had come down by 9.4 million tonnes in the first 7 months, started rising again. As a result, pithead stocks at the end of the year (31-3-86) stood at 27.21 million tonnes as against 29.24 million tonnes at the beginning of the year (1-4-85).

7.27. The productivity target of CIL at 0.88 tonne (output per manshift) was achieved. SCCL achieved a rate of 0.78 tonne against the target of 0.76 tonne.

7.28 The Central Mine Planning and Design Institute planned an exploration target of 3,25,900 metres. Against this, around 3,21,500 metres of drilling was expected to have been achieved. An additional 51,000 metres of drilling was estimated to have been done by Singareni Collieries Co. Ltd.

2 PC/86—15

7.29 The number of operating coking coal washeries at the beginning of the year was 19 with a total capacity of 32.86 million tonnes. One coking coal washery (Mahuda : 0.63 mt.) was commissioned in 1985-86, increasing the capacity to 33.49 mt. and the number of 20. Work continued on 3 washeries with a total capacity of 8.1 million tonnes—Madhuband 2.5 mt. (prime); Ramgarh 3.00 mt. (medium) and Kedla 2.6 mt. (medium). No new washery was sanctioned in 1985-86. Work on the only non-coking coal washery at Bharatpur was discontinued because the National Aluminium Co. did not want beneficiated coal for its captive power plant.

7.30 With a view to bringing about qualitative improvements, the construction of Coal Handling Plants (CHPs) was taken up on a priority basis. The number of CHPs in CIL at the end of 1984-85 was 204 (major : 48; mini : 156) with a capacity of 68.98 million tonnes. As against this, the expected number at the end of 1985-86 was 251 with a capacity of 95.45 million tonnes (major: 66; mini: 185). While 59 per cent of coal produced by CIL passed through CHPs in 1984-85, the quantity was estimated to have increased to 77 per cent by the end of 1985-86.

7.31 During the year, Government sanctioned 14 coal mining projects, which included 5 proposals of Revised Cost Estimates/Revised Project Reports (17.24 million tonnes capacity; sanctioned cost Rs. 609.61 crores) and 9 new projects (capacity: 21.96 million tonnes; total cost Rs. 1031.08 crores). The important new mining projects sanctioned were

Khadia (4.0 mt.) linked to Anpara 'B' Station and Sonepur Bazari (3.0 mt.). In addition, an advance action proposal for Pipjarwar Project, which is likely to be linked to the National Capital Region Power Station at Muradnagar, was sanctioned. Approval was also accorded to a Central Workshop at Chandrapur in Maharashtra at a capital cost of Rs. 23.87 crores. Taking into account these projects, the total number of coal mining projects costing Rs. 5 crores and above, taken up since nationalisation, was 164 at the end of the year. Out of these, 33 projects were completed by 1984-85 and 3 projects were discontinued. Of the remaining 128 projects, 12 projects were completed in 1985-86. The total non-mining projects taken up since nationalisation were 25 as on 31-3-86. They included 8 washeries, 4 fire projects, 2 water supply schemes, 1 railway line diversion, installation of gas turbine sets in ECL and BCCL, low temperature carbonisation plant at Dankuni, 2 Central Workshops and 6 miscellaneous projects. Out of them, 5 projects were completed by 1984-85; 3 washeries (Moonidih, Sudamdih and Nandan), Central Workshop at Barkakhana and the gas turbine project. In 1985-86, 3 more projects viz. Mohuda washery, Sirka Fire Project and Jarangdih Phusro Railway line diversion were commissioned. One project (Bharatpur non-coking coal washery) was dropped. The remaining 16 projects would continue.

7.32 For better management of production and supply of coal, 2 new subsidiary companies under CIL were created. The Singrauli Division of Central Coalfields Ltd. was formed into a separate company named Northern Coalfields Ltd. with headquarters at Singrauli. The other subsidiary company, namely the South Eastern Coalfields Ltd., would operate from Bilaspur and comprise Bilaspur Division of Western Coalfields Ltd. and Orissa Division of Central Coalfields Ltd.

### Lignite

7.33 The production target of lignite from Neyveli was 6.72 million tonnes (Neyveli First Mine: 6.5 mt.; and Second Mine: 0.22 mt.). Development of the Second Mine, Stage I (4.7 mt.) was completed in 1985-86 but its production was regulated to synchronise with the commissioning of the Second Thermal Power Station at Neyveli (1st unit of 210 MW was commissioned in March, 1986). The total production from Neyveli at 7.13 mt. exceeded the target and the requirements of downstream units were fully met. The Gujarat Mineral Development Corporation produced an additional 0.9 mt. of lignite.

### Plan Outlay

7.34 In 1985-86, an outlay of Rs. 997.00 crores (CIL: Rs. 851.50 crores; SCCL: Rs. 72.00 crores; Neyveli Mines: Rs. 68.50 crores; and S & T and others: Rs. 5.00 crores) was provided. The estimated expenditure is also of the same order i.e. Rs. 996.56 crores (CIL: Rs. 839.01 crores; SCCL: Rs. 76.59 crores; Neyveli Mines: Rs. 76.09 crores; S & T and

others: Rs. 4.87 crores). The marginal shortfall in CIL expenditure was due to delays in supply/procurement of mining equipment and land acquisition problems.

### Annual Plan 1986-87

7.35 On the basis of detailed discussions with the major consumers and coal companies, the demand for coal in 1986-87 has been taken at 176.60 million tonnes (excluding 5.71 mt. of middlings). Details are given in Table 7.9. This is 13.2 per cent more than the offtake level of 156 million tonnes in 1985-86. Of the total demand, 6 major sectors account for 78.9 per cent—Power; 47.2 per cent, Steel; 16.3 per cent, Cement 5.3 per cent, Railways: 4.9 per cent, Fertilizers: 2.9 per cent and Soft Coke: 2.3 per cent. In view of the shortfalls between projected demand and actual offtake in the earlier years, there is need for introduction of refinements in demand evaluation and adequate consumption monitoring. The pithead stocks at the beginning of the year stood at 27.21 million tonnes. This would enable a large drawal from stocks, particularly non-coking coal to meet a part of the demand. However, recurrence of the past experience of large addition to stocks in the last quarter of the year would need to be avoided by adopting appropriate phasing of stock depletion and production. In view of the quality of indigenous coking coal, it would be necessary to import some superior coking coal to meet the steel plants' requirement. Taking into account an import of 2.6 mt. and drawal from pithead stocks, the production target for 1986-87 has been fixed at 166.80 million tonnes. The company-wise production plan for 1986-87 is given in the following Table:

TABLE 7.11  
Company-wise Coal Production Target

(Million tonnes)				
	Existing mines	Continuing projects (sanctioned upto 31-3-85)	New projects (approved/ to be approved)	Total
1	2	3	4	5
1. Coal India	81.35	59.78	2.37	143.50
2. Singareni Collieries Co.	12.75	4.93	0.32	18.00
3. TISCO/HISCO/DVC	5.30	—	—	5.30
TOTAL	99.40	64.71	2.69	166.80

7.36 To avoid mis-match between demand and supply, the target of coal movement by the railways has been fixed at 120 mt.

7.37 In the background of past performance and the objectives defined in the Seventh Plan, the Plan



underscores the urgent need for scientific demand-supply management.

7.38 The productivity (OMS) targets for the year are 0.94 tonne for CIL and 0.80 tonne for SCCL.

7.39 In consonance with the Seventh Plan exploration programme to drill 2167000 metres, the drilling target for 1986-87 is 450,000 metres (CIL-390,000; SCCL-60,000 metres). This would be done mostly through the Mineral Exploration Corporation and the Central Mine Planning and Design Institute.

7.40 It has been projected that 86 per cent of coal production of Coal India would pass through CHPs in 1986-87. The major CHPs expected for completion in 1986-87 number 17. The coking coal production of CIL and the entire production of SCCL already pass through Coal Handling Plants. The extent to which the facilities created so far would bring in desired qualitative improvements has to be studied so that additional measures, if necessary, could be initiated to improve the quality of non-coking coal.

7.41 Inconsistency in the quality of coal supply to power stations has been a chronic problem in the past. Introduction of joint sampling and erection of coal handling plants has helped in improving considerably the quality of coal supplied to power plants. Adequate attention has, however, to be given to quality control both at the time of mining and loading. Further measures based on the recommendations of the Fazal Committee, Kumaramangalam Committee, etc., which have gone into the question of qualitative improvement of coal would also need to be taken.

7.42 The supply of prime coking coal from indigenous sources to steel plants has become a serious problem. In recent years, this has resulted from delinking of several mines which were not matching quality specifications of steel plants, resulting in a shortfall of around 2 to 3 million tonnes. The position may be aggravated further as the commissioning of Vizag Steel Plant is likely to be brought forward within the Seventh Plan. Consequently, there would be a need to import coking coal to the extent indigenous availability falls short of demand. Attention will also be given to port capacity and the linked inland movement capacity in this context. Experiments to study whether coal from delinked mines could be used as blends with superior coking coal to augment indigenous supply are to be pursued.

7.43 The Plan envisages taking up work on new prime-coking coal washeries. Proposals for two washeries namely, Bhalgora (2.5 mt.) and Pootkee (3.0 mt.), are in an advanced stage awaiting Government clearance.

7.44 Consistent with the thrust areas identified for the Seventh Plan, greater attention will be given to land reclamation and environmental control and introduction of mining electronics for safety and conservation. The mines where mining electronics would be introduced in a phased manner have been identified.

7.45 Following the recommendations of the Working Group set up to look into the problems of power supply to coalfields in the eastern region a Joint Committee of Department of Coal and Power has been set up to monitor implementation of its recommendations. This is expected to improve power supply. Besides, Coal based power stations (six sets of 10 MW each) have been sanctioned to insulate the critical load centres in the eastern region.

7.46 The welfare measures for mine workers will continue as an integral part of the Plan programmes. The emphasis would be more on residential housing, water supply and medical care.

7.47 A Standing Scientific Research Committee would continue to plan and oversee the implementation of R&D projects in the coal sector. An experimental project for coal transportation by slurry pipeline has been conceived and the feasibility report is under preparation. The site selected for the experimental project is 30 km, long connecting Chandrapur Power Station to New Majri Coal Mine in Maharashtra. Work on 'in-situ' coal gasification has been finalised for an experimental project at Mehsana in Gujarat under the aegis of Oil and Natural Gas Commission (ONGC). Separate outlay has been provided for this purpose under the Plan of ONGC.

#### Lignite

7.48 The first mine at Neyveli is operating at more than 100 per cent capacity level. In order to maintain full production work on lengthening of conveyors to cover additional reserves has been taken up. Stage I of the Second Mine has been commissioned and work has started on the expansion programme to 10.5 million tonnes stage.

7.49 The exploration work for development of lignite resources in Rajasthan would continue in 1986-87. The main emphasis would be on delineation of mineable blocks in favourable areas.

7.50 For 1986-87 a target of 7.4 million tonnes has been fixed for Neyveli (First Mine : 6.5 mt. Second Mine: 0.9 mt.). Besides, a production of 0.90 mt. is expected from the Gujarat Mineral Development Corporation. The Corporation is going ahead with the mechanisation programme of Panandhro Mines to attain an annual production capacity of 1.5 mt. The outlay for this scheme is provided in the State Sector.

#### Outlay :

7.51 An outlay of Rs. 1179.77 crores has been provided in the Central sector for the development of Coal and Lignite in 1986-87. This is 18.3 per cent more than the outlay in the 1985-86 Plan. Schemewise details are given in Annexure 7.11.

7.52 The provision for Coal India at Rs. 972.01 crores is Rs. 120.6 crores more than the outlay in the preceding year. The bulk of the provision is for the on-going mining and non-mining schemes for their scheduled completion.

7.53 The provision for Singareni at the Centre i.e. exclusive of the share of the Andhra Pradesh Government is 46.6 per cent more than in 1985-86.

7.54 An outlay of Rs. 95.17 crores has been provided for the Neyveli Lignite Corporation. This is mainly for the Second Mine Expansion and balancing equipment for the first mine. It also includes provision for the Rajasthan Lignite Exploration Project.

7.55 An outlay of Rs. 7 crores has been provided for S&T schemes. This is mostly for the ongoing projects.

#### PETROLEUM AND GAS

##### Review for 1985-86

7.56 In spite of a shortfall in crude oil production (vis-a-vis targets) in the oil fields of the Oil and Natural Gas Commission (ONGC) and Oil India limited (OIL) in the Eastern Region, mainly due to production problems and lesser number of development wells because of shortage of drilling rigs, the overall crude oil production target for 1985-86 was achieved, as shown in Table 7.12 :—

TABLE 7.12  
Crude Production in 1985-86  
(in million tonnes)

	Target	Achievement	Achievement as % of target
<b>ONGC</b>			
Onland	6.50	6.70	103
Offshore	20.61	20.82	101
Sub-Total	27.11	27.52	101.5
<b>OIL</b>			
Onland	3.03	2.66	87.8
TOTAL	30.14	30.18	100.1

7.57 The position regarding seismic surveys in onland and offshore areas of ONGC and OIL is indicated in Table 7.13.

TABLE 7.13  
Seismic Surveys in 1985-86

	Target	Achievement	Achievement as % of target
1	2	3	4
<b>ONGC</b>			
Onland (in Party years)	53	47	88.7
Offshore (Line Kms)	25000	11494	46.0
<b>OIL</b>			
Onland (Line Kms)	5700	7175	125.9
Offshore (Line Kms)	6000	—	—

7.58 There was a shortfall in seismic surveys in both onland and offshore areas of ONGC. In onland areas, the shortfall was mainly on account of lesser mobilisation of departmental parties. As regards offshore areas, the shortfall was due to the following reasons :—

(i) there was a deliberate reduction in the target from 25000 to 17000 line kms by ONGC on account of considerable backlog in seismic data processing due to delay in getting an additional computer; and

(ii) the second seismic vessel was not available. OIL had planned 6000 line kms of seismic surveys in Andaman Offshore and North-East Coast but this was deferred as OIL wanted to see the results of exploratory drilling in these areas before taking up further surveys. As regards onland areas, OIL had overachieved the target.

7.59 The drilling target and achievements are given in Table 7.14 :

TABLE 7.14  
Drilling in 1985-86

	Target	Achievement	Achievement as % of Target
1	2	3	4
<b>ONGC</b>			
Onland exploratory	255450	203300	79.6
Offshore exploratory	95500	91200	95.5
Onland Development	270520	206900	76.5
Offshore Development	100400	88700	88.4
<b>OIL</b>			
Onland exploratory	43700	34069	78.0
Offshore exploratory	15000	8619	57.5
Onland development	99000	76148	76.9

7.60 Significant slippages occurred in drilling by ONGC and OIL. In the case of ONGC, the main reasons for shortfall in onland exploratory drilling were : shortage of drilling rigs due to delay in getting contract rigs, delay in supply of rigs by manufacturers, drilling complications in a number of wells and adverse weather conditions in some areas. The major

shortfall in onland development drilling was on account of delay in starting operations in Cambay Basin. In offshore areas, the slippages in exploratory and development drilling were chiefly due to shortfall in the availability of suitable rigs.

7.61 The onland drilling programme of OIL faced problems of delay in supply of rigs by domestic manufacturers and also some commissioning problems in respect of new rigs. The exploratory drilling in Rajasthan and Mahanadi onland areas did not start in 1985-86 as planned. In case of OIL offshore areas, the shortfall was mainly on account of drilling complications in one of the exploratory wells and the need for prolonged production testing in another well.

7.62 The targets of LPG production by fractionation of gas and the achievements are indicated in Table 7.15 :

TABLE 7.15  
*LPG Production by gas fractionation in 1985-86*

	Target	Achievement	(in tonnes) Achievement as % of target
ONGC . . . . .	275000	319700	116.2
OIL . . . . .	55000	42684	77.6

ONGC overachieved the LPG production target of 275000 tonnes during 1985-86 whereas in the case of OIL, a production of only 42684 tonnes was reached against the target of 55000 tonnes. The shortfall was on account of problems faced in gas compression facilities and changes in the composition of feed gas to the LPG plant.

7.63 As regards gas despatches, the target and achievement are indicated in Table 7.16 :

TABLE 7.16  
*Natural Gas Despatches in 1985-86*

	Target	Achievement	(In Million Cubic Metres) Achievement as % of target
ONGC			
Onland . . . . .	845	794	94
Offshore . . . . .	2500	2520	100.8
OIL . . . . .	730	630	89

7.64 There was a marginal shortfall in gas despatches by ONGC from onland areas due mainly to lesser offtake by users in the eastern region. Similarly, the achievement by OIL was lower than the target

on account of lesser purchases by consumers.

#### Gas Authority of India Limited (GAIL)

7.65 During 1985-86, the Gas Authority of India Limited concentrated on various pre-construction activities related to HBJ gas pipeline. Besides opening various regional offices, work progressed further on soil studies, right of use of land for pipeline, land acquisition for compressor stations, environmental clearances, permission for railway crossings etc. About 187 thousand tonne of pipelines were also received from various foreign suppliers.

#### Refining and marketing

7.66 The consumption of petroleum products during 1985-86 was 40.93 million tonnes as against 38.80 million tonnes in 1984-85, representing an increase of 5.5 per cent as compared to 8.2 per cent in 1984-85. The growth in consumption of middle distillates was 6.9 per cent in 1985-86 compared to 8.6 per cent 1984-85.

7.67 The crude throughput during 1985-86 was 42.91 million tonnes against the target of 42.14 million tonnes and actual throughput of 35.56 million tonnes in 1984-85. The over-achievement is mainly on account of higher throughput achieved at Bharat Petroleum Corporation Limited (BPCL, Bombay), Madras Refineries Limited (MRL) and at Haldia, Gujarat and Mathura Refineries of Indian Oil Corporation (IOC).

7.68 The installed refining capacity increased from 45.55 million tonnes in 1984-85 to 47.55 million tonnes with the commissioning of Bombay Refinery Expansion Project of Hindustan Petroleum Corporation Limited (HPCL). The secondary processing facilities at Cochin Refineries Limited (CRL) and Hindustan Petroleum Corporation Limited (HPCL) refinery at Vishakh and additional coking unit at Barauni (IOC) were commissioned. The major projects under implementation were the Captive Power Plants at HPCL (Bombay), BPCL and MRL refineries.

7.69 With the increased availability of LPG from the refinery expansion projects of HPCL at Bombay and Visakh; of CRL at Cochin; of MRL at Madras and LPG plants of ONGC and OIL as also with augmentation of marketing facilities, the consumption of LPG increased from 953 thousand tonnes in 1984-85 to about 1241 thousand tonnes in 1985-86, giving a growth rate of 30.2 per cent.

7.70 The Bombay-Poona Pipeline Project (HPCL), Visakh Terminal Facilities (HPCL) and Aviation Fuel Hydrant Project at Palam (BPCL) were commissioned during the year. The major projects under implementation at the end of the year were : LPG Marketing Facilities—Phase III and construction of product tankages.

## Annual Plan 1986-87

7.71 There would be further increase in exploration activities during 1986-87. ONGC would deploy 14 geological and 7, gravi-magnetic parties in different onland areas. As regards seismic surveys in onland areas, 58 survey parties would be engaged with concentration in Cambay, Upper Assam, Bengal, Cauvery and Himalayan Foothills and Ganga Valley areas. In case of offshore areas ONGC has planned 25,000 line kms of seismic surveys. The onland survey programme of OIL consists of 1800 line kms in Assam and Arunachal Pradesh and 1700 line kms in Rajasthan.

7.72 As regards exploratory drilling, ONGC has planned 228240 metres in onland and 95600 metres in offshore areas. Onland exploratory drilling would be mostly in Cambay, Assam-Arakan, Krishna-Godavari, Cauvery and Himalayan Foothills and Ganga Valley basins. There would be substantial step-up in drilling in Himalayan Foothills and Ganga Valley basin. In case of offshore areas, Bombay High would continue to receive major exploratory drilling inputs. An increase is also envisaged in Kutch Saurashtra and Bengal basins. OIL has planned 43100 metres and 17500 metres of exploratory drilling in onland and offshore areas respectively. As regards onland areas, drilling would be mainly in Assam and Arunachal Pradesh. In addition, drilling would be started in Mahanadi area. As for offshore areas, OIL has planned drilling of 3,500 metres in North-East Coastal areas and 14000 metres in Andaman. Thus, OIL has not only planned starting of exploratory drilling in Andaman, but a major part of its offshore drilling activity would be in this area only.

7.73 To summarise, a total of 384440 metres of exploratory drilling has been planned for 1986-87 by ONGC and OIL comprising 271340 metres in onland and 113100 metres in offshore areas, implying an increase of 13 per cent in offshore and 14 per cent in onland drilling over the achievements in 1985-86.

7.74 A total of 242000 metres of development drilling onland has been planned by ONGC for 1986-87 against an achievement of 206900 metres during 1985-86. The step up is mainly on account of increased development drilling in Cambay basin. In upper Assam, the tempo of development work would be more or less of the same magnitude as in 1985-86. There would also be an increase in offshore development drilling by ONGC to 120500 metres as against an achievement of 88700 metres in 1985-86. OIL would have development drilling of 84300 metres in Assam and Arunachal Pradesh during 1986-87 against an achievement of 76148 metres in 1985-86. This, a total of 446800 metres of development drilling has been planned by ONGC and OIL for 1986-87 and this comprises 326300 metres in onland and 120500 metres in offshore areas, representing an increase of 15 per cent in onland and 36 per cent in offshore drilling over the achievements of 1985-86.

7.75 The total crude oil production by ONGC and OIL is targetted at 30.21 million tonnes for 1986-87 as shown below :

TABLE 7.17

Oil Production Targets in 1986-87

(in million tonnes)	
I. ONGC	
(a) Onland	
(i) Cambay Basin	4.50
(ii) Upper Assam & Nagaland	2.60
Sub-Total	7.10
(b) Offshore	20.27
Total—ONGC (a+b)	27.37
II. OIL	2.84
Total (I+II)	30.21

Further details are given in Annexure 7.12.

7.76 The total gas despatches by ONGC and OIL are targetted at 4677 million cubic metres, the details of which are given in Table 7.18 :

TABLE 7.18

Natural Gas despatches in 1986-87

(In million cubic metres)	
1	2
I. ONGC	
(a) Onland	
(i) Cambay basin	800
(ii) Upper Assam and Assam Arakan basin	200
Sub-Total	1000
(b) Offshore	2700
Total ONGC (a+b)	3700
II. OIL	977
TOTAL—(I+II)	4677

7.77 The total LPG production by gas fractionation both by ONGC and OIL is targetted at 400,000 tonnes. The increase in LPG production during 1986-87 over 1985-86 would be on account of capacity build up of LPC-Plant Phase II at Uran as well as from LPG plant at Ankeleshwar in Gujarat. The details of LPG production are given in Table 7.19 :

TABLE 7.19

LPG production by gas fractionation in 1986-87

(Tonnes)	
1	2
I. ONGC	
Uran Plants I & II	3,37,000
Ankleshwar Plant	15,000
Sub-total	3,52,000
II. OIL	48,000
TOTAL—(I+II)	4,00,000

### Gas Authority of India Limited (GAIL)

7.78 With the award of pipeline construction contract in April, 1986 the pipeline laying would start in various sections of HBJ pipeline during 1986-87. Work is expected to be completed in Hazira—Bijaipur section during the year.

### 7.79 Other Projects.

During 1986-87, work would progress further on the following important projects :—

- (i) Gas Sweetening Condensate Treatment and Sulphur Recovery Plant, Phase I and II (ONGC).
- (ii) Development of South Bassein gas field, Phase I and II (ONGC).
- (iii) LPG plant at Hazira (ONGC).
- (iv) Development of Jorajan oil field (OIL).
- (v) Cambay Basin petroleum projects under World Bank Financing (ONGC).
- (vi) Drilling of in-fill wells for additional oil recovery in Bombay High field (ONGC), and
- (vii) HBJ gas pipeline project (GAIL).

### Refining & Marketing

7.80 The demand for petroleum products is estimated at 43.67 million tonnes. This indicates a growth of 6.7 per cent over the consumption in 1985-86. The middle distillates demand is expected to grow by 8.9 per cent.

7.81 The crude throughput target for the year has been fixed at 44.94 million tonnes. The refinery-wise targets, together with the targets and achievements for 1985-86, are given at Annexure 7.13.

7.82 Work on additional Secondary Processing Facilities at Gujarat Refinery (IOC) and Lube Base-stock Augmentation facilities at HPCL, Bombay refinery will be initiated during the year.

7.83 The consumption of LPG is expected to increase from about 1241 thousand tonnes in 1985-86 to 1520 thousand tonnes in 1986-87. This will represent a growth of 22.5 per cent.

7.84 The marketing projects scheduled for completion during the year are : Marketing facilities for OIL's LPG (IOC), Additional Product Tankage—Phase I and Oil Terminal at New Bombay (HPCL). Work will continue on LPG Marketing Facilities Phase III and Additional Product Tankage—Phase IIA.

7.85 An outlay of Rs. 2766.88 crores has been provided for various programmes of exploration, production and transportation of oil and gas. For

refining and marketing the outlay is Rs. 449.12 crores. The total outlay is Rs. 3216.00 crores.

7.86 The organisation-wise outlay is given in Annexure 7.14 and scheme-wise outlay in Annexure 7.15.

### NEW AND RENEWABLE SOURCES OF ENERGY

#### Review for 1985-86

7.87 During 1985-86, an outlay of Rs. 90 crores was initially approved for the Non-Conventional Energy Programmes. Subsequently, an additional amount of Rs. 29.35 crores was provided for the National Project on Biogas development (Rs. 20 crores); Project on improved chullahs (Rs. 5 crores); and Solar thermal energy programme (Rs. 4.35 crores). Thus the total approved outlay increased to Rs. 119.35 crores against which Rs. 118.83 crores were utilised.

#### National Project on Biogas Development

7.88 Against the target of 1.5 lakh family size biogas plants, 1.93 lakh plants were set up during 1985-86, thereby bringing the total number of biogas plants in the country to 6.50 lakhs. A total allocation of Rs. 66.25 crores was made for this programme (Rs. 46.25 crores initially and Rs. 20 crores in supplementary grant), against which an amount of Rs. 66.87 crores was utilised. Training in maintenance of biogas plant has been introduced under TRYSEM and instructions have been issued to State Nodal Departments incharge of biogas programme to liaise with other Departments implementing the scheme of TRYSEM and develop courses on maintenance and repair of biogas plants. The new Biogas Plant models approved during 1985-86 are (i) FERRO Cement Model, (ii) Fibre glass Reinforced Plastic gas holder plants, (iii) Pragati Model with provision of floating gas holder, (iv) one cubic meter biogas plant and (v) biogas plant using night soil. These models have been installed in different regions so as to get a feedback on the operational performance.

#### Community/Institutional biogas plants

7.89 An allocation of Rs. 3.02 crores was made for commissioning 70 Community/institutional biogas plants during the year under review. Expenditure during the year was Rs. 2.76 crores and 72 plants were commissioned. The cumulative total of such plants stood at 173 at the end of 1985-86. The programme picked up momentum during the year in Andhra Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh. The procedure for sanctioning the projects for CBP/IBP has been streamlined and beneficiaries have to give an undertaking regarding maintenance, after the plant has been maintained by the Department of Non-conventional Sources of Energy, for an initial period of 6 to 12 months.

## Research and Development

7.90 R & D efforts during 1985-86 concentrated on diversification of feed-stock and development of alternative construction materials for biogas plants. Important feed-stocks that were tried include water hyacinth, distillery effluents, paper and pulp industry wastes, textile industry waste, oil castor cakes etc. An allocation of Rs. 1.02 crores was utilised during 1985-86.

### National Programme on Improved Chullahs

7.91 The outlay for the National Programme on Improved Chullahs was increased from the initial Rs. 5 crores to Rs. 10 crores for installing 10 lakh chullahs against the initial target of 5 lakh chullahs. More than 12 lakh chullahs are reported to have been installed in the year with an expenditure of Rs. 9.84 crores. The research institutions and social organisations developed new models/designs of improved chullahs. The minimum efficiency of the approved designs increased from 15 per cent to 20 per cent. Community stoves capable of cooking for upto 200 persons were also developed and promoted. R&D efforts for improving design and performance, setting up technical back-up units, training courses for master trainers and testing facilities at major technical institutions were organised.

### Solar Thermal Energy :

7.92 Against the revised allocation of Rs. 10.85 crores, the actual expenditure for this programme during the year under review was Rs. 10.98 crores comprising an expenditure of Rs. 1.83 crores for research and development/field demonstration, Rs. 0.76 crore for solar energy centre and balance of Rs. 8.39 crores for subsidy on solar cookers and other solar thermal systems.

7.93 The major activities in this programme during the year included setting up of 343 solar water heating systems, 100 domestic solar water heaters, 8 solar timber kilns, 112 solar desalination system and 11 solar crop dryers/air heaters. A total collector area of 33000 sq. mts. was covered for such systems.

### Solar Photovoltaic

7.94 Against an allocation of Rs. 6 crores for this programme, Rs. 1.90 crores were spent under The National Solar Photovoltaic Energy Demonstration (NASPED) Project and Rs. 4.08 crores under the other Photovoltaic Programmes. The NASPED Project, which was sponsored for the five year period from October, 1980 with the major objective of establishing pilot production facilities for solar cells and modules and the development and demonstration of PV systems for various operations, was concluded during the year.

7.95 Demonstration programmes involving setting up of water pumping systems, community, PV/lighting systems and pole mounted street lights battery

charging units etc. were supplied in different parts of the country.

7.96 Against a target of 350 water pumping systems, only 128 could be installed, including 50 pumps for individual users. Also, against a target of 300 villages to be provided with PV street light, only 160 could be covered. The shortfall was mainly due to non-availability of PV modules in sufficient quantities from indigenous sources. Photovoltaic production went up considerably but was not commensurate with demand. Over 1500 street lighting units were supplied to State Electricity Boards and Renewable Energy Agencies during the year under review.

7.97 A commercial project for up-scaling the capacity in stages to reach a level of 5 MW was taken up by the Central Electronics Limited (CEL). Various systems like water pumping for drinking water and micro irrigation, street lighting units, community lighting systems, community TV and power supply for off shore platforms were designed and developed and field tested.

### Biomass and Draught Animal Power

7.98 Against an allocation of Rs. 6 crores made for the Biomass Programme for 1985-86, Rs. 6.55 crores were utilised. Rs. 2.73 crores were spent on demonstration projects on energy plantations and Rs. 1.73 crores on R & D Projects on Biomass.

7.99 Sanctions for 3496 hectares of plantation on degraded land against the target of 6000 hectares were issued under the biomass programme. A capacity of 800 KW was commissioned against the target of 1 MW under Biomass Gasifiers. One Biomass Research Centre was set up at the Mohanlal Sukhadia University at Udaipur in Rajasthan.

### Draught Animal Power

7.100 An allocation of Rs. 75 lakhs was provided during the year 1985-86. The amount actually released was Rs. 16.68 lakhs. The major activities taken up during 1985-86 under this programme included laying the ground work for setting up of the Centre for Draught Animal Power and preparation of a State-of-art report by the Indian Institute of Management, Bangalore. However, this sector calls for major development efforts in 1986-87, especially in view of the fact that 80 million draught animals are being utilised in India and play a key role in meeting transport and energy requirement.

### Urban Wastes

7.101 Under this programme, a project for incineration of 300 MT of Delhi city garbage per day was taken up in collaboration with a Danish Company since 1984-85. The project is likely to be commissioned by March, 1987. An outlay of Rs. 2.00

crores was provided for 1985-86. Against this, an amount of Rs. 2.03 crores was spent, mainly for procurement of plant and machinery.

#### *Wind Energy*

7.102 The major activities taken up during the year included setting up of 342 wind pumps under the demonstration programme and 4 wind farm demonstration projects as follows :—

Okha in Gujarat (550 KW), Tuticorin in Tamil Nadu (1.15 MW), Puri in Orissa (550 KW) and Deogarh in Maharashtra (550 KW).

Wind generation projects were also taken up by State Governments and 50 wind battery chargers were demonstrated during 1985-86. R&D programme for improvement in the designs of wind pump systems, development of new wind mill designs and development of small battery charges and wind electric generators were taken up. R & D Projects were also sponsored for developing and field testing sail type wind-mills and carrying out comparative performance studies based on measurement on four types of wind-mills. The Wind Energy Centre at Allahabad undertook a programme for effecting improvements in the design and performance as well as monitoring of wind pumps and Aero generators. An allocation of Rs. 5 crores for this programme was made for 1985-86 against which Rs. 5.15 crores were utilised.

#### *Other Renewable Sources of Energy*

7.103 These programmes include small hydro and allied schemes, ocean energy, battery powered vehicles, chemical energy and geo-thermal energy.

7.104 The major activities under micro hydel programme were undertaken at the Alternate Hydro Energy Centre which has been set up by the DNES at the University of Roorkee. This Centre took up three demonstration projects at Kakori (Haryana), Manali (Himachal Pradesh) and Jubbal (Himachal Pradesh). The Project at Jubbal was commissioned other projects were to be commissioned shortly. The expenditure under this programme during 1985-86 was Rs. 1.36 crores against the approved outlay of Rs. 1.50 crores.

7.105 For the ocean energy programmes, an outlay of Rs. 1 crore was provided against which Rs. 0.63 crore was utilised. The major activity was at the ocean Thermal Energy Conservation Project Cell established at Indian Institute of Technology, Madras and involved completing the preliminary feasibility study for establishing 1 MW OTEC Project at Lakshadweep.

7.106 The activities in Geo-thermal energy programme included the establishment of a 7.5 ton capacity cold storage pilot plant at Manikaran (H.P.) as a joint venture of Indian Institute of Technology, 2 PC/86—16

Delhi and Geological Survey of India, Lucknow. A 5 KW Pilot Power Plant is under fabrication at the National Aeronautical Laboratory, Bangalore. An allocation of Rs. 50 lakhs was provided for the programme out of which only Rs. 1.30 lakh was utilised.

7.107 An allocation of Rs. 40 lakhs provided for Battery powered vehicles was utilised fully during 1985-86 through support of R & D projects for the development of battery powered vehicles of 1 ton payload at Bharat Heavy Electricals Ltd. The Delhi Development Energy Agency was also provided grants for running indigenously developed battery buses in the crowded area of Delhi, where diesel/petrol driven vehicles have led to high pollution.

7.108 Under the Magneto Hydro Dynamics' (MHD) programme, the experimental MHD power plant of 5 MW was commissioned at Tiruchirapalli and the experimental run for power generation was carried out successfully. A two year experimental programme in MHD was started.

7.109 Under the programme for Rural Renewable Energy systems, 20 projects were set up and 85 surveys were carried out for studying energy consumption patterns in the rural areas

7.110 The total outlay for the other Renewable Energy programmes for 1985-86 was Rs. 3.9 crores while the expenditure was Rs. 3.81 crores.

7.111 A Renewable Energy Development Agency, which would support various new and renewable sources of energy claims, is being set up and necessary ground work for setting up this agency was undertaken during the year.

7.112. A number of activities relating to exhibitions for publicity, public education and incentive for promotion of New and Renewable sources of Energy Programmes were also undertaken.

#### *Programmes for 1986-87*

##### *National Project on Biogas Development (NPBD)*

7.13 An outlay of Rs. 59 crores has been provided for the NPBD (Programme) for 1986-87 for construction of 1.51 lakh plants. During this year, the focus would be on improving the operation and maintenance of plants through the provision of technically trained manpower at different levels, and especially at the grassroot level. For this purpose, a number of training programmes are being organised in the States and at the Centre. Studies and analysis are being undertaken to review the present subsidy pattern for Biogas so as to determine as to how the subsidy may be reduced in a phased manner during the remaining years of the 7th Plan.

7.114 1000 filed demonstrations on the utility of manure produced from Biogas Plants will be taken up during the year, in order to make the rural beneficiaries aware of the value of biogas slurry which is qualitatively superior to conventional manure.

7.115 Under the R & D programmes for biogas, the focus would be on developing low cost designs and diversification of feed stock. An allocation of Rs. 1.5 crores has been made for R & D for 1986-87.

#### *Community|Institutional|Biogas Plants*

7.116 Under the CBP|IBP Programme, a provision of Rs. 3.5 crores has been made for setting up 80 additional CBP|IBP Projects. A two stage sanction procedure has been developed for these plants. New Mechanisms are being devised for management of community biogas plants by the Community|Panchayat agencies.

#### *National Programme for Improved Chullahs*

7.117 An allocation of Rs. 5.19 crores has been made for this programme under which it is proposed to install 5 lakhs improved chullahs, conduct 2500 training courses and make 2500 villages smokeless. A supervisory fee of Rs. 5 per chullah is proposed to be charged per beneficiary in order to ensure their involvement in the maintenance and operation of the chullahs.

#### *Wind Energy*

7.118 An allocation of Rs. 4 crores has been made for this programme. Of this Rs. 3 crores would be for demonstration and field trials, including setting up of wind farms with a capacity of 1 MW, 500 wind pumps, 50 wind battery chargers and 10 stand alone systems. An outlay of Rs. 50 lakhs has been provided for R&D Projects with the object of improving design and performance of wind pumps and technology development for wind farms. Another Rs. 50 lakhs have been provided for wind monitoring and developing data base on wind velocities in different parts of the country.

#### *Biogas and Draught Animal Power*

7.119 The Biomass production programme consists of energy plantation in different agro-climatic conditions. It is proposed to undertake 4000 hectares of energy plantation on degraded land. Gasifiers upto the capacity of 1000 KW will be installed during the year.

7.120 Under the DAP Programme a national centre for Draught and Animal power will be set up during the year also in order to identify Research and Development activities for efficient utilisation of Draught Animal Power in the country preparation of a State-of-Art report has been sponsored at the Indian Institute of Management, Bangalore. An allocation of Rs. 5.65 crores has been provided for the two programmes of Biomass and DAP.

#### *Solar Thermal Energy*

7.121 An outlay of Rs. 5.75 crores has been provided for various activities relating to solar thermal energy. Of this amount, Rs. 1.23 crores is for the Solar Energy Centre and Rs. 3.10 crores for the solar thermal extension programmes. R&D activities involving development of collectors material, development of power generating systems, refrigeration and air-conditioning etc. are being taken up for which an outlay of Rs. 86 lakhs has been provided.

7.122 The Solar Thermal Energy Centre has now become operational and would concentrate on development of materials, devices and systems having high efficiency. The programme for subsidised sale of solar facility. The programme for subsidised sale of solar cookers would be continued and a target of sale of 10,000 solar cookers has been fixed for 1986-87.

#### *Solar Photovoltaic*

7.123 An outlay of Rs. 5.5 crores has been allocated for this programme. Of this, a major component is for R & D projects i.e. Rs. 4.20 crores. R & D projects would focus on lowering of cost of solar cells and improving efficiency and life reliability of the systems. A major integrated R&D Programme on amorphous silicon solar cells involving 7 premier research institutions has also been taken up. A 1 MW pilot plant is proposed to be set up for making amorphous silicon solar cells and modules. R & D would also include testing and evaluation of systems working on photovoltaic modules.

7.124 Under the demonstration programme, photovoltaic systems such as water pumping for drinking water and irrigation, community lighting, community TV sets and street lights are also being installed. The programme has been drawn up in cooperation with the Rural Electrification Corporation and State Electricity Boards for providing PV power street lights in 300 unelectrified remote villages during 1986-87.

#### *Energy from Urban Waste*

7.125 A provision of Rs. 3.5 crores has been made for 1986-87 for the installation of incineration plant at Timarpur, Delhi which will utilise 300 MT of city charge per day and also generate 3.75 MW of power as a by-product. The trial run of this plant is expected by November 1986.

7.126 The other methods for utilising solid waste for energy production are pyrolysis and land-fill methods which are being tested on pilot basis. Projects for utilising pyrolysis process in Bombay and land-fill in Timarpur at Delhi are being taken up.

#### *Magnetohydro Dynamics Programmes*

7.127 An experimental MHD power generation plant was set up on a pilot basis in 1985 with the object of generating techno-economic and operational data which would be useful for carrying out feasibility studies and work towards the establishment of a commercial MHD power plant. An outlay of Rs. 2 crores has been provided in 1986-87 for this purpose.

#### *Geothermal Energy*

7.128 During 1986-87, an experimental cold storage plant at Manikaran in Himachal Pradesh, which is now in final stages of completion with full load testing being carried out, will be handed over to the Himachal State Electricity Board for operation and maintenance. Another project involving design development and installation of an experimental 5 MW power plant using binary cycle is being taken up at Manikaran. A provision of Rs. 5 lakhs has been made for the programme.



### *Other Renewable Energy Programmes*

7.129 A sum of Rs. 25 lakhs has been provided for carrying out energy surveys and coordination under the Rural Renewable Energy system programme. It is proposed to undertake 200 energy surveys.

7.130 A provision of Rs. 80 lakhs has been made for a micro hydel project under which R & D and demonstration activities will be taken up during 1986-87. The technologies developed at the Alternate Hydro Energy Centre in the University of Roorkee will be demonstrated in the States. Further, more work on chemical energy, battery power vehicles and ocean energy conservation will be continued and expanded to undertake a wide range of R & D Programmes with a set of inter-related projects.

### *Renewable Energy Development Corporation*

7.131 A provision of Rs. 1 crore has been made in 1986-87 for this Corporation which would fund projects for Research, Development, Demonstration and commercialisation of various non-conventional energy technologies.

### *Information and Publicity*

7.132 A provision of Rs. 51 lakhs has been made in 1986-87 for education, extension and the publicity for promotion of new and renewable energy sources.

### *Plan Outlay*

7.133 The programnewise break up of the Plan Outlay for 1986-87 is given in Annexure 7.16.

## ANNEXURE 7.1

*Energy Generation in 1985-86 and 1986-87 (Utilities)*

(MKWH)

Region	1985-86								1986-87			
	Target				Achievement				Target			
	Hydro	Ther- mal	Nuclear	Total	Hydro	Ther- mal	Nuclear	Total	Hydro	Ther- mal	Nuclear	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Northern	19380	25239	1150	45769	19673	25177	1292	46142	20790	30059	1018	51867
Western	7250	48031	1750	57031	5948	49487	1962	57397	6230	53183	2022	61435
Southern	24980	17186	1100	43266	21354	20399	1731	43484	25320	21928	2160	49408
Eastern	3390	18624	—	22014	2964	18215	—	21179	3300	21360	—	24660
North Eastern	1000	920	—	1920	1001	842	—	1843	1360	1270	—	2630
TOTAL	56000	110000	4000	170000	50940	114120	4985	170045	57000	127300	5200	190000

## ANNEXURE 7.2

Annual Plan 1985-86

PLF of SEB's/Central Organisations

SEB's	Target	Achievement
1	2	3
D.E.S.U. . . . .	61.7	63.8
H.S.E.B. . . . .	37.7	32.8*
R.S.E.B. . . . .	57.3	57.5
P.S.E.B. . . . .	58.0	58.9
U.P.S.E.B. . . . .	39.7	37.3*
G.S.E.B. . . . .	53.4	53.2*
M.S.E.B. . . . .	51.0	54.8
M.P.S.E.B. . . . .	55.8	53.3*
A.P.S.E.B. . . . .	59.2	64.8
T.N.E.B. . . . .	48.0	56.5
K.S.E.B. . . . .	..	33.5
B.S.E.B. . . . .	34.8	34.1*
O.S.E.B. . . . .	37.7	37.7*
W.B.S.E.B. . . . .	39.3	42.2
D.P.L. . . . .	34.7	26.3*
A.S.E.B. . . . .	33.2	27.5*
<b>TOTAL : SEB's</b>	<b>48.4</b>	<b>49.2</b>
N.T.P.C. . . . .	53.9	65.2
Neyveli . . . . .	61.2	74.9
D.V.C. . . . .	49.0	49.4
Chola . . . . .	48.5	..*
<b>TOTAL : Central</b>	<b>53.3</b>	<b>61.9</b>

\*Achievement below the target.

## Targets and Achievement of Addition to Generating Capacity 1985-86

S.No.	Name of the Project and Unit No.	State	Target (MW)	Achievement (MW)	Slippage (MW)	Date of commissioning
1	2	3	4	5	6	7
<b>Northern Region</b>						
<b>Hydro</b>						
1.	Western Yamuna Canal Units 1 and 2	Haryana	16	8	8	25.3.86 (R)
2.	Mahi Bajaj Stage-I Units 1 and 2	Rajasthan	50	50	-	1/86, 2/86
3.	Anand Pur Sahib Units 1,2,3 & 4	Punjab	134	134	-	Unit I-4/85 Units 2,3 & 4,5/85
Sub-Total : (H)			200	192	8	
<b>Thermal</b>						
1.	Panipat Unit-3	Haryana	110	110	-	11/85
2.	Anpara Unit-1	Uttar Pradesh	210	210	-	3/86
Sub-Total (T)			320	320	-	
Total : (N.R.)			520	512	8	
<b>Western Region</b>						
<b>Hydro</b>						
1.	Tillari Unit-1	Maharashtra	60	-	60	
2.	Bandardhara Unit-1	Maharashtra	10	10	-	3/86
3.	Pench Unit-1	MP/Maharashtra	80	80	-	3/86 (R)
Sub-Total : (H)			150	90	60	
<b>Thermal</b>						
1.	Wanakbori Unit-4	Gujarat	210	210	-	3/86
2.	Korba West Unit-4	Madhya Pradesh	210	210	-	3/86
3.	Chandrapur Units 3 & 4	Maharashtra	420	420	-	5/85, 3/86
4.	Urban Gas Turbine Units 5 -8	Maharashtra	432	432	-	6/85, 8/85, 10/85, 1/86
Sub-Total : (T)			1272	1272	-	
Total : (W.R.)			1422	1362	60	
<b>Southern Region</b>						
<b>Hydro</b>						
1.	Nagarjunasagar PSS Stage-II, Unit 3	Andhra Pradesh	100	100	-	12/85
2.	Srisaïlam Stage-II Unit - 6	Andhra Pradesh	110	110	-	2/86 (R)
3.	Kalinadi Stage-I (2x50 MW)	Karnataka	100	100	-	8/85, 11/85
4.	Idamalayar Units 1&2 (2x37.5 MW)	Kerala	75	37.5	37.5	7/85 (R)
5.	Idukki Stage-II Units 1 & 2 (2x130)	Kerala	260	260	-	10/85, 3/86
6.	Servalar Unit 1	Tamil Nadu	20	20	-	3/86
Sub-Total : (H)			665	627.5	37.5	
<b>Thermal</b>						
1.	Raichur Units-2	Karnataka	210	210	-	3/86
2.	Neyveli 2nd Mine NLC Unit -3	Central Sector	210	210	-	3/86
Sub-Total : (T)			420	420	-	
<b>Nuclear</b>						
1.	Kalpakkam Unit-2	Central Sector	235	235	-	8/85
Sub-Total : (N)			235	235	-	
<b>Eastern Region</b>						
<b>Hydro</b>						
1.	Rengali Units 1&2	Orissa	50	50	-	8/85
Sub-Total : (H)			100	100	-	3/86

## ANNEXURE 7.3 (Contd.)

Sl. No.	Name of the Project and Unit No.	State	Target (MW)	Achievement (MW)	Slippage (MW)	Date of commissioning
1	2	3	4	5	6	7
<i>Thermal</i>						
1.	Patratu Unit-10	Bihar	110	110	..	3/86
2.	Muzaffarpur Unit-2	Bihar	110	110	..	3/86
3.	Kolaghat Unit-2	West Bengal	210	210	..	12/85
4.	Durgapur (DPL) Unit-6	West Bengal	110	110	..	7/85
5.	Bokaro 'B' Unit-1	D.V.C.	210	210	..	3/86
6.	Farakka Unit-1	Central Sector	210	210	..	1/86
SUB-TOTAL : (T)			960	960	..	
TOTAL : (E.R.)			1060	1060	..	
NORTH EASTERN REGION						
<i>Hydro</i>						
1.	Nungsung Kwang Unit 1—3	Manipur	1.5	1.5	..	7/85
2.	Maharani Unit 1 & 2	Tripura	1.0	..	1.0	
3.	Kopili Unit 1	NEEPCO	50	..	50	
SUB-TOTAL : (H)			52.5	1.5	51.0	
<i>Thermal</i>						
1.	Bongaigaon-4	Assam	60	..	60	
2.	Lakwa Gas Turbine Ext.	Assam	15	..	15	
3.	Baramura Gas Turbine Units 1 & 2	Tripura	10	5	5	
SUB-TOTAL : (T)			85	5	80	
TOTAL : (NER)			137.5	6.5	131	
<i>All India</i>						
<i>Hydro</i>						
			1167.5	1011.00	156.5	
<i>Thermal</i>						
			3057.0	2977.0	80.0	
<i>Nuclear</i>						
			235.0	235.0	..	
TOTAL			4459.5	4223.0	236.5	

(R) = Rolled

## ANNEXURE 7.4

## List of Projects likely to yield benefits during 1986-87

Sl. No.	Name of the Project and Unit No.	State	Capacity (MW)	Expected date of Commissioning
1	2	3	4	5
<b>NORTHERN REGION</b>				
<i>Thermal</i>				
1.	Panipat Unit-4	Haryana	110	10/86
2.	Anpara 'A' Unit-2	Uttar Pradesh	210	12/86
3.	DESU Gas Turbine Unit-1	Delhi	30	4/86
4.	DESU Unit-2	Delhi	30	3/86
5.	DESU Unit-3	Delhi	30	6/86
6.	DESU Unit-4	Delhi	30	7/86
7.	DESU Unit-5	Delhi	30	8/86
8.	DESU Unit-6	Delhi	30	9/86
9.	Singrauli St. II Unit-6	NTPC	500	1/87
SUB-TOTAL : (Thermal) (9 Units)			1000 MW	
<i>Hydro</i>				
10.	Western Yamuna Canal (PH-A) Unit-2	Haryana	8	6/86
11.	-do- (PH-B) Unit-3	Haryana	8	2/87
12.	-do- (PH-B) Unit-4	Haryana	8	3/87
13.	Andhra Unit-1	Himachal Pradesh	5.65	10/86
14.	Andhra Unit-2	Himachal Pradesh	5.65	11/86
15.	Andhra Unit-3	Himachal Pradesh	5.65	1/87
16.	Rongtong Unit-1	Himachal Pradesh	0.5	10/86
17.	Rongtong Unit-2	Himachal Pradesh	0.5	10/86
18.	Rongtong Unit-3	Himachal Pradesh	0.5	11/86
19.	Rongtong Unit-4	Himachal Pradesh	0.5	11/86
20.	Stakna Unit-1	Jammu & Kashmir	2	10/86
21.	Stakna Unit-2	Jammu & Kashmir	2	12/86
22.	Anoopgarh (PH-I) Unit-1	Rajasthan	1.5	11/86
23.	-do- Unit-2	Rajasthan	1.5	12/86
24.	-do- Unit-3	Rajasthan	1.5	12/86
25.	Anoopgarh (PH-II) Unit-4	Rajasthan	1.5	2/87
26.	-do- Unit-5	Rajasthan	1.5	3/87
27.	-do- Unit-6	Rajasthan	1.5	3/87
28.	Salal Unit-1	N.H.P.C.	115	9/86
29.	Salal Unit-2	N.H.P.C.	115	10/86
30.	Salal Unit-3	N.H.P.C.	115	12/86
SUB-TOTAL : (Hydro) (21 Units)			400.95 MW	
TOTAL : (Northern Region) (30 Units)			1400.95 MW	
<b>WESTERN REGION</b>				
<i>Thermal</i>				
31.	Wanakbori Unit-5	Gujarat	210	9/86
SUB-TOTAL : (Thermal) (1 Unit)			210	

1	2	3	4	5
<i>Hydro</i>				
32.	Ukai LBC Unit-1 . . . . .	Gujarat	2.5	12/86
33.	Ukai Unit-2 . . . . .	Gujarat	2.5	3/87
34.	Tillari Unit-1 . . . . .	Maharashtra	60	4/86
35.	Bhira Tail Race Unit-1 . . . . .	Maharashtra	40	12/86
36.	Vaitarna Dam Toe Unit-1 . . . . .	Maharashtra	1.5	12/86
37.	Pench Unit-2 . . . . .	M.P. & Maharashtra	80	9/86
SUB-TOTAL—(Hydro) (6 Units)			186.5	
TOTAL—(Western Region) (7 Units)			396.5	
SOUTHERN REGION				
<i>Thermal</i>				
38.	Mettur St. I Unit-1 . . . . .	Tamil Nadu	210	12/86
39.	Neyveli 2nd Mine Cut . . . . .	N.L.C. (Central)	210	2/87
SUB-TOTAL—(Thermal) (2 Units)			420	
<i>Hydro</i>				
40.	Srisaillam Unit-5 . . . . .	Andhra Pradesh	110	9/86
41.	Srisaillam Unit-7 . . . . .	Andhra Pradesh	110	2/87
42.	Pochampad Unit-1 . . . . .	Andhra Pradesh	9	12/86
43.	Idukki St. II Unit-3 . . . . .	Kerala	130	10/86
44.	Idamalyar Unit-2 . . . . .	Kerala	37.5	9/86
45.	Lower Mettur Unit-5 . . . . .	Tamil Nadu	15	12/86
46.	Lower Mettur Unit-6 . . . . .	Tamil Nadu	15	3/87
SUB-TOTAL—(Hydro) (7 Units)			426.5	
TOTAL—Southern Region (9 Units)			846.5	
EASTERN REGION				
<i>Thermal</i>				
47.	Farakka Unit-2 . . . . .	N.T.P.C.	210	8/86
48.	Farakka Unit-3 . . . . .	N.T.P.C.	210	2/87
49.	Gas Turbine Unit-1 . . . . .	D.V.C.	30	3/87
50.	Gas Turbine Unit-2 . . . . .	D.V.C.	30	3/87
SUB-TOTAL—(Thermal) (4 Units)			480	
<i>Hydro</i>				
51.	Uppar Kolab Unit-1 . . . . .	Orissa	80	3/87
SUB-TOTAL—(Hydro) (1 Unit)			80	
TOTAL—Eastern Region (5 Unit)			560	

1	2	3	4	5
<b>NORTH EASTERN REGION</b>				
<i>Thermal</i>				
52.	Bongaigaon Unit-4 . . . . .	Assam	60	4/86
53.	Lakwa Gas Turbine Unit-4 . . . . .	Assam	15	6/86
54.	Baramura Gas Turbine Unit-2 . . . . .	Tripura	5	4/86
55.	Diesel Station Unit-1 . . . . .	Manipur	1	3/87
56.	Diesel Station Unit-2 . . . . .	Manipur	1	3/87
SUB-TOTAL—(Thermal) (5 Units) . . . . .			82	
<i>Hydro</i>				
57.	Kopili Unit-1 . . . . .	N.E.C.	50	10/86
58.	Kopili Unit-2 . . . . .	N.E.C.	50	2/87
59.	Maharani Unit-1 . . . . .	Tripura	0.5	4/86
60.	Maharani Unit-2 . . . . .	Tripura	0.5	4/86
SUB-TOTAL—(Hydro) (4 Units) . . . . .			101	
TOTAL—North Eastern Region (9 Units) . . . . .			183	
TOTAL—All India (Thermal) (21 Units) . . . . .			2192	
(Hydro) (39 Units) . . . . .			1194.95	
(Nuclear) . . . . .			—	
TOTAL—(60 Units) . . . . .			3386.95	
In addition to the above, the following mini/micro hydel capacity is also likely to be added during the year 1986-87.				
Northern Region . . . . .			3.1 MW	
Eastern Region . . . . .			2.2 MW	
North Eastern Region . . . . .			4.05 MW	
TOTAL . . . . .			9.35 MW	
GRAND TOTAL . . . . .			3396.30 MW	



## ANNEXURE 7.5

*Transmission Lines Scheduled for Commissioning/Completion during the year 1986-87*

S. No.	Name of the line	No. of circuits	Length Ckt. Kms.	State/Executing Agency	Scheduled Completion
1	2	3	4	5	6
<b>400 KV Lines —Central Sector</b>					
<b>NORTHERN REGION</b>					
1.	Kanpur—Jaipur				
	(a) Kanpur—Agra . . . . .	S/C	242	NTPC	6-86
	(b) Agra—Jaipur . . . . .	S/C	257	NTPC	6-86
<b>SOUTHERN REGION</b>					
2.	Cuddapah—Bangalore . . . . .	S/C	240	NTPC	6-86
3.	Cuddapah—Sriperambudur				
	(a) Section-I (Bhanu) . . . . .	S/C	105	NTPC	2-86
	(b) Section-II (Tata) . . . . .	S/C	124	NTPC	2-86
4.	Neyveli—Salem . . . . .	S/C	175	NLC	2-86
5.	Neyveli—Sriperambudur . . . . .	S/C	182	NLC	3-87
<b>EASTERN REGION</b>					
6.	Farakka—Durgapur . . . . .	S/C	150	NTPC	6-86
7.	Durgapur (NTPC)—Durgapur (WBSEB) . . . . .	D/C	22	NTPC	6-86
8.	Malda—Farakka . . . . .	D/C	80	NHPC	3-87
<b>SUB-TOTAL—400 KV Central Sector</b> . . . . .			1577		
<b>400 KV State Sector</b>					
<b>WESTERN REGION</b>					
9.	Ukai—Asoj . . . . .	S/C	150	GEB	12-86
10.	Parli—Karad (Balance works) . . . . .	S/C	39	MSEB	6-86
11.	Karad—Bonikhand . . . . .	S/C	160	MSEB	12-86
<b>EASTERN REGION</b>					
12.	Kolghat—Jeerat . . . . .	S/C	134	WBSEB	3-87
<b>SUB-TOTAL—400 KV Lines State Sector</b> . . . . .			483		
<b>TOTAL—400 KV Lines</b> . . . . .			2060		
<b>220 KV lines—Central Sector</b>					
<b>NORTHERN REGION</b>					
1.	Salal—Udhampur (Balance Work) . . . . .	S/C	42	NHPC	6-86
<b>SOUTHERN REGION</b>					
2.	Neyveli—Villianur . . . . .	S/C	64	NLC	12-86
<b>SUB-TOTAL—220 KV Central Sector</b> . . . . .			106		
<b>220 KV Lines—State Sector</b>					
<b>NORTHERN REGION</b>					
3.	Dadri—Rewari . . . . .	S/C	57	HSEB	3-87
4.	Sarna—Batala . . . . .	Strg. of 2nd Cht.	60	PSEB	3-87

1	2	3	4	5	6
5.	LILO of Lalton—Kalan—Barnala at Malerkotla . . . . .	S/C	30	PSEB	3-87
6.	Jamalpur—Lalton—Kalan (2nd Ckt.) . . . . .	S/C	15	PSEB	3-87
7.	Lalton Kalan—Moga . . . . .	D/C	67	PSEB	3-87
8.	Ajmer—Beawar . . . . .	S/C	60	PSEB	6-86
9.	Unchahar—Lucknow . . . . .	D/C	230	UPSEB	3-87
10.	Azamgarh—Jaunpur . . . . .	S/C	72	UPSEB	3-87
WESTERN REGION					
11.	Nardipur—Vijapur . . . . .	D/C	56	GEB	12-86
12.	Bableshtar—Aurangabad . . . . .	Strg. of 2nd Ckt.	89	MSEB	12-86
13.	Chinchwad (Parvati)—Phursangi—Theur . . . . .	Strg. of 2nd Ckt.	56	MSEB	6-86
14.	Bhira—Kandalgaon . . . . .	S/C	11	MSEB	12-86
15.	Bhilai—Baipur . . . . .	SC/ on D/C	26	MPEB	3-87
SOUTHERN REGION					
16.	Dommur—Gazuwaka . . . . .	Strg. of 2nd Ckt.	180	APSEB	6-86, 4-86
17.	Ghanapur—Shapur Nagar . . . . .	D/C	75	APSEB	3-87
18.	Kothagudan—Kamaguru . . . . .	Strg. of 2nd Ckt.	45	APSEB	6-86 4-86
19.	HTPS—Munirabad . . . . .	S/C	200	KEB	12-86
20.	Hubli—Mahalingapur . . . . .	S/C	130	KEB	3-87
21.	Hoody—Malur . . . . .	S/C	25	KEB	3-87
22.	Salem—Pugalur . . . . .	S/C	65	TNEB	3-87
23.	Mettur TPS—Salem 400 KV S/S . . . . .	S/C	54	TNEB	3-87
24.	Link Line from Mettur TPS . . . . .	D/C	23	TNEB	12-86
25.	Edamam—Trivandrum . . . . .	D/C	96	KSEB	3-87
EASTERN REGION					
26.	Muzzafarpur—Hazipur upto Ganga river crossing . . . . .	D/C	136	BSEB	12-86
27.	Bodhgaya—Biharshariff . . . . .	D/C	160	BSEB	3-87
NORTH EASTERN REGION					
28.	Samaguri—Chandrapur . . . . .	Strg. of 2nd Ckt.	100	ASEB	12-86
SUB-TOTAL—State Sector			2118		
220 KV Inter-State					
NORTHERN REGION					
29.	Kota—Ujjain . . . . .	Strg. of 2nd Ckt.	230	RSEB MPEB	3-87
30.	Raigarh—Brijraj Nagar . . . . .	Strg. of 2nd Ckt.	75	MPEB OSEB	6-86
WESTERN REGION					
31.	Nasik—Navsari . . . . .	Strg. of 2nd Ckt.	178	MSEB GEB	3-87
SUB-TOTAL—Inter-State			483		
TOTAL—220 KV Lines			2707		

## ANNEXURE 7.6

*Targets for Electrification of Villages and Pumpsets for 1986-87*

Sl. No.	States	Villages	Pumpsets
1	2	3	4
1.	Andhra Pradesh . . . . .	815	68370
2.	Assam . . . . .	2211	500
3.	Bihar . . . . .	3500	20000
4.	Gujarat . . . . .	900	20000
5.	Haryana . . . . .	..	10000
6.	Himachal Pradesh . . . . .	500	60
7.	Jammu and Kashmir . . . . .	295	60
8.	Karnataka . . . . .	1000	40000
9.	Kerala . . . . .	..	15000
10.	Madhya Pradesh . . . . .	3000	35000
11.	Maharashtra . . . . .	500	60000
12.	Manipur . . . . .	85	..
13.	Meghalaya . . . . .	212	..
14.	Nagaland . . . . .	35	..
15.	Orissa . . . . .	1386	5000
16.	Punjab . . . . .	..	20000
17.	Rajasthan . . . . .	875	10000
18.	Sikkim . . . . .	30	..
19.	Tamil Nadu . . . . .	8	40000
20.	Tripura . . . . .	141	90
21.	Uttar Pradesh . . . . .	3610	30000
22.	West Bengal . . . . .	2356	17000
	<b>SUB-TOTAL . . . . .</b>	<b>21459</b>	<b>391080</b>
<b>II. UNION TERRITORIES</b>			
1.	A & N Islands . . . . .	33	..
2.	Arunachal Pradesh . . . . .	50	..
3.	Chandigarh . . . . .	..	10
4.	Dadar & Nagar Haveli . . . . .	..	10
5.	Delhi . . . . .	..	500
6.	Goa, Daman & Diu . . . . .	..	140
7.	Lakshdweep . . . . .	..	..
8.	Mizoram . . . . .	50	..
9.	Pondicherry . . . . .	..	200
	<b>SUB-TOTAL—U.Ts. . . . .</b>	<b>133</b>	<b>860</b>
	<b>TOTAL—All India . . . . .</b>	<b>21592</b>	<b>391940</b>

## ANNEXURE 7.7

## Breakup of Outlay for Annual Plan—1986-87—Power Sector

(Rs. crores)

Sl. No.	State/U.T./Deptt.	Generation			T&D	Rural Electrification				Renova- tion & Moderni- sation	Misc.	Total
		Ongoing	New	Total		State Plan	REC	MNP	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13
STATES												
1.	Andhra Pradesh . . . . .	81.20	1.00	82.20	69.26	11.69	9.15	..	20.84	7.30	0.40	180.00
2.	Assam . . . . .	32.21	6.00	38.21	45.70	15.92	5.18	12.07	33.17	4.72	1.27	123.07
3.	Bihar . . . . .	110.68	10.00	120.68	67.68	9.00	13.91	15.00	37.91	7.00	1.73	235.00
4.	Gujarat . . . . .	151.70	21.76	173.46	55.00	2.90	9.10	..	12.00	6.78	0.51	247.75
5.	Haryana . . . . .	102.91	0.35	103.26	50.00	1.89	4.11	..	6.00	3.38	0.05	162.69
6.	Himachal Pradesh . . . . .	44.60	..	44.60	11.00	0.30	5.45	0.57	6.32	0.01	0.40	62.33
7.	Jammu & Kashmir . . . . .	26.51	9.57	36.08	23.72	—	6.55	..	6.55	3.00	1.25	70.60
8.	Karnataka . . . . .	92.74	15.47	108.21	54.05	4.74	5.31	..	10.05	2.00	0.56	174.87
9.	Kerala . . . . .	36.80	0.60	37.40	35.48	..	3.51	..	3.51	..	0.50	76.89
10.	Madhya Pradesh . . . . .	297.16	0.01	297.17	124.00	4.20	20.79	15.00	39.99	11.95	1.00	474.11
11.	Maharashtra . . . . .	263.25	5.50	268.75	103.64	42.63	11.37	..	54.00	6.21	40.00	472.60
12.	Manipur . . . . .	1.68	..	1.68	2.41	0.25	9.22	2.00	2.47	..	0.15	6.71
13.	Meghalaya . . . . .	14.30	..	14.30	2.23	..	3.06	1.40	4.46	..	0.15	21.14
14.	Nagaland . . . . .	1.00	0.10	1.10	3.25	0.05	0.85	0.25	1.15	..	0.10	5.60
15.	Orissa . . . . .	67.81	19.46	87.27	40.74	2.00	11.20	8.00	21.20	3.70	1.55	154.46
16.	Punjab . . . . .	218.93	..	218.93	54.92	..	9.80	..	9.80	5.00	0.35	289.00
17.	Rajasthan . . . . .	119.87	0.01	119.88	44.83	0.68	12.96	1.00	14.64	..	0.15	179.50
18.	Sikkim . . . . .	2.70	0.80	3.50	2.70	0.33	1.82	0.15	2.39	..	0.05	8.55
19.	Tamil Nadu . . . . .	222.37	21.35	243.72	107.00	12.27	5.18	..	17.45	15.69	2.00	385.86
20.	Tripura . . . . .	0.90	0.85	1.75	3.60	..	2.20	0.97	3.17	1.25	0.23	10.00
21.	Uttar Pradesh . . . . .	380.00	50.00	430.00	175.50	11.00	18.72	25.00	54.72	18.89	11.06	690.17
22.	West Bengal . . . . .	98.27	3.60	101.87	66.00	0.50	20.30	8.00	28.80	8.30	0.59	205.56
TOTAL—States . . . . .		2367.59	166.43	2534.02	1142.71	120.35	180.74	89.41	390.50	105.18	64.05	4236.46
UNION TERRITORIES												
1.	A & N Islands . . . . .	1.32	2.24	3.56	0.27	..	..	..	..	..	..	3.83
2.	Arunachal Pradesh . . . . .	2.37	2.63	5.00	1.25	..	..	1.50	1.50	..	0.05	7.80
3.	Chandigarh . . . . .	..	..	..	6.27	..	..	..	..	..	..	6.27
4.	Dadra & Nagar Haveli . . . . .	..	..	..	0.88	..	..	..	..	..	..	0.88
5.	Delhi . . . . .	..	83.00	83.00	59.89	0.60	..	..	0.60	2.81	2.00	148.30
6.	Goa, Daman & Diu . . . . .	..	0.15	0.15	6.35	..	..	..	..	..	..	6.50
7.	Lakshadweep . . . . .	0.82	..	0.82	..	..	..	..	..	..	..	0.82
8.	Mizoram . . . . .	..	1.63	1.63	3.95	..	..	1.68	1.68	..	0.11	7.37
9.	Pondicherry . . . . .	2.75	..	2.75	..	..	..	..	..	..	..	2.75
TOTAL—U.Ts. . . . .		7.26	89.65	96.91	78.86	0.60	..	3.18	3.78	2.81	2.16	184.52

1	2	3	4	5	6	7	8	9	10	11	12	13			
Central Sector															
I. Department of Power															
A.	NTPC	.	.	.	1091.05	199.58	1290.63	446.58	..	..	..	..	14.67	6.25	1758.13
B.	NHPC	.	.	.	331.86	61.50	393.36	58.23	..	..	..	..	..	3.00	454.57
C. Misc. Programmes															
(i)	CEA	.	.	.	..	..	..	..	..	..	..	..	11.17	..	11.17
(ii)	Inter-State Lines	.	.	.	..	..	..	24.00	..	..	..	..	..	..	24.00
(iii)	Renovation and Moder- nisation	.	.	.	..	..	..	..	..	..	..	100.00	..	..	100.00
(iv)	Other including NPCC	.	.	.	25.75	39.00	64.75	..	..	..	..	..	..	29.20	93.95
SUB-TOTAL—(DOP)					1448.66	300.08	1748.74	528.81	..	..	..	..	114.67	49.62	2441.84
II.	DVC	.	.	.	73.43	35.15	108.58	15.26	..	..	..	..	4.82	4.00	132.66
III.	NLC	.	.	.	136.00	..	136.00	32.57	..	..	..	..	1.66	..	170.23
IV.	DAE	.	.	.	152.54	67.90	220.44	..	..	..	..	..	..	19.56	240.00
TOTAL					1810.63	403.13	2213.76	576.64	..	..	..	..	121.15	73.18	2984.73
ALL INDIA					4185.48	659.21	4844.69	1798.21	120.95	180.74	92.59	394.28	229.14	139.39	7405.71
NEC					25.10	18.50	43.60	10.01	..	..	..	..	..	3.20	56.81

## ANNEXURE 7.8

*Break-up of Plan outlay for major generation schemes in States and Union Territories*

(Rs. crores)

Sl. No.	Name of Scheme (Capacity in MW)	1985-86		1986-87 Plan outlay
		Plan outlay	Anticipated Expenditure	
1	2	3	4	5
<b>ANDHRA PRADESH</b>				
1.	Srisaillam HES Stage-I (4 × 110)	10.00	10.00	10.00
2.	Nagarjunasagar PS HES Stage-II (3 × 100)	4.50	6.00	2.30
3.	Srisaillam HES Stage-II (3 × 110)	5.50	7.00	3.80
4.	A.P. Power House at Balimela (2 × 30)	4.00	2.00	3.50
5.	Pochampad HEP (3 × 9)	5.00	8.25	10.00
6.	Penna Ahobilam HEP (2 × 10)	1.50	0.90	7.00
7.	Nagarjunasagar LBC HES (2 × 30)	4.00	3.30	8.00
8.	Vijayawada TPS Stage-II (2 × 210)	36.00	36.00	35.78
9.	Other schemes	8.35	7.41	1.82
	<b>TOTAL</b>	<b>78.85</b>	<b>80.86</b>	<b>82.20</b>
<b>ASSAM</b>				
1.	Bongaigaon TPS Stage-II (2 × 60)	14.00	20.00	5.00
2.	Namrup W.H.P. (1 × 22)	4.00	2.60	2.00
3.	Chandrapura TPS Extn. (1 × 30)	10.00	10.00	4.50
4.	Lakwa TPS Phase-II (4 × 15)	4.00	2.00	4.00
5.	Karbi Langpi HEP (2 × 50)	12.00	12.00	14.00
6.	Dhansiri HEP (15 × 1.33)	0.50	0.10	1.50
7.	Other Schemes	3.17	1.95	7.21
	<b>TOTAL</b>	<b>47.67</b>	<b>48.65</b>	<b>38.21</b>
<b>BIHAR</b>				
1.	Muzaffarpur TPS (2 × 110)	22.00	22.00	13.50
2.	Tenughat TPS (2 × 210)	30.00	30.00	53.66
3.	Eastern Gandak HES (3 × 5)	9.00	2.95	8.25
4.	Noth Koel HES (2 × 12)		4.66	5.37
5.	Sone Western Link HES (4 × 1.65)		1.54	5.61
6.	Sone Eastern Link HES (2 × 1.65)		0.35	2.67
7.	Other schemes	13.00	24.18	31.62
	<b>TOTAL</b>	<b>74.00</b>	<b>85.68</b>	<b>120.68</b>
<b>GUJARAT</b>				
1.	Kadana HEP (2 × 60) Units 1 & 2	6.00	5.00	11.61
2.	Wanakbori TPS Extn. (3 × 210)	47.35	47.35	40.00
3.	Kutch Lignite TPS (2 × 70)	15.00	15.00	15.77
4.	Sikka TPS Replacement (1 × 120)	27.50	25.00	32.00
5.	Gandhinagar TPS Extn. (1 × 210)	15.00	15.00	30.14
6.	Sardar Sarover Project	15.00	13.23	16.48
7.	Other Schemes	7.00	16.20	27.46
	<b>TOTAL</b>	<b>132.85</b>	<b>136.78</b>	<b>173.46</b>

1	2	3	4	5
<b>HARYANA</b>				
1.	Panipat TPS Stage-II (2 × 110)	20.00	20.00	13.85
2.	Panipat TPS Stage-III (1 × 210)	55.00	43.45	70.00
3.	WYC HES Stage-I (6 × 8)	7.65	7.65	10.00
4.	Yamunanagar TPS Stage-I (2 × 210)	11.00	13.00	7.00
5.	Other schemes	0.92	2.72	2.41
	<b>TOTAL</b>	<b>94.57</b>	<b>86.82</b>	<b>103.26</b>
<b>HIMACHAL PRADESH</b>				
1.	Rongtong HES (4 × 0.5)	3.00	3.00	3.25
2.	Bhabha HES (3 × 40)	31.38	31.38	34.15
3.	Andhra HES (3 × 5.65)	8.50	8.50	5.15
4.	Other schemes	0.50	0.50	2.05
	<b>TOTAL</b>	<b>43.38</b>	<b>43.38</b>	<b>44.60</b>
<b>JAMMU &amp; KASHMIR</b>				
1.	Karnah HES (2 × 1)	2.00	1.60	2.00
2.	Upper Sindh HES Stage-II (2 × 35)	19.00	19.90	24.50
3.	Other schemes	1.00	8.13	9.58
	<b>TOTAL</b>	<b>22.00</b>	<b>29.63</b>	<b>36.08</b>
<b>KARNATAKA</b>				
1.	Kalinadi HES Stage-I (6 × 135 + 2 × 50)	16.00	16.00	10.00
2.	Raichur TPS Stage I (2 × 210)	36.00	36.00	23.62
3.	Varahi HES (2 × 115 + 2 × 4.5)	30.00	28.53	30.00
4.	Ghataparabha HES (2 × 15)	1.67	1.67	5.00
5.	Diesel Generator (77.7)	..	..	15.00
6.	Raichur TPS Stage-II (210) 3rd unit	..	..	13.85
7.	Kalinadi HES Stage-II (3 × 40 + 3 × 40 + 2 × 30)	0.5	1.14	10.00
8.	Other schemes	2.68	3.71	0.74
	<b>TOTAL</b>	<b>86.85</b>	<b>87.05</b>	<b>108.21</b>
<b>KERALA</b>				
1.	Idukki HES Stage-II (3 × 130)	22.00	22.00	7.34
2.	Kakkad HES (2 × 25)	5.14	5.14	12.00
3.	Kallada HES (15)	4.50	4.50	4.00
4.	Lower Periyar HES (3 × 60)	2.50	2.50	10.00
5.	Other Schemes	1.06	1.06	4.06
	<b>TOTAL</b>	<b>35.20</b>	<b>35.20</b>	<b>37.40</b>
<b>MADHYA PRADESH</b>				
1.	Korba West TPS 3rd & 4th Unit (2 × 210)	29.00	29.00	22.00
2.	Sanjay Gandhi TPS (2 × 210)	50.00	40.99	50.00
3.	Pench HE (2 × 80)	3.90	3.90	4.60

1.	2.	3	4	5
4.	Indira Sarovar (Bodhghat) HES (4×125)	75.00	48.08	38.00
5.	Bansagar Tons HES (3×105+2×15+3×15)	38.00	52.00	82.00
6.	Hasdeo (Bango) HES (3×40)	4.00	3.00	5.00
7.	Bargi HES (2+45)	10.00	15.00	10.50
8.	Korba East TPS Unit IV	5.15	3.30	5.10
9.	Satpura TPS 8th & 9th Unit (2×210)	19.00	13.42	16.00
10.	Korba West TPS Unit I & II (2×210)	3.50	5.58	6.50
11.	Sardar Sarovar MPP	3.64	N.I.	32.96
12.	Narmada Sagar M.P.P.	24.00	N.I.	20.00
13.	Other Schemes	4.71	3.51	4.51
	<b>TOTAL</b>	<b>269.90</b>	<b>217.78</b>	<b>297.17</b>
<b>MAHARASHTRA</b>				
1.	Bhira Tail Race HES (2×40)	7.00	7.49	8.39
2.	Bhandardara HES Ph. I & II (1×10+1×35)	2.50	3.30	3.15
3.	Pawna HES (1×10)	2.05	3.25	2.43
4.	Bhatsa HES (1×15)	1.02	1.02	3.35
5.	Khadakwasla HES (2×8)	1.00	1.00	5.00
6.	Ujjani HES (1×12)	1.00	1.00	3.00
7.	Sardar Sarovar M.P.P.	25.41	25.00	27.81
8.	Chandrapur TPS Unit 3 & 4 (2×210)	30.88	35.12	10.80
9.	Chandrapur TPS Stage III (2×500)	32.00	38.20	15.75
10.	Gas Turbine Extn. Units 5 to 8 (4×108)	28.81	33.16	2.28
11.	Khaperkheda TPS Extn. (2×210)	39.30	18.31	74.20
12.	Parli TPS Unit 5 (1×210)	32.30	33.50	63.00
13.	Other schemes	59.33	65.41	49.59
	<b>TOTAL</b>	<b>262.50</b>	<b>265.76</b>	<b>268.75</b>
N.I. Not indicated by the state.				
<b>MANIPUR</b>				
1.	Lokchao HES (2×0.2)	0.13	0.22	0.24
2.	Booning HES (2×0.5)	0.35	0.10	0.44
3.	Keithalmanbi HES (2×0.2+2×0.1)	0.37	0.13	0.47
4.	Other schemes	1.24	0.79	0.53
	<b>TOTAL</b>	<b>2.09</b>	<b>1.24</b>	<b>1.68</b>
<b>MEGHALAYA</b>				
1.	Umliam Umtru HES Stage IV with Upper Kheri Diversion (2×30)	7.00	8.81	14.30
	<b>TOTAL</b>	<b>7.00</b>	<b>8.81</b>	<b>14.30</b>
<b>NAGALAND</b>				
1.	Dikhut HES (1×0.250+1×0.750)	0.50	0.65	1.00
2.	Other schemes	..	..	0.10
	<b>TOTAL</b>	<b>0.50</b>	<b>0.65</b>	<b>1.10</b>



1	2	3	4	5
ORISSA				
1.	Rengali HES (2 × 50)	7.00	9.50	3.00
2.	Upper Kolab HES (3 × 80)	19.00	19.00	22.21
3.	Upper Indravati MPP (4 × 150)	30.00	28.00	36.00
4.	Hirakund HES Unit 7 (1 × 37.5)	12.00	6.50	6.00
5.	Rengali HES Stage II	..	1.00	11.46
6.	Other schemes	1.25	1.54	8.60
TOTAL		69.25	65.54	87.27
PUNJAB				
1.	Mukerian HES (6 × 15 + 6 × 19.5)	45.00	47.00	70.00
2.	Ropar TPS Stage II (2 × 210)	36.92	37.50	71.54
3.	Micro Hydel Schemes	2.00	2.00	5.00
4.	Thein Dam Project (4 × 150)	75.00	75.00	70.00
5.	Other schemes	18.90	19.19	2.39
TOTAL		177.82	180.69	218.93
RAJASTHAN				
1.	Mahi HES (2 × 25 + 2 × 45)	24.75	16.00	29.00
2.	Kota TPS Stage II (2 × 210)	50.00	60.00	85.00
3.	Anoopgarh HES (6 × 1.5)	2.84 (LS)	2.00	4.80
4.	Other schemes	3.41	3.00	1.08
TOTAL :		81.00	81.00	119.88
SIKKIM				
1.	Rimbi HES Stage II (2 × 0.5)	0.60	0.60	0.50
2.	Rongnichu HES Stage II (5 × 0.5)	1.00	1.00	2.00
3.	Other Schemes	0.86	0.86	1.00
TOTAL :		2.46	2.46	3.50
TAMIL NADU				
1.	Servalar HES (1 × 20)	3.19	3.19	0.57
2.	Kadamparai HES (4 × 100)	24.43	24.43	15.91
3.	Lower Mettur HES (8 × 15)	23.00	23.00	15.00
4.	Kundah HES Unit V (1 × 20)	2.00	2.00	5.32
5.	Pykara Micro Hydel (1 × 2)	0.25	0.25	1.72
6.	Lower Maharani Micro Hydel (4 × 2)	1.05	0.60	4.09
7.	Vaigai Micro Hydel (2 × 3)	0.70	0.59	3.75
8.	Mettur TPS Stage I (2 × 210)	126.00	126.00	76.00
9.	Mettur TPS Stage II (2 × 210)	20.00	20.00	65.00
10.	Tuticorin TPS Extn. (2 × 210)	13.57 (LS)	12.47 (LS)	35.00
11.	North Madras TPS (3 × 210)			15.00
12.	Other schemes	1.00	0.87	6.36
TOTAL :		215.19	213.40	243.72

1	2	3	4	5
<b>TRIPURA</b>				
1.	Maharani Micro Hydel (2 × 0.5)	0.70	0.50	0.30
2.	Baramura Gas Turbine (2 × 5)	2.31	4.80	0.60
3.	Other schemes	2.99	0.30	0.85
<b>TOTAL :</b>		<b>6.00</b>	<b>5.60</b>	<b>1.75</b>
<b>UTTAR PRADESH</b>				
1.	Maneri Bhali HES Stage II (4 × 76)	25.00	25.00	22.00
2.	Anpara 'A' TPS (3 × 210)	110.00	105.00	46.00
3.	Tanda TPS (4 × 110)	63.00	50.00	70.00
4.	Unchahar TPS (2 × 210)	120.00	120.00	145.00
5.	Anpara 'B' TPS (2 × 500)	5.00	1.00	50.00
6.	Tehri Dam MPP (4 × 250)	10.00	15.00	20.00
7.	Lakhwar Viyasi MPP (3 × 100 + 2 × 60)	5.00	5.00	10.00
8.	Vishnu Prayag HES (4 × 120)	1.00	1.00	1.00
9.	Khara HES (3 × 24)	—	16.00	30.00
10.	Srinagar HES (4 × 50)	10.00	1.00	15.00
11.	Unchahar TPS Extn. (3 × 210)	(LS)	..	5.00
12.	Other schemes	32.15	33.25	16.00
<b>TOTAL :</b>		<b>381.25</b>	<b>372.25</b>	<b>430.00</b>
<b>WEST BENGAL</b>				
1.	Kolaghat TPS Stage I (3 × 210)	27.00	31.00	13.00
2.	Rammam HES Stage II (4 × 12.5)	8.00	7.00	9.50
3.	Kolaghat TPS Stage II (3 × 210)	40.00	41.00	57.00
4.	Fazi Augmentation (1 × 12)	1.16	0.75	0.75
5.	Teesta Canal Fall HES Stage I to IV (9 × 7.5)	6.00	0.80	1.50
6.	Other schemes	9.65	17.47	20.12
<b>TOTAL :</b>		<b>91.81</b>	<b>98.02</b>	<b>101.87</b>
<b>DELHI</b>				
1.	Replacement of Rajghat TPS (2 × 67.5 MW)	0.01	*	65.00
2.	Gas Turbine (6 × 30 MW)			18.00
<b>TOTAL :</b>		<b>0.01</b>	<b>—</b>	<b>83.00</b>

\*Additional Central assistance of Rs. 75 crores was provided in 1985-86 against which the anticipated expenditure is Rs. 89 crores.

## ANNEXURE 7.9

## Break-up of Plan Outlay for Power Generation—Centre

(Rs. Crores)

Name of Scheme (Capacity in MW)	1985-86		1986-87 Plan Outlay
	Plan Outlay	Anticipated Expenditure	
1	2	3	4
<b>I. PROGRAMME OF NTPC</b>			
<b>A. Schemes completed</b>			
1. Badarpur TPS . . . . .	18.44	4.51	16.75
2. Sangrauli-I (600) . . . . .	0.78	3.20	1.09
<b>SUB-TOTAL (A)</b> . . . . .	<b>19.22</b>	<b>7.71</b>	<b>17.84</b>
<b>B. On-going Schemes for benefits during VII Plan</b>			
1. Singrauli II (1400) . . . . .	141.15	136.53	97.57
2. Korba-I (1100) . . . . .	97.43	102.57	60.57
3. Korba-II (1000) . . . . .	77.23	81.08	97.57
4. Ramagundam I (1100) . . . . .	48.89	79.68	157.9
5. Ramagundam II (1000) . . . . .	58.78	49.44	26.9
6. Farakka I (600) . . . . .	89.96	118.39	64.0
7. Vindhyachal I (1260) . . . . .	144.49	200.88	224.0
8. Rihand I (1000) . . . . .	325.99	216.79	281.0
<b>SUB-TOTAL (B)</b> . . . . .	<b>983.92</b>	<b>985.36</b>	<b>1009.51</b>
<b>C. On-going Schemes for benefits beyond VII Plan</b>			
1. Farakka-II (1000) . . . . .	40.0	41.0	23.7
2. Kahalgaon-I (840) . . . . .	15.73	10.28	40.0
<b>SUB-TOTAL (C)</b> . . . . .	<b>55.73</b>	<b>51.28</b>	<b>63.7</b>
<b>D. New Schemes for benefits during VII Plan</b>			
1. Kawas (600) } . . . . .	10.0	3.32	100.00
2. Anta (430) }			
3. Auraiya (600) }			
<b>SUB-TOTAL : (D)</b> . . . . .	<b>10.0</b>	<b>3.32</b>	<b>100.00</b>
<b>E. New Schemes for benefits beyond VII Plan</b>			
1. Muradnagar (NCR) (840) . . . . .	15.0	3.5	91.58
2. Talcher I (1000) . . . . .	3.0	2.0	7.0
3. Rihand II (1000) . . . . .	..	..	..
4. Farakka III (1000) . . . . .	..	..	1.0
5. Vindhyachal II (1000) . . . . .	..	..	..
6. Manuguru-I (1000) . . . . .	..	..	..
<b>SUB-TOTAL : (E)</b> . . . . .	<b>18.0</b>	<b>5.5</b>	<b>99.58</b>
<b>TOTAL : (A to E)</b> . . . . .	<b>1086.87</b>	<b>1053.17</b>	<b>1290.63</b>
<b>II. PROGRAMME OF NHPC</b>			
<b>A. Schemes completed</b>			
1. Loktak (3 × 35) . . . . .	1.0	1.38	1.66
<b>SUB-TOTAL (A)</b> . . . . .	<b>1.0</b>	<b>1.38</b>	<b>1.66</b>

1	2	3	4
<b>B. On-going Schemes</b>			
1. Salal (3 × 115)	90.0	92.84	80.0
2. Dulhasti (3 × 130)	30.0	17.08	50.5
3. Chamara (3 × 180)	107.0	109.58	193.5
4. Tanakpur (3 × 40)	30.54	33.33	56.7
5. Koel Karo (4 × 172.5 + 1 × 20)	1.0	0.77	1.0
SUB-TOTAL : (B)	258.54	253.60	381.7
<b>C. New Schemes</b>			
1. Uri (4 × 120)	5.0	..	5.0
2. Rangit (60)	2.5	..	2.5
3. Dhauliganga (4 × 65)	1.0	..	0.5
4. Tehri (1000)	6.5	..	1.0
5. Nathpa Jhankri (6 × 170)	7.1	..	1.0
SUB-TOTAL : (C)	22.1	..	10.0
TOTAL (A to C)	281.64	254.98	393.36
<b>III. PROGRAMME OF DOP</b>			
<i>Continuing Schemes</i>			
1. Sardar Sarovar Project (Centre's contribution)	50.0	12.88	25.75
2. DVC Gas Turbines	0.1	3.79	39.00
3. DESU/GT /Replacement units	40.0	..	..
4. Lower Logyap HEP	0.01	..	..
TOTAL:	90.11	16.67	64.75
GRAND TOTAL : Department of Power	1458.62	1324.82	1748.74
<b>IV. DAMODAR VALLEY CORPORATION</b>			
<i>A. Schemes completed by 31-3-1985</i>			
Durgapur TPS—4 (1 × 120)	0.30	0.37	0.28
SUB-TOTAL : (A)	0.30	0.37	0.28
<i>B. On-going Schemes for benefits during VII Plan</i>			
(i) Bokaro-B (1 × 210)	18.0	30.0	23.0
(ii) Bokaro-B (2 × 210)	45.0	28.46	45.0
(iii) Panchet Hydrel-II (40)	22.0	16.0	5.15
SUB-TOTAL : (B)	85.0	74.46	73.15
<i>C. New Schemes</i>			
(i) Mejia	10.0	7.0	35.0
(ii) Maithon TPS Ph. I (5 × 210)	0.5	..	0.15
(iii) Balpahari DPH (1 × 20)	(L.S.)	..	..
SUB-TOTAL : (C)	10.5	7.0	35.15
TOTAL : (A to C)	95.80	81.83	108.58
<b>V. NEYVELI LIGNITE CORPORATION</b>			
<i>1. On-going Schemes</i>			
(i) Second Mine Cut TPS-Stage-I (3 × 210)	40.00	35.44	48.0
(ii) Second Mine Cut TPS-Stage-II (4 × 210)	31.87	45.50	88.0
SUB-TOTAL :	71.87	80.94	136.0

(Rs. Crores)

1	2	3	4
2. New Schemes . . . . .	..	..	
<b>TOTAL:</b> . . . . .	<b>71.87</b>	<b>80.94</b>	<b>136.0</b>
<b>VI. DEPARTMENT OF ATOMIC ENERGY</b>			
<b>A. Schemes completed by 31-3-1985</b>			
(i) RAPP-2 (220) . . . . .	2.96	3.37	4.28
(ii) MAPP-1 (235) . . . . .	4.30	2.15	0.15
<b>SUB-TOTAL : (A)</b> . . . . .	<b>7.26</b>	<b>5.52</b>	<b>4.43</b>
<b>B. On-going Schemes for benefits during VII Plan</b>			
(i) MAPP-2 (235) . . . . .	11.0	13.78	8.05
(ii) NAPP-1 & 2 (2×235) . . . . .	45.0	49.99	58.98
<b>SUB-TOTAL : (B)</b> . . . . .	<b>56.0</b>	<b>63.77</b>	<b>67.03</b>
<b>C. On-going Schemes for benefits beyond VII Plan</b>			
1. KAPP-1 & 2 (2×235) . . . . .	65.0	61.39	81.08
<b>D. New Schemes for benefits beyond VII Plan</b>			
(i) Kaiga 1 & 2 (2×235) and RAPP 3 & 4 (2×235) . . . . .	6.0	5.29	11.54
(ii) New Projects (500 MW units at Nagarjuna Sagar and TAPS (Extn.) . . . . .	..	1.20	2.75
(iii) Advance procurement of materials and equipment for future projects . . . . .	45.0	39.56	53.61
<b>SUB-TOTAL : (D)</b> . . . . .	<b>51.0</b>	<b>46.05</b>	<b>67.90</b>
<b>TOTAL : (A to D)</b> . . . . .	<b>179.26</b>	<b>176.73</b>	<b>220.44</b>

## ANNEXURE 7.10

*Plan Outlay for Power—North Eastern Council*

(Rs. Crores)

Sl.No.	Name of Scheme (Capacity in MW)	1985-86		1986-87
		Plan Outlay	Anticipated Expenditure	Plan Outlay
1	2	3	4	5
<b>A. Approved &amp; Ongoing Scheme</b>				
1.	Kopili HEP (2×25+2×50)	19.0	19.0	9.0
2.	Doyang HEP (3×35)	9.0	9.0	16.0
3.	Garo Hills TPP (2×30)	1.0	0.10	0.10
	SUB-TOTAL (A) :	29.0	28.10	25.10
<b>B. New Schemes</b>				
		..	..	18.50
	TOTAL : (A & B)	29.0	28.10	43.60

## ANNEXURE 7.11

## Outlay for Coal and Lignite

(Rs. Crores)

Sl. No.	Schemes/Projects	1985-86		1986-87
		Plan Outlay	Anticipated Expenditure	Plan Outlay
1	2	3	4	5
<b>I. EASTERN COALFIELDS LTD. (ECL)</b>				
1.	Jhanjhra	9.92	12.65	15.97
2.	Rajmahal	25.48	18.17	28.99
3.	Sonepur-Bazari	2.89	1.77	7.00
4.	Other ongoing and new mining projects	35.12	32.21	39.28
5.	Existing Mines	39.38	44.98	38.50
6.	Exploration	7.14	} 25.81	8.00
7.	Other non-mining schemes	25.07		13.26
8.	<b>TOTAL (ECL)</b>	<b>145.00</b>	<b>135.59</b>	<b>151.00</b>
<b>II. BHARAT COKING COAL CO. LTD. (BCCL)</b>				
1.	Moonidih	12.70	10.70	12.05
2.	Pootkee Ballihari	6.87	7.21	11.46
3.	Block II OCP	9.54	8.74	24.35
4.	Other ongoing and new mining projects	53.55	49.36	44.15
5.	Existing Mines	44.26	46.31	39.26
6.	Exploration	5.92	8.61	6.41
7.	Madhuband Washery	6.00	6.00	8.60
8.	Other non-mining schemes	36.16	28.07	23.72
9.	<b>TOTAL (BCCL)</b>	<b>175.00</b>	<b>165.00</b>	<b>170.00</b>
<b>III. CENTRAL COALFIELDS LTD. (CCL)</b>				
1.	Sirka O.C.	3.52	3.02	4.84
2.	Rajrappa O.C.	4.27	7.96	8.30
3.	Karkatta O.C.	0.13	5.39	5.29
4.	Selected Dhorl Reorg.	2.99	3.45	6.08
5.	Dhorl West	2.00	2.41	4.82
6.	Other ongoing and new mining projects	} 85.71	23.03	30.49
7.	Existing Mines		41.17	24.00
8.	Exploration		7.59	4.92
9.	Other non-mining schemes		31.10	22.82
10.	<b>TOTAL (CCL)</b>	<b>98.62</b>	<b>125.12</b>	<b>111.56</b>
<b>IV. WESTERN COALFIELDS LTD. (WCL)</b>				
1.	Gnugus	9.00	15.09	10.43
2.	Sasti	3.00	1.88	6.56
3.	Padampur-Motaghat	5.00	8.82	11.21

1	2	3	4	5
4. Umrer Expansion		5.50	9.56	5.72
5. Silewara		2.90	2.64	5.07
6. Nilgai		0.05		4.59
7. Other ongoing and new mining projects			35.76	23.81
8. Existing Mines		74.55	19.06	22.48
9. Exploration			6.90	7.30
10. Other non-mining schemes			9.22	12.83
11. TOTAL (WCL)		100.00	108.93	110.00
V. SOUTH EASTERN COALFIELDS LTD. (SECL)				
1. Bharatpur		3.83	3.66	10.04
2. Jamuna O.C.		4.00	2.98	7.42
3. Belpahar		9.60	8.60	7.46
4. Lajkura		6.00	5.93	5.99
5. Kusmunda		12.92	13.70	26.34
6. Gevra Expn. O.C.		23.90	22.40	18.46
7. Other ongoing and new mining projects			55.99	51.23
8. Existing Mines		112.46	50.94	23.16
9. Exploration			5.51	7.31
10. Other non-mining schemes			7.24	15.43
11. TOTAL (SECL)		172.71	176.95	172.84
VI. NORTHERN COALFIELDS LTD. (NCL)				
1. Jayant		23.34	17.53	37.00
2. Amlori		18.88	23.96	43.00
3. Dudhichua		39.93	27.21	40.00
4. Nigahi		4.00	1.89	35.00
5. Khadia		7.96	4.06	30.00
6. Other ongoing and new mining projects			11.59	17.91
7. Existing Mines		26.56	6.09	1.00
8. Exploration			7.61	1.12
9. Other non-mining projects				9.41
10. TOTAL (NCL)		120.67	99.94	214.44
VII. NORTH EASTERN COALFIELDS LTD. (NEC)				
1. Existing Mines		2.00	2.35	3.00
2. Other ongoing & new mining projects		2.90	1.00	2.08
3. Exploration		1.40	1.96	2.30
4. Non-mining schemes		3.70	2.19	4.01
5. TOTAL (NEC)		10.00	7.50	11.39
VIII. CEMPDIL HQR.		7.50	5.93	9.18
IX. DANKUNI COAL COMPLEX		16.70	16.00	10.00
X. CIL HQR.—Captive Power Schemes and others		5.30	10.54	11.60
TOTAL : Coal India Ltd. (I to X) :		851.50	851.50*	972.01



1	2	3	4	5
<b>XI. SINGARENI COLLIERIES CO. LTD (SCCL)</b>				
1. Ramagundam O.C.I.		10.72	14.55	9.30
2. Yellandu		4.22	6.17	4.20
3. Jawaharkhani S		2.88	2.77	4.93
4. Manuguru O.C. II		5.46	4.15	32.03
5. Ramagundam O.C. II		1.69	1.59	6.08
6. Other ongoing & new mining schemes		19.21	17.30	18.70
7. Existing mines		23.10	31.43	22.00
8. Exploration		2.90	3.70	4.05
9. Other non-mining schemes		8.82	1.00	13.30
10. TOTAL (SCCL)		79.00	82.66	114.59
Of which				
—contribution of Andhra Pradesh Govt.		7.00	10.66	9.00
— Net outlay of Centre		72.00	72.00	105.59
<b>XII. NEYVELI LIGNITE CORPORATION (NLC)</b>				
1. Second Mine Stage I		21.00	17.00	10.00
2. Second Mine Stage II		25.00	37.08	59.00
3. Balancing Conveyor Ist Mine		8.00	9.22	8.45
4. Balancing Equipment		9.66	8.00	10.00
5. Lignite Exploration in Rajasthan, J & K		2.22	2.22	3.00
6. Other Schemes		2.62	2.68	4.72
7. TOTAL (NLC)—Mining Sector		68.50	76.20	95.17
XIII. Science & Technology		5.00	5.01	7.00
GRAND TOTAL		997.00	1004.71**	1179.77

\*Subsequently revised to Rs. 844.17 crores.

\*\*Subsequently revised to Rs. 997.38 crores.

## ANNEXURE 7.12

## Target of production of crude oil

(in million tonnes)

		1985-86	1986-87
		Achievement	Target
I. ONGC			
Onland		6.70	7.10
Offshore		20.82	20.27
Sub-Total		27.52	27.37
II. OIL		2.66	2.84
TOTAL (I+II)		30.18	30.21
Petroleum Products			
Installed Capacity		47.55	47.90
Crude Throughput		42.91	44.94
Production		39.90	41.79

*Refining Capacity and Crude Throughput*

ANNEXURE 7.13

(Million Tonnes)

Sl. No.	Organisation/Refinery	Installed Capacity		Crude Throughput		
		1985-86	1986-87	1985-86		1986-87
				Target	Achievement	Target
1	2	3	4	5	6	7
1.	IOC, Gauhati	0.85	0.85	0.80	0.76	0.80
2.	IOC, Barauni	3.30	3.30	3.09	2.77	3.04
3.	IOC, Gujarat	7.30	7.30	6.95	7.83	7.02
4.	IOC, Haldia	2.50	2.50	2.63	2.82	2.62
5.	IOC, Mathura	6.00	6.00	5.69	6.07	6.17
6.	IOC, Digboi	0.50	0.50	0.52	0.53	0.52
7.	HPCL, Bombay	5.50*	5.50*	4.37	4.38	4.95**
8.	HPCL, Vishakhapatnam	4.50	4.50	3.29	2.66	3.79
9.	BPCL, Bombay	6.00	6.00	5.56	6.39	5.55
10.	MRL, Madras	5.60	5.60	4.52	5.06	5.29
11.	CRL, Cochin	4.50	4.50	3.72	2.75	4.19
12.	BRPL, Bongaigaon	1.00	1.35	1.00	0.89	1.00
		47.55	47.90	42.14	42.91	44.94

\*Includes 2.00 million tonnes of Swing Refinery.

\*\*Includes 1.50 million tonnes from Swing Refinery.

## ANNEXURE 7.14

## Organisationwise Plan Outlay

Annual Plan 1986-87

(Rs. Crores)

Sl. No.	Organisation	Outlay	Financed by	
			Internal & Extra Budgetary Resources	Budgetary Support
A. Exploration & Production				
1.	ONGC . . . . .	2250.00	2174.00	76.00
2.	OIL . . . . .	200.62	200.62	—
3.	GAIL . . . . .	316.26	120.47	195.79
	Sub-total (A) . . . . .	2766.88	2495.09	271.79
B. Refining & Marketing				
4.	I.O.C. . . . .	205.05	205.05	—
5.	H.P.C.L. . . . .	102.63	83.74	18.89
6.	B.P.C.L. . . . .	101.18	80.18	21.00
7.	M.R.L. . . . .	15.94	4.94	11.00
8.	C.R.L. . . . .	11.66	6.09	5.57
9.	B.R.P.L. . . . .	0.20	0.20	—
10.	L.I.L. . . . .	4.01	4.01	—
11.	E.I.L. . . . .	8.45	8.45	—
	Sub-total (B) . . . . .	449.12	392.66	56.46
	GRAND TOTAL . . . . .	3216.00	2887.75	328.25

*Outlay for Petroleum Sector*

**ANNEXURE 7.15**

(Rs. in Crores)

	1985-86 Plan Outlay	Revised Estimate	1986-87 Plan Outlay
<b>1. Exploration, Production and Transportation of Oil and Gas</b>			
<b>A. Oil and Natural Gas Commission</b>			
<b>I. Onland</b>			
(i) Surveys . . . . .	52.51	65.39	61.09
(ii) Exploratory drilling . . . . .	285.55	235.33	296.46
(iii) Development drilling . . . . .	121.67	96.98	156.28
(iv) Logging units & other tools . . . . .	36.12	32.57	51.60
(v) 22 exploratory rigs with accessories . . . . .	101.57	86.53	48.36
(vi) Development rigs (6 nos) . . . . .	9.94	1.11	20.72
(vii) Mobile rigs under World Bank Programme . . . . .	25.00	—	25.15
(viii) Regional computers . . . . .	—	0.73	16.20
(ix) Production equipments—Cambay basin development project . . . . .	13.81	2.31	9.47
(x) Integrated Gas Grid Scheme—Assam . . . . .	—	—	4.15
(xi) Captive Power Plant—Assam . . . . .	—	—	3.51
(xii) LPG plant—Hazira . . . . .	22.85	29.47	35.63
(xiii) Gas Sweetening Plant—Phase-I . . . . .	104.40	36.27	142.03
(xiv) Gas Sweetening Plant Phase-II . . . . .	—	2.12	61.34
(xv) Upgradation of KNK Line . . . . .	—	—	7.00
(xvi) Work over Rigs . . . . .	—	—	8.35
(xvii) Misc. drilling production survey equipt. and common facilities etc. . . . .	306.70	421.29	348.12
<b>SUB-TOTAL . . . . .</b>	<b>1077.14</b>	<b>1010.10</b>	<b>1295.46</b>
<b>II. OFFSHORE</b>			
(i) Surveys . . . . .	13.96	9.52	6.12
(ii) Exploratory drilling . . . . .	199.40	214.83	231.49
(iii) Development drilling . . . . .	109.89	114.65	146.96
<b>(iv) Accelerated Plan of Production—Bombay Offshore</b>			
<b>Bombay High Development</b>			
(a) SH/NQ Complexes . . . . .	90.88	121.90	11.01
(b) WIS Process Platforms . . . . .	38.80	38.80	21.69
(c) SC Complex . . . . .	20.00	3.07	27.92
(d) N1, N2, N3, platforms . . . . .	15.00	16.47	7.00
(e) EB, EC, ED, EE platforms . . . . .	16.00	20.00	16.50
(f) SU, NH, NR, NT Platforms . . . . .	14.30	15.01	2.00
(g) SY and WI-II Platforms . . . . .	—	6.00	8.00
(h) Water injection Platforms W1-6 to W1-10 . . . . .	27.69	16.47	8.00
<b>Panna Field Development</b>			
(i) Early Production System—Panna field . . . . .	29.68	29.52	18.26
<b>Heera Field Development</b>			
(j) Heera Production Complex . . . . .	10.00	7.25	9.40
<b>(v) Development of South Bassein—Phase-I</b>			
(a) South Bassein Platform Complex . . . . .	63.50	77.22	34.95
(b) Other items . . . . .	34.17	54.69	22.00
<b>(vi) Infill Drilling—Bombay High South &amp; North</b>			
(a) New Platforms-12 Nos. . . . .	12.50	0.03	68.24
<b>(vii) Development of South Bassein Phase-II . . . . .</b>			
(viii) Seismic Vessel I . . . . .	9.50	18.59	1.40
(ix) Seismic Vessel II . . . . .	5.60	—	—
(x) Geo Tech cum NDT Vessels . . . . .	11.00	22.98	8.36
(xi) Drill ship (Sagar Phusan) . . . . .	9.00	18.50	18.00

	Plan Outlay	Revised Estimate	Plan Outlay
(xii) Jack up rigs (2 Nos. MDL)	14.92	8.36	27.54
(xiii) Acid Boat cum stimulation vessel	12.16	16.51	0.47
(xiv) NDT cum inspection vessel	5.20	6.24	15.40
(xv) Multipurpose support vessels	9.32	5.25	6.85
(xvi) Ethane/Propane Recovery Plant at Uran	1.00	0.35	0.56
(xvii) Expansion of Uran Terminal-Phase-II	7.78	8.39	0.30
(xviii) Misc. Survey, drilling, production, equipment, etc.	335.87	207.89	170.18
Sub-Total II	1117.12	1058.49	917.54
III. R&D projects including outlay for institutions	55.74	31.41	37.00
Total (I+II+III):	2250.00	2100.00	2250.00
(B) OIL INDIA LIMITED )			
(i) Jorajan Development	17.00	17.00	9.35
(ii) Additional Power Generation	10.00	2.00	9.00
(iii) Back up equipment and facilities for maintenance of production etc.	119.31	77.64	52.00
(iv) Mahanadi onland exploratory drilling	4.33	—	7.10
(v) Assam & Arunachal Pradesh Exploratory & Development Drilling	50.00	38.85	44.73
(vi) Mahanadi & NE coast offshore Expl. drilling	40.50	36.56	20.94
(vii) Andaman Exploratory drilling	20.50	3.94	50.75
(viii) Rajasthan Exploratory drilling	16.26	12.01	6.75
(ix) Misc./Others	2.10	—	—
Total	280.00	188.00	200.62
(C) GAS AUTHORITY OF INDIA LIMITED			
(i) H-B-J-Pipelines Project	100.00	377.00	316.26
TOTAL(A+B+C)	2630.00	2665.00	2766.88
2. REFINING AND MARKETING			
(D) INDIAN OIL CORPORATION LIMITED			
1. Gujarat Refinery Additional Secondary Processing Facilities	0.10	0.10	10.00
2. Improvement of heater efficiency in CDU & VDU at Mathura Refinery	0.50	1.70	5.50
3. Modernization of SVKM crude pipeling for handling B.H. Crude in winter	—	1.85	14.35
4. LPG marketing facilities—Phase III	56.25	55.37	74.15
5. Additional product tankage—phase I	10.00	10.00	8.00
6. Additional product tankage—Phase IIA	4.00	5.00	6.70
7. Computer & Communication net-work	5.00	—	7.50
8. Office & Residential Accommodation	4.75	10.00	12.00
9. R&D centre - Phase II & other schemes	3.00	5.00	10.00
10. Resitment of lube plants	1.53	2.05	6.00
11. LPG Phase IV	—	—	12.00
12. Other schemes	50.63	54.71	39.15
Total	135.86	145.78	205.05
(E) HINDUSTAN PETROLEUM CORPORATION LTD.			
1. Lube base stock augmentation facilities	5.00	2.50	10.00
2. Captive Power Plants Bombay	4.00	4.00	16.00
3. Heat Exchangers & other facilities	3.00	2.18	6.40
4. LPG Phase III	70.00	57.71	30.00
5. Marketing of LPG—Phase IV	—	—	6.00
6. Other schemes	74.72	55.67	34.23
Total	156.72	122.06	102.63

	Plan Outlay	Revised Estimate	Plan Outlay
<b>(F) BHARAT PETROLEUM CORPORATION LTD.</b>			
1. C.O. boiler for FCC Unit . . . . .	0.80	0.80	5.50
2. Captive power plant . . . . .	—	2.00	16.00
3. Augmentation of product despatch facilities (refinery) . . . . .	0.10	0.80	5.00
4. Marketing of LPG Phase III/IIIA . . . . .	40.00	49.54	31.00
5. Additional product tankage Phase —I . . . . .	7.00	6.62	6.36
6. Additional product tankage—Phase IIA . . . . .	3.00	2.30	5.00
7. LPG Phase IV . . . . .	—	—	6.00
8. Other projects . . . . .	39.04	37.46	26.32
<b>Total</b> . . . . .	<b>89.74</b>	<b>99.52</b>	<b>101.18</b>
<b>(F) MADRAS REFINERIES LIMITED</b>			
1. Additional facilities for power generation . . . . .	6.55	0.30	7.07
2. Other schemes . . . . .	10.79	13.47	8.87
<b>Total</b> . . . . .	<b>17.34</b>	<b>13.77</b>	<b>15.94</b>
<b>(G) COCHIN REFINERIES LIMITED</b> . . . . .	<b>14.26</b>	<b>20.48</b>	<b>11.66</b>
<b>(H) BONGAIGAON REFINERIES &amp; PETROCHEMICALS LTD.</b> . . . .	<b>16.61</b>	<b>0.84</b>	<b>0.20</b>
<b>(I) LUBRIZOL INDIA LIMITED</b> . . . . .	<b>5.01</b>	<b>4.85</b>	<b>4.01</b>
<b>(J) ENGINEERS INDIA LIMITED</b>			
1. R&D Centre at Gurgaon . . . . .	7.60	6.05	7.15
2. Other projects . . . . .	6.03	4.00	1.00
<b>Total</b> . . . . .	<b>13.63</b>	<b>10.05</b>	<b>8.45</b>
<b>Total Refining &amp; Marketing Schemes (D to J)</b> . . . . .	<b>455.00</b>	<b>417.35</b>	<b>449.12</b>
<b>3. MINISTRY OF PETROLEUM &amp; NATURAL GAS</b>			
Subsidy to Mazagon Dock Ltd. . . . .	—	19.00	—
<b>GRAND TOTAL</b> . . . . .	<b>3085.00</b>	<b>3101.35</b>	<b>3216.00</b>

## ANNEXURE 7.16

Statement showing Financial Outlay and Utilisation of funds during 1984-85, 1985-86 and Outlay for 1986-87 under Non-Conventional Energy Programme

(Rs. Crores)

Name of the Scheme	1984-85 (Actuals)	1985-86	1985-86	Allocation for 1986-87
		Total outlay	Actuals	
1	2	3	4	5
1. Biogas				
(a) N.P.B.D. . . . .	47.52	46.25	66.87	59.00
(b) CPB/IBP . . . . .	1.72	3.02	2.76	3.50
(c) R&D . . . . .	0.25	1.50	1.02	1.50
Total . . . . .	49.49	50.77+20	70.65	64.00
2. Solar Thermal Energy . . . . .	6.30	6.50+4.35	10.98	5.75
3. Solar Photovoltaic . . . . .	3.32	6.0	5.98	5.50
4. Wind Energy . . . . .	1.75	5.0	5.10	4.00
5. Biomas. . . . .	0.59	6.0	6.55	5.00
Draught Animal Power . . . . .		0.75	0.17	0.65
6. National Project on Demonstration of Improved Chullhas . . . . .	4.02	5.0+5	9.84	5.19
7. Energy Urban/Agri-waste Residues . . . . .	14.51	2.0	1.99	3.50
8. Other Renewable Sources . . . . .	1.09	8.63	7.50	5.31
9. Regional Offices . . . . .	0.05	0.10	0.07	0.10
10. REA . . . . .	..	..	..	1.00
Total . . . . .	81.12	119.35	118.83	100.00



## CHAPTER 8

### VILLAGE AND SMALL INDUSTRIES

The dispersed sector of village and small industries plays a vital role in terms of production, generation of employment, contribution to foreign exchange earnings and preservation of craftsmanship. By their very nature, village and small industries require comparatively low investment. A number of measures have, therefore, been taken to promote the growth of these industries.

8.2 The Central Budget for 1986-87 included further measures to speed up modernisation and promote investment in the small scale sector. The upper limit of annual clearance for the purpose of excise concessions has been enhanced from Rs. 0.75 crore to Rs. 1.50 crore to prevent division of capacity and facilitate growth and achievement of scale economies in the case of small units. Considering that the small production units are the backbone of the country's footwear industry, the general scheme of exemption of excise duty for small industries has been extended to the footwear industry also. The import duty on modern tools and equipment for use in industries like gem and jewellery has been reduced to facilitate modernisation and upgradation of technology. A special fund, known as "Small Industries Development Fund" has been established in the Industrial Development Bank of India to provide refinance assistance for development, expansion and modernisation of small scale industries. Besides, the various support programmes like reservation of items for exclusive production, exclusive/graded reservation and price preference under Government purchase programme, priority in the provision of loans by financial institutions, supply of raw materials, provision of machinery and equipment on easy terms, marketing assistance etc. will be continued.

8.3 The performance of village and small industries in respect of production, exports and employment during 1984-85 is shown in Annexure 8.1. The targets and achievements for 1985-86 as well as the targets for 1986-87 are shown in Annexure 8.2. The overall production target for 1985-86 is estimated to have been achieved. Exports are estimated to have increased from Rs. 4786 crores in 1984-85 to Rs. 4950 crores in 1985-86, the corresponding figures for employment being about 291 lakh persons and 303 lakh persons respectively.

8.4 A brief review of the progress achieved during 1985-86 and major programmes and schemes proposed to be continued/taken up during 1986-87 are given in the paragraphs that follow.

#### *Small Scale Industries*

8.5 The small scale industries continued to register substantial growth. The value of production increased

from Rs. 50,520 crores in 1984-85 to Rs. 57,100 crores in 1985-86 (at 1984-85 prices) and employment from 90 lakh persons to 96 lakh persons. The targets of production, employment and exports for 1986-87 have been fixed at Rs. 61,130 crores, 100 lakh persons and Rs. 2950 crores respectively.

8.6 Direct assistance in terms of consultancy services, product development, training, common facilities, improved processing, testing, marketing, motivation of entrepreneurs, etc. is provided through a wide network of promotional agencies, namely 26 Small Industries Services Institutes (SISIs), 418 District Industries Centres (DICs), 32 Branch Institutes, 39 Extension Centres, 4 Regional Testing Centres, 20 Field Testing Stations, 3 Product and Process Development Centres, 2 Footwear Training Centres and 4 Production Centres, Institute for Design for Electrical Measuring Instruments (IDEMI), 4 Prototype Development & Training Centres under the National Small Industries Corporation (NSIC), National Institute of Small Industries Extension and Training Institute (NISIET) and National Institute for Entrepreneurship and Small Business Development (NIESBUD). During 1985-86, the number of units which availed of consultancy services was 2.39 lakhs.

8.7 Twenty one new DICs are being set up in various districts. Taking into consideration the problems of Special Category States, the population limit has been raised from one lakh to five lakhs for the operation of the margin money scheme implemented by DICs in these States.

8.8 The scheme of providing self-employment to educated unemployed youth was evaluated in one district in each State/UT selected at random. The Evaluation Report revealed that in 76% of the cases for which disbursement was made in the selected districts, the units established by beneficiaries were actually functioning. During 1984-85, the number of cases sanctioned was 2.29 lakhs, the corresponding figure for 1985-86 being 2.18 lakhs.

8.9 The scheme for modernisation of selected small scale industries is being strengthened and emphasis has been laid on technological upgradation measures. Apart from in plant studies, clinics, workshops and seminars, modernisation guides have been prepared in respect of certain selected industries. The recommendations of the Working Group set up on upgradation of technology are proposed to be implemented in a phased manner.

8.10 Attention is being focussed on strengthening/creation of tooling/workshop facilities and for the

development of proto-type designs and imparting higher level of training. Ancillarisation is to receive greater attention. Special emphasis will also be placed on technological upgradation of diesel engines, pumps, electronic software etc. Henceforth the conversion of letter of intent into industrial licence would be subject to a satisfactory programme of ancillarisation by the parent units.

8.11 In order to ensure continuous supply of raw materials at competitive prices, the NSIC is supplying both indigenous and imported raw materials to small scale units on the basis of their actual requirements. It distributed raw materials worth about Rs. 8.6 crores during 1985-86 and a target of Rs. 10.30 crores has been fixed for 1986-87.

8.12 Units in the small scale sector are being assisted by making available to them equipment and machinery on hire-purchase basis. The supply of machines under the scheme is estimated to have increased from Rs. 10.19 crores in 1984-85 to Rs. 15 crores in 1985-86 and a target of Rs. 17 crores has been fixed for 1986-87.

### *Handlooms*

8.13 The new Textile Policy announced in June, 1985 envisages an important role for handlooms. The responsibility for the entire production of controlled cloth is to be transferred to the handloom sector by the end of the Seventh Plan. Thrust is being given to the development of handloom sector through co-operatives and Central/State level Corporations, modernisation of looms and provision of technological and other inputs, encouraging the production of mixed and blended fabrics to increase the income of weavers, establishment of pre-loom and post-loom processing facilities, improving the marketing of handloom products, training of marketing personnel and undertaking of a census of handlooms for strengthening data base for planning and execution of development programmes. Effective measures are being taken to prevent the encroachment of powerlooms on items reserved for the handlooms sector. Twenty-two types of cloth in the cotton, blended, silk and woollen varieties have been reserved for exclusive production in the handloom sector under the "Handloom (Reservation of Articles for Production) Act, 1985".

8.14 As part of the development programme for the handloom industry, two new welfare schemes for the handloom weavers, namely, Contributory Thrift Fund Scheme and Workshop-cum-Housing Scheme are being implemented since 1985-86.

8.15 During the year 1985-86, there was a shortfall in the production of handloom cloth, the achievement being about 3700 million metres, including 420 million metres of Janata cloth, against the target of 3870 million metres. The progress in the modernisation programme was also slow as only 22,621 handlooms were modernised during 1985-86 against the target of 37,686 handlooms.

8.16 A pilot study has been initiated to examine the impact of various schemes for handloom development and to suggest measures for improving their structure as well as the delivery system. Quarterly Review Meetings are being undertaken with the State Directors of Handlooms, State Handloom Corporations, Apex Societies and the concerned Central Corporations. The State Governments have been requested to submit Plan of Action of the coming years by the end of September each year. A standing committee is reviewing the progress and scope of setting up of new spinning mills. The National Handloom Development Corporation (NHDC) has set up yarn depots in deficit areas under the Raw Material Guarantee Scheme. It is also setting up marketing complexes in different regions of the country. In order to reduce the cost of printing and improve design capabilities, the techniques of foam printing and micro processor based simulated fabric design are proposed to be introduced.

8.17 The targets for production, employment and export for 1986-87 have been set at 3900 million metres of cloth, including 500 million metres of Janata cloth, 86.40 lakh persons and Rs. 383.70 crores respectively. The setting up of pre-loom and post-loom facilities will be accelerated. The limited tender facilities for government purchase have been extended to handloom cooperatives.

### *Sericulture*

8.18 The production, employment and export in 1985-86 in respect of sericulture are estimated to have been close to the targets. The production target for 1986-87 has been fixed at 72.00 lakh kgs. in respect of mulberry and 8.00 lakh kgs. in respect of non-mulberry silk. Employment during 1986-87 is likely to go up to 21.35 lakh persons from 21.00 lakh persons in 1985-86 and export is expected to reach a level of Rs. 160.00 crores.

8.19 During 1986-87, emphasis will be laid on the programmes for strengthening the infrastructure base and disseminating research results. The acreage under mulberry, both rainfed and irrigated, is likely to go up from 2.14 lakh hectares in 1985-86 to 2.20 lakh hectares in 1986-87. Additional area would also be covered under plantations for tasar, eri and muga sericulture. Specific projects have been taken up for intensive development of sericulture in Orissa, West Bengal and the North Eastern region.

8.20 Under the National Silkwear Seed Project (NSSP), 22 hybrid seed production centres and 14 parent seed maintenance and multiplication stations had been established in different sericulture States by the end of 1985-86. During 1986-87, additional seed production centres and basic seed maintenance and multiplication stations will be taken up besides establishing cold storage units, chawkie rearing, technical service and development centres. The existing network is being strengthened so as to enable the NSSP to produce at least 10% of the total seed requirements.

8.21 Under the Inter-State Tasar Project initiated in 8 States in 1981-82, against a target of 6000 hectares to be planted under 'Arjun' plantations, 7945.70 hectares were planted by 1986. On account of late plantations and drought conditions in certain States, only 683 hectares became available for exploitation in 1985-86; this is estimated to increase to 2786 hectares in 1986-87.

8.22 During 1986-87, research studies relating to special problems will be taken up in certain States. A separate Muga Research Institute will also be established in Assam for fully exploiting the potential of muga culture and promoting it. The Central Research Institutes at Mysore, Behrampore and Ranchi would, apart from their continuing programmes, take up new schemes for genetically upgrading mulberry and cater to the diverse requirements of the sericulture States. The existing research station at Pampore would be upgraded to a full-fledged research institute.

#### *Powerlooms*

8.23 The organisation of production in the powerloom sector shall be guided by the objectives of increasing production and efficiency, improving workers' welfare and facilitating locational dispersal. It would be ensured that powerlooms do not violate locational guidelines for industries, particularly in the large and metropolitan cities. Effective measures would be taken to see that powerlooms do not encroach upon items exclusively reserved for production in the handlooms sector. The Office of Development Commissioner (Handlooms) would post its own staff in areas of heavy concentration of powerlooms in order to check violation of the Reservation Act.

8.24 The production of cloth in the powerloom sector is estimated to have increased to 5334 million metres during 1985-86. The target for 1986-87 is 5210 million metres of cloth. Employment is expected to be provided to 36.32 lakh persons. The Central Scheme of establishment of powerlooms service centres would be continued. As in the past, these centres would provide training in loom mechanism, training of powerloom weavers, testing of samples, technical assistance to weavers etc. The various Textile Research Associations have been associated in the implementation of this scheme so as to make available necessary technological services to the decentralised powerloom sector.

#### *Handicrafts*

8.25 The anticipated production of handicrafts during 1985-86 is Rs. 3700 crores against the target of Rs. 3815 crores. Exports during the year are estimated at Rs. 1800 crores as compared to the target of Rs. 1896 crores, the shortfall being mainly due to lower exports of gem and jewellery and carpets.

8.26 Training in various crafts is the main programme undertaken in the Central sector for the development of handicrafts. In order to impart training in weaving of high knottage carpets having a minimum

standard of 18 × 18 knots per sq. inch, 70 Advanced Training Centres in carpet weaving were sanctioned for U.P. in addition to 56 already functioning in J & K. The training in carpet weaving is being supplemented by opening 6 Centres for washing and finishing of carpets. In an Evaluation Study of the Carpet Weaving Training Scheme, it has been revealed that this scheme has helped in providing employment to the extent of 65% of the persons trained at the Training Centres. Institutional training courses are also being conducted in different crafts namely, art-metal ware, cane and bamboo, handprinted textiles and wood-ware. It is proposed to train 8000 persons during 1986-87 in these crafts.

8.27 At present, 24 State Corporations and 3 Central Corporations are marketing handicrafts through a chain of emporia. These Corporations are given financial assistance for opening new sales outlets, renovation of the existing ones, opening of Common Facilities Centres and Raw Material Depots as well as for providing design assistance and training to craftsmen. A High Powered Working Group/Committee is being set up to review the working of the State/Central Corporations. There were also 39 Handicrafts Marketing and Service Extension Centres at the end of 1985-86 in different parts of country. These Centres provide a package of assistance including credit, raw material, marketing etc. to the artisans. Additional 31 centres are proposed to be set up during the Seventh Plan period; out of these 8 have been sanctioned for 1986-87. During 1986-87, it is proposed to hold 200 Product Promotion Programmes and 45 Market Meets.

8.28 During 1986-87, the production of handicrafts is expected to increase to Rs. 4000 crores and, out of this, exports would be of the order of Rs. 2040 crores. The total employment is expected to increase to 30.5 lakh persons.

#### *Coir*

8.29 Against the target of 1.83 lakh tonnes, production of coir fibre during 1985-86 is estimated at 1.55 lakh tonnes. Export is however, estimated to have been close to the target of Rs. 30 crores. The adverse effects of drought during 1982 and 1983 were still visible, resulting in fall in production of coir fibre during 1985-86. However, production is likely to pick up with improvement in weather conditions. The target for production of coir fibre during 1986-87 has been fixed at 1.91 lakh tonnes and that for export at Rs. 33.2 crores.

8.30 During the year, the thrust on research and upgradation of technology, design development, improved weaving techniques for mats and matting, product development and diversification and development of rubberised coir etc. will be continued. The two research institutes i.e. Central Coir Research Institute, Kavaloor and Central Institute of Coir Technology, Bangalore being run by the Coir Board would be further strengthened to achieve the objective of improved technology for the coir industry.

8.31 The scheme of cooperativisation of the coir sector will continue. It has been further modified/ liberalised so that cooperative societies in both the sectors of white fibre and brown fibre industries could increasingly avail of assistance for share capital, modernisation and renovation of equipment and looms, marketing assistance etc. Though the Husk Control Order has been in operation for the last 10 years with the main objective of making available sufficient husks to cooperative societies, the collection of husks has not reached the level sufficient to provide full employment to members of cooperative societies throughout the year. To step up supply of husks to cooperative societies and improve movement of husks from surplus districts to deficient districts in Kerala, it is proposed, on a trial basis for one year, to delegate powers to the Kerala State Government under the Essential Commodities Act for the introduction of levy system in place of Husk Control Order and free the movement of husk both inside and outside the State.

8.32 To develop the training infrastructure, the Coir Board has already set up three Regional Coir Training and Design Centres at Arsikera (Karnataka), Thanjavur (Tamil Nadu) and Rajamundry (Andhra Pradesh). During 1986-87, these Centres would be further strengthened. The Coir Board is also exploring the possibility of setting up such a Centre in Orissa.

8.33 For expansion of the market within the country as well as abroad, the schemes to be continued include opening of new sales outlets, exhibitions and special display, coir mark scheme for ensuring quality of coir products, publicity through radio/TV, foreign publicity/advertisement outside India, trade delegations, etc.

#### *Khadi & Village Industries*

8.34 The production of khadi and village industries under the purview of the Khadi and Village Industries Commission (KVIC) is estimated to have been Rs. 1092 crores during 1985-86, which is about 5% higher than the target for the year. The employment target of 39 lakh persons (full-time and part-time) is reported to have been achieved.

8.35 The institutions producing khadi heavily rely upon the KVIC for meeting their working capital requirements. It is necessary that medium and major institutions producing khadi (i.e. those having a production of the value of Rs. 50 lakhs and above per annum) obtain a larger part of their requirements of

working capital from financial institutions. In the case of village industries, which do not figure in the credit plans of commercial banks, the KVIC will make attempts to obtain more bank finance. The refinance facility now available from the National Bank for Agriculture and Rural Development (NABARD) is expected to enable raising of more bank finance for the programme for the development of these industries.

8.36 Further measures have been taken recently to promote khadi and village industries. The Directorate of Instrumentation of the KVIC has geared itself for speedy transfer of technology by undertaking production on commercial scale and supply of improved tools and equipment to the field agencies. The programme of evolving and distributing improved spinning and reeling machines to ensure higher earnings for spinners and weavers will continue. Schemes for opening and expansion of sales outlets will be implemented to improve marketing. Efforts will be made for better coordination among the KVIC, the State Khadi and Village Industries Boards, the District Rural Development Agencies and other organisations. The institutional infrastructure of the KVIC will be strengthened for implementation of the programme in the hilly, border, tribal and other backward areas. A Committee is reviewing the working of the KVIC and other organisations engaged in the promotion of khadi and village industries in order to recommend reorientation of programmes and revamping and professionalisation of the concerned institutions.

8.37 The programmes for 1986-87 include distribution of improved New Model Charkhas, woollen/ muslin charkhas and other equipment for village industries like atta chakkis, power ghanis, bee hives, honey extraction equipment, etc. Extension workers, spinners, weavers and other artisans will be provided training under the programmes of the KVIC and under the scheme of Training of Rural Youth for Self-Employment. The targets for 1986-87 have been set at production of 120.00 million sq. metres of khadi and Rs. 1025.00 crores of output of village industries under the purview of the KVIC.

#### *Plan Outlays for 1986-87*

8.38 The actual expenditure during 1984-85, revised estimates for 1985-86 and the outlays provided for 1986-87 for different sub-sectors of village and small industries are shown in Annexure 8.3. Scheme-wise outlays for 1986-87 in the Central Sector are shown in Annexure 8.4.

## ANNEXURE 8.1

## Village &amp; Small Industries-Achievements: 1984-85

Sl. No.	Sector	Unit	Production (Value in Rs. crores) Estimates	Exports (Value in Rs. crores) Estimates	Employment coverage (Lakh persons) Estimates
1	2	3	4	5	6
<b>A. Traditional Industries</b>					
1.	Khadi (cloth)	Million sq. metres	103.98		
		Value	157.62	2.18	13.05
2.	Village Industries	Value	807.06	..	24.84
3.	Handlooms (cloth)	Million Metres	3600.00	6.97	76.80*
		Value	2880.00	348.86	
4.	Sericulture (raw silk)	Lakh kgs.	76.70		
		Value	345.69	129.06	20.43
5.	Handicrafts	Value	3500.00	1699.67	27.40
6.	Coir (Fibre)	Lakh tonnes	1.49		5.89
		Value	100.50	26.41	
<i>Sub-Total (A)</i>		Value	7790.87	2206.18	168.41
<b>B. Modern Small Scale Industries</b>					
7.	Small Scale Industries	Value	50520.00	2579.94	90.00
8.	Powerlooms (cloth)	Million Metres	4930.00	..	
		Value	6423.00	..	32.19
<i>Sub-Total (B)</i>		Value	56943.00	2579.94	122.19
<b>Total : (A) + (B)</b>		Value at current prices	64733.87	4786.12	321.69

\*As reported by the Office of DC (Handlooms)

## Village &amp; Small Industries : Annual Plan 1986-87

## TARGETS &amp; ACHIEVEMENTS

S. No.	Industry/Product	Unit	Production		Exports (Rs. crores)				Employment Coverage		Coverage persons in lakh numbers)
			1985-86		1986-87	1985-86		1986-87	1985-86		
			Target	Antici- pated Achieve- ment	Target	Target	Anti- cipated Achieve- ment	Target	Target	Anti- cipated Achieve- ment	Target
1	2	3	4	5	6	7	8	9	10	11	12
A. Traditional Industries											
1.	Khadi (cloth)	Million Sq. Metres	133.00	108.00	120.00	..	..	..	} 16.00	14.00	15.00
		Value in Rs. crores	208.00	182.00	205.00	..	..	..			
2.	Village Industries	-do-	875.00	910.00	1025.00	..	..	..	24.10	25.00	25.55
3.	Handloom (cloth)	Million metres	3870.00	3700.00	3900.00	} 368.00	350.00	383.70	80.00	78.92	86.40
		Value in Rs. crores	3096.00*	2960.00*	3120.00*						
4.	Sericulture (Raw Silk)	Lakh Kgs.	76.00	76.95	80.00	} 140.00	140.00	160.00	20.50	21.00	21.35
		Value in Rs. crores	355.60	360.66	374.96						
5.	Handicrafts	-do-	3815.00	3700.00	4000.00	1896.00	1800.00	2040.00	28.90	28.00	30.50
6.	Coir (Fibre)	Lakh tonnes	1.83	1.55	1.91	} 28.00	30.00	33.20	6.50	8.03	8.29
		Value in Rs. crores	139.51*	118.16*	143.30*						
Sub-Total (A)		Value in Rs. crores	8489.11	8230.82	8868.26	2432.00	2320.00	2616.90	176.00	174.95	187.09
B. Modern small Scale Industries											
7.	Small Scale Industries	Value/in Rs. crores	55225.00*	57100.00*	61130.00*	2630.00	2630.00	2950.00	95.00	96.00	100.00
8.	Powerlooms	Mill. metres	5400.0	5334.00	5210.00	} ..	..	..	35.32	31.80	35.32
		Value Rs. crores	7020.00.	6949.34*	6787.79*						
Sub-Total (B)		Value Rs. crores	62245.00	64049.34	67917.79	2630.00	2630.00	2950.00	120.32	127.80	135.32
Total: (A)+(B)			70734.11	72280.16	76786.05	5062.00	4950.00	5566.90	306.32	302.75	322.41

\*Value at 1984-85 prices.

## ANNEXURE 8.3

*Village & Small Industries**Plan Outlays & Expenditure*

(Rs. Crores)

S.No.	Sub-sector	1984-85			1985-86			1968-87		
		Actual Expenditure			Anticipated Expenditure			Approved Outlay		
		Centre	States/ UTs	Total	Centre	States/ UTs	Total	Centre	States/ UTs	Total
1	2	3	4	5	6	7	8	9	10	11
1.	Khadi & Village Industries	130.00	27.77	157.77	91.42	21.25	112.67	100.00	18.42	118.42
2.	Handlooms	23.96	95.59	119.55	30.36	63.37	93.73	26.80	68.70	95.50
3.	Sericulture	11.23	27.75	38.98	17.79	35.74	53.26	16.50	39.77	56.27
4.	Handicrafts	10.16	9.21	19.37	11.07	9.51	20.58	10.70	10.63	21.33
5.	Coir	2.87	4.55	7.42	3.50	2.52	6.02	3.50	2.72	6.22
6.	Small Scale Industries	157.86	122.88	280.74	143.02	109.06	252.08	170.00	135.99	305.99
7.	Powerlooms	0.18	1.60	1.78	0.25	1.88	2.13	0.25	2.12	2.37
TOTAL		336.26	289.35 <sup>1</sup>	625.61	297.41	243.06	540.47	327.75	278.35	606.10

<sup>1</sup> In respect of Madhya Pradesh, an additional expenditure of Rs. 5.33 crores under Sub-sectors 'Handlooms, Powerlooms, Industrial cooperatives, Khadi & Village industries and Sericulture, has been reported.

## ANNEXURE 8.4

*Plan outlay for Central, and, Centrally-sponsored Schemes for 1985-86 and 1986-87—VILLAGE & SMALL INDUSTRIES*  
(Rs. Crores)

Sl.No.	Name of the scheme	1985-86		1986-87
		Plan outlay	Anticipated expenditure	Plan outlay
1	2	3	4	5
<b>I. Department of Industrial Developmente</b>				
<b>A. Small Scale Industries</b>				
1.	Self Employment Scheme . . . . .	65.00	95.00	102.60
2.	Credit Guarantee Scheme . . . . .	30.00	15.00	30.00
3.	District Industries Centres . . . . .	19.00	17.28	19.00
4.	National Small Industries Corporation . . . . .	7.60	7.17	7.60
5.	Field offices land & building . . . . .	2.65	1.90	1.78
6.	Process-cum-products Development Centres . . . . .	0.50	0.40	1.00
7.	Hand Tool Institutes, Jalandhar and Nagaur . . . . .	0.59	0.31	1.00
8.	Collection of statistics, etc. . . . .	1.00	0.85	0.92
9.	NISIET, Hyderabad . . . . .	0.40	0.30	0.65
10.	North-East/Hilly areas/Backward areas-Residential buildings . . . . .	0.35	0.02	0.50
11.	Industrial Cooperatives . . . . .	0.50	0.38	0.50
12.	Other schemes . . . . .	6.49	4.48	4.45
	<b>Total . . . . .</b>	<b>134.08</b>	<b>143.02</b>	<b>170.00</b>
<b>B. Khadi &amp; Village Industries</b>				
13.	Khadi Industries . . . . . }	115.42	41.75	51.75
14.	Village Industries . . . . . }		49.67	48.25
	<b>Total . . . . .</b>	<b>115.42</b>	<b>91.42</b>	<b>100.00</b>
<b>C. Coir Industry</b>				
15.	Development schemes of Coir Board . . . . .	1.81	1.81	1.81
16.	Cooperativisation . . . . .	1.23	1.23	1.23
17.	S & T . . . . .	0.46	0.46	0.46
	<b>Total . . . . .</b>	<b>3.50</b>	<b>3.50</b>	<b>3.50</b>
<b>II. Department of Textiles</b>				
<b>D. Handloom Industry</b>				
18.	Assistance to NCDC-Coop. Spinning Mills . . . . .	5.00	8.45	5.00
19.	Share capital assistance to Apex Societies/State Handloom Developments Corpns. . . . .	5.00	5.00	4.40
20.	Export production/Development projects . . . . .	2.00	3.25	3.65
21.	Pre-loom and post-loom processing facilities . . . . .	3.00	2.50	2.00
22.	National Handloom Development Corpn. . . . .	2.00	2.00	2.00
23.	Modernisation/renovation/purchase of looms . . . . .	1.75	1.75	1.75
24.	Share capital assistance to Primary Weavers Coop. Societies . . . . .	3.50	2.50	1.60
25.	Weavers Service Centres and Institutes of Handloom Technology . . . . .	1.70	1.37	1.50
26.	Instt. of Fashion Technology . . . . .	..	0.75	1.45
27.	Workshed-cum-housing Scheme . . . . .	1.00	1.00	1.40
28.	Provident fund to weavers . . . . .	0.45	0.45	1.00
29.	Other schemes . . . . .	4.96	1.34	1.05
	<b>Total . . . . .</b>	<b>30.36</b>	<b>30.36</b>	<b>26.80</b>



## ANNEXURE 8.4

(Rs. Crores)

Sl. No.	Name of the scheme	1985-86		1986-87
		Plan Outlay	Anticipated expenditure	Plan Outlay
1	2	3	4	5
<b>E. Powerlooms</b>				
30.	Technical Service Centres . . . . .	0.25	0.25	0.25
<b>F. Handicrafts</b>				
31.	Training . . . . .	6.00	6.00	5.50
32.	Exhibition and publicity . . . . .	0.90	0.80	0.90
33.	Museum . . . . .	0.80	0.77	0.65
34.	Marketing & Service Extn. Centres . . . . .	1.00	0.90	0.60
35.	Common facility centres/raw material depots . . . . .	0.75	0.60	0.60
36.	Assistance to State Handicrafts Corpsns/Apex Societies . . . . .	0.50	0.60	0.60
37.	Design and technical development . . . . .	0.60	0.40	0.50
38.	Other schemes . . . . .	1.30	1.00	1.35
Total . . . . .		11.85	11.07	10.70
<b>G. Sericulture</b>				
39.	'R & D' and Extension . . . . .	16.46	16.46	14.55
40.	Central Silk Board's administration and other schemes . . . . .	0.98	0.98	1.30
41.	Price stabilisation, etc. . . . .	0.10	0.35	0.65
Total . . . . .		17.54	17.79	16.50
Grand Total . . . . .		313.00	297.41	327.75

## CHAPTER 9

### INDUSTRY AND MINERALS

#### *Plan Performance During 1985-86*

The Seventh Five Year Plan envisages an average annual growth rate of 8.3 per cent in the output of the Industry and Minerals Sector. For 1985-86, the first year of the Plan, a growth rate of 7 per cent was targetted. The actual growth rate achieved during the year as indicated by the provisional Index of Industrial Production, was only 6.2 per cent. The growth during the year was also uneven, with 5.8 per cent growth in the first quarter (compared to the corresponding period of the previous year), 5.4, 6.8 and 6.6 per cent in the second, third and fourth quarters respectively. However, the overall performance of the industry sector can be considered satisfactory in the light of the performance in the previous years. The rate of industrial growth has shown a steadily increasing trend from 3.9 per cent in 1982-83 to 5.3 per cent in 1983-84 and 5.8 per cent and 6.2 per cent in 1984-85 and 1985-86 respectively.

9.2 The sectoral break up of the Index of Industrial Production as per the Quick Index indicates growth rates of 4.6, 8.6 and 6.1 per cent respectively for mining, electricity and manufacturing sectors in 1985-86. While the growth rates in mining and electricity sectors are lower compared to those in the previous year, the manufacturing sector shows an increasing trend. The growth rate in the mining sector is only 4.6 per cent in 1985-86 compared to 8.0 per cent in the previous year. Electricity generation achieved a growth rate of 8.6 per cent in 1985-86 compared to 12.0 per cent in the previous year. In the manufacturing sector, the growth rate in 1985-86 is 6.1 per cent against 4.3 per cent in 1985-86.

9.3 The growth rates as indicated by the Index of Industrial Production are generally of a lower order as compared to the actual growth in the overall manufacturing sector. The Index (base 1970=100) has serious limitations in terms of inadequate coverage of newly emerging high growth areas and of the small scale sector. For example, the annual growth rate of output in the manufacturing sector at constant prices worked out from the Annual Survey of Industries data for the period 1971-72 to 1982-83 is significantly higher than that shown by the Index of Industrial Production. A revised Index of Industrial Production (base 1980-81=100) is likely to be ready soon.

9.4 As far as industrial performance in 1985-86 is concerned, the Annual Plan targets were achieved or surpassed in respect of capacity build up in industries like cement, fertilizers, soda ash, polyester staple fibre,

nylon filament and industrial yarns, textile yarn, jute manufactures, automobile tyres, paper and paper board, sugar, synthetic detergents (organised sector), ship building, commercial vehicles, passenger cars, two wheelers, dry cells and storage batteries. However, there were shortfalls in a few cases like saleable steel, machine tools, mining machinery, agricultural tractors, ball and roller bearings, domestic refrigerators, typewriters, sewing machines (organised sector), wrist watches, ACSR and AA conductors etc.

9.5 The targets of production for 1985-86 were achieved or exceeded in respect of a large number of items like crude oil and petroleum refinery products, saleable steel, zinc, phosphatic fertilizers, a number of man made fibres, textile yarn, cloth (decentralised sector), bulk drugs and formulations, automobile and bicycle tyres, paper and paper products, newsprint, synthetic detergents (organised sector), machinery for metallurgical and cement industries, boilers, transformers, two wheelers, bicycles (organised sector) and electronic items like consumer electronics, industrial electronics and computer system. There were shortfalls in production in some important items like coal, iron ore, non-ferrous metals like aluminium, copper and lead, cement, nitrogenous fertilizers, industrial chemicals like soda ash and calcium carbide, sugar, cloth (mill sector), agricultural tractors and earth moving machinery, ship building, commercial vehicles, passenger cars and jeeps, steam and hydro turbines, machine tools, industrial machinery for mining, sugar, rubber, paper and printing industries and also electronic items like communication equipment. The main constraints limiting production were (i) inadequate availability of infrastructural facilities, especially power in the case of steel, aluminium, cement, paper, fertilizers etc. and coal in the case of paper, cement, steel, etc., (ii) demand constraint in the case of textiles and a number of engineering industries like railway wagons, commercial vehicles, agricultural tractors, earth moving equipment etc., and (iii) equipment break-downs and operational problems in certain industries.

8.6 It has been generally observed that the rate of industrial growth is directly related to the performance in the infrastructure sector like power, coal, railway, steel, etc., most important being the timely, availability of electricity in adequate quantity. In the case of electricity, even though the target of generation for 1985-86 was achieved, the growth was only 8.6 per cent as compared to 12 per cent in the previous year. The production of raw coal in 1985-86 increased by 4.6 per cent over the previous year; however, the production of coking coal declined by 3.4 per cent creating a serious problem for the

steel industry and necessitating substantial imports of coking coal. The performance of the Railways was satisfactory. However, some industries like cement, steel and fertilizers faced bottlenecks in regard to rail movement.

9.7 In 1985-86, the Government initiated a number of measures aimed at removing the constraints on industrial growth and providing a more congenial environment for the development of industries in the country. The specific changes made in industrial policy and procedures reflected the recommendations made by a number of high level committees set up by the Government. In the area of Licencing Policy, twenty five broad categories of industries were delicensed in March 1985. Such undertakings need not now obtain licences under the Industries (Development and Regulation) Act provided they do not fall within the purview of the Monopolies and Restrictive Trade Practices (MRTP) Act or Foreign Exchange Regulation Act (FERA), are not located within specified urban areas and the items manufactured are not reserved for the small scale sector. In such cases, only registration with the Secretariat of Industrial Approvals would be sufficient. Delicensing was extended to 82 bulk drugs and related formulations and to MRTP and FERA Companies located in Centrally declared backward areas for 22 out of 27 industries exempted from Sections 21 and 22 of the MRTP Act.

9.8 The facility of 'Broad-banding' was accorded to a number of industries within the ambit of industrial licensing, in order to allow for rapid changes in product mix to adjust to changing conditions of demand, technology etc. 'Broad banding' was extended in stages and covered over 82 groups of industries by the end of 1985-86. These include steel pipes and tubes, metallurgical, earth moving and agricultural machinery, auto-ancillaries and instruments, diesel engines, aerial ropeways, marine freight containers, railway wagons and coaches, vacuum and air brakes, fabricated steel structures, offshore platforms, cranes, automotive industry, chemical, pharmaceutical and fertilizer machinery, machine tools, typewriters, material handling equipment, air and gas compressors, power driven pumps, air conditioning and refrigeration equipment for non-industrial uses, compressors for domestic and industrial air conditioning and refrigeration, electrical engineering items (Motors/alternators/generators, transformers, circuit-brakers, turbines, furnaces, electrical welding equipment, isolators, switches, contactors, storage batteries, electric lamps, relays, capacitors and rectifiers), electronic items (entertainment electronics, electronic toys, computer peripherals, electronic test and measuring instruments, discrete semi-conductor devices and electronic private automatic branch exchanges—EPABX based on C-DOT technology), paper and pulp, particle board etc., synthetic fibres, glass hollow-ware items and electrical cables, wires, etc. not used for telecommunication purposes.

9.9 The Government also introduced a scheme of capacity re-endorsement which would be applicable to all licensed units which have achieved 80 per cent or more of licensed capacity in any of the five years

preceding 31st March, 1985. The scheme would not apply to MRTP/FERA companies engaged in the production of non-Appendix I items, industries producing items reserved for the small scale sector, certain industries facing acute shortage of raw materials or infrastructural inputs and industries located in specified urban locales as well as those posing high pollution problems. The re-endorsement of licenced capacity would be to the extent of the highest production achieved during any one of the previous five years plus one-third thereof. Where production exceeds the re-endorsed capacity, the unit will be eligible for further re-endorsement in subsequent years to the extent of production already achieved plus one-third thereof. In cases where units are operating at uneconomic scales even after re-endorsement of capacity, they may request for expansion of capacity to at least economic scales. The scheme would be valid for the Seventh Plan period (1985—90). The applicability of the scheme to drugs and pharmaceuticals industry would be subject to certain specified ratio parameters. In the case of industrial units where modernisation/replacement or renovation would result in increase of licenced capacity to the extent of 50 per cent, a simplified procedure of approval has been introduced where by locational constraints would also not be applied. With a view to reducing the restrictions on entry into high priority industrial areas and also improving the competitiveness of Indian Industry, various measures were taken to rationalize the MRTP Act. These included, upward revision of the asset threshold criterion of MRTP Act from Rs. 20 crores in 1969 to Rs. 100 crores in March 1985. A notification was issued in May 1985 exempting MRTP Companies in 27 specific industries from sections 21 and 22 of the MRTP Act, thereby enabling them to directly seek a licence under the IDR Act without first obtaining prior and separate clearances from the Department of Company Affairs for setting up a new project for substantial expansion. The revised and expanded list of Appendix I industries, notified in December, 1985 specifies 30 broad groups of industries wherein MRTP and FERA companies are allowed entry, provided the concerned items of manufacture are not specifically reserved for the small scale or public sector. In the case of non-Appendix I industries, MRTP and FERA companies will continue to be permitted entry so long as the products are predominantly for export i.e., involving an export obligation of 60 per cent in normal cases and 75 per cent in the case of items reserved for the small scale sector. In the case of backward areas the criteria of export obligation for MRTP/FERA Companies were reduced from 50 to 25 per cent in the case of category B & C districts and 30 per cent to nil in the case of Category A districts.

9.10 Apart from the above described measures aimed at general liberalisation of Industrial Policy, a number of specific measures were also initiated to alleviate the problems of various industries. These included the new Textile Policy announced on June 1985, follow up action in the form of liberalisation of licensing policy in regard to synthetic yarns and fibres, broad banding in respect of filament yarn/staple fibre sectors and changes in fiscal levies on

textiles, the long term policy for augmenting supply of sugar-cane to the sugar industry and permitting a higher proportion of sugar sale in the open market and creation of a highly liberalised policy framework for development of the electronics industry including liberal import of technology and foreign collaboration to upgrade the technology base of the industry in the country. A Long Term Fiscal Policy was also adopted in December, 1985.

#### *Annual Plan 1986-87*

9.11 The Annual Plan 1986-87 has been formulated keeping in view the objectives, priorities and programme thrusts of the Seventh Five Year Plan and the strategy of development outlined therein. Considerable emphasis has been placed on improving the performance of the public enterprises and productivity indices have been identified for various public sector industries and these would be monitored along with the physical production targets. Suitable outlays have been provided for on-going projects in order to ensure their timely completion. Greater stress has been laid on programmes for modernisation, upgradation of product as well as process technologies, replacement and renewals and installation of balancing facilities whichever necessary so as to maximise production from existing capacity and thereby increase not only the quantity and quality of industrial output in the country, but also the productivity levels in various industries. Specific outlays have been provided for science and technology schemes, considering the importance accorded to science and technology in the Seventh Plan strategy for development. Because of large commitments for essential on-going projects and the constraint on resources, an extremely selective approach has been followed towards new starts. However, taking into account the long term development requirements of the economy and the need to make timely entry into 'sunrise industries' and areas of future growth suitable provisions have been made for selected new starts in thrust areas like electronics.

9.12 An outlay of Rs. 4278 crores has been provided in the Central Sector for large and medium industrial and mineral projects, excluding coal and petroleum which form part of the energy sector plan. Of this, budgetary support is of the order of Rs. 2881 crores; the rest of the outlay of Rs. 1397 crores is to be met through internal resources of public enterprises and extra budgetary resources. The details of the outlays provided for Central Ministries/Departments are given in Annexure 9.1.

9.13 In accordance with the priority attached to the augmentation of output in the infrastructural and basic industries, over 66 per cent of the outlay for

industrial and mineral schemes in the Central sector is accounted for by steel, non-ferrous metals and fertilizers. The outlays provided for important industries are indicated below :

Industry	Outlay for 1986-87 (Rs. crores)
Iron and Steel	1350
Fertilizers	875
Non-ferrous metals	630
Chemicals and Petrochemicals	270
Electronics	122
Cement	83
Paper and Newsprint	82
Textiles	46
Drugs & Pharmaceuticals	12

9.14 An outlay of Rs. 531 crores has been provided for the industrial and mineral projects in the Plans of the States and Union Territories, the details of which are given in Annexure 9.2. A major portion of the outlay provided for the industry and minerals sector in the Plans of the States and Union Territories is towards augmentation of the share capital of the State Institutions like industrial development corporations, financial corporations, regional development corporations, infrastructural development corporations etc., in order to finance their activities in the field of industrial promotion and setting up of industries in the public and joint sectors. Special emphasis has been placed on the need to increase capacity utilisation and to maximise output from the existing assets, through removal of infrastructural constraints, modernisation, technological upgradation and improvement in productivity. Augmentation of infrastructural facilities has also been stressed upon so as to provide the basic framework for rapid and sustained industrial growth in the States. In view of the resource constraint, stringent norms of viability have to be applied in the selection of new projects. While capital intensive and long gestation projects are to be avoided in general, special attention would be given to employment oriented, short-gestation projects based on local raw materials and skills. In the mineral sector, adequate emphasis would be on undertaking geological surveys and exploration activities by the concerned organisations. The Plan discussions also underscored the need for speedy and effective implementation of Plan projects through regular and systematic monitoring.

9.15 The capacity and production targets for selected industries for 1986-87 along with achievements in 1984-85 and 1985-86 are detailed in Annexure 9.3.

9.16 The primary thrust of the Union Budget for 1986-87 is on implementing the various elements of the Long Term Fiscal Policy, especially in regard to streamlining the system of direct and indirect taxation in the country. In the area of direct taxes, a funding scheme allowing deduction to the extent of 20 per cent of the profits in lieu of the investment allowance

scheme, streamlining and simplifying of capital gains taxation and wealth taxation and introduction of the system of allowing depreciation in respect of block assets instead of individual assets are some of the important measures which are expected to stimulate investment in industry. It has also been proposed to transfer part of the benefit of tax reduction on export profits, to the supporting manufacturers. A 'venture fund' (financed by a 5 per cent levy on payments for purchase of technology from abroad, royalty payments etc.) would also be set up to promote indigenous technology.

9.17 As part of the long term policy a major over-haul of the existing system of excise taxation is envisaged so as to reduce the cascading effects of multi-point excise levies and thus help in reducing costs and prices to the consumer. The scheme of Modified Value Added Tax (MODVAT) is being introduced in stages from 1st March 1986 whereby the present system of proforma credit would be extended to all excisable commodities, excepting a few like petroleum, tobacco and textiles. The introduction of MODVAT is expected to decrease the cost of the final product considerably through the availability of instant credit of duties paid on inputs and consequential reduction of interest costs. With a view to facilitate the healthy growth of the small scale units and prevent unnecessary fragmentation, a new scheme of concessions in respect of excise duty has been proposed. Further, proforma credit under MODVAT scheme to the extent of notional normal duty would be available to the small scale sector units which would have paid only concessional duty. With a view to provide incentives for production of edible oils, especially oils from rice bran, oil cakes and cotton seeds, excise duty relief of varying order has been proposed. Further, various concessions in the form of reduction or exemption from export duty, reduction in import duty on specific raw materials and machinery etc., have been provided to help exports and export production in case of items like garments, unmanufactured tobacco, cigars, marine products, footwear and gems and jewellery. Excise duty exemptions have been offered to the handloom sector for use of blended polyester cotton/viscose yarn, to the woollen textile industry for certain cheaper items and to the drugs and pharmaceuticals industry for 41 additional life saving formulations.

9.18 A number of policy measures have been taken in the recent past to impart a momentum to industrial growth. While these measures have generally been welcomed by the different sections of the society, including captains of the industry, it would be necessary to review them from time to time and take appropriate corrective measures.

9.19 Considering the need for speedier and more efficient implementation of projects in the Central Sector and for reducing slippages and thereby minimising cost escalations, a Council on Central Projects has been set up in the Ministry of Programme implementation. This council, which includes experts from the private sector also, would monitor the implementation, remove bottlenecks and evolve methods for completing Central Projects on schedule.

9.20 Taking into consideration the favourable effects of the liberalisation policies on the investment climate in the country, the likelihood of a more efficient performance by the infrastructure sector, especially power, and the steady growth trend shown by the industry, a growth rate of at least 7 per cent in industrial production is envisaged for 1986-87.

9.21 The development programmes of major industries for 1986-87 are discussed in the following paragraphs :

#### *Iron Ore*

9.22 The production target of iron ore envisaged for 1985-86 was 48.15 million tonnes comprising 19.00 million tonnes for domestic consumption, 29.15 million tonnes for export (18 million tonnes of ore by MMTC, 9.50 million tonnes of ore by Goan Shippers, and 1.65 million tonnes of concentrates from Kudremukh). The production is estimated to be around 45.50 million tonnes and exports around 29.40 million tonnes (16.40 million tonnes by MMTC and 11.00 million tonnes by Goan Shippers and 2.00 million tonnes of concentrates from Kudremukh).

9.23 A production target of 52.10 million tonnes including 3.10 million tonnes of concentrates from Kudremukh has been fixed for 1986-87. This would cater to the domestic requirement of 20.00 million tonnes of ore and anticipated exports of 19.00 million tonnes by MMTC, 10.00 million tonnes by Goan Shippers and 2.00 million tonnes of concentrates from Kudremukh. The balance of 1.10 million tonnes of concentrates would be utilised for pellet production at the newly commissioned pellet plant of Kudremukh Iron Ore Co. Ltd. at Mangalore.

9.24 The fines ore handling plant at Bailadilla—5 mine is now expected to be completed by December, 1986. The new mine at Bailadilla—11C is likely to be completed in June 1987, considerably behind the original schedule of April, 1985.

9.25 An outlay of Rs. 35.57 crores has been provided in the Annual Plan 1986-87 of the Department of Steel for various projects under ferrous minerals.

#### *Steel*

9.26 The production of saleable steel in 1985-86 is estimated at 9.87 million tonnes against the target of 9.80 million tonnes. The Steel Authority of India Limited (including IISCO) and TISCO exceeded the targets in respect of saleable steel although there were shortfalls in the production of hot metal and ingot steel. The total production of saleable steel recorded a growth of 12.3 per cent over the previous year. The financial performance of SAIL, excluding IISCO, was quite good. However, IISCO continued to incur heavy losses in spite of an increase in production.

9.27 By and large, the demand for steel during 1985-86 was adequately met and the stocks of finished steel with the main producers which had shown an

upward trend till December, 1985, started coming down due to increase in the demand for domestic flat products (plates and sheets) during the later part of the year arising out of the change in the import duty structure. The stock of finished steel at the end of March 1986 was at reasonable levels. Judicious import of billets for conversion by the secondary producers was resorted to so as to ensure adequate availability of bars and rods for the construction sector.

9.28 The demand for finished steel for 1986-87 has been estimated at 11.9 million tonnes. The target of saleable steel production has been fixed at 11.06 million tonnes and the gap would have to be met through imports. Efforts would continue to produce higher value and specialised categories of steel, e.g. LPG and API grades of flat products EDD grade, electrical steel sheets, high tensile quality of structurals and rails, etc.

9.29 There was a decrease in the ash content of indigenous coal due to delinking of offending mines, but indigenous supply of coking coal during 1985-86 fell short of the mutually agreed targets between SAIL and Coal India, necessitating imports of more than 2 million tonnes. The lower ash content of the coal blend helped to decrease the consumption of coke in blast furnaces by four per cent and that of energy per tonne of saleable steel by five per cent. During 1986-87 the shortfall in the supply of indigenous coking coal is estimated at 3.6 million tonnes including 0.5 million tonnes for TISCO. Measures would need to be taken to augment port handling and inland transportation of imported coking coal.

9.30 The availability of power from the State Grids and DVC was the major constraint in the case of Rourkela Steel Plant and to a lesser extent in the case of Bokaro and Durgapur plants. Captive generation of power by the Steel Plants was also less than optimum. In order to achieve the production targets set for 1986-87, it would be essential to ensure adequate power supply to the steel plants, partly from the State Electricity Boards and partly through improvements in the captive generation of the public sector steel plants. The commissioning schedules of the captive power plants would need to be vigorously followed so as to avoid further slippages.

9.31 Project implementation in the steel sector continues to be a cause for serious concern, with further slippages in the commissioning of major projects viz., Visakhapatnam Steel Plant (VSP), second stage of the 4 MT expansion at Bhilai additional coiling yard and cold Rolling Mill at Bokaro and Captive Power Plants at Durgapur, Bokaro and Rourkela. The progress in the implementation of schemes associated with the VSP viz., railway line, coal washeries, water supply etc., also needs substantial acceleration to match the revised commissioning schedule.

9.32 The Annual Plan 1986-87 provides an outlay of Rs. 1314.43 cores for the various schemes under Iron and Steel with a budgetary support of Rs. 694.34 crores. Adequate provision has been made for VSP,

4 MT. Expansion of Bokaro and Bhilai, captive power plants at Rourkela, Durgapur and Bokaro. The modernisation proposals of Durgapur and Rourkela would need to be processed urgently in order to take up implementation of these schemes at the earliest.

### *Non-Ferrous Metals*

#### *Aluminium*

9.33 Production of aluminium in 1985-86 is estimated at around 2,65,000 tonnes as against the target of 3,00,000 tonnes. The shortfall was mainly due to inadequate availability of power. The overall utilisation of smelter capacity would be around 73.2 per cent in 1985-86 compared to 76.0 per cent in 1984-85. The gap between demand and supply of aluminium in 1985-86 was met through imports of about 50,000 tonnes. Keeping in view the availability of power a production target of 2,90,000 tonnes has been fixed for 1986-87.

9.34 The construction of a new mine at Gandhamardhan in Orissa was continued by BALCO. This project would make available bauxite to the Korba Smelter as the present sources are fast depleting. The project is expected to be completed during 1987. BALCO has also taken in hand, the setting up of a captive power plant of 270 MW capacity at Korba to insulate the aluminium smelter from the vagaries of the grid power supply. The project is expected to be completed in 1988.

9.35 The National Aluminium Company is setting up a new alumina/aluminium complex at Orissa comprising an alumina plant of 8 lakh tonnes per annum capacity and an aluminium smelter of 2,18,000 tonnes per annum capacity. A captive power plant of 600 MW capacity is also being set up for this project. The project is in an advanced stage of construction and is expected to be completed during 1987.

9.36 The Annual Plan provides an outlay of Rs. 144.97 crores for the various schemes of Bharat Aluminium Company and Rs. 380.40 crores for the National Aluminium Company.

#### *Copper*

9.37 The production of blister copper in 1985-86 is estimated at around 33,500 tonnes against the target of 44,000 tonnes. Capacity utilisation in 1985-86 is placed at about 70 per cent compared to 86 per cent during the previous year. The shortfall in production as compared to the target was due to simultaneous shutdown of both smelters for major overhauling work for about 2½ months. Production of refined copper in 1985-86 is estimated at around 29,600 tonnes against the target of 21,150 tonnes.

9.38 The demand supply gap for copper continued to be met through imports. About 62,000 tonnes of copper was imported by MMTC during 1985-86. The demand for copper for 1986-87 has been estimated at 1,22,400 tonnes. Taking into account

the likely availability of power etc., target of 44,000 tonnes of blister copper and 40,000 tonnes of refined copper have been set for 1986-87. The gap in demand would be met through imports.

9.39 The Hindustan Copper Limited had taken up the installation of  $2 \times 10$  MW gas turbine sets at Khetri Copper Complex to augment captive power generation capacity. The project has since been completed and the production started in September 1985. The implementation of the schemes for modernisation and debottlenecking of smelters/refineries at Ghatsila and Khetri has also been taken up.

9.40 An outlay of Rs. 17.42 crores has been provided for 1986-87 for the various schemes of Hindustan Copper Limited.

#### *Zinc and Lead*

9.41 The production of zinc during 1985-86 is estimated at around 72,800 tonnes as against the target of 69,500 tonnes. This represents a growth of 26.4 per cent over the previous year. The overall capacity utilisation of zinc smelters was 76 per cent.

9.42 Production of lead during 1985-86 is expected at 17,200 tonnes against the target of 23,200 tonnes. However, this is 21.1 per cent more than the production in the previous year. The shortfall in production as compared to the target was mainly due to problems relating to supplies of lead concentrates, power shortage and teething problems faced by the expanded smelter at Vizag.

9.43. The gap in the demand supply balance for lead and zinc continued to be bridged through imports. Around 55,000 tonnes of zinc and 38,000 tonnes of primary lead were imported by MMTC during 1985-86. For 1986-87, the demand for zinc and lead has been estimated at 142,600 tonnes and 68,100 tonnes respectively. The production targets have been set at 70,000 tonnes and 22,600 tonnes respectively.

9.44 The Annual Plan 1986-87 provides an outlay of Rs. 24.80 crores for Hindustan Zinc Limited, of which Rs. 19.00 crores are to be met through internal resources of the undertaking.

#### *Engineering Industries*

9.45 The demand for output of the engineering industry is to a large extent derived demand depending upon the requirement of various sectors of industry, power, transport and other services. The level of production in the engineering industry thus depends upon the resources available for investment with the user sectors and also the consumer demand which is related to purchasing power. The acceleration of power sector programme, particularly for thermal generation, has been associated with 26.5 per cent increase in boiler production, 9.8 per cent growth in the production of power transformers and 4.2 per cent rise in the output of electric motors in the large and medium industrial units in 1985-86.

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9.46 A substantial portion of the production of electric motors in the country is in the small scale sector, whose production statistics are not included in the trends analysed here. The increase in power generation capacity by more than 4000 MW in 1985-86 was supported largely by the domestic power equipment industry.

9.47 In the transport equipment sector, both the group transport segment and the personalised transport segment have been able to sustain high growth rates—21 per cent for cars, 37 per cent for two wheelers, 15 per cent for jeeps and 8 per cent for commercial vehicles. While the road transport industry maintained an all round buoyancy in offtake, production of rail transport equipment was either stagnant or showed only a marginal increase.

9.48 In the other capital goods industries, the performance varied from 4.00 per cent decline in machine tools industry to very high growth in a number of industries like road rollers (69 per cent), cement machinery (65 per cent), metallurgical machinery (32 per cent), boilers (25 per cent) and ball and roller bearings (27 per cent). On the other hand, machinery for mining, sugar, paper & pulp, chemical and pharmaceuticals and rubber industries and agricultural tractors showed negative growth rates primarily due to demand constraint.

9.49 The Department of Public Enterprises (DPE) looks after 38 public sector units of which 26 units belong to the engineering sector. The Annual Plan 1985-86 targetted an overall growth in output of 26 per cent for the units under DPE. The estimated growth rate is 17 per cent. The engineering units under DPE are estimated to achieve a growth of 18 per cent against a target of 24.6 per cent. While these trends are reported in terms of value of production, these could be taken as fairly representative of the physical growth since the engineering industry has maintained a general stability in prices under pressure of sharp increase in capacity, a stable demand and substantial imports.

9.50 The manufacture of the first indigenous 500 MW thermal turbo-generator unit by BHEL for NTPC is in advanced stage. Maruti Udyog exceeded the production target for vehicles by 25 per cent, and has since come up with an improved model of car. HMT and a number of other units have taken up the manufacture of NC and CNC machine tools in a big way so as to bridge the technological gap and make available state-of-the art machine tools to the indigenous industry. The 30 lakh CKM jelly filled cables project of Hindustan Cables Limited at Hyderabad commenced production during 1985-86.

9.51 Many of the engineering units under the erstwhile Department of Heavy Industry have been incurring losses continuously. It is proposed to re-group a number of such units under two holding companies. This should enable formulation of a coordinated programme for shedding some of the product lines and taking up new products on their joint strength. As regards Scooters India Limited, which is incurring



substantial losses, an action plan to improve its working is under consideration. Instrumentation Limited has been facing severe competition, even from other public sector units manufacturing controls and instrumentation viz., Bharat Heavy Electricals (BHEL) and Electronics Corporation of India Ltd. (ECIL). A programme for rationalising the business areas of these three companies engaged in the manufacture of instrumentation systems is being drawn up, under the aegis of Bureau of Public Enterprises.

9.52 An outlay of Rs. 409.00 crores has been provided in the Annual Plan 1986-87 for the Department of Public Enterprises. Of this, Rs. 176.04 crores would be met out of internal and extra budgetary resources.

#### *Ship Building and Ship Repair Industry*

9.53 Hindustan Shipyard Ltd. (HSL) achieved an output of 77,400 DWT in 1985-86, the highest so far achieved by this yard. The order book position of HSL at present is not sufficient to fully utilise the capacity of the yard which is under modernisation and expansion. Efforts would need to be intensified for securing additional orders for the shipyard for undertaking series production. The output of Cochin Shipyard Ltd. (CSL) during 1985-86 was 46,114 DWT and the target for 1986-87 has been set at 45,000 DWT. The order book position of CSL is very lean and without additional orders for ships, the capacity of the yard will continue to be under-utilised. The shipyard is planning to take up production of oil tankers of 86,000 DWT capacity, for which design collaboration has been entered into. The keel for the first tanker is planned to be laid in November, 1986.

9.54 The expansion/modernisation programme of HSL which was scheduled to be commissioned by March, 1986 was delayed by a few months. Excepting some portion of the covered building dock, almost all the work connected with the project had been completed.

9.55 An outlay of Rs. 26.80 crores has been provided in the Annual Plan 1986-87 for ship building and ship repairs. This includes Rs. 8 crores for the Development Programme (Stage II) of HSL, and Rs. 6.41 crores for Development of Off-shore facilities at HSL.

#### *Fertilisers*

9.56 The capacity build up of the fertiliser industry outstripped the targets in 1985-86 in respect of both nitrogenous and phosphatic nutrients. In the case of nitrogenous nutrients, the installed capacity increased to 6.59 million tonnes against the target of 5.96 million tonnes. As regards phosphatic nutrients, the installed capacity was 1.75 million tonnes against the target of 1.61 million tonnes. The production of nitrogenous fertilisers at 4.33 million tonnes was marginally lower than the target of 4.42 million tonnes while that of phosphatic fertilisers at 1.43 million tonnes was higher than the target of 1.32 million tonnes.

9.57 The overall capacity utilisation of the industry in 1985-86 was 71 per cent in respect of nitrogenous fertilisers (compared to 74 per cent in 1984-85) and 90 per cent for phosphate fertilisers which was same as in 1984-85. While many fertiliser plants are either operating or are capable of operating at capacity utilisation level of around 80 per cent, the plants at Gorakhpur, Udyogmandal, Durgapur, Barauni, Namrup, Ramagundam, Talcher and Rourkela are operating at low levels of capacity utilisation, due to old machinery, defective designs, imbalances in equipment and inadequate/unstable power supply.

9.58 Commercial production of Phase I and II of the new gas-based project at Thal Vaishet (Maharashtra) commenced in March and June 1985 respectively, with a total installed capacity of 0.683 million tonnes per annum of nitrogen. The gas-based plant (installed capacity—0.668 million TPA of N) at Hazira (Gujarat) went into trial production in December, 1985. Both these units have two ammonia plants of 1350 TPD each, with matching urea capacity. Commercial production at Haldia is yet to commence, though trial production at the Ammonia, Urea and Methanol plants started in 1985.

9.59 The projects under implementation are Namrup III of Hindustan Fertiliser Corporation, Paradeep Phosphates Limited and Bijaipur unit of National Fertilisers Limited in the public sector, Aonla gas-based project of Indian Farmers Fertilisers Cooperative Limited (IFFCO) in the cooperative sector and Di-Ammonium Phosphate (DAP) plants of Hindustan Lever Limited (Haldia), Mangalore Chemicals and Fertilisers Limited (Mangalore), Godavari Fertilisers Limited (Kakinada), and Gujarat State Fertiliser Company (Sikka) and the nitrophosphate project of Gujarat Narmada Valley Fertiliser Company (at Bharuch), in the private sector.

9.60 With regard to the six new-gas based fertiliser projects based on gas available off the West Coast, preparatory work is under progress for the projects at Sawai Madhopur (Rajasthan) and Jagdishpur, Baramala and Shahjahanpur in Uttar Pradesh.

9.61 The capacity and production targets for fertiliser nutrients for 1986-87 have been set at 7.0 million tonnes and 5.18 million tonnes of Nitrogen and 2.13 million tonnes and 1.78 million tonnes of  $P_2O_5$  respectively.

9.62 The Annual Plan 1986-87 provides a total outlay of Rs. 875 crores for the public and cooperative sector fertiliser projects under the Department of Fertilisers. Substantial provision has been made for the new gas based fertiliser projects at Bijaipur (M.P.) in the public sector and at Aonla and Hazira in the cooperative sector. The other major provisions are for Paradeep Phosphates, caprolactam project of FACT and Namrup III project.

#### *Petrochemicals*

9.63 A review of the petrochemical industry indicates that the actual production during 1985-86 was



as per the targets fixed or even higher in respect of high Density Polyethylene, Polystyrene, Caprolactam, Linear Alkyl Benzene, Nylon Filament Yarn, Nylon Cord/Nylon Industrial Yarn, Polyester Staple Fibre, Polyester Filament yarn and Acrylic Fibres. Shortfalls are however, indicated in the case of Low Density Polyethylene, Polypropylene, Polyvinyl Chloride, Styrene Butadiene Rubber, Poly Butadiene Rubber, Acrylonitrile and Dimethylterephthalate (DMT) mainly due to power shortage, feed stock constraint and equipment break-downs. At Indian Petrochemicals Corporation Ltd. (IPCL), the production of Linear Alkyl Benzene, Acrylic Fibre, Ethylene Glycol, Ethylene Oxide, Benzene, Ethylene and Propylene was higher than targetted. Shortfalls are however estimated in the case of acrylonitrile, LDPE, Xylene, DMT, Polyvinyl Chloride, Polypropylene, Poly-butadiene Rubber, P-xylene and Acrylates due to man power shortage, equipment break-downs and feed-stock problems. The production of Polyester Filament Yarn at Petrofils Cooperative Limited also fell short of the target. At BRPL, production of xylenes and DMT was considerably lower than the target, mainly because of initial commissioning problems and also feed stock quality problems. Production of Benzene and Toluene at BPCL was lower than the targets because of market constraint.

9.64 The major project under implementation in 1986-87 is the Maharashtra Gas Cracker Complex (MGCC) which is on schedule. Outlays of Rs. 189.49 crores and Rs. 65.00 crores have been provided for petrochemical schemes for 1986-87 under the Department of Chemicals and Petro-chemicals and Ministry of Petroleum and Natural Gas respectively.

#### *Chemicals and Pesticides*

9.65 Against a capacity target of 9.66 lakh tonnes for 1985-86 for Caustic Soda, the achievement is estimated at 9.84 lakh tonnes. Additional capacity to the extent of 5.38 lakh tonnes had been licensed in order to meet the future demand. The production in 1985-86 was 7.34 lakh tonnes against the target of 7.00 lakh tonnes. The targets for capacity and production envisaged for 1986-87 are 9.98 and 7.95 lakh tonnes respectively.

9.66 The installed capacity for soda ash at the end of 1985-86 was equal to the target of 10.05 lakh tonnes. The production of 8.49 lakh tonnes was lower than the target of 9.34 lakh tonnes. For 1986-87, a production target of 9.80 lakh tonnes has been set, though no increase in capacity is anticipated.

9.67 The calcium carbide industry, being a power intensive industry, was seriously affected by frequent power failures in 1985-86. The production was 77,000 tonnes against the target of 140,000 tonnes and the previous year's production of 111,000 tonnes. For 1986-87, a production target of 100,000 tonnes has been set.

9.68. There are around 47 units manufacturing technical pesticides and over 500 units making formulations. The production in 1985-86 was 59,270 tonnes. Some additional capacity has been licensed to

encourage manufacture of later generation pesticides such as synthetic pyrethroids and wheat weedicides.

9.69. A production target of 66,000 tonnes of pesticides has been set for 1986-87.

#### *Cement*

9.70. The Annual Plan 1985-86 envisaged capacity target of 45 million tonnes for Cement which was attained. The production of cement has increased over the years and reached 33.10 million tonnes during 1985-86 as against 30.17 million tonnes in 1984-85. The production achieved during 1985-86 was however, below the target of 34 million tonnes. The main constraints were inadequate availability of power in the major cement producing states of Rajasthan, Gujarat, Tamil Nadu and Karnataka, strikes/lock outs in some of the major cement producing units, difficulties in the availability of wagons for movement of coal and cement and delay in implementing the new/expansion programmes. The cement manufacturing units have been advised to instal captive power plants to meet about 40% of their power requirements.

9.71 The targets of Capacity and Production for 1986-87 have been fixed at 51 and 37 million tonnes respectively.

9.72 The policy of partial de-control of cement which was introduced in February 1982 resulted in a step up in investment in the cement industry and increase in the production of cement. Further liberalisation in the policy of de-control of cement was announced in June 1985. The levy quota of cement was brought down from 65 per cent of installed capacity to 60 per cent of actual production for old units and from 45 per cent of the installed capacity to 40 per cent of the actual production for new and sick units.

9.73 The total installed capacity of 9 units of Cement Corporation of India (CCI) was 2.72 million tonnes. Against the production target of 2.36 million tonnes for CCI for 1985-86 the actual production during the year 1985-86 was 2 million tonnes. The shortfall was mainly due to shortage of power and inadequate availability of railway wagons which affected production in the Southern plants at Kurkunta and Yerraguntla. A total production of 3 million tonnes is envisaged from the CCI units in 1986-87.

9.74 The CCI is presently implementing two one million tonnes projects, viz., Nayagaon expansion in Madhya Pradesh and Yerraguntla expansion in Andhra Pradesh. The former is likely to be commissioned by the second quarter of 1987 while the latter is scheduled to be completed by the end of 1986. The project at Tandur in Madhya Pradesh has already been commissioned.

9.75 The Annual Plan 1986-87 provides an outlay of Rs. 83.00 crores for the various projects of CCI.

## Textiles

9.76 The production target for cloth was fixed at 12600 million metres for 1985-86 comprising 4000 million metres by the organised sector and 8600 million metres by the decentralised powerloom and handloom sectors. Though the decentralised sector achieved the target, a shortfall of about 600 million metres is estimated in the organised sector. The total production is estimated around 12,000 million metres. As against the target of production of yarn of 1425 million kgs., the achievement was 1473 million kgs.

9.77 The production of cloth by 103 nationalised mills of the National Textile Corporation (NTC) is estimated at 810 million metres against the target of 845 million metres. The production of market yarn by these mills is estimated at 65 million kgs. against the target of 80.5 million kgs. The production of cloth in the 22 managed mills is estimated to be at the targetted level of 19.4 million metres while production of yarn for market would be around 15 million kgs. against the target of 17.3 million kgs. The NTC is estimated to have incurred a loss of about Rs. 120 crores in its nationalised mills and Rs. 40 crores in the managed mills.

9.78 The textile industry has been passing through a crisis for the last few years. A new policy was introduced in June, 1985. This was followed by a number of measures like economy of scale in synthetic fibre manufacturing units, reduction in excise duty on Polyester staple fibre and its blended products, broad banding of the industry etc. to reduce the price of raw material and boost consumption. While the full impact of these measures is yet to be realised, it is generally felt that consumption has not been picking up to the desired extent. The industry is saddled with the problem of obsolescence of machinery and technology. Further, the production capacity of the industry as a whole (including handlooms and power loom sectors), is much more than can be absorbed by the market. The consequential effect is under-utilisation of capacity, high cost of production and low profitability. In addition to these, NTC is also beset with problems of management. The immediate needs of the textile industry are faster modernisation and rationalisation with measures for rehabilitating the resultant surplus labour, including creation of a fund for rehabilitation of retrenched work force, effective and timely monitoring of sickness, quick decision regarding rehabilitation/closure of sick and marginal units and formulation and effective implementation of a pragmatic export policy.

9.79 The production targets set for 1986-87 are 13000 million metres of cloth and 1500 million kgs. of yarn.

## Jute Industry

9.80 The jute industry has been facing serious difficulties for the last few years due to successive crop failures and consequent high prices on the one hand and old machinery and obsolete technology on

the other. This forced a number of units to close down. In 1985-86 there was a substantial improvement due to a bumper crop and the resulting fall in prices of raw jute which were generally close to the support level. However, the performance of the jute industry was adversely affected by stiff competition from synthetics on the one hand and high cost of production of jute goods compared to its synthetics substitutes on the other. The export market has been declining and synthetics are affecting the demand in the domestic market as well. The production of jute goods in 1985-86 was 14 lakh tonnes against the target of 14.45 lakh tonnes. Exports were of the order of 3 lakh tonnes valued at Rs. 250-275 crores.

9.81 The National Jute Manufacturers Corporation which is managing six nationalised units has also been affected by the general adverse trends in the jute industry. To overcome this, a modernisation programme for five units in West Bengal at a cost of Rs. 28.34 crores is in progress and an amount of Rs. 20 crores has already been spent on it.

9.82 The target for 1986-87 has been set at 14.5 lakh tonnes of jute goods of which 3.25 lakh tonnes would be for export and the rest for domestic consumption.

## Paper and Paper Board

9.83 The paper industry had attained a capacity level of 24 lakh tonnes and production of 13.76 lakh tonnes by 1984-85. The Annual Plan 1985-86 envisaged a capacity target of 25.50 lakh tonnes based on the assumption that the Nowgong paper project with a capacity of 1 lakh tonnes per annum would be commissioned during 1985-86. However, only one of the paper machines of the Nowgong project could be commissioned during the year; the second machine was expected to be commissioned in April, 1986. Taking into account the additional capacity created in the small paper mills, it is estimated that the capacity target of 25.50 lakhs tonnes for 1985-86 would have been achieved. Against the production target of 14.25 lakh tonnes, the production achieved was 15.17 lakh tonnes. For 1986-87, capacity and production targets of 26.50 and 16.00 lakh tonnes respectively have been set.

9.84 Although, there has been no shortage of paper and all common varieties of paper are freely available in the market, the industry is facing serious problems due to irregular supply of cellulosic raw materials and other inputs such as power, coal etc. Besides, the demand for paper is not picking up in consonance with the increase in capacity, resulting in low capacity utilisation and low profitability.

9.85 In the public sector, the Nowgong Pulp & Paper Project of Hindustan Paper Corporation was partially commissioned, in October, 1985. The Nagaland Paper Project with an installed capacity of 33,000 tonnes per annum, commissioned in July 1982 is still facing serious problems in regard to power supply, malfunctioning of boilers and non-availability

of skilled personnel, resulting in low capacity utilisation. To improve the performance of the unit, a number of steps are under consideration, including the installation of new gas boiler, conversion of the existing coal-fired boiler to gas firing, installation of other balancing equipment etc. The commissioning schedule for the Cachar Paper Project, also in the North Eastern region, is April, 1987.

9.86 The Annual Plan 1986-87 provides an outlay of Rs. 60 crores for Hindustan Paper Corporation.

#### *Newsprint*

9.87 Indigenous production of newsprint is not sufficient and therefore large quantities of newsprint are being imported. In 1985-86 the indigenous production was 2.65 lakhs tonnes against the estimated demand of 4.8 lakh tonnes, necessitating substantial imports. The Seventh Plan envisages a capacity of 4.1 lakh tonnes and production of 3.40 lakhs tonnes in 1989-90. While no additional capacity is envisaged in the public sector, a number of letters of intent for manufacture of newsprint have been issued to the private sector. The progress in the implementation of three schemes would need to be closely monitored.

9.88 In 1986-87, no addition to capacity is envisaged and the production target has been set at 2.65 lakh tonnes.

#### *Drugs and Pharmaceuticals*

9.89 The production of bulk drugs and formulations in 1985-86 is estimated at Rs. 416 crores and Rs. 1945 crores respectively which is higher than the targets set for the year viz., Rs. 400 crores of bulk drugs and Rs. 1900 crores for formulations. In 1984-85, Rs. 377 crores worth of bulk drugs and Rs. 1827 crores worth of formulations were produced in the country. Though the trend of increasing production in a large number of essential drugs was maintained in 1985-86, the production of many other drugs in the organised sector was affected by cheaper production in the small scale sector arising out of increased imports of bulk drugs and intermediates in the wake of the liberalised import policy. The total import of drugs and intermediates increased from Rs. 163.34 crores (CIF) in 1983-84 to Rs. 250.62 crores in 1984-85. The export also increased from Rs. 161.82 crores to Rs. 270.45 crores during the same period.

9.90 During 1985-86, the prices of 39 bulk drugs and 1300 formulations were revised to take care of variations in input costs. Delicensing in favour of non-MRTP and non-FERA Companies was done in respect of 94 bulk drugs and intermediates. Clearance for use of 35 new drugs, including Ranitidine, Nifedipine etc., was also given. Based on the recommendations of the National Drugs and Pharmaceuticals Development Council, the Drug Policy (1978) is under revision.

9.91 There are five public sector undertakings in the Central sector manufacturing drugs and pharmaceuticals. An outlay of Rs. 12 crores has been provided in the Annual Plan 1986-87 for the schemes of these undertakings.

9.92 The targets for 1986-87 for bulk drugs and formulations have been set at Rs. 450 crores and Rs. 2000 crores respectively.

#### *Sugar*

9.93 The production of sugar from sugarcane increased from 5.9 million tonnes in 1983-84 season (October-September) to 6.1 million tonnes in 1984-85 and is expected to be 6.9 million tonnes in 1985-86.

9.94 There had been a reduction in the area under sugarcane from 31.10 lakh hectares during 1983-84 to 29.92 lakh hectares during 1984-85, resulting in decrease in production of sugarcane from 174 million tonnes to 173 million tonnes during the same period. The number of sugar factories in operation increased from 326 in 1983-84 to 339 in 1984-85. The total cane crushed during 1984-85 was 60 million tonnes as against 59 million tonnes during 1983-84. The recovery of sugar also increased from 10.03 per cent during 1983-84 to 10.24 per cent in 1984-85. In 1984-85, the minimum statutory price of sugarcane was fixed at Rs. 14 per quintal linked with the recovery of 8.5 per cent. This was increased to Rs. 16.50 per quintal linked with the recovery of 8.5 per cent in 1985-86.

9.95 The policy of partial de-control of sugar with dual pricing is continuing during 1985-86 season, but for the sugar year 1985-86, the ratio of levy and levy free sugar has been changed from 65 : 35 to 55 : 45. With the operation of release mechanism supported by imports, the price in the open market is being maintained at reasonable levels.

9.96 There is an urgent need for modernisation of the sugar industry for improving productivity of the industry. Efforts have to be made to forge more intimate links between the industry, R&D organisations and financial institutions to work out a concrete plan of action for improving productivity, upgradation of technology and proper maintenance of machinery and equipment.

9.97 During 1986-87, the installed capacity of sugar industry is envisaged to increase to 8.9 million tonnes and production to 8.4 million tonnes.

#### *Edible Oils and Vanaspati*

9.98 The production of edible oils in the country is short of demand and the gap between demand and production is being bridged through imports. The imported oils are sold direct to consumers through the public distribution system and a part is supplied to vanaspati manufacturing units. Efforts are being

made to increase indigenous production of vegetable/edible oils to reduce dependence on imports. A number of Centrally sponsored schemes are being implemented in this regard. In order to promote the consumption of non-conventional oils like soyabean oil, the Government have decided to allow manufacture and marketing of blends of soyabean oil with groundnut oil.

9.99 Against the estimated demand of 47 lakhs tonnes of edible oils in 1985-86, the indigenous production was 37 lakh tonnes and about 10 lakh tonnes of oil were imported. It is estimated that during 1986-87, about 50 lakh tonnes of oil may be required against which indigenous production would be around 41 million tonnes leaving a gap of 9 lakh tonnes to be met by imports.

9.100 The entire demand of vanaspati is being met from indigenous production. Substantial relief in excise duty on vanaspati granted in 1985-86 for use of specific minor oils is likely to lead to greater use of such oils in the production of vanaspati.

9.101 Against the installed capacity of 14.5 lakh tonnes in 1985-86, the production was 9.01 lakh tonnes. During 1986-87, the installed capacity is expected to go up to 15 lakh tonnes and production may be around 11 lakh tonnes.

#### *Leather Footwear Industry*

9.102 The requirements of leather footwear are met entirely from indigenous production and a part of the production is also exported. The leather footwear industry has great export potential. Leather shoe uppers and leather footwear are important items of foreign trade, earning considerable foreign exchange. As the manufacture of leather footwear is reserved for small scale sector, the bulk of the production is in the small scale sector and the units in the organised sector are mainly producing for export purposes. Sufficient capacity is already available in the country to meet the indigenous demand as well as the export needs. In 1985-86, 16 million pairs of leather footwear were produced in the organised sector. The targets of capacity and production of leather footwear for 1986-87 in the organised sector have been set at 25 million pairs and 18 million pairs respectively.

#### *Soaps & Synthetic Detergents*

9.103 The manufacture of laundry soap has been reserved exclusively for development in the small scale sector since 1967. More than 95% of the production of toilet soaps is in the organised sector, while detergents are being produced both in the organised and small scale sectors. The manufacture of detergents is also open to the large Houses and FERA and MRTP concerns. The production of soaps in the organised sector during 1984-85 was 3.77 lakh tonnes. The production of synthetic detergents in the organised sector was 1.74 lakh tonnes, an equal quantity being produced in the small scale sector also. The production of soap and synthetic detergents in the

organised sector during 1985-86 was around 3.69 lakh tonnes and 1.93 lakh tonnes respectively. During 1986-87 production of soaps and synthetic detergents in the organised sector is anticipated at 4.3 and 3.00 lakh tonnes respectively.

#### *Electronics*

9.104 The electronics Industry has a catalytic role to play in the restructuring of the industry in the country and in increasing production and productivity in key sectors of the economy like power, coal, oil, railways, communications and process industries. In consonance with the Seventh Plan targets, the Annual Plan 1985-86 envisaged a production target of Rs. 3055 crores for electronic goods. This was subsequently scaled down to Rs. 2636 crores and the estimated production is of the order of Rs. 2880 crores, showing a growth rate of about 39 per cent as compared to the average growth rate of 40 per cent per annum envisaged in the Seventh Plan. An important development was a fall in the prices of many electronics items, for example, the prices of computers declined by 50 per cent or even more and those of TV sets by around 10 per cent. The growth in physical terms was substantially higher than in financial terms. However, the growth in the value added was not satisfactory because of the high levels of imported components and CKD/SKD imports.

9.105 In 1985-86, the performance of the consumer electronics industry was satisfactory. Against the revised target of Rs. 676 crores, the anticipated production in 1985-86 is Rs. 1100 crores, the major contribution being that of TV and radio sets. The performance of the communications electronics sector was far from satisfactory with the production anticipated at Rs. 635 crores against the target of Rs. 830 crores. This was due to slippages in all the constituent sectors viz., mass communication, telecommunications, aerospace and defence. The anticipated production of components is Rs. 440 crores in 1985-86 the same as the revised target of Rs. 440 crores. This sector feeds the other segments of the electronic industry and as such plays a critical role in the development of electronics industry as a whole. The major problems of the electronics components industry are extremely limited market compared to international levels, high capital intensity, long gestation periods and high rate of obsolescence.

9.106 The export performance of the electronics industry was far from satisfactory. Seventy per cent of the exports were from the Electronics Export Zones. The production at the Santa Cruz Electronics Export Promoting Zone (SEEPZ) is estimated at Rs. 85 crores against the revised target of Rs. 110 crores and the production of Rs. 96 crores achieved in 1984-85. The major reason for the poor export performance is the fact that the export markets are highly competitive and sensitive to price and quality. Although there is good potential for export of software, the Indian exporters are yet to make a mark in the international market. It is proposed to set up software Export Technology parks to overcome this problem. Export through dedicated satellite link is also envisaged. The liberalisation and rationalisation of computer policy in

November, 1984 has given an impetus to the computer industry which recorded a growth rate of over 80 per cent in physical terms during 1985-86. The Department of Electronics is having regular meetings with the users and manufacturers to solve their problems and for monitoring the phased manufacturing programme to introduce indigenisation of components/sub-assemblies.

9.107 Semi Conductor Complex Limited (SCL) has established manufacture of LSI/VLSI devices and modules based on these. The devices for watches, clocks and pulse diallers are being produced and are being developed for the electronic switching system. The turnover of SCL in 1985-86 was more than Rs. 7 crores. The Computer Maintenance Corporation (CMC) has played a key role in implementing computerised railway reservation systems. Banking operations in the commercially intensive centres are being computerised with assistance from CMC. The Electronics Trade and Technology Development Corporation is now directly supporting electronics production through the MTB (Materials, Technology and Brand Name back up) Plan.

9.108 With a view to develop control instrumentation and industrial electronics, various programmes have been envisaged in the Annual Plan 1986-87. These include, (i) use of electronics in power generation, transmission and distribution, (ii) improvement in the communication and retro-fitting systems in the power plants of the State Electricity Boards so as to better their performance, (iii) introduction of an Integrated Control System (INCOS) at the Bhilai Steel Plant to improve productivity, achieve energy conservation and bring down the cost of production of steel (iv) the use of electronics and computer systems in the oil sector and (v) further expansion of use of computers in railway reservations. The fivefold growth of output in the electronics industry, envisaged in the Seventh Plan would also necessitate product specific manpower development by the industry in order to overcome the shortage of manpower in various categories. The Department of Electronics has identified requirements of manpower in various categories, for implementing planned manpower development programme. A council for Development of Materials for Electronics Industry has been set up to evolve an integrated programme for the development of strategic and critical electronics materials, including those required for defence.

9.109 The total production of electronics industry is expected to go up from Rs. 2880 crores in 1985-86 to Rs. 3600 in 1986-87 involving an overall growth of about 25 per cent.

9.110 A total outlay of Rs. 108 crores has been provided in the Annual Plan 1986-87 for various schemes under the Department of Electronics. This includes Rs. 8.30 crores from internal and extra budgetary resources—Rs. 6.00 crores of Computer Maintenance Corporation Limited and Rs. 2.3 crores of the Electronics Trade and Technology Development Corporation Limited.

### *Atomic Energy*

9.111 The programmes of atomic energy under the industry and minerals sector are mainly linked to nuclear power generation programmes. Some of the programmes are aimed at meeting the requirement of the other sectors of the economy such as application of radiation and radio isotopes in the field of industry, medicines and agriculture and consumer/electronic items.

9.112 The production of Heavy water at Baroda and Tuticorin in 1985-86 was broadly in line with the targets fixed for these plants. Shortfalls were there at Talcher and Kota Plants due to non-availability of steam and certain technical problems. Higher production is anticipated from these plants in 1986-87. The two major plants under construction namely Thal and Managuru are likely to start commercial production in February 1987 and April 1988 respectively.

9.113 Orissa Sand Complex being set up at Chattarpur in the Ganjam district of Orissa has further slipped and is now likely to be completed in 1986-87. The phase I of the Nuclear Fuel Complex is expected to be completed by April 1987. The Electronics Corporation of India Limited is engaged in the manufacture of instruments, components, control systems and computers for the projects of the Department of Atomic Energy and power and communication projects. It is also a major producer of consumer electronic products like colour and black and white TV sets, communication systems for the Post and Telegraphs Department etc.

9.114 An outlay of Rs. 252 crores (including Rs. 2.00 crores as internal and extra budgetary resources of the Electronics Corporation of India (Limited) has been provided for 1986-87 for the industrial and mineral schemes under the Department of Atomic Energy. An additional outlay of Rs. 6.93 crores for the Electronics Corporation of India, to be met entirely out of extra-budgetary resources has also since been agreed to.

## ANNEXURE 9.1

Outlays for Central Industrial and Mineral Projects : 1985-86 (Outlay and Revised Estimates) and 1986-87 (Plan Outlay)

## (SUMMARY STATEMENT)

(Rs. crores)

Ministries/Department	1985-86		1986-87 Plan Outlay
	Plan Outlay	Revised Estimates	
I. Department of Steel . . . . .	925.00	1501.56	1350.00
II. Department of Mines . . . . .	635.00	901.33	630.00
III. Ministry of Petroleum & Natural Gas (Petrochemical & Engg. Units) . . . . .	87.68	81.40	84.00
IV. Department of Fertilizers . . . . .	543.48	478.77	610.00
V. Department of Agriculture & Cooperation (Fertilizer Projects) . . . . .	240.00	211.29	265.00
VI. Department of Chemicals & Petrochemicals . . . . .	138.83	166.65	216.84
VII. Department of Public Enterprises . . . . .	341.84	476.45	409.60
VIII. Department of Industrial Development . . . . .	70.16	116.74	66.90
IX. Department of Surface Transport (Ship Building & Repair). . . . .	26.00	30.15	26.80
X. Deptt. of Electronics . . . . .	108.00	104.87	108.00
XI. Department of Atomic Energy . . . . .	240.00	275.77	252.00
XII. Ministry of Civil Supplies . . . . .	6.00	6.00	5.60
XIII. Department of Revenue . . . . .	2.00	1.83	1.00
XIV. Department of Economic Affairs (Mints & Presses) . . . . .	45.00	46.78	40.00
XV. Department of Economic Affairs (Banking Division) . . . . .	140.00	153.70	125.00
XVI. Ministry of Commerce (excluding Plantations) . . . . .	24.54	26.73	33.44
XVII. Department of Textiles . . . . .	41.74	29.62	45.75
XVIII. Department of Science & Industrial Research . . . . .	2.50	3.80	4.50
XIX. Department of Supply . . . . .	3.00	2.33	2.65
XX. Deptt., of Ocean Development . . . . .	1.00	0.30	1.00
<b>TOTAL . . . . .</b>	<b>3711.77</b>	<b>4616.07</b>	<b>4278.08</b>

Outlay for Central Industrial and Mineral Projects : 1985-86 (Outlay &amp; RE) and 1986-87 (Plan Outlay)

## DETAILED STATEMENT

I. DEPARTMENT OF STEEL . . . . .	925.00	1501.56	1350.00
A. Iron and Steel . . . . .	889.00	1462.26	1314.43
1. Steel Authority of India . . . . .	653.00	631.92	584.96
(i) Bhilai Steel Plant . . . . .	245.00	281.86	222.90
(ii) Rourkela Steel Plant . . . . .	105.00	87.00	74.50
(iii) Durgapur Steel Plant . . . . .	62.00	47.66	79.00
(iv) Alloy Steel Plant . . . . .	25.00	24.10	18.00
(v) Bokaro Steel Plant . . . . .	155.00	137.91	121.56
(vi) Salem Steel Plant . . . . .	4.00	3.40	3.00
(vii) R & D Centre for Iron & Steel . . . . .	10.00	9.00	13.00
(viii) Central Marketing Organisation . . . . .	8.00	5.27	6.00
(ix) Corporate Office & M.T.I. . . . .	1.74	2.15	3.00
(x) Indian Iron & Steel Company . . . . .	35.20	29.71	43.00

(Rs. crores)

	1985-86		1986-87 Plan Outlay
	Plan Outlay	Revised Estimates	
(xi) IISCO—Ujjain Pipe & Foundry Company . . . . .	0.80	0.35	0.90
(xii) Visvesvaraya Iron & Steel Company Limited . . . . .	1.26	1.99	0.10
2. Rashtriya Ispat Nigam Ltd. (Visakhapatnam Steel Plant) . . . . .	215.00	799.71	700.00
3. Vijayanagar Steel Limited . . . . .	1.00	1.00	0.87
4. Sponge Iron India Limited . . . . .	3.20	3.20	3.34
5. Neelachal Ispat Nigam . . . . .	1.00	0.86	0.61
6. Hindustan Steel Works Construction Limited . . . . .	3.00	5.00	4.00
7. Bharat Refractories Ltd. . . . .	6.90	5.96	7.00
8. Metallurgical & Engineering Consultants Limited . . . . .	3.30	4.50	1.03
9. Metal Scrap Trading Corporation Limited . . . . .	1.00	8.61	8.10
10. Tenughat Dam Project (Loan to Bihar Government) . . . . .	1.00	1.50	3.52
11. Mahanadi Reservoir Project (Loan to Madhya Pradesh Govern- ment) . . . . .	1.00	—	1.00
<b>B. Ferrous Minerals . . . . .</b>	<b>36.00</b>	<b>39.30</b>	<b>35.57</b>
12. National Mineral Development Corporation Limited . . . . .	17.37	20.02	20.00
13. Kudremukh Iron Ore Company Limited . . . . .	11.50	12.68	2.01
14. Manganese Ore India Limited . . . . .	1.48	1.45	4.32
15. Mineral Development Board . . . . .	0.65	0.65	0.87
16. Loan to Government of Karnataka for road and power schemes for Kudremukh Project . . . . .	5.00	4.50	7.37
17. Bird Group of Companies . . . . .	..	..	1.00
<b>II. DEPARTMENT OF MINES . . . . .</b>	<b>635.00</b>	<b>901.33</b>	<b>630.90</b>
1. Bharat Gold Mines . . . . .	4.00	4.00	3.55
2. Mineral Exploration Corporation Limited . . . . .	29.00	29.00	33.00
3. Bharat Aluminium Company Limited . . . . .	97.61	79.69	144.97
4. National Aluminium Company Limited . . . . .	412.00	694.50	380.40
5. Hindustan Copper Limited . . . . .	33.36	32.21	17.42
6. Hindustan Zinc Limited . . . . .	19.35	17.00	24.80
7. Geological Survey of India . . . . .	39.10	42.00	22.00
8. Indian Bureau of Mines . . . . .	2.33	2.30	2.20
9. S & T Programmes of other Organisations . . . . .	1.63	0.56	1.66
<b>III. MINISTRY OF PETROLEUM &amp; NATURAL GAS (Petrochemical &amp; Engineering Units) . . . . .</b>	<b>87.68</b>	<b>81.40</b>	<b>84.00</b>
<b>A. Petrochemical Units . . . . .</b>	<b>67.53</b>	<b>67.75</b>	<b>65.00</b>
1. Bongaigaon Refineries & Petrochemicals Limited . . . . .	42.93	47.06	40.00
2. Bharat Petroleum Corporation Limited . . . . .	12.50	6.57	4.00
3. Cochin Refineries Limited . . . . .	8.00	8.82	12.00
4. Indian Oil Corporation . . . . .	0.10	0.05	0.40
5. Madras Refineries Limited . . . . .	2.00	5.15	6.00
6. Hindustan Petroleum Corporation Limited . . . . .	2.00	0.10	2.60
<b>B. Engineering Units . . . . .</b>	<b>20.15</b>	<b>13.65</b>	<b>19.00</b>
7. Indo Burma Petroleum Company . . . . .	9.11	7.89	8.26
8. Balmer Lawrie Company . . . . .	5.53	4.26	5.74
9. Bridge Roof Company . . . . .	5.50	1.50	5.00
10. Biecco Lawrie & Company . . . . .	0.01	..	..

(Rs. crores)

	1985-86		1986-87
	Plan Outlay	Revised Estimates	Plan Outlay
<b>IV. DEPARTMENT OF FERTILIZERS</b>	<b>543.48</b>	<b>478.77</b>	<b>610.00</b>
1. Fertilizer Corporation of India	11.37	18.40	33.89
2. Fertilizers & Chemicals (Travancore) Limited	47.67	38.12	93.67
3. Pyrites Phosphates & Chemicals Limited	4.32	2.57	11.00
4. Rashtriya Chemicals & Fertilizers Limited	131.12	68.42	54.35
5. Hindustan Fertilizer Corporation Limited	64.53	86.10	70.11
6. Projects & Development India Limited	7.95	5.90	11.25
7. Paradeep Phosphates Limited	100.00	110.00	90.00
8. Madras Fertilizers Limited	10.00	2.00	10.00
9. National Institute of Fertilizer Technology	0.01	..	0.01
10. National Fertilizers Ltd.	161.51	142.26	230.62
11. Loans to Madhya Pradesh Government	5.00	5.00	5.00
12. Other Schemes	..	..	0.10
<b>V. DEPARTMENT OF AGRICULTURE AND COOPERATION (Fertilizer Projects)</b>	<b>240.00</b>	<b>211.29</b>	<b>275.00</b>
1. Krishak Bharati Cooperative and New IFFCO Projects	200.00	151.29	60.00
2. IFFCO's Aonla Project	40.00	60.00	205.00
<b>VI. DEPARTMENT OF CHEMICALS &amp; PETROCHEMICALS</b>	<b>138.83</b>	<b>166.65</b>	<b>216.84</b>
<b>A. Chemicals</b>	<b>31.05</b>	<b>34.17</b>	<b>15.35</b>
1. Hindustan Organic Chemicals Limited	26.75	30.67	11.50
2. Hindustan Insecticides Ltd.	4.30	3.50	3.85
<b>B. Drugs &amp; Pharmaceuticals Ltd.</b>	<b>19.46</b>	<b>10.18</b>	<b>12.00</b>
3. Indian Drugs & Pharmaceuticals Limited	4.62	2.00	4.00
4. Hindustan Antibiotics Limited	6.65	4.65	4.00
5. Smith Stanistreet Pharmaceuticals Limited	1.10	0.50	0.50
6. Bengal Chemicals & Pharmaceuticals Limited	2.50	1.03	2.00
7. Bengal Immunity Limited	3.50	2.00	1.50
8. Other Programmes	1.09	..	..
<b>C. Petrochemicals</b>	<b>88.32</b>	<b>122.30</b>	<b>189.49</b>
9. Indian Petrochemicals Corporation Limited	87.00	121.18	186.87
10. Petrofils Cooperative Limited	0.10	0.10	0.10
11. Central Institute of Plastic Engineering & Tools	0.77	0.77	2.02
12. Plastic Development Centre	0.45	0.25	0.50
<b>VII. DEPARTMENT OF PUBLIC ENTERPRISES</b>	<b>431.84</b>	<b>476.45</b>	<b>409.60</b>
1. Bharat Heavy Electricals Ltd.	58.50	58.96	50.00
2. HMT Limited	50.00	35.48	35.00
3. Heavy Engineering Corporation	9.00	9.00	10.00
4. Bharat Heavy Plates & Vessels Limited	6.00	5.00	6.00
5. Bharat Pumps & Compressors Ltd.	4.00	3.50	2.90
6. Braithwaite & Company Limited	2.50	1.00	2.00
7. Burn Standard & Company Ltd.	10.39	10.41	10.00
8. Bharat Brakes & Valves Limited	1.00	1.00	0.65



(Rs. crores)

	1985 86		1986-87 Plan Outlay
	Plan Outlay	Revised Estimates	
9. Bharat Wagon & Engineering Company Limited . . . . .	1 50	0 95	1 50
10. Engineering Projects (India) Ltd. . . . .	0 05	..	0 60
11. Hooghly Dock & Port Engineers Limited . . . . .	0 70	..	0 75
12. Jessops & Company Limited . . . . .	3 00	..	2 30
13. Lagan Jute Machinery Corporation Ltd. . . . .	1 27	0 63	1 00
14. Mining & Allied Machinery Corporation Limited . . . . .	3 00	2 00	2 50
15. Maruti Udyog Limited . . . . .	55.00	80 00	60.00
16. Richardson & Crudes Ltd. . . . .	1 00	2 52	3 00
17. Scooters India Limited . . . . .	1 00	1 00	0 70
18. Triveni Structurals Ltd. . . . .	1 00	0 20	1 00
19. Tunghabhadra Steel Products Ltd. . . . .	0 90	0 50	0 75
20. High Voltage Direct Current Transmission Project . . . . .	4 00	4 30	5 25
21. Bharat Process & Mechanical Engineering Limited . . . . .	0 65	0 65	..
22. National Instruments Ltd. . . . .	1 50	0 60	1 25
23. Hindustan Cables Limited . . . . .	28 80	28 80	16 00
24. Instrumentation Limited . . . . .	6 60	1 91	6 60
25. Bharat Ophthalmic Glass Ltd. . . . .	1 85	0 43	3 50
26. Cycle Corporation of India Ltd. . . . .	1 00	0 65	1 00
27. National Bicycle Corporation of India Limited . . . . .	1 00	1 00	1 00
28. Andrew Yule & Company Limited . . . . .	2 13	2 56	4 00
29. Bharat Leather Corporation of India . . . . .	2 00	..	0 40
30. Tannery and Footwear Corporation of India . . . . .	0 65	0 80	0 80
31. Cement Corporation of India . . . . .	83 00	85 30	83 00
32. Hindustan Paper Corporation . . . . .	70 35	92 12	60 00
33. Hindustan Salts Limited . . . . .	0 50	0 10	0 35
34. National Newsprint & Paper Mills Limited . . . . .	15 50	15 50	22 50
35. Hindustan Photofilms Manufacturing Company Limited . . . . .	2 00	24 82	11 00
36. Tyre Corporation of India . . . . .	1 00	2 50	1 70
VIII. DEPARTMENT OF INDUSTRIAL DEVELOPMENT. . . . .	70 16	110 74	66 90
1. Subsidy to new Industrial Units in selected backward areas. . . . .	60 00	110 00	58 20
2. Research Institutions & Other Programmes . . . . .	10 16	6 74	8 70
IX. DEPARTMENT OF SURFACE TRANSPORT (SHIPBUILDING & REPAIR) . . . . .	26 00	30 15	26 80
1. Hindustan Shipyard Ltd. . . . .	19 10	25 10	19 50
2. Cochin Shipyard Ltd. . . . .	2 85	2 80	3 50
3. Calcutta Port — Drydock etc. . . . .	2 00	2 00	2 35
4. Dredger Corporation of India Limited . . . . .	0 50	0 05	0 65
5. Others . . . . .	1 55	0 20	0 80
X. DEPARTMENT OF ELECTRONICS . . . . .	108 00	104 87	108 00
1) Electronics Trade & Technology Development Corporation. . . . .	3 40	1 00	3 30
2) Computer Maintenance Corporation Limited . . . . .	5 00	6 00	11 00
3) Semi Conductor Complex Ltd. (Including LSI/VLSI Development Programme) . . . . .	9 60	9 24	15 00
4) Society for Applied Microwave Electronics Engineering & Research (SAMEER) . . . . .	2 30	2 00	2 00
5) Development & Engineering programme of Digital & Electronics Switching System (CDOT) . . . . .	7 20	7 20	5 95

(Rs. crores)

	1985-86		1986-87
	Plan Outlay	Revised Estimates	Plan Outlay
(6) Systems Engineering Consultancy in Radar and C31 systems . . . . .	0.50	0.30	0.30
(7) Centre for advance studies in Electronics . . . . .	2.00	2.00	2.00
(8) Electromagnetic Interference/Electromagnetic compatibility (EMI/EMC) studies programme . . . . .	1.20	1.05	0.65
(9) Reliability Engineering Studies . . . . .	0.80	0.60	0.35
(10) Head Quarters . . . . .	1.50	1.00	4.50
(11) Special Components & Materials Development programme . . . . .	0.80	0.80	1.00
(12) National Silicon Facility . . . . .	5.45	4.70	2.60
(13) Standardisation, testing & quality control programme (S, T Q C) . . . . .	4.50	4.50	4.00
(14) Special manpower development programme . . . . .	0.34	0.34	0.99
(15) Centres for Excellence, social electronics, Regional Development centres . . . . .	1.66	1.66	1.00
(16) Centre for Electronics Design & Technology (CEDT) . . . . .	2.00	2.00	2.00
(17) Computer Literacy & Studies in Schools (Class) Programme . . . . .	4.00	3.43	4.00
(18) Electronic Development in Rural areas . . . . .	..	..	0.01
(19) Electronic Components Development Fund . . . . .	0.10	0.10	0.50
(20) Centre for R & D and Production of Power Semi-Conductor devices . . . . .	0.10	0.10	0.10
(21) National Centre for Software Technology (NCST) . . . . .	2.50	2.50	1.25
(22) National Informatics Centre . . . . .	18.00	18.09	20.00
(23) Computer Centre Programme . . . . .	2.00	2.00	2.00
(24) Software Development Programme . . . . .	2.00	2.00	1.50
(25) Centre for Development of Computer Mainframes . . . . .	10.00	10.00	1.00
(26) Fibre Optics Systems . . . . .	1.00	1.00	1.00
(27) Programmes for Special Manpower development for Computers . . . . .	3.50	3.50	3.50
(28) Industrial Electronics Promotion Programme (IEPP) . . . . .	4.00	4.00	3.00
(29) Centre for flexible manufacturing . . . . .	1.00	0.90	1.00
(30) National High Voltage Direct Current Transmission Project . . . . .	2.50	2.50	1.90
(31) Telematics Promotion & Development Programme . . . . .	1.00	0.97	1.00
(32) Fifth generation super mini computers . . . . .	0.30	0.26	1.20
(33) Advanced Technology in Computer Networking . . . . .	0.50	0.50	1.00
(34) Software Export Promotion Programme . . . . .	0.10	0.10	0.40
(35) Technology development Council Schemes . . . . .	3.00	3.00	3.00
(36) NRC National Radar Council Schemes (NRC) . . . . .	2.00	3.30	2.00
(37) National Micro electronics Council (NMC) Schemes . . . . .	2.00	2.00	2.00
(38) Instrument maintenance programme . . . . .	0.10	0.10	..
(39) Amateur Radio Activities . . . . .	0.05	0.05	..
<b>XI. DEPARTMENT OF ATOMIC ENERGY . . . . .</b>	<b>240.00</b>	<b>275.77</b>	<b>252.00</b>
1. Bhabha Atomic Rerearch Centre. . . . .	41.58	45.04	43.40
(a) Power Reactor Fuel Reprocessting Plant (PRFRE), Kalpakakam. . . . .	32.00	35.01	34.51
(b) PREFRE, Tarapur . . . . .	5.23	6.38	5.68
(c) Other Projects . . . . .	4.35	3.65	3.21
2. Heavy Water Projects . . . . .	151.70	197.17	162.16
(a) Heavy Water Project, Thal . . . . .	20.79	42.36	11.30
(b) Heavy Water Project, Manuguru . . . . .	109.50	144.85	127.78
(c) New Heavy Water Projects . . . . .	5.00	3.00	10.00
(d) Other Projects . . . . .	16.41	6.96	13.08
3. Nuclear Fuel Complex . . . . .	3.68	2.96	12.05

(Rs. crores)

	1985-86		1986-87 Plan Outlay
	Plan Outlay	Revised Estimates	
4. Atomic Minerals Division . . . . .	0.95	0.97	0.89
5. Indian Rare Earths Limited . . . . .	10.54	12.00	5.67
6. Electronics Corporation Limited . . . . .	11.24	11.24	14.12*
7. Uranium Corporation Ltd. . . . .	20.31	6.39	13.71
<b>XII. MINISTRY OF CIVIL SUPPLIES . . . . .</b>	<b>6.00</b>	<b>6.00</b>	<b>5.60</b>
1. Metric System of Weights & Measures . . . . .	0.65	0.65	0.20
2. Indian Standards Institution . . . . .	1.58	1.58	0.80
3. Measures for Consumers' Protection . . . . .	0.15	0.15	0.10
4. Development of Vegetable Oil & Vanaspati . . . . .	3.62	3.62	4.50
<b>XIII. MINISTRY OF FINANCE, DEPARTMENT OF REVENUE . . . . .</b>	<b>2.00</b>	<b>1.83</b>	<b>1.00</b>
Opium & Alkaloid Factories . . . . .	2.00	1.83	1.00
<b>XIV. MINISTRY OF FINANCE, DEPARTMENT OF ECONOMIC AFFAIRS (Mints &amp; Presses) . . . . .</b>	<b>45.00</b>	<b>46.78</b>	<b>40.00</b>
1. Indian Security Press, Nasik . . . . .	6.00	4.00	4.00
2. Security Printing Press, Hyderabad . . . . .	0.70	0.70	0.50
3. Currency Note Press, Nasik Road . . . . .	22.00	24.41	20.00
4. Bank Note Press, Dewas . . . . .	5.01	7.97	4.00
5. Security Paper Mills Hoshangabad . . . . .	2.20	0.95	0.50
6. Mints . . . . .	8.84	8.48	11.00
7. Feasibility Study . . . . .	0.25	0.27	..
<b>XV. MINISTRY OF FINANCE, DEPARTMENT OF ECONOMIC AFFAIRS (BANKING DIVISION) . . . . .</b>	<b>140.00</b>	<b>153.70</b>	<b>125.00</b>
1. Industrial Reconstruction Bank of India . . . . .	45.00	45.00	57.00
2. Industrial Development Bank of India . . . . .	46.84	60.10	7.69
3. Industrial Finance Corporation of India . . . . .	2.55	2.55	3.14
4. Industrial Credit & Investment Corporation of India . . . . .	5.61	6.05	7.17
5. Export-Import Bank of India . . . . .	40.00	40.00	35.00
6. Subscription to Share Capital of Nationalised Banks . . . . .	..	..	15.00
<b>XVI. MINISTRY OF COMMERCE . . . . .</b>	<b>24.54</b>	<b>26.73</b>	<b>33.44</b>
1. Agricultural Products Export Development Authority . . . . .	0.07	0.01	0.40
2. Export Processing Zones . . . . .	17.68	20.45	22.10
3. MITCO . . . . .	2.79	2.79	5.80
4. Marine Products Export Development Authority . . . . .	3.50	2.78	4.50
5. Others . . . . .	0.50	0.70	0.64
<b>XVII. DEPARTMENT OF TEXTILES . . . . .</b>	<b>41.74</b>	<b>29.62</b>	<b>45.75</b>
1. National Textile Corporation . . . . .	25.00	25.00	25.00
2. British India Corporation . . . . .	10.00	3.00	16.00
3. Textile Research Assns. . . . .	1.04	0.97	1.27
4. National Jute Manufacture Corporation . . . . .	5.00	5.00	3.00
5. Jute Reasearch Associations . . . . .	0.70	0.65	0.48
<b>XVIII. DEPARTMENT OF SCIENCE &amp; INDUSTRIAL RESEARCH . . . . .</b>	<b>2.50</b>	<b>3.80</b>	<b>4.50</b>
Central Electronics Limited . . . . .	2.50	3.80	4.50

\*Additional outlay of Rs. 6.93 crore, to be met out of extra budgetary resources has been agreed to so that total outlay is Rs. 21.05 Crores.

(Rs. crores)

	1985-86		1986-87 Plan Outlay
	Plan Outlay	Revised Estimates	
<b>XIX. DEPARTMENT OF SUPPLY</b>	3.00	2.33	2.65
1. National Test House	2.00	1.33	1.85
2. Expenditure met by CPWD	0.90	0.90	0.75
3. Director General of Supply	0.10	0.10	0.05
<b>XX DEPARTMENT OF OCEAN DEVELOPMENT</b>	1.00	0.30	1.00
Industrial & Mineral Programmes	1.00	0.30	1.00

## ANNEXURE 9.2

## Annual Plan : 1986-87 Outlays—States/Union Territories

## Annual Plan Outlay 1986-87

(Rs. lakhs)

States/Union Territories	Large & Medium Industries	Mining	Weights & Measures	Total
<i>States</i>				
Andhra Pradesh	3200	623	6	3829
Assam	1362	76	15	1453
Bihar	3468	550	12	4030
Gujarat	5315	500	26	5841
Haryana	342	15	6	363
Himachal Pradesh	350	20	4	374
Jammu & Kashmir	459	96	5	560
Karnataka	1800	56	1	1857
Kerala	2337	60	20	2417
Madhya Pradesh	1867	173	3	2043
Maharashtra	5790	80	..	5870
Manipur	220	12	3	235
Meghalaya	250	35	5	290
Nagaland	210	160	10	380
Orissa	2450	515	10	2975
Punjab	2090	6	2	2098
Rajasthan	1200	485	4	1689
Sikkim	90	32	5	127
Tamil Nadu	2578	460	..	3038
Tripura	125	2	5	132
Uttar Pradesh	7460	600	33	8093
West Bengal	4648	83	15	4746
<b>TOTAL (STATES)</b>	<b>47611</b>	<b>4639</b>	<b>190</b>	<b>52440</b>
<i>Union Territories</i>				
Andaman and Nicobar Islands	..	..	..	..
Arunachal Pradesh	23.00	2.50	6.00	31.50
Chandigarh	..	..	0.80	0.80
Dadra & Nagar Haveli	..	..	..	..
Delhi	90.00	118.00	10.00	218.00
Goa, Daman & Diu	230.00	5.00	4.00	239.00
Lakshadweep	..	1.00	1.00	2.00
Mizoram	30.00	15.00	4.00	49.00
Pondicherry	86.00	..	2.00	88.00
<b>TOTAL (UNION TERRITORIES)</b>	<b>459.00</b>	<b>141.00</b>	<b>27.80</b>	<b>628.30</b>
<b>GRAND TOTAL</b>	<b>48070.00</b>	<b>4780.50</b>	<b>217.80</b>	<b>53068.30</b>

## Capacity and Production for selected industries

Targets for 1986-87

Sl. No.	Industry	Unit	1984-85		Targets		1985-86		1986-87		Growth rate of Production	
			Actual		Targets		Actual/Anticipated		Targets		Production	
			Capacity	Production	Capacity	Production	Capacity	Production	Capacity	Production	1985-86 over 1984-85	1986-87 over 1985-86
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>(1) MINING</b>												
1.	Coal	M. Tonnes	..	147.44	..	158.50	..	154.29	..	166.80	4.6	8.1
2.	Lignite	-do-	..	7.80	..	7.42	..	8.03	..	8.30	2.9	3.4
3.	Crude Oil	-do-	..	29.00	..	30.14	..	30.18	..	30.21	4.1	..
4.	Iron Ore	-do-	..	42.20	..	48.15	..	45.50	..	52.10	7.8	14.5
<i>Basic Metals</i>												
5.	Hot Metal (Integrated Steel Plants)	-do-	14.33	9.24	14.33	10.72	14.33	10.03	14.33	11.47	8.5	14.4
6.	Pig Iron Ore Sale (Integrated Steel Plants)	-do-	..	1.12	..	1.31	..	1.16	..	1.03	3.6	-11.2
7.	Steel Ingot (Integrated Steel Plants)	-do-	13.31	8.30	14.11	9.76	13.07	9.06	13.07	10.71	9.2	18.2
8.	Saleable Steel	-do-	12.54	8.79	13.82	9.80	12.87	9.87	12.97	11.06	12.3	12.1
9.	Saleable Steel (Integrated Steel Plants)	-do-	9.54	7.00	10.65	7.70	9.77	7.77	9.77	8.96	11.0	15.3
10.	Alloy & Special Steel	000 tonnes	865	800	890	800	890	800	950	810	..	1.3
11.	Sponge Iron	-do-	210	65	300	200	300	130	450	200	100.0	53.8
12.	Aluminium	-do-	362	276.50	362	300	362	265	362	290	(-)4.2	9.4
13.	Copper (Blister)	-do-	47.50	41.00	47.50	44.00	47.50	33.50	47.50	44.00	(-)17.1	29.4
14.	Copper (Refined)	-do-	39.40	33.45	42.00	42.15	42.00	29.60	42.00	40.00	(-)13.3	37.9
15.	Zinc Ingots	-do-	96.00	57.60	96.00	69.50	96.00	72.80	96.00	70.00	22.6	(-)0.5
16.	Lead Ingots	-do-	30.00	14.20	30.00	23.20	30.00	17.20	30.00	22.60	16.2	36.9
<i>Metal Products</i>												
17.	Steel Castings	-do-	200	87	200	100	200	93	200	105	6.9	12.9
18.	Steel Forgings	-do-	300	154	300	190	300	163	300	195	5.8	19.6
<i>Non-Metallic Mineral Products</i>												
19.	Cement	M. Tonnes	42.80	30.17	45.00	34.00	45.00	33.10	51.00	37.00	9.7	11.8
20.	Petroleum Products (through hut)	-do-	45.55	35.56	47.90	42.14	47.55	42.91	47.55	44.94	20.7	4.7
<i>Basic Chemicals</i>												
21.	Caustic Soda	'000 tonnes	966	684	966	700	984	734	997.75	795	7.3	8.3
22.	Soda Ash	-do-	1000	817	1005	934	1005	918	1005	980	12.4	6.7
23.	Calcium Carbide	-do-	170	92	180.45	140	152.40	77	232	100	(-)16.3	29.9

*Agricultural Chemicals*

24. Nitrogenous Fertilisers . . . . .	'000 tonnes	5195	3917	5960	4415	6589	4328	7011	5175	10.5	19.6
25. Phosphatic Fertilisers . . . . .	-do-	1488	1264	1610	1319	1749	1420	2124	1775	12.3	25.0
26. B.H.G. (int terms of 13% isomers) . . . . .	-do-	41.90	28.80	41.90	32.00	41.90	26.00	41.90	30.00	(—)9.7	15.3
27. DDT . . . . .	-do-	9.10	7.30	9.10	8.50	9.10	5.20	9.10	6.00	(—)28.8	15.4
28. Other pesticides . . . . .	-do-	36.29	18.00	36.39	22.00	45.00	23.50	40.60	30.00	30.5	27.6
29. Malathion . . . . .	-do-	12.00	3.40	12.00	6.00	12.00	5.30	12.00	7.00	55.9	32.1

*Thermo Plastics and Synthetic Rubber*

30. L.D. Polyethylene . . . . .	'000 tonnes	122	107	122	110	122	96	122	105	(—)10.3	9.4
31. H.D. Polyethylene . . . . .	-do-	30	39	30	37	30	34	30	35	(—)12.8	2.9
32. Polyvinyl Chloride . . . . .	-do-	141	83	141	120	141	107	141	110	28.9	2.8
33. Polypropylene . . . . .	-do-	30	27	30	25	30	24	30	27	(—)11.1	12.3
34. . . . .											
35. Polystyrene . . . . .	-do-	26	16	26	15	26	17	26	16	6.2	(—)5.9
36. Styrene Butadiene Rubber . . . . .	-do-	30	22	30	25	30	21	30	28	(—)4.5	33.3
37. Polybutadiene Rubber . . . . .	-do-	20	17	20	17	20	14	20	17	(—)17.6	21.4

*Petrochemical Intermediates*

38. Acrylonitrile . . . . .	-do-	24	20	24	22	23	20	24	22	0.0	10.0
39. D.M.T. . . . .	-do-	135	27	139	70	139	46	139	105	70.4	128.3
40. Caprolactam . . . . .	-do-	20	16	20	18	20	19	20	18	18.7	(—)5.3
41. Detergent Alkylate . . . . .	-do-	30	29	30	28	30	33	20	28	13.8	(—)15.2
42. Methanol . . . . .	-do-	45	46	75	70	81	55	131	62	19.6	12.7
43. Phenol . . . . .	-do-	22	20	62	32	22	21	62	30	5.0	42.8

*Man-made Fibres*

44. Viscose Filament Yarn . . . . .	-do-	50	33	45	40	42	42	45	45	27.3	7.1
45. Viscose Staple Fibre . . . . .	-do-	110	100	120	110	110	90	120	110	(—)10.0	22.2
46. Viscose Tyre Cord . . . . .	-do-	23	8	23	10	18	7	15	6	(—)12.5	(—)14.3
47. Nylon Filament Yarn . . . . .	-do-	30	33	32	30	36	37	37	34	12.1	(—)8.1
48. Nylon Tyre Cord & Industrial Yarn . . . . .	-do-	15.50	20	20	26	22	25	22	20	25.0	(—)20.0
49. Polyester Staple Fibre . . . . .	-do-	37	39	42	42	55	42	111	87	7.6	107.1
50. Polyester Filament Yarn . . . . .	-do-	38	56	60	50	58	67	57	70	19.6	4.5
51. Acrylic Fibre . . . . .	-do-	20	21	20	18	20	23	20	18	9.5	(—)21.7

*Drugs and Pharmaceuticals*

52. Bulk Drugs . . . . .	Rs. crores	..	377	..	400	..	416	..	450	10.3	8.2
53. Formulations . . . . .	-do-	..	1827	..	1900	..	1945	..	2000	6.4	2.8

*Food Products*

54. Sugar* . . . . .	Mill. tonnes	7.30	6.10	7.50	7.20	8.00	6.90	8.00	8.40	13.1	21.7
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\*Relate to Sugar Year (October-September)

S. No.	Industry	Unit	1984-85		1985-86		1986-87		1986-87		Growth Rates of	
			Actual		Targets		Anticipated		Targets		Production	
			Cap.	Prod.	Cap.	Prod.	Cap.	Prod.	Cap.	Prod.	1985-86 over 1984-85	1986-87 over 1984-85
											per cent	
1	2	3	4	5	6	7	8	9	10	11	12	13
55.	Vanaspati Textiles	'000 tonnes	1400	945	1500	1000	1450	901	1500	1100	(—)4.6	22.1
56.	All Yarn (Cotton blended Mixed)	Capacity Million Spindles Production Mill. Kgs.	24.20	1392	24.50	1425	24.75	1473	24.75	1500	5.8	1.8
57.	Cloth (Mill Sector)	Cap. Lakh looms production Mill metres	2.10	3420	2.10	4000	2.10	3400	2.10	13000	0.4	8.3
58.	Cloth (Decentralised Sector)	Mill. Metres	..	8530	..	8600	..	8600	..			
59.	Jute Manufacturers	'000 tonnes	1500	1368	1500	1445	1550	1400	1550	1450	2.3	3.6
	<i>Leather and Rubber Goods</i>											
60.	Leather Footwear (Org. Sector)	Mill pairs	22	14	23	20	23	15	25	18	7.1	20.0
61.	Rubber Footwear	-do-	54	36	57	39	54	39	56	40	8.3	2.5
62.	Bicycle Tyres (Org. Sector)	Mill No.	34	31.2	34	32	34	36	34	34	16.1	(—)5.5
63.	Automobile Tyres	-do-	13.64	11.46	16.00	12.23	16.00	12.34	19.00	14.00	7.7	13.4
	<i>Paper and Paper Products</i>											
64.	Paper & Paper Board	'000 tonnes	2400	1376	2550	1425	2550	1517	2650	1600	10.2	5.5
65.	Newsprint	-do-	280	201	280	230	280	241	280	265	19.9	9.9
	<i>Soaps and Detergents</i>											
66.	Soaps (Org. Sector)	-do-	358	377	292	397	365	367	418	430	(—)2.1	16.5
67.	Synthetic Detergents (Org. Sector)	-do-	308	174	350	300	350	193	400	300	10.9	55.4
	<i>Industrial Machinery</i>											
68.	Machine Tools	Rs. Crores	336	303	470	375	390	291	400	330	(—)4.0	13.4
69.	Mining Machinery	-do-	56	48	80	62	56	43	60	50	(—)10.4	16.3
70.	Metallurgical Machinery	-do-	86	68	86	64	86	90	100	95	32.3	5.6
71.	Cement Machinery	-do-	81	58	75	60	100	96	110	105	65.5	4.2
72.	Chemicals & Pharmaceuticals Machinery	-do-	255	170	250	200	250	168	250	175	(—)1.2	4.2
73.	Sugar Machinery	-do-	75	44	70	55	75	43	75	50	(—)2.3	16.3
74.	Rubber Machinery	-do-	20	16	25	20	20	14	2	15	(—)12.5	7.1
75.	Paper & Pulp Machinery	-do-	52	20	52	26	52	19	52	18	(—)5.0	(—)5.2
76.	Printing Machinery	-do-	20	16	25	20	20	15	21	18	(—)6.2	20.0



												(per cent)	
77. Textile Machinery . . . . .	Rs. crores	500	393	550	440	550	351	550	440	(—)10.7	25.3		
78. Boilers . . . . .	-do-	600	490	600	550	850	613	900	800	25.2	30.5		
<i>Electrical Power Equipment</i>													
79. Steam Turbines . . . . .	MKW	4.50	2.90	4.50	3.12	4.50	1.99	4.50	3.36	(—)31.4	68.9		
80. Hydro Turbines . . . . .	MKW	1.35	0.24	1.35	0.30	1.35	0.26	1.35	0.45	8.3	73.1		
81. Transformers . . . . .	MKVA	35	25	35	26	37	27	35	31	8.0	14.8		
82. Electrical Motors . . . . .	MHP	7	4.94	8	7	7	5	7	6	6.3	14.3		
<i>Construction Machinery</i>													
83. Earth Moving Equipment . . . . .	Nos.	2300	1806	2300	2200	2300	1844	2400	2000	2.1	8.5		
84. Road Rollers . . . . .	Nos.	1500	443	1800	300	1800	750	1800	820	69.3	9.3		
<i>Agriculture Machinery</i>													
85. Tractors . . . . .	'000 Nos.	90	85	125	100	97	76	92	80	(—)10.5	5.3		
<i>Railway and Water Transport</i>													
86. Diesel Locomotives . . . . .	Nos.	210	140	210	157	210	126	210	171	(—)10.0	35.7		
87. Electrical Locomotives . . . . .	Nos.	60	48	80	58	80	81	80	81	68.7	..		
88. Railway Coaches . . . . .	„	1450	1354	1650	1282	1650	1277	1650	1300	(—)5.7	1.8		
89. Railway Wagons . . . . .	„	28	13	28	12.50	28	13	28	20	..	53.8		
90. Ship Building . . . . .	'000 DWT	169.50	58.50	208.20	132.40	208.20	123.50	242.00	118.50	111.1	(—)4.0		
<i>Road Transport</i>													
91. Commercial Vehicales . . . . .	'000 Nos.	129	97	130	110	195	103	195	110	6.2	6.8		
92. Passenger Cars . . . . .	„	79	74	140	95	154	88	154	110	18.9	25.0		
93. Jeeps . . . . .	-do-	26	25	35	30	30	29	32	30	15.1	3.4		
94. Scooters, Motor Cycles Mopeds . . . . .	'000 Nos.	1074	918	1350	1075	1548	1234	1650	1500	34.4	21.5		
95. Bicycles (Org. Sector) . . . . .	Mill Nos.	7200	5893	8300	5000	7200	5553	7200	5700	(—)5.8	2.6		
<i>Mechanical Components and Consumer Durables</i>													
96. Ball & Roller Bearings . . . . .	Mill Nos.	54	46	68	57	63	58	80	70	27.5	20.7		
97. Typewriters . . . . .	'000 Nos.	153.40	115.80	175	135	153	122	153	125	5.3	2.5		
98. Sewing Machines (organised sector) . . . . .	„	473	648.60	600	380	473	291	473	302	(—)13.9	0.7		
99. Mecnanical Watches . . . . .	Mill Nos.	7.30	5.54	10.00	7.50	8.30	5.34	8.50	5.50	(—)4.2	3.8		
<i>Electrical Components Consumer Durables</i>													
100. ACSR & AA Conductors . . . . .	'000 tonnes	150	53	230	60	150	60	150	70	12.9	16.7		
101. PVC & VIR Cables (Org. Sector) . . . . .	M. Core Meters	1310	542	1130	630	1300	481	1300	500	(—)10.1	4.2		
102. Dry Cells . . . . .	Mill Nos.	1626	1148	1690	1240	2164	1200	2164	1280	4.3	6.7		
103. Storage Bateries . . . . .	'000 Nos.	2690	1990	3100	2200	3270	2221	3500	2500	10.2	13.6		
104. Fluorescent Tubes . . . . .	Mill Nos.	42	40	60	43	44	43	48	46	3.9	9.5		

S. No.	Industry	Unit	1984-85				1985-86		1986-87		Growth rates of Production		
			Actual		Target		Anticipated		Targets		1985-86 over 1984-85	1986-87 over 1985-86	
			Cap.	Prod.	Cap.	Prod.	Cap.	Prod.	Cap.	Prod.			
1	2	3	4	5	6	7	8	9	10	11	12	13	
105.	H.T. Insulator	'000 tonnes	45	32	48	35	45	36	48	40	12.5	11.1	
106.	HT Circuit Breakers	'000 Nos.*	20	105	48	38	20	11.7	20	12	11.4	2.6	
107.	Domestic Refrigerators	-do-	600	576	835	660	630	642	700	700	6.6	11.5	
108.	Power Capacitors (RT & LT)	MVAR*	1582	1000	1582	1380	1482	1349	1600	1500	34.9	11.2	
109.	Welding Electrodes	MRM	912	689	896	715	950	692	950	720	1.5	7.4	
110.	Electric Fans	Mill Nos.	5.00	4.80	6.00	5.10	5.40	5.20	5.60	5.40	8.3	3.8	
111.	Power Cables (XPE, PICL, PVC)	'000 Kms.		3568	..	4000	..	5228	..	6000	53.2	13.2	
ELECTRONICS					2081		2636*		2880		3600	38.4	25.2
(A) Consumer Electronics					665		676*		1100		1350	65.4	22.7
112.	Radio Receivers	Rs. crores		110				125		150	13.6	20.8	
113.	T.V. Receivers	-do-		415				815		990	96.4	21.5	
114.	Tape Recorders (Audio)	-do-		70				90		115	28.6	27.8	
115.	Record Players & VCRs	-do-											
116.	Amplifiers & PAS Systems	-do-											
117.	Electronic Watches	-do-		70				70		95	..	35.7	
118.	Others	-do-											
(B) Industrial Electronics					335		400*		410		480	22.4	17.1
119.	Instruments	Rs. crores		90				110		130	22.2	18.2	
120.	Control Instrumentation & Industrial Electronics	-do-		225				275		32.2	22.2	17.1	
121.	Industrial Electronics	-do-											
122.	Medical Electronics	-do-		20				25		28	25.0	12.0	
(C) Communication Equipment					525		830*		635		800	20.9	26.0
123.	Mass Communication	-do-		33				30		35	(-)9.0	16.7	
124.	Telecommunications	-do-		300				365		470	21.7	28.8	
125.	Two-way communications	-do-		22				20		25	(-)9.1	25.0	
126.	Aero-space	-do-		170				220		270	29.4	22.7	
(D) Computer Systems													
127.	Computers (including office equipments & software) & peripherals	-do-		140		180*		210		280	50.0	33.3	
128.	(E) Production in Free Trade zone	-do-		96		110*		85		150	(-)11.4	76.4	
129.	(F) Components	-do-		320		440*		440		540	37.5	22.7	
*Figures pertain to calendar year.													

\*Figures pertain to calendar year

## CHAPTER 10

### TRANSPORT

In the Seventh Plan the crucial task is to increase the capacity of the transportation system in step with the economic development in the country. This task is to be managed through technological upgradation, optimisation of capacity at the operational level, stepped up investment and shift in priorities. Replacement and rehabilitation of assets along with maintenance is to get precedence over development of incremental capacity as a vehicle of output increase from the system.

10.2 In 1985-86, the growth of the transport sector was in line with the objectives and policy thrusts announced above. Railway recorded a growth of 9.18 per cent in freight and 4.6 per cent in non-suburban passenger traffic. The originating loading increased to 285 million tonnes as against 263.9 million tonnes in 1984-85, an increase of 22 million tonnes, the highest ever achieved in one year. Traffic handled at major ports increased from 106 million tonnes in 1984-85 to, 120 million tonnes, an increase of 12.5 per cent. The Airlines' passenger traffic

recorded a growth rate of 10 per cent. The road network is estimated to have expanded at a rate of 5 per cent, consistent with past growth rate. The shipping tonnage, however, declined from 6.32 million gross registered tonnage (MGRT) to 5.76 MGRT.

10.3 In 1986-87, the Railways are expected to load 300 million tonnes of traffic and the ports are expected to handle 128.45 million tonnes. The road network will continue to expand at a rate of about 5 per cent per annum. The growth rate in air traffic may not vary substantially from that in the past unless appropriate measures are taken to bring it in line with the Seventh Plan projections.

10.4 In 1986-87, an outlay of Rs. 5197.69 crores has been provided in the Transport Sector. Of this, the Centre's share is Rs. 3882.40 crores, the States' share is Rs. 1122.03 crores and that of Union Territories is Rs. 193.26 crores. The break up of the allocation by sub-sectors is given below :—

TABLE 10.1  
*Transport Sector Outlays*

				(Rs. crores)
Heads	Centre	States	U.T.s	Total
Railways . . . . .	2650.00	0.10*	..	2650.10
Roads . . . . .	300.00	719.93	124.93	1144.86
Road Transport . . . . .	70.90	327.19	8.85	406.94
Ports . . . . .	322.99	22.26	8.83	359.08
Lighthouses . . . . .	5.00			
Shipping . . . . .	172.71	1.75	43.00	217.46
Inland Water Transport . . . . .	31.50	16.56	1.66	49.72
Civil Aviation . . . . .	295.00	3.47	1.14	299.61
Tourism . . . . .	26.30	30.77	4.85	61.42
Farakba Barrage . . . . .	8.00	..	..	..
<b>TOTAL . . . . .</b>	<b>3882.40</b>	<b>1122.03</b>	<b>193.26</b>	<b>5197.69</b>

\*For Konkan Railway in Maharashtra

10.5 The need for creation of railway capacity ahead of demand has been recognised in the Seventh Plan and programmes are being geared to meet a freight traffic demand of 340 million tonnes of originating traffic (231 billion net tonne Kms.) by 1989-90 against the actual traffic of about 265 million tonnes (182 billion net tonne Kms.) in 1984-85. Consistent with the role of the Railways, the Plan objectives include replacement of overaged assets, modernisation and technological upgradation, higher

productivity of assets, prioritisation of essential on-going projects for time bound completion etc. The 1986-87 Plan would continue to pursue these policy thrusts.

10.6 The operational performance of the Railways registered a significant improvement in 1985-86; as against the target of 250 million tonnes of revenue traffic, the realisation was 258.1 million tonnes. The net increase in revenue traffic over the 1984-85 level

was around 22 million tonnes, the highest ever achieved in one year. The growth in freight traffic is indicated below, together with the targets for 1986-87.

TABLE 10.2  
*Freight Traffic carried by Railways*

Year	Originating Traffic (Million Tonnes)			Net Tonne Kms (Billions)
	Revenue earning	Non-Revenue earning	Total	
1	2	3	4	5
1979-80	193.1	24.7	217.8	156.0
1980-81	195.9	24.1	220.0	158.5
1984-85	236.4	28.4	264.8	182.2
1985-86 Target	250.0	27.0	277.0	189.7
1985-86 Anticipated	258.1	27.0	285.1	205.1
1986-87 Target	271.0 to 273.0	27.0	298.0 to 300.0	206.0

It needs to be mentioned here that though the freight handling increased beyond targets in 1985-86,

there were shortfalls in the case of certain commodities e.g. coal, raw material for steel plants etc. It should also be noted that the increased handling on the part of railways materialised without any increase in the fleet of wagons; in fact as compared to 1980-81, an additional 62 million tonnes of freight loading has been achieved with the wagon fleet gradually declining in numbers by nearly 40000 wagons. The fact alone underscores the stipulation that in the Seventh Plan the overaged stock would have to be phased out from the system totally. The increase in traffic was met also through improvement in asset utilisation. The NTKMs per wagon day on Broad Gauge increased from 972 in 1979-80 to 1288 in 1985-86. For the year 1986-87, a traffic target of 271 to 273 million tonnes of revenue and 27 million tonnes of non-revenue traffic is envisaged. The increase is expected to take place in almost all bulk commodities, including coal, cement and fertilizers.

#### *Passenger Traffic*

10.7 The passenger traffic demand had increased in the early years of the Sixth Plan, reaching a peak in 1981-82 and gradually declining thereafter due to variety of factors, including, *inter alia*, upward revision of fares and diversion of short distance traffic to road transport. For 1985-86, against a marginal increase envisaged at the beginning of the year, passenger traffic is estimated to have increased significantly as could be seen from the Table below :—

TABLE 10.3  
*Passenger Traffic*

Year	No. of Passengers			Passenger Kms.		
	(Millions)			(Billions)		
	Suburban	Non-suburban	Total	Suburban	Non-suburban	Total
1979-80	1903	1602	3505	38.7	159.9	198.6
1981-82	2064	1640	3704	44.0	175.8	219.8
1984-85	1884	1449	3333	42.3	182.3	224.6
1985-86 (Target)	1954	1441	3395	45.0	181.1	226.1
1985-86 (Anticipated)	1927	1515	3442	44.9	191.3	236.2
1986-87 (B.E.)	2044	1588	3632	47.1	200.6	247.7

10.8 The growth in passenger traffic occurred despite the Railways according operational priority to freight traffic and following the policy of restraint in regard to introduction of passenger trains. Given the scarcity of resources and the need to accord priority to freight traffic, it is necessary to regulate the passenger traffic within limits.

#### *Rolling Stock*

10.9 For the year 1985-86, initially an outlay of Rs. 484 crores was provided for Rolling Stock; however, this was subsequently increased to Rs. 656 crores to enable increased acquisition of Rolling Stock, mainly wagons. For 1986-87, an outlay of Rs. 875 crores has been provided. The likely achievement in

1985-86, together with the programme proposed for 1986-87, is indicated in the Table below :

TABLE 10.4  
Rolling Stock Programme  
(Numbers)

S. No.	1985-86		1986-87
	Target	Likely achievements.	Target
1. Wagons . . . . .	12,500	12,369	20,000
2. Diesel Locos. . . . .	157	201	171
3. Electric Locos . . . . .	58		
4. EMUs . . . . .	162	180	180
5. Coaches . . . . .	1,120	1,091	1,102

10.10 During 1985-86, work was initiated on an additional Coach Factory at Kapurthala. During 1986-87, work would be further progressed on the project.

#### Track Renewals

10.11 Considering the huge backlog of track renewals, the Seventh Plan aims at meeting this in a phased and time-bound manner. During 1985-86, against a target of 3000 Kms. for track renewals the estimated achievement is over 3500 Kms. For 1986-87, an outlay of Rs. 595 crores has been provided with the target of 3800 Kms.

#### Electrification

10.12 For 1985-86, energisation of 650 Route Kms. on important trunk corridors connecting Delhi-Bombay, Delhi-Madras was envisaged. The anticipated achievement is, however, much below this level i.e., to the extent of only 415 Kms. The 1986-87 Plan envisages a target of 560 Kms. for energisation with a view to completion of the sections on which work is under progress.

10.13 During 1985-86, the expenditure on construction of New Lines is estimated at Rs. 70 crores against the Plan provision of Rs. 65 crores. Work was completed on Tirunelveli-Milavattan (53 Kms), Koraput-Machliguda (20 Kms), Dharmanagar-Pechartal (22 Kms) and Negothara-Roha (15 Kms), sections. The 1986-87 Plan provides Rs. 100 crores for important project oriented priority New Lines. In view of the large number of on-going new line projects, no new project is envisaged in 1986-87.

#### Gauge Conversions

10.14 Under gauge conversions, work on Suratgarh-Sarupsar-Anupgarh was completed during 1985-86. The provision in 1986-87 for Gauge Conversion scheme is Rs. 50 crores. As in the case of New Lines, efforts would be made to complete priority works within the available allocations.

#### Metropolitan Transport Projects

10.15 Presently, Metropolitan Transport Projects are being progressed at Calcutta, Bombay and Madras. Priority in funding has been accorded to the Calcutta Metro Project. For 1985-87, an allocation of Rs. 90 crores has been made for all MTP schemes, out of this, the Calcutta Metro would be provided Rs. 84 crores. The Metro is operational already in two stretches between Tollyganj-Esplanade and Dum Dum-Balgachia.

#### Plan Outlays

10.16 The following Table indicates the break up of Plan outlays for railways for 1985-86 and for 1986-87. It is envisaged that the outlay for 1986-87 would be financed by a budgetary support of Rs. 1030 crores, internal generation of Rs. 1370 crores and bond issue of Rs. 250 crores.

TABLE 10.5

Railways—Plan Head-wise Outlay for 1986-87

(Rs. in crores)

Plan Head	1985-86		1986-87
	Revised Approved outlay	Anticipa- ted Ex- penditure	approved outlay
1	2	3	4
1. Rolling Stock . . . . .	656	661	875
2. Workshops & Sheds . . . . .	115	115	214
3. Machinery & Plant . . . . .	55	56	65
4. Track Renewals . . . . .	505	502	595
5. Bridge Works . . . . .	35	33	45
6. Line Capacity Works . . . . .	187	181	265
7. Signalling & Safety . . . . .	60	62	60
8. Computerisation . . . . .	..	..	44
9. Electrification . . . . .	220	211	180
10. Other Electrical Works . . . . .	10	10	27
11. New Lines . . . . .	65	70	100
12. Staff Quarters . . . . .	13	13	25
13. Staff Welfare . . . . .	8	9	17
14. User's Amenities . . . . .	9	6	9
15. Other Specified Works . . . . .	6	13	13
16. Research . . . . .	..	..	1
17. Inventories . . . . .	15	15	25
18. Investment in other : Public Sector Undertakings	1	1	..
19. Metropolitan Transport Projects . . . . .	90	91	90
Total :	2050	2050	2650

#### Areas of Meriting Attention

10.17 The improvement in the Railway's performance during 1985-86, commendable as it is, should provide the basis for the Railway Administration to

take steps not merely to sustain the tempo already built up but also, to the extent possible, improve upon it in the years to come. For this purpose, it is necessary for the Railways to expedite creation of necessary infrastructure to introduce heavy duty freight trains of 4500-9000 tonnes and for development of rapid handling terminals. The Railways also need to augment capacity for manufacture of electric locomotives. Similarly, the Railways need to finalise early prototype of improved specialised wagons. The performance of the maintenance workshops, though improved over the previous year, is still below the realistic norms and needs to be improved further. The Railways are burdened with a large portfolio of ongoing projects. Hence the imperative need to prioritise projects.

10.18 To ensure adequate availability of important inputs like wheel sets, steel sleepers, concrete sleepers, rails etc., there is a need to arrange for timely imports of these products as well as to expand indigenous capacity to avoid future imports.

### Roads

10.19 The broad objectives envisaged in the Seventh Plan are—(i) progressive removal of deficiencies in the Highway System, (ii) energy conservation, (iii) preservation and enhancement of environmental quality, (iv) development of new generation of roads on high density corridors, (v) reduction in road accident rates and (vi) achievement of targets for rural roads under the Minimum Need Programme (MNP). Top priority is to be accorded to the completion of ongoing works for which full provision has been made. Maintenance of roads and upgradation of road construction technology is also to receive high priority.

### Review of performance in 1985-86

10.20 The outlay for 1985-86 for Central Sector Roads was approved at Rs. 250 crores, including Rs. 204 crores for the improvement of National Highways. The expenditure is estimated at Rs. 251.38 crores.

10.21 There were about 1600 works costing Rs. 351 crores which spilled over from the Sixth Plan to the Seventh Plan. Of these, about 600 were expected to be completed during 1985-86. 810 new works costing Rs. 209 crores were sanctioned during the year. An agreement was finalised for World Bank assistance (approx. Rs. 240 crores) to finance important National Highway Projects. The details of these projects are as under :—

(Rs. in crores)

1. Widening to 4-lanes Khanna, Jullundhar Section of NH 1 in Punjab	66.00
2. Widening to 4-lanes Murthal-Karnal Section of NH 1 in Haryana	42.5
3. Ahmedabad-Vadodra Expressway (NH 8)	128.4
4. Varanasi Bypass and Ganga Bridge (NH 2)	41.6
5. New 2-lane road on the Calcutta-Durgapur Expressway alignment (NH 2)	48.6

6. Widening to 4-lanes/strengthening 2 lanes in the Madras-Villupuram Section of NH 45 in Tamil Nadu	45.6
Total :	372.7

About 64% of the project cost would be funded through World Bank assistance. Besides the above projects, the World Bank has agreed to finance Training of Highway Engineers, Procurement of Equipment etc.

10.22 The physical progress of works under the National Highway system in 1985-86 and the targets fixed for the Annual Plan 1986-87 are indicated in Table 10.6. The important achievements in 1985-86 include (i) improvement to low grade sections (19 Kms), (ii) widening of single lane to double lane (43 Kms), (iii) strengthening of existing double lane pavement (715 Kms) and (iv) construction of major bridges (14 Kms.).

10.23 In the states sector, against the approved outlay of Rs. 720.34 crores, the anticipated expenditure is Rs. 772.35 crores, including Rs. 249.60 crores for rural roads under MNP which is expected to provide.

TABLE 10.6

Physical Targets & Achievements..Roads

Items	(In Kms)		
	1985-86	1986-87	
	Target	Achievement (Anticipated)	Target
(1)	(2)	(3)	(4)
<b>A. National Highways</b>			
1. Construction of missing links/byepasses	32	12	9
2. Improvements of low grade Sections	50	19	9
3. Widening & strengthening of single lane section to 2 lanes.	200	169	52
4. Widening to 2 lanes only	300	262	165
5. Strengthening of existing weak double lane pavements	500	715	730
6. Widening roads to 4 or 6 lanes	16	16	20
7. Construction of missing/submersible major bridges and damaged weak major bridges	21	14	17
8. Reconstruction or widening of weak or narrow minor bridges	80	80	70
<b>B Strategic roads</b>	80	46.5	39.2

provide linkage to 2944 villages. Of these, 2020 villages are with population of 1500 and above and 924 villages with population of 1000—1500. In accordance with the policy thrust envisaged in the Plan, the States have been advised to accord top priority for completion of ongoing schemes and for preparation of Master Plans for road development.

#### Areas meriting attention

10.24 The phenomenal growth in vehicular traffic, the heavier axle loads and the large deficiencies in the network continue to have an adverse effect both on energy consumption and cost of operation of vehicles. It has been observed that works under the Highway system are undertaken on disjointed basis. This underscores the need for undertaking construction works on a network basis. Delay in the preparation of the Master Plans for road development is also a matter of concern. Completion of such Plans on an urgent basis is essential to ensure that a systems approach is adopted for the development of roads. Care needs to be taken to ensure that Master Plans integrate all the rural roads programmes undertaken by the various agencies in the States.

10.25 The estimated cost of removal of the deficiencies in the National Highway system alone is estimated at Rs. 4500 crores. Since the resources are limited, private sector participation in funding road construction needs to be encouraged.

#### Annual Plan 1986-87

10.26 An outlay of Rs. 300 crores has been approved for Central Sector roads in 1986-87, including Rs. 266 crores for the improvement of National Highways. The allocation for the ongoing schemes is Rs. 125 crores. With this, all the Pre-Seventh Plan works are expected to be completed by the end of 1986-87. Scheme-wise outlays for 1986-87 are as follows :

TABLE 10.7  
Central Sector outlay—Roads  
(Rs. crores)

Schemes	Annual Plan 1985-86			Annual Plan 1986-87
	Outlay	Anti-Expdr.	Outlay	
1. National Highways .	204.00	214.28	266.00	
2. Roads of Inter-State and Economic Importance .	15.00	15.00	10.00	
3. Strategic Roads . .	12.00	12.00	12.00	
4. Machinery . . .	0.30	0.27	2.00	
5. Sensitive Border Area Roads	8.00	8.00	8.00	
6. Highway Research Development and Planning Studies . . . .	1.50	1.50	1.30	
7. Highway Training Institute . . . .	1.00	0.10	0.20	

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8. Development of Roads in Tribal Areas	3.50	3.50	..
9. Roads in Decoy Prone Areas	4.00	4.00	..
10. Miscellaneous Schemes	0.70	..	..
Total	250.00	251.38	300.00

10.27 It has been decided to transfer the subject relating to construction of roads in tribal areas and decoity prone areas to the Department of Rural Development. Accordingly, the outlays for these schemes are not reflected in the Central Sector Roads Plan.

10.28 An outlay of Rs. 719.93 crores has been approved for the development of roads in the State Sector in 1986-87. For Union Territories, an outlay of Rs. 124.93 crores has been approved. Top priority is to be accorded to the completion of ongoing schemes. Under MNP, it is proposed to cover 3016 villages, including 2075 villages with population of above 1500 and 941 villages with population of 1000—1500 during 1986-87. For this purpose, an outlay of Rs. 241.94 crores has been approved. In addition, a large number of villages are expected to be covered under other programmes like the Rural Landless Employment Guarantee Programme (RLEGP) and National Rural Employment Programme (NREP). The Report of the Committee set up by the Government for integration of the Rural Roads Programme has been received and is being examined. Follow-up action on the Report will be taken during the year to improve on the present system of multiple agencies involved in the rural road programme.

10.29 To sum up, an outlay of Rs. 1144.75 crores has been provided in 1986-87 for the Road Sector with the following break-up :

TABLE 10.8  
Plan Outlay for Roads  
(Rs. crores)

	1985-86		1986-87
	Outlay	Anti-Expdr	Outlay
1. Central Sector Roads	250.00	251.38	300.00
2. State Sector Roads	720.34	772.35	844.86
3. Total (1+2)	970.34	1023.73	1144.86

#### ROAD TRANSPORT

10.30 The main objective is to improve the performance of the State Road Transport Undertakings, both physical and financial. To achieve this objective, the policy thrust is on consolidation of the existing operations of these Undertakings. Phasing out of the overaged vehicles has been accorded high priority. It is expected that about 59,000 buses will be phased out during the 7th Plan period. Technological upgradation is being encouraged both for maintenance of fleet and manufacture of new buses.

### Review of Performance in 1985-86

10.31 An outlay of Rs. 70 crores was approved for the Centre's Annual Plan 1985-86, including a provision of Rs. 49.25 crores towards the matching capital contribution by the Central Government to the State Road Transport Corporation (SRTC's), against which the expenditure is Rs. 78.57 crores. In the State/U.T. sector, the outlay approved is Rs. 289.86

crores and the anticipated expenditure is Rs. 311.97 crores.

10.32 The productivity of the fleet has shown some progress during 1985-86 compared to 1984-85 and the previous year. Table 10.9 indicates the year-wise achievement in this respect, together with the estimates for 1986-87 and the last year of the Seventh Plan.

TABLE 10.9

*Productivity of fleet*

	71-72	74-75	78-79	80-81	84-85	85-86	86-87	89-90
	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(anticipated)	(Estimates)	(Estimates)
1. Fleet utilisation (%age of buses on road to total buses)	76	77	79	83	84	85	86	87
2. Labour productivity (Kms per cooker per day)	22.4	26.3	26.3	27.3	29.1	30.0	32.5	35.0
3. Vehicle productivity (Kms per day per vehicle owned)	165	179	197	214	219	229	235	240

### Areas meriting attention

10.33 The huge commercial loss incurred by the SRTC's, namely Rs. 225 crores in 1985-86, is a matter of concern. The States have been advised to undertake appropriate measures including revision of fares, to make the SRTC's financially viable.

### Annual Plan 1986-87

10.34 For the Annual Plan 1986-87, an outlay of Rs. 70.90 crores has been approved of this, an amount of Rs. 18.08 crores is for the Delhi Transport Corporation; Rs. 1.40 crores for road safety programme, including National Highways Patrolling; Rs. 47 lakhs for the National Institute of Road Haulage, and Rs. 20 lakhs for the Electric Trolley Project. A provision of Rs. 140 lakhs has been made for other items, including modal studies, training programme etc. For the scheme of matching contribution by the Central Government, the outlay has been kept at the 1985-86 level i.e., Rs. 49.25 crores.

10.35 The outlay for the Delhi Transport Corporation is mainly for the purchase of buses and construction of depots and other infrastructural facilities.

10.36 An outlay of Rs. 336.04 crores has been approved in the State/UTs Plans. With this provision, it is estimated that about 13450 new buses would be purchased by the State Road Transport Corporations/Undertakings. Out of these, 10746 would be for replacement and the balance for augmentation of the fleet.

### INLAND WATER TRANSPORT

10.37 The broad objectives for the development of Inland Water Transport in the Seventh Plan are—

- development of Inland Water Transport in the regions where it enjoys natural advantage;
- modernisation of vessels and country crafts to suit local conditions; and
- improvement in the productivity of assets.

10.38 Specifically, important waterways are to be declared as National Waterways, integrated terminals are to be set up at suitable locations along the water-fronts, capacity of Central Inland Water Transport Corporation (CIWTC) is to be increased from 4.19 lakh tonnes in 1984-85 to 11 lakh tonnes by the end of the Seventh Plan, all the overaged vessels (57) are to be replaced, the fleet utilisation is to be improved to 94 per cent as against 72.5 per cent, the load factor is to be stepped up to 75 per cent as against 50 per cent and the turn-round time is to be cut down by 25—30 per cent on all the operational routes. The Rajabagan Dockyard is to be modernised and the technology of craft construction is to be upgraded.

### Review of Performance in 1985-86

10.39 Against the Plan outlay of Rs. 38 crores, the expenditure is placed at Rs. 26 crores. The short-fall in expenditure is due to tardy pace of finalisation of investment proposals, resulting in slippage in the acquisition programme of vessels and development of infrastructural facilities. Against the planned acquisition of 20 vessels, CIWTC acquired only 12 vessels raising the carrying capacity of the



Corporation to 4.6 lakh tonnes compared to the target of 5.8 lakh tonnes.

10.40 The stretch between Haldia—Allahabad (a length of 1620 Kms.) in the river Ganges has been declared as National Waterway No. 1. For the purpose of investment planning, this has been divided into three stretches *i.e.* between Haldia Farraka (560 Kms), between Farraka—Patna (460 Kms) and between Patna—Allahabad (600 Kms.). Out of 19 terminals to be set up on the entire stretch of the river, only 4 terminals have been developed between Haldia—Farraka. Development of terminal facilities and their linkage with surface modes of transport is of critical importance for operational use of National Waterway.

10.41 The CIWTC continues to incur losses, though at a much reduced rate. Against the budgeted loss of Rs. 2.87 crores, the anticipated loss during 1985-86 is Rs. 1.92 crores. Excess manpower, high manning scales and poor utilisation of available capacity in the down stream voyages are some of the factors contributing to the losses. Heavy interest liability on past loans also adds to the losses.

10.42 It has been decided to modify the modernisation proposal of Rajabagan Dockyard in the light of the detailed project report which was expected to be available by June, 1986. Meanwhile, the deep sea ship repairing division of the Dockyard has shown improvement; its earnings increased to Rs. 2.07 crores in 1985-86 against Rs. 1.69 crores in 1984-85.

10.43 In the State sector, against an outlay of Rs. 11.16 crores, the expenditure is anticipated at Rs. 10.83 crores. The main emphasis has been on replacement of overaged vessels and improvement of navigable waterways in the States.

#### Annual Plan 1986-87

10.44 An outlay of Rs. 31.50 crores has been approved for Inland Water Transport in the Central Sector. Schemewise details are as follows :—

TABLE 10.10  
Central Sector Outlays  
(Rs. crores)

Schemes	1985-86		1986-87
	Outlay	Ant. Expdr.	Outlay
1. CIWTC Schemes	26.96	18.50	18.12
2. Central Schemes	9.62	7.07	10.42
3. Research & Development Schemes	0.21	0.04	0.14
4. Centrally Sponsored Schemes	1.21	0.52	2.82
Total	38.00	26.13	31.50

10.45 A provision of Rs. 10 crores has been made for the acquisition of vessels by CIWTC. The allocation for the modernisation of Rajabagan Dockyard is Rs. 5 crores. The spillover schemes of CIWTC requiring an investment of Rs. 3.12 crores have been fully provided for.

10.46 In 1986-87, efforts would be made to accelerate work on the pilot project in the Allahabad—Patna stretches of river Ganges for the introduction of regular river service. The Inland Waterways Authority of India is expected to be set up during the year and adequate outlay has been provided for this purpose.

10.47 An outlay of Rs. 18.22 crores has been provided in the state sector. Keeping in view the Seventh Plan objectives, top priority would be accorded to the replacement of overaged vessels and improvement of navigable waterways. The States have been advised to set up suitable organisations for the development of Inland Water Transport.

#### PORTS

10.48 The broad objectives for the development of Ports during the Seventh Plan are :—

- development of infrastructure to match fast changing shipping technology and cargo handling practices;
- modernisation of port facility, especially to handle container traffic;
- improvement in productivity of labour and equipment;
- augmentation of dredging capacity.

The Seventh Plan proposes to increase traffic throughput from 106.73 MT in 1984-85 to 147 MT by 1989-90, while capacity will increase from 132.73 MT to 161.45 MT during the same period.

#### Review of performance in 1985-86

10.49 In 1985-86, the major ports handled 120 million tonnes of cargo as compared to 106.73 million tonnes in 1984-85, thereby recording an increase of 13.3 million tonnes or 12.5%. This increase was achieved by improving the utilisation of existing assets and build up of additional capacity.

10.50 The commodity-wise distribution of traffic shows that there has been a significant increase in the traffic of coal and, to some extent, POL. The increase in container traffic of nearly 26% in 1985-86 over the previous year, was in line with anticipations and the thrust of the Seventh Plan. The increase in container traffic was particularly marked in the Madras Port, where it had risen by 86% over the previous year's level. Correspondingly, as anticipated, the break bulk traffic has declined, though marginally.

10.51 The capacity available during 1985-86 was 141.93 million tonnes as against 132.73 million tonnes in 1984-85. The addition of 9.2 million tonnes in 1985-86 took place in Vizag and Madras, where 4 million tonnes were added in each port to POL traffic, and at Pradweep where 1.2 MT in fertiliser raw material capacity was added.

#### Annual Plan 1986-87

10.52 During 1986-87, the objective will be to further improve productivity. Emphasis will be laid on improved utilisation of equipment and on labour output as well as expansion of facilities to handle throughput.

10.53 A traffic of 128.45 MT has been projected for 1986-87. The aggregate port capacity is programmed to increase from 141.93 MT in 1985-86 to 142.93 MT. The increase in capacity will be at Haldia port, where coal handling capacity will increase by one million tonne.

10.54 Particular attention will be given to timely progress of ongoing schemes such as the construction of Nheva Sheva port, the coal handling system at Haldia and the deepening of Bharti Dock in Madras. Action will also be taken on schemes relating to expansion of container handling facilities at Madras, Bombay, Calcutta, Cochin; construction of a second oil jetty at Haldia; and replacement and modernisation of cargo handling equipment.

#### Financial outlay

10.55 Against the Plan outlay of Rs. 249.61 crores and anticipated expenditure of about Rs. 249 crores for 1985-86, an outlay of Rs. 323 crores has been provided in the Annual Plan 1986-87. The details are given in the Table below :—

TABLE 10.11  
Outlay and Expenditure — Ports (Rs. crores)

Scheme	1985-86		1986-87
	Outlay	Anticipated Expenditure	Outlay
Major Ports . . . . .	219.86	215.85	300.09
Dredging Corporation of India . . . . .	18.00	18.00	15.50
ALHW . . . . .	8.00	8.00	4.00
MPSO . . . . .	1.15	6.92	1.50
R&D . . . . .	0.10		0.16
CDO . . . . .	0.50		1.75
Port Management . . . . .	2.00		
Total : . . . . .	249.61	248.77	323.00

Of the outlay of Rs. 323 crores provided for major ports during 1986-87, Rs. 222 crores would be financed from internal resources of the ports and the balance Rs. 101 crores through budgetary support.

#### Areas meriting attention

10.56 The existing levels of output in terms of cargo transferred or handled across the berths are low and for below the international norms. The present norms for utilisation of cargo handling equipment are out dated and need to be raised to achieve optimum output. Labour productivity continues to be low. The manning scales and productivity norms need to be reviewed.

10.57 The cost of container handling at most ports is excessively high reflecting high meaning scales and low productivity. The port infrastructure and operations have to be so devised as to reduce the cost.

10.58 Due to higher imports of coking coal and increase demand for coal for thermal power houses, the coal handling systems need to be developed and expanded at Paradip, Madras and Vizag to avoid any mismatch between coal traffic demand and available capacity.

10.59 A major constraint in handling bulk commodities like fertilisers is lack of mechanised handling facilities. It is necessary to provide such facilities at selected ports to reduce turn-round time of ships.

10.60 The financial position of most of the ports is far from satisfactory. Port charges should be such as to cover at least the operating costs. It is equally necessary to rationalise tariff structure to reduce inter-port differential.

10.61 Due to limited availability of budgetary support, additional alternative sources of finance such as private investment in construction of berths, container terminals and dredging operations as well as leasing of equipment have to be considered.

#### Andaman, Lakshadweep Harbour Works

10.62 An outlay of Rs. 4 crores has been provided for these works in the Annual Plan 1986-87. The main schemes on which action will be taken are construction of break-water at Ranga in Andaman and Androth in Lakshadweep Islands and provision of port and harbour facilities.

#### Dredging Corporation of India

10.63 The dredging capacity available with the DCI is short of the requirement of the major/minor ports and for inland dredging. During the Seventh Plan, it is proposed to replace overaged dredgers and to add capacity by acquisition of new dredgers.

10.64 In the Annual Plan 1986-87, an outlay of Rs. 15.50 crores has been provided.

#### SHIPPING

10.65 The broad objectives for development of shipping in the Seventh Plan are :

- Modernisation of fleet on the basis of improved ship designs and fuel efficient engines;
- Replacement of overaged fleet on a selective basis;
- Diversification of fleet by acquisition of cellular container ships and specialised product carriers; and
- Addition to fleet on a selective basis, keeping in view the long-term objective of achieving self-sufficiency in tanker fleet, carrying at least 50 per cent of the dry bulk cargo and 40 per cent of the liner trade and improving coastal shipping requirements in full.

10.66 Specifically, the Seventh Plan aims at replacement of 2.5 million gross registered tonnage (MGRT) of overaged vessels and acquisition of 0.43 additional MGRT for which firm orders have been finalised. Taking into account the spillover tonnage of 0.71 MGRT, which was in the pipeline at the beginning of the Plan period, the operational tonnage at the end of the Seventh Plan has been placed at 7.5 MGRT.

10.67 Having regard to the resource constraint, the Plan suggests several policy measures to improve

operations and secure additional funds. These include :

- (a) Availing of concessional foreign credit;
- (b) Long-term charters and treating them at par with Indian bulk vessels in all matters relating to TRANS CHART operations;
- (c) Flexibility in commercial operations, particularly with regard to buying and selling of ships, as this is a profitable operation and can help generate resources for acquisition of tonnage;
- (d) Non-shipping companies to be encouraged to invest in the shipping industry. Likewise, diversification of shipping into non-shipping activities to be allowed; and
- (e) Diversification of Indian Shipping in the off shore oil sector.

#### Review for 1985-86

10.68 An outlay of Rs. 107.59 crores was provided in 1985-86, against which the expenditure is estimated at Rs. 210.24 crores.

10.69 Indian shipping has been severely affected by the continuing recession in the international maritime trade. Due to the uneconomic freight market and limited international cargo, the Indian shipping companies have been forced to lay off vessels. Indian shipping also continues to suffer from its own structural weaknesses—mainly a large percentage of overaged and outmoded fleet, a near absence of container and specialised vessels and lack of adequate infrastructure support.

10.70 In 1985-86, shipping tonnage declined to 5.76 MGRT mainly due to phasing out of inefficient and overaged vessels. The summarised position of the tonnage is as follows :—

	MGRT
Tonnage at the end of 1984-85 . . . . .	6.32
Tonnage scrapped during 1985-86 . . . . .	0.78
Tonnage laid off during 1985-86 . . . . .	0.21
Net Tonnage . . . . .	5.33
Tonnage acquired during 1985-86 . . . . .	0.428
	5.758

10.71 The ownership pattern shows that nearly 56% of the tonnage is with the public sector companies and 44% with the private sector. The age profile of the tonnage shows that about 1 million GRT, or 17 per cent of the fleet, is overaged and during the next 4 years another 32 per cent will be added to this category. The programme of phasing out overage vessels needs to be sustained so that new and modern vessels can be inducted. The Shipping Corporation of India phased out 0.45 MGRT in 1985-86 and in 1986-87 it proposes to scrap 0.87 MGRT.

10.72 The Shipping Corporation of India has been operating container service for the last few years and the container traffic carried by it has steadily increased, as shown below :

Year	Total CEUs carried by SCI ships
1983-84 . . . . .	28499
1984-85 . . . . .	41942
1986-87 . . . . .	67000(Target)

10.73 The SCI has started full container sailings with its own COMBI ships. The Corporation also charters cellular and container vessels on time charter basis. It has rationalised conference liner routes so as to deploy its fleet most effectively.

10.74 The SCI has also entered the field of off-shore oil industry. It has acquired 10 OSV on charter to the OI and Natural Gas Commission. The future thrusts of the SCI will be to enter different areas of off-shore oil exploration, requiring support shipping services.

10.75 In 1985-86, the SCI is likely to have a surplus of Rs. 6.00 crores as against a surplus of Rs. 2.1 crores in 1984-85. This takes into account receipts from scrapping of ships.

#### Areas meriting attention

10.76 The experience of 1985-86 shows that the shipping industry has not been able to achieve the targets or initiate adequate measures to improve its viability. The performance of the shipping companies regarding acquisition of container/cellular vessels has also been tardy. A preponderance of overaged vessels with high operating and staff costs continues to affect the competitiveness of Indian shipping companies; so also, the near absence of container and cellular vessels.

10.77 Indian shipping needs supportive measures and concessions such as cargo support, priority berthing, etc. if it is to successfully face competition from foreign lines. Suitable steps need to be taken in these directions.

#### Annual Plan 1986-87

10.78 The acquisition programme during 1986-87 is likely to be of the order of 0.558 MGRT, relating to orders already placed by the shipping companies. An outlay of Rs. 172.71 crores has been provided for shipping in the Central sector.

#### Lighthouses and Lightships

10.79 An outlay of Rs. 5 crores has been provided for lighthouses and lightships in 1986-87 as against an estimated expenditure of Rs. 3.45 crores in 1985-86. The main schemes relate to construction of lighthouses, replacement of Lighthouse Tender M. V. Sagardeep and procurement of essential equipment.

#### CIVIL AVIATION

10.80 In the Seventh Plan, the emphasis is on integrated and coordinated development of the various agencies engaged in providing civil aviation services.

The Plan envisages financing of development of the civil aviation sector through generation of internal resources by these agencies. It also stresses the need for generation of foreign exchange by the airlines for meeting their requirements for purchase of aircraft, spare parts and fuel. To meet these objectives, it is necessary to improve the productivity and efficiency of services operated by Air India, Indian Airlines and Vayudoot. This also calls for restructuring of route net-work, rationalisation of fare structure, manpower development and upgradation of training facilities. The Seventh Plan envisages a change in the organisational set up of the Directorate General of Civil Aviation in order to expedite implementation of Plan schemes relating to the development of domestic airports. It stresses the need for increasing the throughput at international airports with the help of operational measures and by streamlining procedures at the airports. While formulating the Annual Plan 1986-87, the above objectives and thrust areas have been kept in view.

#### Review for 1985-86

10.81 An outlay of Rs. 322.14 crores was provided in the Central Plan for 1985-86. Indications are that provision was fully utilised by all organisations in the civil aviation sector, except Air India and the Directorate General of Civil Aviation (DGCA). The main reason for the anticipated shortfall in expenditure in the case of Air India is that it has been allowed to borrow 100% of the foreign exchange cost of its project as against 90% at the time of formulation of the Annual Plan. In the case of DGCA, the shortfall is due to non-completion of civil works. The position is likely to improve with the setting up of the proposed National Airport Authority which is expected to provide greater flexibility in planning and speedy implementation of development schemes. The progress of the schemes taken up by Indian Airlines has been satisfactory, except in the case of scheme relating to setting up of modern jet engine facilities. This scheme is to be taken up in 1986-87.

10.82 The Annual Plan 1985-86 of International Airports Authority of India (IAAI) envisaged completion of the following projects :—

- (i) New International Passenger and Cargo Terminal Complex (Phase I) at Delhi Airport.
- (ii) New International Passenger Terminal Complex (Phase II) at Bombay Airport.
- (iii) New Domestic Terminal Complex at Madras Airport. The New Domestic Terminal Complex at Madras was commissioned in April, 1985, and the New International Passenger Terminal Complex in March, 1986. However, the New International Passenger and Cargo Terminal Complex at Delhi Airport could not be completed in 1985-86 and spilled over to 1986-87.

10.83. In 1985-86, a separate organisation, Helicopter Corporation of India, for operating helicopter services was set up. This organisation would meet the air transport support requirement of

the Oil and Natural Gas Commission and also provide helicopter services in inaccessible areas to which the operation of conventional air services is not possible.

10.84 The financial performance of both Air India and Indian Airlines in 1985-86 was quite satisfactory and they made a profit of Rs. 65 crores and Rs. 58.75 crores respectively.

10.85 The measures aimed at meeting productivity norms suggested in the Seventh Plan Document were put into practice by the Indian Airlines. As a result, there has been noticeable improvement in the productivity of assets of Indian Airlines and the airline has been able to meet the growing traffic demand by increasing the utilisation of the existing fleet. Indian Airlines also revised the fare structure to make it cost-oriented. Besides, steps were taken to strengthen computer and communication facilities of Air India and Indian Airlines with a view to improving the operational efficiency of both the airlines.

10.86 In accordance with the objectives of the Seventh Plan, Vayudoot strengthened its services in the North-East region. In order to improve the utilisation of the existing system capacity as a whole, Air India has started picking up passengers on domestic routes. A proposal to transfer some of the routes presently operated by Indian Airlines to turbo prop aircraft to Vayudoot for operational purposes is under consideration. There is also need for strengthening the project formulation, implementation and monitoring machinery in the Department of Civil Aviation.

#### Annual Plan 1986-87

10.87 An outlay of Rs. 295 crores has been provided at the Centre for development of Civil Aviation in 1986-87. The organisation-wise break-up of the outlay is given below :—

TABLE 10.12  
Annual Plan 1986-87—Centre Civil Aviation  
(Rs. crores)

Sl. Project/Schemes No.	Plan Outlay	Financed by	
		Internal/ External Budgetary Resources	tary Support
1. Air India (AI)	137.79 <sup>1</sup>	137.79 <sup>2</sup>	Nil
2. Indian Airlines (IA)	74.68 <sup>3</sup>	74.68 <sup>3</sup>	Nil
3. International Airports Authority of India (IAAI)	31.20	31.20	Nil
4. Directorate General of Civil Aviation (DGCA)/ National Airport Authority (NAA)	35.50	35.50 <sup>3</sup>	..
5. Residual DGCA/Aero Club of India	6.03	Nil	6.03
6. Indira Gandhi Rashtriya Uran Academy (IGRUA)	9.00 <sup>4</sup>	Nil	9.00
7. Vayudoot	0.80 <sup>5</sup>	0.80	Nil
Total	295.00	279.97	15.03 <sup>6</sup>

Note : NAA is a New Service

1. Inclusive of Rs. 3.00 crores for Indira Gandhi Rashtriya Uran Academy (IGRUA) and Rs. 2.00 crores for Vayudoot Ltd.

2. Inclusive of Rs. 3.00 crores for Indira Gandhi Rashtriya Uran Academy (IGRUA) and Rs. 2.00 crores for Vayudoot Ltd.
3. Loan from Indian Airlines.
4. Approved outlay Rs. 15.00 crores, of which Rs. 6.00 crores have been included in outlays of AI&IA.
5. Approved outlay Rs. 4.80 crores of which Rs. 4.00 crores have been included in outlays of AI&IA, i.e. Rs. 2 crores each.
6. Budgetary support to be met by Deposit of Rs. 15.03 crores by IA with Government from out of their surplus Internal Resources.
7. AI has a surplus of Internal/Extra Budgetary Resources. AI will deposit Rs. 13.80 crores of their surpluses of Internal/Extra Budgetary Resources with Govt.
8. IA has a surplus of Internal/Extra Budgetary Resources. IA will deposit Rs. 36.20 crores of their surpluses of Internal/Extra Budgetary Resources with Govt. additionally.

### Air India

10.88 The traffic of Air India is estimated to have decreased from 1257 million revenue tonne kms. (RTKms.) in 1984-85 to 1119 million tonnes RTKm. in 1985-86. The main reason for the decrease in traffic is that the Corporation lost one 747 aircraft "Emperor Kanishka" off the Irish Coast on 23rd June, 1985. The following Table indicates the physical target and achievements for 1985-86 and the proposed targets for 1986-87.

TABLE 10.13

#### Physical Achievements and Targets

Para-meter	1985-86		1986-87
	Target (Revised)	Anticipated Achievement	Target
Available Tonne Kms. (ATKms. —Millions)	1861	1832	1957
Revenue Tonne Kms. RT Kms.)	1201	1119	1268
Percentage utilisation			
(a) Passenger	70.6	66.3	70.2
(b) Overall	64.8	61.1	64.8

10.89 An outlay of Rs. 137.79 crores has been provided for Air India in 1986-87. A substantial part of the outlay is for meeting the requirement of loan repayment against the purchase of aircraft. In 1986-87, Air India is expected to acquire all the six Airbus aircraft, orders for which were placed in 1985-86. These aircraft would enable Air India to phase out B 707 aircraft as well as to meet the requirement of increased traffic. Provision has also been made for improving workshop equipment and facilities, strengthening of ground services, construction of operational buildings etc. The entire outlay of Air India would be financed from its internal resources.

### Indian Airlines

10.90 The traffic of Indian Airlines increased from 661 million RTKms. in 1984-85 to 720 million RTKms. in 1985-86. The following Table indicates the targets and anticipated achievements for 1985-86 and targets for 1986-87 :—

TABLE 10.14

#### Physical achievements and targets

Parameters	1985-86		1986-87
	Target	Anticipated Achievement	Target
Available Tonne Kms. (Million)	1049	1040	1160
Revenue Tonne Kms. (Million)	740	720	794
Load Factor	70.5	69.3	68.5
Passenger Seat Factor	75.2	73.7	73.5
Number of Passengers (Million)	9.42	9.21	10.1

10.91 An outlay of Rs. 74.68 crores has been provided for Indian Airlines in 1986-87. The major part of the outlay is for meeting the requirement of loan repayment against the purchase of aircraft already made by Indian Airlines. Provision has also been made for strengthening workshop engineering facilities, construction of operational building, administrative offices, etc. In 1986-87, a new Phase II simulator for B 737 will be installed and, accordingly, provision has been made for this project. Indian Airlines has placed orders for purchase of 19 Airbus aircraft. Pending the delivery of these aircrafts Indian Airlines will meet the shortfall in the capacity requirement through leasing of aircraft capacity. The entire outlay of Indian Airlines would be financed through its internal resources.

### International Airports Authority of India

10.92 An outlay of Rs. 31.20 crores has been provided in the Annual Plan 1986-87 for the various schemes of International Airports Authority of India. The emphasis would be on the completion of on-going schemes. The entire outlay of IAAI would be financed from internal resources.

### Directorate General of Civil Aviation/National Airport Authority

10.93 An outlay of Rs. 35.50 crores has been provided for the programmes of DGCA/National Airport Authority. Provision has been made for strengthening and extending the runway as required to receive jet aircrafts such as Boeing 737 and Air Bus. Provision has also been made for purchase of safety oriented equipments such as H.E. receivers and transmitters, Very High Frequency Omni-range instrument landing system, Crash fire tenders, Rapid Intervention vehicles etc. In order to strengthen the airport security services the latest X-ray baggage inspection system, door frame metal detector and hand metal detector would be installed at the aerodromes.

The night landing facilities would be provided/improved at a number of airports.

#### Vayudoot

10.94 An outlay of Rs. 4.80 crores has been provided for Vayudoot in 1986-87. This includes a sum of Rs. 2 crores each to be provided by Air India and Indian Airlines as equity contribution.

#### Indira Gandhi Rashtriya Uran Academy

10.95 A sum of Rs. 15 crores has been provided for setting up of Indira Gandhi Rashtriya Uran Academy for training of commercial pilots. This includes a sum of Rs. 3 crores each to be provided by Indian Airlines and Air India.

### TOURISM

10.96. The main objectives of tourism during the Seventh Plan are as follows :

- (i) faster development of tourism;
- (ii) recognition of tourism as an industry;
- (iii) private sector investment to be encouraged and public sector investment to be mainly for development of support infrastructure; and
- (iv) exploiting tourism potential to support local handicrafts and other creative arts.

#### Review for 1985-86

10.97. With the decline in recessionary trends in some of the major tourist-generating areas, foreign tourist traffic to India registered an increase from the beginning of 1985. Food Festivals, Familiarisation Tours Travel Seminars and other promotional activities were organised abroad for further tapping the tourist potential. The total tourist arrivals during 1985 registered a growth of about 5 per cent over 1984. State Governments are formulating schemes for combined package tours by State Tourism Corporations, India Tourism Development Corporation and Vayudoot. An Institute of Water sports is being set up in Goa. For the construction of Jawaharlal Institute of Skiing and Mountaineering, steps have been initiated at Gulmarg.

10.98 The ITDC generated a net profit of Rs. 3.72 crores in 1985-86 compared to Rs. 1.25 crores in 1984-85. It also entered into marketing tie-ups and agreements with several international marketing agencies.

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10.100 An outlay of Rs. 26.3 crores has been approved for tourism in 1986-87. Some of the important programmes envisaged are :

1. Promotion of wild life tourism;
2. Construction of Yatri Niwases;
3. Promotion of social tourism;

4. Adventure and sport tourism ; and
5. Promotion of domestic and overseas tourism etc.

Agency-wise breakup of the outlay for 1986-87 is indicated below :

Table 10.15  
Central Plan Outlay—Tourism

	(Rs. crores)
(i) Department of Tourism . . . . .	14.00
(ii) ITDC . . . . .	7.30
(iii) Hotel Management and Catering Division . . . . .	5.00
<b>Total . . . . .</b>	<b>26.30</b>

10.101 Some of the important schemes under the Department of Tourism are :

Scheme	Outlay (Rs. crores)
1. Overseas promotion . . . . .	3.10
2. Travel circuits . . . . .	1.45
3. Cultural tourism . . . . .	1.50
4. Publicity and promotion . . . . .	1.85

10.102 Under the programme of ITDC, a provision of Rs. 3.5 crores has been made for continuing schemes, namely construction of hotels at various places. An amount of Rs. 2.15 crores has been provided for additions and alterations in the case of the existing hotels/units and the balance of the outlay is for transport and other miscellaneous schemes.

10.103 Under the scheme of Hotel Management and Catering, a sum of Rs. 3.65 crores has been provided for the Institute of Hotel Management, Catering Technology and Applied Nutrition.

10.104 Although there was improvement in the arrivals of foreign tourists in the latter part of 1985-86, the rate of arrivals did not come upto the level of earlier years. It is expected that with concentrated development of selected tourist circuits/centres which appeal to the majority of foreign tourists, this position will improve during 1986-87 and subsequent years. With this end in view, greater attention is sought to be given to the development of the holiday tourism market and such areas as wild life tourism, beach resort tourism, winter sports and trekking. Emphasis is being placed on providing integrated tourist facilities, including accommodation and transport. There is also scope for better coordination between State Tourism Development Corporations at the State level and the Directorate of Tourism at the Centre.

#### Plan Outlay

10.105 Details of Plan outlay for Transport in the Central sector are shown in Annexure 10.1.

## ANNEXURE 10.1

## Details of Plan Outlay on Transport-Central Sector

(Rs. crores)

1	1985-86		1986-87
	Plan Outlay	Revised estimate/ Anticipated Expdr.	Plan Outlay
2	3	4	
<b>I. RAILWAYS</b>			
(a) Rolling Stock . . . . .	656	661	875
(b) Track renewals . . . . .	505	502	595
(c) Electrification			
(i) Jhansi-Bina-Itarsi . . . . .	5		42
(ii) Itarsi-Nagpur . . . . .	4		30
(iii) Ballarshah-Vijayawada . . . . .	21		24
(iv) Ballarshah-Wardha . . . . .	4		20
(v) Other Projects . . . . .	186		64
Total . . . . .	220	211	180
(d) Construction of New Lines:			
(i) Koraput-Rayagada . . . . .	10		20
(ii) Kota-Chittorgarh-Neemuch . . . . .	12		18
(iii) Other lines . . . . .	43		62
Total . . . . .	65	70	100
(e) Line Capacity Works			
1. Gauge conversion			
(i) Suratgarh-Bikaner . . . . .	12		21
(ii) Other schemes . . . . .	23		29
Sub-Total . . . . .	35		50
2. Other Line capacity works . . . . .	152		215
Total . . . . .	187	181	265
(f) Computerisation :			
(i) Freight operations information system . . . . .	—1	1	30
(ii) Other schemes . . . . .	—1	1	14
Total . . . . .			44
(g) Workshops & Sheds and Machinery & Plant			
(i) New Coach Factory at Kapurthala . . . . .	5		70
(ii) Diesel component works, Patiala . . . . .	21		33
(iii) Other schemes . . . . .	144		176
Total . . . . .	170	171	279

1	2	3	4
(h) Metropolitan Transport Projects			
(i) Calcutta Metro	82		84
(ii) Other Schemes	8		6
Total	90	91	90
(i) Other items	157	163	222
Grand Total	2050	2050	2650
<b>II. ROADS</b>			
(a) National Highways	204.00	214.28	266.00
(b) Roads of Inter-State State and Economic Importance	15.00	15.00	10.00
(c) Strategic Roads	12.00	12.00	12.00
(d) Other Roads	19.00	10.10	12.00
Total	250.00	251.38	300.00
<b>III. ROAD TRANSPORT</b>			
(a) Delhi Transport Corporation	17.00	12.00	18.08
(b) Matching Capital Contribution by the Centre to the S.R.T.Cs.	49.25	64.74	49.25
(c) Other schemes	3.75	1.83	3.57
Total	70.00	78.57	70.90
<b>IV. INLAND WATER TRANSPORT</b>			
(a) Central Inland Water Transport Corporation	26.96	18.50	18.12
(b) Centrally Sponsored Schemes	1.21	0.52	2.82
(c) Other Schemes	9.83	7.11	10.56
Total	38.00	26.13	31.50
<b>V. TOURISM</b>			
(a) Tourism Information Publicity	5.16	6.35	6.35
(b) Development of Tourist Centres	5.67	5.96	5.96
(c) Indian Tourism Development Corpn.	8.00	4.30	7.30
(d) Other programmes	7.99	7.31	6.69
Total	26.82	23.92	26.30

(1) Included under item I (i).



1	2	3	4
<b>VI. CIVIL AVIATION</b>			
1. <i>Air India</i>			
(a) Repayment for earlier 747 aircraft . . . . .	36.64	36.30	26.03
(b) Purchase of Airbus A 300 B 4 Aircraft . . . . .	9.90	10.91	12.06
(c) Six Airbuses A 310-300 Aircrafts . . . . .	27.13	6.00	42.76
(d) Workshop/Engineers facilities and Equipment . . . . .	11.49	5.39	11.89
(e) Computer & Communication facilities . . . . .	9.02	1.64	18.87
(f) Other schemes . . . . .	32.30	33.07	26.18
Total . . . . .	126.48	93.31	137.79
2. <i>Indian Airlines</i>			
(a) Payment for aircrafts acquired . . . . .	63.62	71.61	58.32
(b) Other schemes . . . . .	23.38	23.38	16.36
Total . . . . .	87.00	94.99	74.68
3. <i>Vayudoot</i> . . . . .	0.70 <sup>a</sup>	0.70 <sup>a</sup>	0.80 <sup>a</sup>
4. <i>International Airports Authority of India</i>			
(a) New International Terminal Complex Delhi . . . . .	20.00	23.00	12.14
(b) New International Terminal Complex Phase II . . . . .	9.00	8.50	5.73
(c) Other schemes . . . . .	19.00	25.01	13.33
Total . . . . .	48.00	57.51	31.20
5. <i>National Airports Authority and Directorate General Civil Aviation</i>			
(a) Aerodrome works . . . . .	15.55	52.40	6.83
(b) Aeronautical Communication Services . . . . .	21.01		15.17
(c) Ground and Safety Services . . . . .	11.45		13.09
(d) Grants in aid to Aero Club of India . . . . .	4.79		2.00
(e) Other schemes . . . . .	7.16		4.44
Total . . . . .	59.96	52.40	41.53 <sup>e</sup>
6. <i>Indira Gandhi Rashtrya Uran Academy</i> . . . . .	..	..	9.00 <sup>b</sup>
7. <i>Helicopter Corporation of India</i> . . . . .	..	35.77	..
Total Civil Aviation . . . . .	322.14	334.68	295.00

**VII. PORT & LIGHTHOUSES**1. *Major Ports*(a) *Calcutta*

(i) Container Handling Scheme, Phase I . . . . . 2.75 0.90 4.00

(2) Total outlay is Rs. 3.70 crores, including equity contribution of Rs. 1.50 crores each from Air India and Indian Airlines' provision for which has been included in the outlays of the two corporations.

(3) Rs. 1.50 crores each was contributed by Air India and Indian Airlines.

(4) Approved outlay Rs. 4.80 crores, of which Rs. 4 crores have been included in outlays of Air India and Indian Airlines, i.e. Rs. 2 crores each.

(5) Approved outlay Rs. 15 crores, of which Rs. 6 crores have been included in the outlay of Air India and Indian Airlines, i.e. Rs. 3 Crores each.

1	2	3	4
(ii) Replacement of R.S. Vessel, Pathfinder . . . . .	..	..	6.50
(iii) Comprehensive scheme for improvement of draft in Hooghly . . . . .	6.00	3.55	6.00
(b) <i>Haldia</i>			
(i) Second oil jetty with tractor Tugs . . . . .	0.25	0.03	9.00
(c) <i>Paradeep</i>			
(i) Construction of Fertilizer Berth . . . . .	10.25	10.67	1.97
(d) <i>Cochin</i>			
(i) Procurement of Dredger Lady Willingdon . . . . .	..	..	10.00
(e) <i>Madras</i>			
(i) Second Oil Jetty . . . . .	8.65	8.38	2.15
(ii) Deepening of Bharti Dock . . . . .	11.63	13.05	2.12
(iii) Acquisition of Grab Dredger . . . . .	1.00	1.33	2.35
(iv) Extension of container Berth . . . . .	.	.	2.55
(v) Acquisition 2 Transfer Cranes . . . . .	0.60	0.60	2.40
(f) <i>Kanlida</i>			
(i) Replacement of Tug Roopwati by 15 Ton B.P. Tug . . . . .	.	.	2.40
(g) <i>New Mangalore</i>			
(i) Delivery of one No. each 30 T and 20.5 T. B.P. Tugs . . . . .	1.55	1.72	5.01
(h) <i>Vishakhapatnam</i>			
(i) Construction of oil berth . . . . .	5.06	5.06	6.00
(ii) Replacement of Modernisation of iron ore loading facilities . . . . .	1.50	0.46	1.80
(i) <i>Tuticorin</i>			
(i) Procurement of one 30 T Bollard Pull Tug . . . . .	3.05	2.23	2.20
(j) <i>Bombay</i>			
(i) Provision of container handling facilities . . . . .	8.16	.	27.11
(ii) Purchase of Grab Dredger Replacement of Tug Dona Paula . . . . .	0.65	0.80	3.35
(k) <i>Mormugao</i> . . . . .	0.80	0.60	2.00
(l) <i>Nhava Sheva</i> . . . . .	40.00	40.00	128.00
2. Dredging Corporation of India . . . . .	18.00	18.00	15.50
3. ALHW . . . . .	8.00	8.00	4.00
4. Other schemes . . . . .	120.77	133.39	76.58
5. Lighthouses . . . . .	3.54	3.45	5.00
Total . . . . .	253.15	252.22	327.99
<b>VIII. SHIPPING</b>			
(a) Loans to SDFC . . . . .	62	150	169
(b) Subsidy to SDFC . . . . .	38	49	— <sup>a</sup>
(c) Merchant Navy Training and Seamen's Welfare and Loans to Sailing Vessels . . . . .	7.59	8.40	3.71
Total . . . . .	107.59	207.40	172.71
Total Outlay on Transport . . . . .	3117.70	3224.30	3874.40
Parkka Barrage . . . . .	9.90	8.75	8.00
Grand Total . . . . .	3127.60	3233.05	3882.40

(\*) Subsidy of SDFC is being shown on non-plan side from 1986-87 onwards.

(†) Inclusive of supplementary allocation of Rs, 460 crores

## CHAPTER 11

# COMMUNICATIONS INFORMATION AND BROADCASTING

### COMMUNICATIONS

#### *Review of Plan performance in 1985-86.*

In 1985-86, the expenditure on communication programmes in the Central Sector is estimated to have been Rs. 1036 crores, including Rs. 40 crores for Postal Services, Rs. 855 crores for Telecommunications and Rs. 141 crores for the development programmes of Indian Telephone Industries, Hindustan Teleprinters Ltd., Overseas Communications Service and the Wireless Monitoring Organisation.

11.2 In the Postal sector, new post offices could not be opened in 1985-86 on account of the continuing ban on creation of posts. However, under a new scheme licensed postal agencies were set up in different parts of the country. Further, 66 postal buildings and 652 staff quarters were constructed during the year up to December, 1985. Other achievements included the training of 299 postal executives in the Postal Staff College, in-service training to 3374 other employees and savings bank training to 5066 persons. Orders were placed for 35 high-speed stamp cancelling machines with a Calcutta firm and 10 high-speed franking machines were procured from Switzerland. Pending a study of capacity utilisation and economics of operation, against a target of 100 mail motor vehicles, 57 were actually purchased. In addition, 7 Railway Mail vans were acquired through the railways to strengthen the haulage capacity for transportation of mail.

11.3 Under Telecommunications, the anticipated achievement for 1985-86 includes an addition of 3.5 lakh lines of Switching Capacity along with 2.66 lakh telephone connections (Direct Exchange Lines). As regards Long Distance Switching, the anticipated achievement includes the commissioning of one Trunk Auto Exchange, 5400 lines of TAX capacity and 150 Manual Trunk Boards. Under Long Distance Transmission, the anticipated achievement is 1503 route kms. of Co-axial Cables, 2303 route kms. of Micro-wave systems and 1623 route kms. of UHF systems. The other anticipated achievements are the opening of 2000 Telegraph offices, 2000 Long Distance Public Telephones and 28 Telex Exchanges.

11.4 In the case of the Indian Telephone Industries, the estimated production is 140,000 lines of strowger equipment, 85000 lines of cross-bar equipment 64000 equivalent lines of electronic switching equipment and about 7 lakh telephone instruments. The value of Transmission equipment produced by the company is estimated at Rs. 60 crores.

11.5 The production of Teleprinters and ancillary equipments by the Hindustan Teleprinters Ltd. during 1985-86 is estimated at 8000 units.

11.6 Under the Overseas Communications Service, work was continued in 1985-86 on various schemes, including Westward Cable to Gulf Countries. Switching and Satellite Project etc. Capital contribution was also made for INTELSAT and INMARSAT.

11.7 In 1985-86, the Monitoring Organisation continued work on various schemes, including those for (i) improving facilities as Monitoring Stations; (ii) Establishment of a Satellite Monitoring Station and (iii) Micro-wave Monitoring etc.

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11.8 A provision of Rs. 955 crores has been made for Communication programmes in the Central Sector. Of this, Rs. 40 crores is for Postal Services, Rs. 835 crores for Telecommunications and the remaining amount for Rs. 80 crores for other communication programmes. Scheme-wise details are given in Annexure 11.1

11.9 Under Postal Services, the provision of Rs. 40 crores includes Rs. 1.3 crores for expansion of postal facilities, Rs. 32 crores for construction of Postal buildings and staff quarters, Rs. 1.5 crores for Training Schemes, Rs. 2.5 crores for mechanisation and modernisation, Rs. 1.5 crores for Railway Mail Vans and Rs. 1.2 crores for Mail Motor vehicles. Under the programme for expansion of postal network, the physical targets include the opening of 500 rural post offices in tribal and backward areas, construction of 50 postal buildings and 200 staff quarters. Various categories of staff are also proposed to be trained; these include 100 officers in the Postal Staff College, in-service training to 2880 employees and Savings Bank Training to 4000 persons.

11.10 A provision of Rs. 915 crores has been made for the Department of Telecommunications. Out of this, Rs. 835 crores are for Telecommunication Services and the remaining amount of Rs. 80 crores for other programmes.

11.11. The physical targets include an addition of 2.8 lakh lines of Switching capacity and 2.2 lakh Direct Exchange Lines. Under Long Distance Switching System, the targets are 4 nos. of Trunk Auto Exchanges, 9600 lines of TAX capacity and 120 nos. of Manual Trunk Boards. In the case of Long Distance Transmission Systems, the physical

targets include 1100 route kms. of Co-axial Cables, 2225 route kms. of micro-wave systems and 1520 route kms. of UHF systems. Further, 1120 long distance Public Telephones and an equal number of Telegraph Offices are also proposed to be opened. The other targets include commissioning of 14 Telax Exchanges and setting up of Telex capacity of 3000 local lines and 1500 transit lines.

11.12. In regard to tribal areas, the physical targets include the provision of 11,400 lines of Switching Capacity and 7000 Direct Exchange Lines. The other targets include 60 telephone exchanges, addition of 200 route kms. of UHF systems, 100 Long Distance Public Telephones, 100 Telegraph offices and 16 Earth Stations.

11.13. As regards the North East Region, the physical targets include the provision of 5300 lines of Switching Capacity, 3700 Direct Exchange Lines, 25 Telephone Exchanges, 685 route Kms. of UHF systems, 4 Earth Stations, 50 Telegraph Offices, 50 Long Distance Public Telephones and one Telex Exchange.

11.14 A provision of Rs. 55 crores has been made for the development programmes of the Indian Telephone Industries in 1986-87. On-going schemes on which work will be continued during the year include the Bangalore Unit, Naini Unit, Rae-Bareilly Phase II (Cross-bar project) Unit, ESS factory at Mankapur etc. The new schemes on which work may be started during the year include Bangalore Transmission expansion, Naini Transmission Expansion-Phase III and the acquisition of know-how for new projects. The programme also includes suitable provision for other schemes, including schemes for Research and Development.

11.15 Under Hindustan Teleprinters Ltd., a provision of Rs. 3 crores has been made for 1986-87. The implementation of 2 projects—one for the manufacture of Electric Typewriter and the other for the manufacture of Electronic Teleprinters will be continued during the year.

11.16 A provision of Rs. 19 crores has been made for the development programmes of the Overseas Communications Service in 1986-87. Work will continue on various on-going schemes, including the scheme for West-ward Cable to Gulf Countries and Switching and Satellite projects. Provision has also been made for capital contribution towards INTEL-SAT and INMARSAT. The new schemes which may be taken up during the year include the augmentation of Rearward Communication link, purchase of Indefeasible Rights of Users (IRUs) in foreign Cable Systems etc.

11.17. For the programmes of the Monitoring Organisation, a provision of Rs. 3 crores has been made in the Annual Plan 1986-87. Work will be continued on schemes relating to Micro-wave Monitoring, Satellite Monitoring, Civil Works etc. New

Schemes on which work may be taken up in 1986-87 include modernisation of radio monitoring facilities, augmentation of Wireless Monitoring Training Centres, Monitoring/Management set up and Mobile Monitoring as well as the establishment of Regional Maintenance Centres.

## INFORMATION AND BROADCASTING

11.18. The approved plan outlay for 1986-87 of the Ministry of Information & Broadcasting is Rs. 242.30 crores. Mediawise break-up of the outlay is as below :—

	(Rs. in crores)
(i) Doordarshan . . . . .	124.30
(ii) All India Radio . . . . .	107.00
(iii) Information Media . . . . .	4.00
(iv) Films Media . . . . .	7.00
Total . . . . .	242.30

The total outlay includes an amount of Rs. 2.60 crores for the National Film Development Corporation which is proposed to be met by the Corporation from its own resources. Scheme-wise details of the outlay are given in Annexures 11.2 to 11.4.

## SOUND BROADCASTING

### Review of Plan Performance in 1985-86

11.19. A provision of Rs. 45 crores was made for the Annual Plan 1985-86, against which the estimated expenditure is Rs. 43.11 crores. The main objective of the Annual Plan was completion of the schemes, which had spilled over from the Sixth Plan, to maximise the day time coverage by providing new radio stations in uncovered pockets to compensate for the night time shrinkage that takes place as a result of interference from the high power transmitters of the neighbouring countries. Special emphasis in this regard was given to border, tribal and backward areas. During the year, installation works for 100 KW/MW transmitter at Shillong were completed and those for 300 KW/MW transmitter at Lucknow and Rajkot, 200 KW/MW transmitter at Ajmer, Madras, Siliguri and Dharwad; 100KW/MW transmitter at Ranchi, 50 KW/SW transmitter at Guwahati and 10 KW/MW transmitter at Madurai were nearing completion. Installation work was in progress for 300 KW/MW transmitter at Dibrugarh and 4×50 KW/MW transmitter at Delhi. Installation works at 1000 KW/MW transmitter at Nagpur, 100 KW/MW transmitter at Patna, 50 KW/SW transmitter at Shillong, 20 KW/MW transmitter at Tura, 10 KW/MW transmitter at Agra and 2×250 KW/MW transmitter at Delhi were taken up. The building for 10 KW/MW transmitter at Madurai was completed while the buildings for 20 KW/MW transmitter at Tura, 100 KW/MW transmitter at Patna, 1000 KW/MW transmitter at Nagpur and 10 KW/MW transmitter at Agra were nearing completion. Building works were also taken up for 100 KW/MW transmitter at Itanagar and 2×500 KW/SW transmitter at Bangalore.

11.20 Permanent studios were commissioned at Aizawl, Sangh and Mathura, New radio stations at Almora and Itanagar (Interim set up) and local radio stations at Adilabad and Sholapur were completed. Permanent studios at Tirunelveli, Gulberga, Cuddapah and Visakhapatnam were also completed. Installation works for studios at Kanpur, Madurai, Patna and Bhadravati were nearing completion. Besides, installation works had been taken up at Bhagalpur studios local radio stations at Keonjhar, Kota and the radio station at Jamshedpur. Building works for studios at Agra and Tura were also in progress.

11.21. At the end of the year 1985-86, the network of All India Radio consisted of 88 Broadcasting centres with 128 medium wave, 35 short-wave and 4 VHF-FM transmitters. The primary grade Broadcast coverage of the country was 90 per cent of population and 80 per cent by area.

#### *Annual Plan 1986-87*

11.22 The Annual Plan outlay of All India Radio for 1986-87 is Rs. 107 crores. The main thrust during the year will be on completion of the continuing schemes. New schemes of strengthening and modernisation will also be taken up. The new Radio Stations at Agra, Gangtok, Jamshedpur, Madurai and Tura and the local radio stations at Keonjhar and Kota would be completed and commissioned. Building works for 20 KW/MW transmitter at Gangtok, 300 KW/MW transmitter at Jammu, Jalandhar and Suratgarh, as part of the border coverage plan 100 KW/MW transmitters at Tiruchirappalli, 50 KW/SW transmitters at Gorakhpur, Madras, Srinagar and Bombay are to be taken up during the year.

#### TELEVISION

#### *Review of Plan Performance in 1985-86*

11.23 The outlay for Doordarshan for 1985-86 was approved at Rs. 54 crores against which the anticipated expenditure is Rs. 57.87 crores. The excess of Rs. 3.87 crores over the approved outlay is mainly due to orders placed and advance payments made for procurement of equipment proposed to be deployed for World Cup Cricket Match to be held in October-November 1987. This equipment will be finally utilised for Plan projects.

11.24 During the year under review, 10 KW TV transmitters were commissioned at Nagpur, Ahmedabad, Trivandrum, Varanasi, Patna, Dwarka, Cochin, Jammu, Kasauli, Kodaikanal and Bhatinda. The TV transmitter at Poonch was commissioned on 1 KW power pending completion of 150 mtr. tower. Low Power Transmitters at Neyveli, Singhruli, Korpa, Dharbhanga, Ukhrul, Nazira at Khandwa were also commissioned. The Second TV Channel started functioning at Bombay w.e.f. 1-5-1985 and arrangements were in hand for introduction of Second Channel service at Calcutta and Madras. Civil works for studio buildings at Calcutta, Jaipur, Ahmedabad and Trivandrum were completed and departmental works

taken up. One of the studios in the permanent TV Complex at Calcutta was commissioned. Civil works for Studio buildings at Lucknow, Hyderabad, Bangalore and Guwahati were in progress while those for Phase I of Doordarshan Bhavan, Delhi comprising office Block were in the final stage of completion. One of the studios at Delhi was converted for operation in colour with the installation of professional equipment received from Bharat Electricals Limited. Construction of 235 mtrs. RCC tower for 2x10 KW TV transmitters at Delhi was in progress. As on 1-3-1986, Doordarshan network had 179 transmitters, including 44 high power transmitters.

#### *Annual Plan 1986-87*

11.25 Keeping in view the requirement of funds for development and expansion of TV network and implementation of the new schemes included in the Seventh Five Year Plan of Doordarshan, the outlay for 1986-87 has been provided at a substantially higher level of Rs. 124.30 crores. Out of this, an outlay of Rs. 37.91 crores is for continuing schemes and the remaining Rs. 86.39 crores for new schemes included in the Seventh Plan. During 1986-87, Doordarshan expects to commission TV studios at Jaipur, Ahmedabad and Trivandrum on receipt of the equipment on order. One studio each at Bombay and Madras will be completed for operation in colour with the help of professional studio equipment. 10 KW TV transmitters at Visakhapatnam, Vijayawada, Poonch, Panaji, & Agartala and Low Power Transmitters at Bettiah, Jagdalpur, Proddutur, Satara, Bhuj and Bhavanipatnam will be commissioned. Low Power Transmitters (100 watt) at Hassan, Medikeri, Udipi, Mandi, Balia, Ratnagiri and Very Low Power Transmitters (2x10 watt) at Kavarati, Androot, Ameni, Minicoy in Lakshwadeep and Rawathatta (Rajasthan) are also proposed to be commissioned during the year.

11.26 Civil works for Lucknow, Bangalore and Guwahati studios will be completed and departmental works taken up. Civil works for transmitter buildings, TV towers, Programme Production Centre and staff quarters at several places would be in progress. 10 KW TV Transmitters at Dibrugarh and 1 KW TV transmitter at Kohima under the North East TV expansion Plan will be commissioned into service. Civil works for Doordarshan Bhavan (Phase II), Delhi and Studio projects at Bhopal, Patna, Bhubaneswar and Agartala will be taken up. Expansion of Doordarshan Kendra, Bombay and upgradation of Doordarshan Kendra, Srinagar will also be undertaken. Civil works for transmitter buildings and towers for high power transmitter projects included in the Seventh Plan will be taken up where sites become available. Relay of regional service is proposed to be introduced in Maharashtra and Andhra Pradesh by hiring uplink equipment from Department of Telecommunications and Indian Space Research Organisation. Special Software schemes are proposed to be introduced to make TV Programmes more effective and meaningful.

## INFORMATION AND PUBLICITY

*Review of Plan Performance in 1985-86*

11.27 The approved outlay for 1985-86 for Information and Publicity was Rs. 11 crores comprising Rs. 7.00 crores for the Films Media and Rs. 4.00 crores for the Information Media. The anticipated expenditure is Rs. 7.22 crores the shortfall in the Film Sector being due to the non-materialisation of the expected loan of Rs. 2.50 crores from Motion Picture Export Association of America and in the Information Sector being due to the fact that most of the new schemes included in the Seventh Plan could not be taken up for implementation as a review of the activities of the media units in this sector was undertaken to identify activities which had lost their relevance. Construction of Sookhna Bhavan at New Delhi continued during the year. The Press Information Bureau purchased a computer for setting up Data Bank and Information retrieval system. The pace of civil works of the National Film Archive's building complex at Pune picked up and the construction of the Second Phase of Films Division at Bombay commenced during the year. The Children's Film Society of India completed production of one feature film and another film was under production. It organised the 4th International Children's Film Festival in November, 1985 at Bangalore. The foundation stone of the Children's Film Complex of the Society was also laid there. The National Film Archives of India acquired a large number of films, books/stills and periodicals etc. The construction work of the Indian Institute of Mass Communication's Building Complex at New Delhi was completed and special courses on mass communication and broadcast journalism were conducted by the Institute. The National Film Development Corporation continued to help in the production of films and in financing the construction of theatres. The Directorate of Film Festivals organised the 32nd National Film Festival in June, 1985 and Filmotsav '86 at Hyderabad in January, 1986.

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11.28 A provision of Rs. 11 crores has been made for the schemes relating to Information & Publicity. It comprises Rs. 7 crores for the films media and Rs. 4 crores for the Information Media. The Press Information Bureau will computerise its photo indexing features and provide telephoto services at its regional/branch offices. The Directorate of Audio Visual and Publicity will develop its audio visual set up and mechanise its dispatching system for distribution of publicity material. The Indian Institute of Mass Communication is expected to start the Second Phase of construction work of its building project. Two new major courses for Master's Degree in Journalism and Post Graduate Diploma in Hindi Journalism will also be started. The construction of Children's Film Complex at Bangalore is expected to

start. The Photo Division will be strengthen its colour Unit at Headquarter and set up Colour Units at Bombay, Madras and Calcutta. Construction of Sookhna Bhavan (Phase I) at New Delhi will be in progress. The Second Phase of construction work of the Film Division's building complex will reach an advanced stage. The production of 16 mm featurettes for rural audiences will be continued by the Films Division. Besides, the Films Division has a scheme for replacing old equipment by modern, sophisticated equipment and for acquisition of additional equipment; and another scheme to make additional prints to match the increase in the number of theatres in the country. The Film and Television Institute of India will augment its facilities for video training in the film wing and acquire equipment for its cinematography, editing, lighting and sound department. The National Film Development Corporation will continue to play a purposeful role in the development of good cinema and financing theatre construction. The Directorate of Field Publicity proposes to construct office and residential accommodation in North-eastern States provide Field Publicity Units with VCPs and Colour monitors and equip itself with a computer for programme analysis.

11.29 In addition to the outlay of Rs. 11 crores in the Central Sector mentioned above, the Annual Plan 1986-87 provides for an outlay of Rs. 22.56 crores in the States and of Rs. 1.67 crores in the Union Territories for schemes relating to Information and Publicity.

*INSAT-SPACE Segment*

11.30 The Annual Plan outlay for 1985-86 agreed to for INSAT Space Segment was Rs. 25 crores, Rs. 12.50 crores was provided in the communication Sector and Rs. 12.50 crores in the Science and Technology Sector. Against this, the revised estimate of expenditure for 1985-86 is Rs. 47.50 crores, of which Rs. 23.75 crores is in the Communication Sector. The increase of Rs. 11.25 crores in the revised estimate over the approved outlay of Rs. 12.50 crores for 1985-86 is mainly due to additional expenditure on procurement and launching of INSAT-ID. The spacecraft is proposed to be procured from Ford Aerospace and Communication Corporation and launched by National Aeronautics and Space Administration's space shuttle during October 1988—September 1989 time-frame.

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11.31 For the Annual Plan 1986-87 an outlay of Rs. 56.00 crores has been provided; Rs. 29.02 crores in the Communication Sector and Rs. 26.98 crores in the Science and Technology Sector. These funds are for maintaining operation of INSAT-IB; for INSAT-IC for insurance and making milestone payment to FACC and NASA for launching, for INSAT-ID for making milestone payment as well for meeting expenditure for programmes management.

## ANNEXURE 11.1

## Scheme-wise Plan Outlay — Posts and Telecommunications

(Rs. crores)

Name of the Scheme	1985-86 Plan Outlay	1985-86 Anticipated Expenditure	1986-87 Plan outlay
1	2	3	4
<b>Postal Services</b>			
1. Expansion of Postal network . . . . .	0.75	1.00	1.30
2. Construction of Buildings . . . . .	29.50	29.00	32.00
3. Training . . . . .	2.00	2.00	1.50
4. Mechanisation & Modernisation . . . . .	4.75	5.00	2.50
5. M.M.S. Vehicles . . . . .	1.20	1.00	1.20
6. R M S Vans . . . . .	1.80	2.00	1.50
<b>TOTAL . . . . .</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>
<b>II. Telecommunications</b>			
1. Local Telephone System . . . . .	446.47	481.32	500.87
2. Long Distance Switching System . . . . .	42.90	40.00	38.10
3. Long Distance Transmission . . . . .	144.47	144.47	137.91
4. INSAT & INTELSAT . . . . .	20.00	21.04	40.00
5. Telegraph & Telex System . . . . .	93.17	93.17	41.43
6. Land & Buildings . . . . .	24.00	28.50	24.00
7. TRC, Training, Testing & other organisations . . . . .	63.99	46.50	52.69
<b>TOTAL . . . . .</b>	<b>835.00</b>	<b>855.00</b>	<b>835.00</b>
<b>III. Indian Telephone Industries</b>			
1. ESS Factory, Mankapur . . . . .	10.00	64.55	24.65
2. Naini Unit . . . . .	7.00	5.62	2.20
3. Other continuing schemes . . . . .	38.00	48.83	28.15
<b>TOTAL . . . . .</b>	<b>55.00</b>	<b>119.00</b>	<b>55.00</b>
<b>IV. Hindustan Teleprinters</b>			
	3.00	3.00	3.00
<b>V. Overseas Communications Service</b>			
1. Satellite projects . . . . .	6.12	6.12	3.04
2. Intelsat Capital Contribution . . . . .	4.01	4.01	3.97
3. Inmarsat Capital Contribution . . . . .	1.14	1.14	0.85
4. Other Schemes . . . . .	2.73	2.73	11.14
<b>TOTAL . . . . .</b>	<b>14.00</b>	<b>14.00</b>	<b>19.00</b>
<b>VI. Monitoring Organisation</b>			
	3.00	5.00	3.00
<b>GRAND TOTAL . . . . .</b>	<b>950.00</b>	<b>1036.00</b>	<b>955.00</b>

## ANNEXURE 11.2

## Scheme-wise Plan Outlays—Sound Broadcasting

(Rs. Crores)

S. No.	Scheme	1985-86 Plan Outlay	1985-86 Anticipated Expenditure	1986-87 Plan Outlay
1	2	3	4	5
<b>A. Continuing Schemes</b>				
1.	Studios at 10 Centres . . . . .	1.50	0.65	0.46
2.	Upgradation of Power Transmitters at 11 Centres . . . . .	3.89	2.49	1.86
3.	Installation of New Radio Stations at 11 Centres . . . . .	5.04	3.24	4.15
4.	Short-wave Transmitters for External Services at two Centres . . . . .	9.81	5.10	5.48
5.	National Channel at Nagpur—Installation of 1000 KW/MW Transmitter . . . . .	5.62	6.24	2.45
6.	Miscellaneous Schemes . . . . .	4.00	12.17	5.36
	<b>TOTAL (A)</b> . . . . .	<b>29.86</b>	<b>29.89</b>	<b>19.66</b>
<b>B. New Schemes</b>				
1.	Modernisation and Replacement of Studios and Transmitter equipment . . . . .	4.17	3.80	23.60
2.	Setting up of Studios at 8 Centres . . . . .	0.32	—	1.00
3.	Upgradation of power transmitters at 11 Centres . . . . .	0.87	1.65	12.89
4.	Installation of New Radio Stations . . . . .	0.39	3.85	21.97
5.	Installation of New Transmitters at 10 Centres . . . . .	0.40	0.99	5.08
6.	Soft Ware Development Schemes . . . . .	1.80	—	3.14
7.	Research and Training . . . . .	1.02	0.50	1.07
8.	National Channel Studios at 2 Centres . . . . .	0.14	0.23	0.20
9.	External Services at 3 Centres . . . . .	0.13	0.29	7.22
10.	Staff Quarters . . . . .	0.51	0.70	2.05
11.	Radio net-working through INSAT . . . . .	—	—	0.79
12.	Other Schemes . . . . .	5.39	1.21	8.33
	<b>TOTAL—(B)</b> . . . . .	<b>15.14</b>	<b>13.22</b>	<b>87.34</b>
	<b>GRAND TOTAL A+B</b>	<b>45.00</b>	<b>43.11</b>	<b>107.00</b>



## ANNEXURE 11.3

## Scheme-wise Plan Outlays—Doordarshan

(Rs. Crores)

S. No.	Scheme	1985-86 Plan Outlay	1985-86 Anticipated expenditure	1986-87 Plan Outlay
1	2	3	4	5
<b>(A) Production Facilities</b>				
1.	Replacement of studio equipment at existing Kendras and OB Van at Madras	0.60	2.27	14.00
2.	Continuing studio schemes	30.43	25.01	33.16
3.	Studio centres at State Capitals	2.05	..	8.61
4.	Studio Centres in cultural Centres	..	..	2.10
5.	Continuity Booths	..	0.92	1.91
6.	Colour OB Vans—6 Nos & EFP Vans, 9 Nos.	..	1.97	4.15
7.	Additional Studios at Calcutta & Madras for II Channel	..	..	1.40
8.	Programme Generation Facilities at Selected Relay Centres, 9 Nos.	..	0.36	4.88
9.	Modernisation of Programme Production facilities at existing centres	..	0.51	3.27
SUB. TOTAL (A)		33.13	31.04	73.47
<b>(B) Transmission facilities and Other Schemes</b>				
10.	Spill over of Transmitter schemes from VI Plan	12.02	14.72	3.60
11.	Replacement of old Transmitter (8 Nos.)	0.40	0.19	3.50
12.	Primary Services Relay Transmitters 10 KW (13 Nos)/1 KW (2 Nos)	0.25	0.96	7.10
13.	Border Services	1.45	..	5.20
14.	100 W. Transmitters for uncovered districts (103) 2 x 10 W Transmitters (17 Nos) with associated maintenance Centres	0.20	0.32	4.06
15.	II Channel Transmitters at Delhi, Bombay, Calcutta and Madras	0.90	0.53	1.84
16.	Software Schemes, including R&D	0.52	..	6.00
17.	Staff Quarters & Rest Homes	..	..	1.51
18.	Satellite & Microwave links	1.00	2.44	8.64
19.	Installation Staff and Machinery and equipment.	1.71	2.17	2.47
20.	Other Schemes	2.42	0.56	7.00
TOTAL (B)		20.87	21.89	50.83
GRAND TOTAL (A & B)		54.00	52.93*	124.30

\*This excludes capital expenditure of Rs. 4.94 crores for which schemewise break. up is not available.

## ANNEXURE 11.4

*Break-up of Plan Outlay—  
Information and Publicity including Films*

(Rs. crores)

S. No.	Name of Media Unit	1985-86 Plan Outlay	1985-86 anticipated expenditure	1986-87 Plan Outlay
1	2	3	4	5
1.	Press Information Bureau	0.70	0.78	0.59
2.	D.A.V.P.	0.19	0.19	0.35
3.	Dte. of Field Publicity	0.79	0.79	1.29
4.	Photo Division	0.16	0.10	0.20
5.	I.L.M.C.	0.72	0.99	0.66
6.	Soochna Bhavan	0.80	0.60	0.53
7.	Films Division	1.33	1.33	2.21
8.	NFAI	0.63	0.65	1.18
9.	FTII	0.29	0.48	0.22
10.	CFS/I	0.75	0.64	0.35
11.	NFDC	3.25	2.51	2.60
12.	Dte. of Film Festivals	0.65	0.65	0.43
13.	Other Schemes	0.74	0.63	0.39
TOTAL		11.00	10.40	11.00

## CHAPTER 12 EDUCATION

### Review of Plan performance in 1985-86

An outlay of Rs. 1020.78 crores was approved for the Education Sector for the Annual Plan 1985-86

against which the anticipated expenditure is Rs. 983.12 crores, as shown below:

TABLE 12.1

*Approved outlay and Anticipated Expenditure by Major heads of Education and by Centre and States/Uts for 1985-86*

(Rs. in crores)

Head of Development	Approved Outlay			Anticipated Expenditure		
	Centre	States & U.Ts.	Total	Centre	States & U.Ts.	Total
1. General Education . . . . .	252.85	542.29	795.14	217.35	538.96	756.31
Elementary . . . . .	37.58	237.19	274.77	20.00	251.47	271.47
Adult . . . . .	63.00	26.53	89.53	44.63	23.05	67.68
2. Technical Edn. . . . .	75.65	76.57	152.22	75.40	71.66	147.06
3. Art & Culture . . . . .	19.00	20.13	39.13	21.00	23.76	44.76
4. Sports & Youth Affairs Education . . . . .	11.68	22.61	34.29	11.18	23.81	34.99
	359.18	661.60	1020.78	324.93	658.19	983.12

12.2 The anticipated expenditure for 1985-86 is 3.69 per cent less than the approved outlay. In the State Sector, the shortfall is insignificant. However, in the Central Sector, despite an excess of Rs. 2 crores on Art and Culture, there is overall under-utilisation of the order of Rs. 34.25 crores which is mainly under General Education. For the Centre and States taken together, while the shortfall in elementary education is insignificant, it is 24 per cent in Adult Education. This is mainly due to slow progress of the programmes included in the Central Sector.

12.3 The major target-oriented programmes, namely elementary education (children of the age-group 6-14) and adult education for the age group 15-35, are covered under the Minimum Needs Programme and 20-Point Programme. The target and the anticipated achievement under Elementary Education are shown in Table 12.2 below.

TABLE 12.2

*Additional Enrolment at Elementary Stage 1985-86*

(Figures in lakhs)

I. Primary Stage	Target	Anticipated Achievement
1	2	3
Classes I-V		
Age-Group 6-11 Yrs.		
Boys . . . . .	12.64	15.83
Girls . . . . .	17.23	21.58
Total . . . . .	29.87	37.41

1	2	3
II. Middle Stage		
Classes VI-VIII		
Age-Group 11-14 yrs.		
Boys . . . . .	10.97	11.99
Girls . . . . .	11.88	8.81
Total . . . . .	22.85	20.80
III. Elementary Stage		
Classes I-VIII		
Age-Group 6-14 yrs.		
Boys . . . . .	23.61	27.82
Girls . . . . .	29.11	30.39
Total . . . . .	52.72	58.21

Thus, under Elementary Education, against the target of 52.72 lakh additional children to be enrolled in schools in classes I-VIII, the anticipated achievement is 58.21 lakhs. While the additional enrolment of girls at primary school stage was 25 per cent more than the target, at the middle school stage there was almost 25 per cent shortfall.

12.4 Table 12.3 below indicates the progress of Elementary Education in 1985-86 in the nine States identified as backward in the 6th Plan. The educationally backward States accounted for nearly 77 per cent of the all India target of additional enrolment, and 70 per cent of the achievement.

TABLE 12.3

*Additional Enrolment in 1985-86 at Elementary Stage in nine Educationally backward States, classes I-VIII*

(Figures in lakhs)

States	Target	Anticipated Achievement
1. Andhra Pradesh . . . . .	7.60	7.66
2. Assam . . . . .	3.01	3.92
3. Bihar . . . . .	6.52	6.52
4. Jammu & Kashmir . . . . .	0.81	0.81
5. Madhya Pradesh . . . . .	7.00	7.07
6. Orissa . . . . .	1.88	0.48
7. Rajasthan . . . . .	3.55	3.56
8. Uttar Pradesh . . . . .	5.00	5.07
9. West Bengal . . . . .	5.02	5.52
10. Total . . . . .	40.39	40.61
11. All India . . . . .	52.72	58.21
82. 10 as % of 11 . . . . .	76.61	69.76

12.5 The Seventh Plan envisages that about 2.5 crores of children will benefited from non-formal courses. By the end of 1985-86, 1.45 lakh Non-formal Education Centres with enrolment of 36.24 lakh children had been sanctioned for the educationally backward States with 50 per cent assistance

from the Centre. Besides, 20,500 centres sanctioned upto 1984-85 under the scheme of establishment of exclusively girls centres were continued.

12.6 Under adult education, as against the target of 75.46 lakh illiterate adults in the age-group 15-35 to be covered during 1985-86, the anticipated achievement is 72.64 lakhs.

12.7 At secondary stage, 1.35 lakh students are reported to be enrolled by the end of 1985-86, for vocational courses at +2 stage in 10 States and 5 Union Territories. A large number of Youth programmes were also organised by the governmental and non-governmental agencies at the district, State and national levels by way of observing the International Youth Year 1985.

12.8 The Programme of Art & Culture were further developed during 1985-86. A new programme of Zonal Cultural Centre was initiated and three Zonal Cultural Centres were set up at Patiala, Shantiniketan and Thanjavur for the Northern, Eastern and Southern Zones respectively. The foundation stone of the Indira Gandhi National Centre for Art was also laid.

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12.9 An outlay of Rs. 1297.39 crores has been approved for Education in the Annual Plan 1986-87. The break-up of the outlay by Centre, States and Union Territories and by major sub-heads of education is indicated in Table 12.4 below :

TABLE 12.4

*Outlay for 1986-87 for Education, Art & Culture and Sports.*

										(Rs. in crores)		
Sl. No.	Sub-head								Centre	States/UTs.	Total	%age in-crease over approved outlay for 1985-86
1.	General Education . . . . . 1 . . . . .								275.96	656.58	932.54	17
	Elementary Education . . . . .								31.80	328.93	360.73	31
	Adult Education . . . . .								63.00	33.86	96.86	8
2.	Technical Education . . . . .								76.00	106.63	182.63	20
3.	Art & Culture . . . . .								58.80	35.50	94.30	141
4.	Sports & Youth Services . . . . .								50.33	37.59	87.92	156
5.	Total Education . . . . .								461.09	836.30	1297.39	27

12.10 The outlay of Rs. 31.80 crores in the Central Sector for 1986-87 for Elementary Education includes provision for assistance to the educationally backward States towards continuation of Non-formal education centres and meeting the expenditure on lady teachers appointed during the Sixth Plan period.

12.11 It is planned to enrol 56.61 lakh additional children in classes I-VIII as against the target of

additional enrolment of 52.72 lakhs children in 1985-86. Efforts will be continued to expand the programmes designed to enhance the retention rates in the formal school system and to reduce drop-outs. Provision for construction of school buildings from NREP and RLEGP funds would be continued. Increased provision has been made for improving libraries, science teaching, supply of tat patts and furniture and for the schemes of Socially Useful Productive Work Programmes are being developed

to introduce modern technology utilising the communication satellite facilities.

12.12 To promote in children the school going habits as also to improve the retention rate, provision for play centres/balwadis adjacent to primary schools would be expanded. This will enable regular attendance, particularly of girls who otherwise would be required to look after the younger children in the family when their parents are away for work. Population education, public health education, ecology concepts etc. are being added to the curricula to make school education relevant to national development. Science kits are being provided to schools to improve teaching of science. Block Education Officers responsible for the supervision of education will continue to receive in-service training for enhancement of their professional competence. Training courses in planning and management for field level functionaries would be intensified. Monitoring and evaluation of on-going programmes will be strengthened, with particular reference to the 20-Point Programme. A crash programme for retraining of teachers and to acquaint them with the New Educational Policy will be implemented. About 5 lakh teachers are proposed to be covered in 1986-87. District Institutes of Education are proposed to be established for conducting in-service training of teachers.

12.13 To increase enrolment of Scheduled Castes, Scheduled Tribes and other weaker sections of the society, incentives like free supply of books and stationery, school uniforms, payment of pre-matric scholarships and attendance scholarships will be expanded during 1986-87.

#### *Adult Education*

12.14 An outlay of Rs. 96.86 crore has been approved for 1986-87 against the likely expenditure of Rs. 67.68 crores in 1985-86. The programmes would be further expanded and additional literacy projects would be taken up, particularly in the State Sector. The Ministry of Human Resource Development, (Department of Education), would continue to assist the States in strengthening the resource centres set up to undertake training materials. The production of teaching-learning materials. The programmes of workers' social education. *Shramik Vidya* and production of post-literacy follow-up reading materials for neo-literates will be continued. A programme of mass education has been taken up to eradicate illiteracy through teachers, students, social workers and voluntary organisations.

#### *Secondary Education*

12.15 Improvements in science teaching, through the provision of laboratories, revision and updating of curricula and production of textbooks and other learning material will continue to receive priority under secondary education. Provision of libraries, establishment of book banks and in-service training of teachers are proposed to be organised on a large scale. High priority is being given to vocationalisation. Surveys are proposed to be carried out in selected

districts to assess the local work opportunities for the middle level semi-skilled workers. These surveys will help in identifying the needs of vocationalisation at the plus two stage of secondary education. In addition to the allocation made in the State Plans, a provision of Rs. 7 crore has been made in the Central Plan for expansion of vocational education. Besides, a provision of Rs. 25 crore has been made for Navodiya Schools. Teachers will be encouraged to take up projects for improvement of their schools through the State Councils of Education, Research and Training. Scholarships would continue to be given to children from rural areas and those belonging to the Scheduled Castes/Scheduled Tribes. Population education would be introduced in curriculum at plus two stage of the Secondary Education. Computer education in schools would be expanded further. To make available non-formal education at the secondary stage, facilities for increased enrolment in the "Open School" would be provided.

#### *Higher Education*

12.16 Provision has been made for continuance of the ongoing programmes. Stress would be laid on consolidation and optimum utilisation of the existing facilities with special concern for first generation learners of socially disadvantaged groups. With a view to linking education to employment, undergraduate courses are being restructured. Greater involvement of students in community service would be sought to be achieved. Necessary provision has been made for the University Grants Commission to help implement quality improvement programmes in the Universities and other institutions of higher education. The problem of regulating admissions in higher education, particularly in general education, would be sought to be tackled through non-formal methods. Deficiencies in science and technology teaching and research would be removed during the Seventh Plan through the programme of Committee for Strengthening of Infrastructure for Science and Technology (COSIST). Centres of advanced studies will be activated to undertake fundamental as well as applied research. Emphasis will be on promotion of quality programmes through collaboration among universities, national laboratories and other research institutions.

#### *Sports and Youth Welfare*

12.17 The implementation of the resolution on National Sports Policy will be continued during 1986-87. Some new schemes have been added and expansion of on-going schemes will be undertaken. In order to provide greater dynamism and flexibility in the functioning of Nehru Yuva Kendras, a Central autonomous organisation is proposed to be set up to administer and develop these Kendras. The National Service Scheme will be made more broad-based and a 10 per cent increase per annum in the participation of students will be attempted. Adventure facilities will be provided to youth as also the spirit of social service encouraged through the national service volunteer scheme. The number of regional sports coaching centres has been increased in State Capitals and District Headquarters and coaching facilities in

various sports disciplines have been further extended. The National Institute of Sports will further consolidate and expand its activities. Besides managing and utilising the existing stadia, the Sports Authority of India will arrange for coaching training.

### Art and Culture

12.18 The programmes for development of archaeology, archives and museums will be continued. Dissemination of culture through government and non-government agencies, Zonal Cultural Centres and voluntary organisations will be encouraged. The first phase of construction work of Indira Gandhi National Centre of Arts is expected to start in 1986-87.

### Technical Education

12.19 Under technical education, stress will continue to be laid on consolidation and quality improvement through modernisation of the existing infrastructure, curriculum improvement and faculty development. Programmes of assistance to selected engineering colleges and polytechnics to help them in critical areas of institutional development will be continued. The Centres of advanced studies established in the Institutes of Technology would be developed on the lines recommended by a High Level Review Committee. The programme of institutional network and internal technical assistance among technical education institutions will be continued and extended wherever possible.

12.20 Special attention will be given to the creation of facilities for manpower training in areas like computer science, electronics, instrumentation, maintenance engineering, bio-sciences etc. A Technical Manpower Information System to assist realistic planning for technical education facilities has started functioning. In order to help the transfer of technology and technical skills to the rural areas more effectively, the existing Polytechnics will be evaluated and further developed accordingly.

### 20-Point Programmes

12.21 It is proposed to enrol additional 56.61 lakhs children at the elementary stage and to cover 83.60 additional adults in the age-group 15-35 in 1986-87 (Annexure 12.1). Monitoring of the progress of elementary education and adult education will be continued and further strengthened to make it more effective and to ensure timely and reliable information for taking corrective measures.

12.22 The educationally backward States account for about 70 per cent of the all India target of additional enrolment at the elementary stage during 1986-87. Table 12.5 below indicates the enrolment targets in these States.

TABLE 12.5

*Additional Enrolment at Elementary Stage in Nine Educationally Backward States, Classes I-VIII—1986-87.*

(Figures in lakhs)

States	1986-87 Target
1. Andhra Pradesh . . . . .	7.66
2. Assam . . . . .	4.22
3. Bihar . . . . .	6.75
4. Jammu & Kashmir . . . . .	0.84
5. Madhya Pradesh . . . . .	4.00
6. Orissa . . . . .	1.20
7. Rajasthan . . . . .	3.07
8. Uttar Pradesh . . . . .	6.00
9. West Bengal . . . . .	5.85
10. Total . . . . .	39.59
11. All India . . . . .	56.61
12. 10 as % of 11 . . . . .	69.93

### National Policy

12.23 The National Policy on Education, 1986 lays stress on developing a national system of education based on national curricular framework with a view to promote values such as common cultural heritage, egalitarianism, democracy and secularism, equality of the sexes, protection of the environment removal of social barriers, observance of the small family norm and the inculcation of the scientific temper.

12.24 To make it more effective, the elementary system of education would be restructured and adequate arrangement will also be made to provide non-formal education for the drop outs, working children and girls who cannot attend the whole day school. Opportunities will be provided to the youth, housewives, agricultural and industrial workers and professionals to pursue education of their choice. Removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive overriding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. In the case of scheduled castes, the central focus in the educational development is on their equalisation with the non-Scheduled Caste population at all stages and levels of education in all areas and in all the four dimensions—rural male, rural female, urban male and urban female. Requisite measures will also be taken urgently to bring the Scheduled Tribes at par with others. Greater attention will be paid to the education of the minority groups in the interest of equality and social justice. The education of the handicapped will be integrated with that of the general community to enable them to face life with courage and confidence. Anganwadis, non-formal education centres and adult education centres will be opened on a priority basis in the areas inhabited by

majority of Scheduled Tribe population. The New Education Policy also commits itself to safeguard the language and culture of the minorities which is the cardinal principle of secularism in India's democratic framework. Adequate care will be taken of the handicapped. Pace-setting schools are to be established for the children with special talent or aptitude. The policy envisages that all children who have attained the age of about 11 years by 1990 will have had 5 years of schooling or its equivalent through non-formal system. Likewise by 1995 all children will be provided free and compulsory education upto 14 years of schooling or its equivalent through non-dication of illiteracy, particularly in the age-group

15—35, vocationalisation of education to cover 10 per cent of higher secondary students by 1990 and 25 per cent by 1995 as well as on modernisation and quality improvement of education at all stages. Measures are contemplated for examination reform, teacher training, curriculum development and improvement of management system in education institutions. A beginning would be made in delinking degrees from jobs in selected areas.

#### *Plan outlay*

12.25 Details of plan outlay for 1985-86 and 1986-87 are give in Annexures 12.2 and 12.3.

## ANNEXURE 12.1

Targets under the 20-points Programmes for 1985-86 and 1986-87—Point No. 16 A &amp; B (Elementary Education and Adult Education).

(in 000's)

Sl. No.	States	1985-86		1986-87	
		Elementary Education	Adult Edu.	Elementary Education	Adult Edu.
1	2	3	4	5	6
1.	Andhra Pradesh . . . . .	760	440	766	432
2.	Assam . . . . .	301	362	422	363
3.	Bihar . . . . .	652	1040	675	1128
4.	Gujarat . . . . .	180	415	375	461
5.	Haryana . . . . .	117	183	133	210
6.	Himachal Pradesh . . . . .	30	40	30	40
7.	Jammu & Kashmir . . . . .	81	77	84	80
8.	Karnataka . . . . .	125	384	343	384
9.	Kerala . . . . .	—	100	—	100
10.	Madhya Pradesh . . . . .	700	756	400	885
11.	Maharashtra . . . . .	378	572	411	740
12.	Manipur . . . . .	10.5	50	12.6	50
13.	Meghalaya . . . . .	8	40	10	42
14.	Nagaland . . . . .	10	20	12	20
15.	Orissa . . . . .	188	225	120	230
16.	Punjab . . . . .	35	125	44	135
17.	Rajasthan . . . . .	355	366	307	411
18.	Sikkim . . . . .	4.5	15	5.7	15
19.	Tamil Nadu . . . . .	225	700	225	900
20.	Tripura . . . . .	26	40	11.5	85
21.	Uttar Pradesh . . . . .	500	900	600	933
22.	West Bengal . . . . .	502	550	585	577
TOTAL—(States) . . . . .		5188	7400	5571.8	8221
<i>Union Territories</i>					
23.	A. & N. Islands . . . . .	4	2.4	4	2.4
24.	Arunachal Pradesh . . . . .	10	12.9	7	13
25.	Chandigarh . . . . .	5.6	6.0	5.5	6
26.	Dadra & Nagar Haveli . . . . .	0.5	3.6	0.6	4.5
27.	Delhi . . . . .	51	90.0	58	80
28.	Goa, Daman & Diu . . . . .	4	10.0	3.0	11.4
29.	Lakshadweep . . . . .	—	1.0	1.6	1.0
30.	Mizoram . . . . .	5	5.0	6	6
31.	Pondicherry . . . . .	3.5	15	3.5	15
TOTAL—(UTs) . . . . .		83.6	145.90	89.2	139.3
GRAND TOTAL . . . . .		5271.6	7545.90	5661	8360.3



## Plan Outlay for important Central Schemes for 1986-87—Education

(Rs. in lakhs)

Programme/Scheme	1985-86 Plan Outlay	Anticipated Expenditure	1986-87 Plan Outlay
1	2	3	4
<b>A. Department of Education</b>			
<i>General Education</i>	25285	21735	27596
<b>I. School Education</b>	9352	8000	10700
(i) Non formal Education	880	1150	2015
(ii) Appointment of Women teachers in Primary schools in Nine educationally backward States	370	450	450
(iii) Education technology programmes, including INSAT utilisation	825	825	850
(iv) Model Schools	—	—	2500
(v) Vocationalisation	—	—	700
Other Schemes	7277	5575	4185
<b>II. University and Higher Education</b>	8200	7969	9000
(i) University Grants Commission	7100	7000	7000
(ii) Indira Gandhi National Open University	75	300	750
(iii) Other Schemes	1025	669	1250
<b>III. Adult Education</b>	6300	4463	6300
(i) Rural Functional Literacy Projects	3070	3070	3070
(ii) Mass Movement for Functional Literacy	1000	240	1800
(iii) Other Schemes	2230	1253	1430
<b>IV. Book Promotion</b>	100	100	100
<b>V. Scholarships</b>	491	358	500
<b>VI. Languages</b>	837	845	850
(i) Hindi	100	114	137
(ii) Modern Indian Languages	37	28	40
(iii) Sanskrit	93	93	96
(iv) Other Schemes	607	610	577
<b>VII. Other education Schemes, including Planning &amp; Admn. and Physical Education</b>	5	—	146
<b>VIII. Technical Education</b>	7565	7540	7600
(i) Modernisation of Lab./Workshops	500	1500	1650
(ii) Emerging Technology	550	550	700
(iii) Areas of Weakness	550	750	700
(iv) Other Schemes	5965	4740	3550
<b>B. Sports &amp; Youth Affairs</b>	1168	1118	5033
(i) Deptt. of Art	..	..	..

1	2	3	4
C. Indira Gandhi National Centre for Arts (IGNCA)	—		100
(ii) Deptt. of Culture	1900	2100	5780
(i) Archaeological Survey of India	275	275	500
(ii) Museums	821	820	983
(iii) Archives & Records	168	116	239
(iv) Institution of Tibetan Buddhist and other Historical studies	108	79	140
(v) Libraries	218	200	313
(vi) Academies and National School of Drama	195	195	294
(vii) Promotion & Dissemination of Culture including Zonal Culture Centre	103	294	1319
(viii) Others Schemes	6	—	1942
GRAND TOTAL	35918	32493	46109

## ANNEXURE 12.3

*Plan Outlay by Major Heads of Development under Education 1986-87—  
States & Union Territories*

(Rs. in lakhs)						
Sl. No.	States	General Edn.	Technical Edn.	Art & Culture	Sports Youth Affairs	Total
1	2	3	4	5	6	7
1.	Andhra Pradesh	5441	450	394	175	6460
2.	Assam	4700	380	295	90	5464
3.	Bihar	5700	275	75	75	6125
4.	Goa	1178	430	64	49	1721
5.	Haryana	2007	310	50	100	2467
6.	Himachal Pradesh	837	100	120	120	1177
7.	Jammu & Kashmir	1517	235	58	95	1905
8.	Karnataka	1817	150	268	120	2355
9.	Kerala	672	370	150	100	1292
10.	Madhya Pradesh	5600	652	178	80	6510
11.	Maharashtra	4570	1855	235	185	6845
12.	Manipur	475	30	55	100	660
13.	Meghalaya	347	23	18	35	423
14.	Nagaland	344	30	71	45	490
15.	Orissa	3051	390	100	300	3841
16.	Punjab	1150	440	100	145	1835
17.	Rajasthan	3706	300	94	36	4136
18.	Sikkim	630	—	60	35	725
19.	Tamil Nadu	5005	700	160	150	6015
20.	Tripura	1200	14	45	70	1329
21.	Uttar Pradesh	4545	1500	213	554	6812
22.	West Bengal	4066	448	191	576	5281
TOTAL—States		58558	9082	2994	3235	73869
<i>Union Territories :</i>						
23.	A & N Islands	264	35	2	14	315
24.	Arunachal Pradesh	1225	20	80	50	1375
25.	Chandigarh	305	130	30	110	575
26.	Dadra & Nagar Haveli	87.22	1.50	3.61	7.67	100
27.	Delhi	3800	900	250	150	5100
28.	Goa, Daman & Diu	675	115	105	60	955
29.	Lakshadweep	52	—	10	20	82
30.	Mizoram	339	30	25	30	424
31.	Pondicherry	353	350	50	82	835
TOTAL—UTs.		7100.22	1581.50	555.61	523.67	9761
GRAND TOTAL		65658.22	10663.50	3549.61	3758.67	83630

## CHAPTER 13

# HEALTH, FAMILY WELFARE AND NUTRITION

### HEALTH

Health care facilities are being augmented and strengthened in consonance with the policies and strategies adopted for the Seventh Plan towards the accepted goal of attaining Health for All by 2000 AD. The emphasis during 1986-87 would be on further strengthening of the Rural Health Infrastructure and control of common communicable diseases, particularly those for which National Programmes are being implemented.

#### Minimum Needs Programme

13.2 The total outlay approved for the Annual Plan 1985-86 for augmentation of health care facilities under the Minimum Needs Programme of States/UTs. was Rs. 173.99 crores. While the Union Territories have reported more or less full utilisation of funds under the programme, the anticipated expenditure in

States shows a shortfall of about Rs. 26 crores compared to the approved outlay. This shortfall is accounted for mainly by Maharashtra, Uttar Pradesh, Punjab, Andhra Pradesh, Tamil Nadu and Orissa.

13.3 The three-tier system of health care infrastructure comprising sub-centres, primary health centres and community health centres has been further augmented and strengthened to ensure reach of primary health care to the vast segment of population living in villages. Training of Auxiliary Nurse Midwives (ANMs) and other paramedical workers was also accorded priority to ensure proper manning and efficient functioning of health centres etc.

13.4 The targets set and achievements reported under the Minimum Needs Programmes for 1985-86 alongwith the cumulative achievements by the end of the Sixth Five Year Plan are given in the Table below :—

TABLE 13.1  
Targets and Achievements

Sl. No.	Programme	Number in position as on		1985-86	
		1-4-1985	Targets	Anticipated Achievement	Number Anticipated as on 1-4-86
1	2	3	4	5	6
1.	Sub-Centres	84,581	6,132	6,598	91,179
2.	Primary Health Centres	11,094	1,455	1,777	12,871
3.	Community Health Centres	720	298	182	902

13.5 Maharashtra, Manipur, Nagaland, Sikkim and Kerala reported achievement exceeding the set targets in respect of Sub-Centres in 1985-86, while the States of Bihar and West Bengal reported a shortfall. Andhra Pradesh, Assam, Kerala, Punjab, Uttar Pradesh and Nagaland reported achievement exceeding the targets in respect of Primary Health Centres, while Meghalaya, Orissa and Tamil Nadu reported shortfalls in achievement. With regard to establishment of Community Health Centres, the States of Assam, Bihar and Jammu and Kashmir reported performance exceeding the targets, while the States of Karnataka, Orissa, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Manipur, Rajasthan and Uttar Pradesh reported shortfalls. The performance during the first year of the Seventh Plan also indicates a desirable and significant shift in emphasis in establishing Sub-Centres and Primary Health Centres in preference to establishment of Community Health Centres.

13.6 Under the Village Health Guides Scheme, training is imparted to the selected representatives of

the community to function as a Village Health Guide. Under this scheme, about 3.50 lakhs Village Health Guides were trained and positioned in 4227 PHCs. The programme is being continued in the Seventh Plan to train about 1 lakh additional guides to meet the projected total requirement of 4.50 lakh guides for the entire country by 1989-90. A total of 3700 Village Health Guides were trained during April—December, 1985, raising the overall number to 3.87 lakhs by March, 1985. The States of Jammu & Kashmir, Kerala, Tamil Nadu and Arunachal Pradesh, which have taken up alternative schemes to Centre's Village Health Guide Scheme continued their training programmes during 1985-86. A total of 1772 volunteers were reported trained by these States upto 31st December, 1985.

13.7 The health workers of different categories working in various uni-level health care programmes were being trained as multi-purpose functionaries under the Multipurpose Workers Scheme towards the

objective of providing a comprehensive integrated package of health care and family welfare services for the rural population, 338 out of a total of 412 districts were covered under the MP Scheme till March, 1985. Effective utilisation of trained personnel as multi-purpose functionaries still remains to be achieved due to impediments like non-acceptability of the programme to some States, administrative bottlenecks connected with rationalisation of pay scales, non-compliance of population norms in posting of multi-purpose workers, inadequate importance to manpower planning etc. Due to such apathy on the part of the States, funds set apart in the Central Sector for meeting the 100 per cent cost of the training of identified paramedicals remained under-utilised.

### *Control of Communicable Diseases*

13.8 The modified plan of operations for control of Malaria was continued during 1985-86. The incidence of Malaria has come down from 6.5 million cases in 1984 to 1.74 million cases (provisional) in 1985. 150 deaths (provisional) were reported in the year 1985 against total reported deaths of 247 in 1984. The average rate of blood slides examined remained below 10 per cent during 1976 to 1979 and 1982 to 1985, reflecting operational efficiency of the control programme. The overall reduction in the incidence of Malaria is also confirmed by slide positivity rate (SPR) which was 2.72 per cent in 1985 against 11.5 per cent in 1976, showing decline of 76.45 per cent. The average parasitic index (API) also showed decline of 78.06 per cent during the same period. The strategy adopted for containing *p. falciparum* proved effective and there had been a decline in *p. falciparum* incidence from 7.5 lakhs cases in 1976 to 6.55 lakhs in 1984 and 4.88 lakhs cases (provisional) in 1985.

13.9 Under the Filariasis Control Programme, 9 Control Units, 1 Survey Unit and 33 Clinics were set up in 1985-86, raising the overall infrastructure in the country to 197 Control Units, 27 Survey Units and 148 Clinics. The Rural Filariasis Project taken up in Balsad District of Gujarat has been completed and the work in respect of the other two control projects in Srikakulam District in Andhra Pradesh and Jaunpur District in Uttar Pradesh is in progress.

13.10 The National Leprosy Eradication Programme is funded 100 per cent by the Centre and is accorded a high priority. 3.24 million cases were recorded under the programme as on 31-12-1985, of which 3.02 million cases accounting for 93 per cent of the total, were brought under treatment and 1.95 million cases were reported discharged. A target of 3.81 lakhs for case detection and treatment was set for the year 1985-86. 4.23 lakh cases were reported detected and 4.10 lakh cases brought under treatment till the end of February, 1986. During 1985-86, 15 districts were under various phases of multi-drug therapy treatment under SIDA assistance programme. The Government of India have also entered into an agreement with DANIDA for introduction of multi-drug regimen therapy in four districts. Infrastructural facilities have sufficiently been augmented under

this programme and 403 Leprosy Control Units, 661 Urban Leprosy Centres, 6985 Survey, Education and Treatment (SET) Centres were established, besides 33,000 Leprosy beds, by the end of March, 1985.

13.11 The programme for the control of Tuberculosis incidence is being pursued vigorously on target oriented basis with effect from 1982-83. A target of detection of 14 lakh new TB cases and Sputum examination of 34 lakhs at Primary Health Centres was fixed for 1985-86. 9.08 lakh cases were reported detected besides examination of 13.08 lakh Sputum cases upto the end of December 1985. Control measures under the programme are being ensured through a network of 364 District TB Centres and about 46000 beds available in various medical Institutes & TB Hospitals in the country.

13.12 Under the National Scheme for control of blindness, ophthalmic care facilities have been sufficiently augmented in the country. Central assistance was provided for upgradation of ophthalmic Departments of 58 medical colleges besides establishment of 9 regional institutes and 37 training schools for imparting training to medical and paramedical staff. During 1985-86, Ophthalmic equipment was supplied to 1000 PHCs against a target of assisting 4000 PHCs in all during the Seventh Five Year Plan. It was targeted to conduct 13.84 lakh Cataract Operations during the year, against which a performance of 8.79 lakh operations was reported upto February 1986. Maharashtra, Punjab, Pondicherry and Chandigarh have reported more than 100 per cent achievement of the targets. Andhra Pradesh, Haryana, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Tripura, Goa, Daman & Diu and Delhi have achieved the targets between 50 and 100 per cent. Bihar, Gujarat, Meghalaya, U.P., and Dadra & Nagar Haveli have achieved the targets between 25 and 50 per cent and Assam, H.P., J&K, Kerala, Manipur, Nagaland, Orissa, Sikkim, Arunachal Pradesh, Mizoram and Andaman & Nicobar Islands have reported performance below 25 per cent of the set targets.

13.13 The research activities/projects initiated by the Indian Council of Medical Research in 1985-86 were along the lines indicated in the Seventh Plan. The major research activities taken up by the Council pertain to communicable diseases like Malaria, T.B. and Leprosy; fertility control and contraceptive technology in the field of human resources development and non-communicable diseases like Hypertension, Cancer etc. The Council has also taken up studies in the field of primary health care to facilitate operationalisation of improved technologies, inputs etc. Some of the States and UTs have also taken up specific research projects for tackling the local problem as an integral part of their health care programmes.

### *Plan Outlay for 1986-87*

13.14 For the Annual Plan 1986-87, an outlay of Rs. 692.93 crores has been provided for the health sector as against the provision of Rs. 608.74 crores

and anticipated expenditure of Rs. 596.34 crores for 1985-86, as shown below :

TABLE 13.2

*Outlay and Expenditure*

(Rs. crores)

	Centre	States	Union Territories	Total
1985-86				
Approved Outlay . . . . .	200.00	366.96	41.78	608.74
Anticipated Expenditure . . . . .	190.72	356.25	41.78	588.75
1986-87				
Approved Outlay . . . . .	200.00	446.00	48.24	694.24

The details of Plan Outlay are given in Annexures 13.1 and 13.2.

*Physical Programmes for 1986-87**Rural Health*

13.15 The programmes taken up in 1985-86 will continue and the health infrastructure consolidated by making up deficiencies in respect of trained personnel, equipment and their physical facilities. Besides, additional 8766 Sub-Centres, 1554 Primary Health Centres and 278 Community Health Centres have been targetted for establishment during 1986-87. Construction works would be taken up in areas where rented buildings are not easily available.

13.16 The training of multi-purpose workers and basic training of male multi-purpose workers and male health assistants would continue during 1986-87. The continuing education of PHCs staff and training of specialists and para-medical workers required for proper manning of the rural health care infrastructure is expected to pick up further during the year. The scheme of training of Village Health Guides is under review.

13.17 Under the programme of Re-orientation of Medical Education, 106 medical colleges in the country besides the Post-Graduate Institute, Chandigarh have each adopted 3 adjunct PHCs in a selected district with the objective of exposing medical undergraduates to rural health problems and to give them an orientation to the needs of rural areas, besides providing specialist out-patient services to the rural community. The programme implemented hitherto would need to be evaluated and monitored effectively to facilitate achievement of its basic objectives.

13.18 Some of the States/UTs have been organising school health services. In view of the strategic importance of this programme, a pilot scheme taken up by the Health Ministry sometime in 1982 with SIDA assistance was further strengthened in 1985-86. This pilot scheme, which is under implementation in 100 PHCs, will continue in 1986-87. It will be evaluated thereafter to help States/UTs to take up a more comprehensive programme based on the feedback from the pilot project.

*Control of Communicable Diseases*

13.19 Spraying of the rural areas with an Annual Parasitic Index (API) of 2 above and augmented anti-larvel measures in urban areas, besides radical treatment of fever cases, will continue under the National Malaria Eradication Programme during 1986-87. The cost of insecticides and other materials and equipment under the programme will be shared by the Centre and States on a matching basis. An indepth Evaluation Team has been set up for evaluating the on-going Malaria Control Programme.

13.20 The strategy of anti-larvel measures with chemical larvicides at weekly intervals for control of Filariasis in urban area would continue during 1986-87. The rural filariasis projects in Srikakulam District in Andhra Pradesh and Jaunpur district in Uttar Pradesh would also continue. It is proposed to further augment the infrastructure by additional 7 Control Units, 1 Survey Unit and 52 Clinics during 1986-87.

13.21 The strategy of early detection and regular treatment of leprosy cases would be further intensified. It is targetted to detect and bring under treatment additional 4.20 lakh leprosy cases during 1986-87. Establishment of additional 90 Leprosy Control Units, 64 Survey, Education and Treatment (SET) Centres, 190 urban leprosy centres, 41 modified leprosy control units and 4 district leprosy units have been targetted for 1986-87.

13.22 The strategy of effective treatment of all radiologically active TB cases, including sputum positive cases would be pursued with vigour under the TB Control Programme. It is targetted to detect and bring under treatment additional 14.50 lakh TB cases and undertake about 34 lakh sputum examinations at the primary health centres during 1986-87. With the experience gained in the implementation of the short course of chemotherapy drug regimens on a pilot basis in some districts of the country, it is proposed to introduce new drug regimens of 6-8 months duration in the States of Tamil Nadu, Gujarat and Maharashtra in a phased manner starting in 1986-87.

13.23 The strategy of developing various services at peripheral, intermediate and Central levels for augmentation of preventive, promotive and curative services initiated under the National Programme for Control of Blindness would continue in 1986-87. It is proposed to equip 400 primary Health Centres with ophthalmic equipment, besides establishing 40 District Mobile Units and 24 Eye Banks, and conducted 13.84 lakh Cataract Operations in 1986-87.

13.24 Under the Guinea Worm Eradication Programme, active case searches were conducted in 1984 in the 7 endemic States of Andhra Pradesh, Karnataka, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu. The independent appraisal of the programme undertaken in 1985 showed Tamil Nadu free from disease as no indigenous base of guinea worm was reported from that State during the preceding three years. During 1986-87, active case search, provision of safe water supply in the affected villages, chemical treatment of drinking water, health education of the community and management of cases by use of bandages will continue.

13.25 The intra-mural research activities through a net-work of different research institutions will be further augmented during 1986-87 under the aegis of the Indian Council for Medical Research. The programme activities in this sphere pertain to control of Communicable diseases, Non-communicable diseases, Nutrition, Environmental and Occupational Health, Bio-medics, Maternity & Child Health etc. Research in Bio-medical field cutting across several disciplines of sciences like bio-chemistry, bio-physics, biology, bio-technology etc. would also be further augmented as part of Extra-mural research activities of the Council. Besides, high priority would continue to be accorded to research studies in the field of fertility control and contraceptive technology. Research studies are also proposed by States/UTs as part of their Plan programmes during 1986-87 for tackling their specific local problems.

#### *Medical Education*

13.26 Funds have been provided in State Plans for improvement of facilities in terms of staff, equipment and buildings in medical colleges and the attached teaching hospitals to meet the requirements of the Medical Council of India. Schemes taken up by some of the States for strengthening post-graduate teaching and curative facilities in specialities and selective super-specialities will continue during 1986-87. Monitoring of the benefits accruing to the candidates belonging to Scheduled Castes/Scheduled Tribes seeking admission to under-graduate medical education courses through the programme of pre-examination training schemes taken up by Government of India in 1984-85 would also continue.

#### *Hospitals and Dispensaries*

13.27 Provision has been made for continuing further strengthening the schemes for augmentation of diagnosis and curative facilities in the medical institutions under the control of the Ministry of

Health in Delhi, Chandigarh, Pondicherry and other Metropolitan Cities. Provision has also been made for further improvement of available facilities/opening additional dispensaries under the C.G.H.S. Scheme. Besides, provision has been made in the State Plans for further augmentation of curative care facilities and establishment of additional hospitals and dispensaries, depending upon the local needs of the population.

#### *Indian Systems of Medicine and Homoeopathy*

33.28 Financial assistance for programmes for promotion of research, standardisation of drugs, production of medicines and development of under-graduate and post-graduate educational facilities in respect of the Indian Systems of Medicine and Homoeopathy would be continued during 1986-87.

13.29 The anticipated achievement vis-a-vis the targets for 1985-86 and targets proposed for the year 1986-87 in respect of programmes of health and control of communicable diseases are given in Annexure-13.3.

#### *FAMILY WELFARE*

13.30 The Family Welfare Programme occupies a crucial position in the national socio-economic development plans. The birth rate of 33.8 per thousand population in 1984 as per Sample Registration Scheme (SRS) estimates leaves the growth rate of population at considerably high level of 21.3 per thousand for that year, or 2.13%. The nation is committed to achieve Net Reproduction Rate of unity by the turn of the century by reducing the birth rate to 21 per thousand and death rate to 9 per thousand. The policies and programmes initiated in the Seventh Five Year Plan towards the above perspective aim at achieving a birth rate of 27 per thousand population, death rate of about 10 per thousand population and a couple protection rate of 42 per cent by 1989-90.

#### *Performance Review*

13.31 The programme had a set-back during the year 1977-78, but picked up slowly in the initial years of the Sixth Five Year Plan and gained further momentum thereafter with a coverage of 16 million acceptors during 1984-85, which was an all-time record. The percentage of couples effectively protected increased to 32.3 per cent as on 1st April, 1985 from 29.2 per cent a year ago.

13.32 The number of acceptors of all the methods of family planning during 1985-86 were 19.13 million, which is 16.2% higher than the level reached in 1984-85. The targets set for various family planning methods for the Annual Plan 1985-86 and the anticipated achievements upto the month ending February & March, 1986 in relation to achievements for the corresponding period in 1984-85 can be seen from Table 13.3 below.

TABLE 13.3

## Family Welfare Achievements

(Figures in millions)

Sl. No.	Method	VII Plan (Target)	1985-86 (Target)	Achievement*	
				1985-86	1984-85
1.	Sterilizations . . . . .	31.00	5.50	4.89	4.08
2.	I. U. Ds . . . . .	21.25	3.25	3.27	2.56
3.	Conventional contraceptives or oral pills users. . . . .	14.50 (89-90 level)	10.50	10.99	9.82

\*Figures are provisional.

13.33 The higher morbidity and mortality amongst children is a positively associated phenomenon with the size of a family. A decline in child mortality, therefore, constitutes a basic turning factor for speedier acceptance of the Family Welfare Programme. The Maternal and Child Health (MCH) Programme has, therefore, been accorded a very high priority in the Seventh Five Year Plan towards the objective of reducing infant mortality rate to below 60 by 2000 AD. The infant mortality as per SRS, which was 129 per thousand in 1978, came down the 104 in 1984. The programme has been given a momentum by launching universal immunization during the year 1985-86 with the objective of providing immunization against all diseases to all eligible infants and pregnant women by 1990.

13.34 The progress made during 1985-86 under family planning and MCH services is summarized in Annexure 13.4.

13.35 The Plan outlay for the programme is being stepped up substantially from year to year so as to ensure its effective implementation and achievement of the set targets. An outlay of Rs. 500 crores was approved for 1985-86, which was spent fully during the year. The pace of implementation of the programme is being reviewed at various levels so as to take necessary remedial measures for achievement of the immediate and perspective goals of the programme. These measures comprise new initiatives for intensification and expansion of the programme, enhanced rates of compensation money for sterilizations and IUDs, supply of vehicles and increase in POL Charges for improving the mobility of staff engaged in the programme, provision of cash awards to States to promote healthy competition, innovative publicity and propagation of education on health and small family norms etc.

*Physical targets for 1986-87*

13.36 The details of the targets fixed for 1986-87 both in respect of family planning and MCH schemes are given in Annexure 13.5.

13.37 Measures for streamlining the services delivery system are accorded high priority for realisation of the set targets through active participation of the people in the programme. In addition to work

on completing the on-going projects and continuing the facilities and services already established, the following expansion activities will be taken up in 1986-87 :

- (i) Setting up of 8810 sub-centres.
- (ii) Training of 20,000 traditional birth attendants.
- (iii) Sanction of 20 ANM Training Schools, 5 LHV Training Schools.
- (iv) Post partum programme in 125 sub-divisional hospitals.
- (v) Revamping of the infrastructure for delivery of Health and Family Welfare activities/services in urban areas/slums.
- (vi) Coverage of 60 additional districts under Universal Immunisation Programme; and
- (vii) Performance target of 6 million sterilization, 3.75 million IUD, 10.50 million CC users and 1.00 million O.P users for 1986-87.

*Outlay for 1986-87*

13.38 An outlay of Rs. 530 crores has been provided for the family welfare programme for 1986-87. The scheme-wise break-up of the outlay for 1986-87 is given below :—

TABLE 13.4

*Break-up of Plan outlay*

Sl. No.	Schemes	(Rs. crores)
		Allocation
1.	Services and supplies . . . . .	266.40
2.	Training . . . . .	4.76
3.	Information, Education and Communications . . . . .	13.36
4.	Research and Evaluation including budgetary support to I.C.M.R. . . . .	15.25
5.	Maternity and child health . . . . .	122.88
6.	Organization . . . . .	18.65
7.	Village Health Guide Scheme . . . . .	39.25
8.	Area Projects . . . . .	49.45
Total . . . . .		530.00

More details of the Plan outlay are given in Annexures 13.6 and 13.7.



## NUTRITION

*Review of performance in 1985-86*

13.39 In 1985-86, an outlay of Rs. 313.37 crores was provided for Nutrition Programmes. This included Rs. 0.78 crore in the Central Sector for the schemes of the Department of Food and Rs. 312.59 crores in the State Sector.

*Central Sector*

13.40 Against an approved outlay of Rs. 0.78 crore for the nutrition schemes of the Department of Food, the anticipated expenditure is Rs. 0.44 crore. The major shortfall in expenditure is reported under the scheme of Fortification of Salt and Production of Nutritious Beverages.

13.41 A new scheme of Integrated Nutrition Education was formulated. Pending implementation of this scheme, four additional Mobile Food and Nutrition Extension Units (MEUs) were set up in 1985-86 in backward and tribal areas. With the addition of these units, the total number of MEUs went upto 34.

13.42 The production of Miltone, a protein-rich milk substitute, based on 50 per cent groundnut flour and 50 per cent animal milk and fortified with minerals and vitamins, was over 27.00 lakh litres during the period April, 1985 to January, 1986. About 17,906 MT of Energy, Ready-to-eat (RTE) and weaning foods were produced for use in the supplementary feeding programmes.

13.43 Fortification of milk with Vitamin 'A' to combat nutritional blindness was continued at Mother Dairies in Delhi and Calcutta and the Delhi Milk Scheme. The total quantity of milk fortified during the period April, 1985 to February, 1986 was about 3578.35 lakh litres.

13.44 Under the scheme of Research and Development, three projects relating to improvement and use of processed foods were sponsored. Surveys relating to consumption of toxic pulse *Lathyrus Sativus* and prevalence of Lathyrism was conducted in Madhya Pradesh. Food and Nutrition Reports were brought out for Kerala, West Bengal, Goa, Daman & Diu, Dadra and Nagar Haveli and Pondicherry. Besides, a survey on consumption of Vitamin 'A' was conducted in Delhi.

*State Sector*

13.45 In the State Sector, the two major schemes for intervention feeding, viz., Special Nutrition Programme (SNP) and Mid-day Meals Programme (MDM) continued to operate as part of the Minimum needs Programme. The estimated expenditure on both schemes is Rs. 243.13 crores against the approved outlay of Rs. 312.59 crores.

13.46 The SNP covers pre-school children in the age group 0-6 years, pregnant women and nursing mothers. The programme provides supplementary

food consisting 300 calories with 8-12 grams of protein for children and 500 calories with 20-25 grams of protein for mothers for 300 days in a year. The coverage under SNP, which was 8 million beneficiaries at the beginning of the Sixth Plan, reached a level of 11.57 million by the end of the Plan. Of the total beneficiaries, 7.94 million were within the ICDS projects sanctioned upto the end of the Sixth Plan. In 1985-86, additional 224 (212 Centre and 12 State Sector) projects were sanctioned. During this year, 2.23 million additional beneficiaries were covered under the programme in the ICDS areas. Beneficiaries from the areas outside ICDS were being brought within the ambit of the ICDS programme progressively.

13.47 The MDM programme meant for school children in the age group 6-11 years provides supplementary nutrition of 300 calories with 8-12 grams of protein for 200 days in a year. The cumulative coverage under the programme at the end of the Sixth Plan was 15.62 million. In 1985-86, there was only a moderate expansion of the programme, the additional coverage being 0.13 million.

*Annual Plan 1986-87*

13.48 An allocation of Rs. 311.58 crores has been made for Nutrition in the Annual Plan 1986-87. The break-up of this amount as well as the approved outlay and anticipated expenditure for 1985-86 is as follows :—

TABLE 13.5  
*Outlays and Expenditure—Nutrition*  
(Rs. in Crores)

Sl. No.	Sector	1985-86		1986-87
		Approved Outlay	Anticipated Expenditure	Approved Outlay
1.	Central	0.78	0.44	0.80
2.	States	305.38	235.92	303.21
3.	Union Territories	7.21	7.21	7.57
4.	Total (2+3)	312.59	243.13	310.78
5.	Grand Total	313.37	243.57	311.58

*Central Sector*

13.49 In the Central Sector, an outlay of Rs. 0.80 crore has been provided for programmes of the Department of Food. The major emphasis will be on the implementation of the scheme of Integrated Nutrition Education which has been finalised. The scheme envisages imparting nutrition education in an integrated manner in order to create awareness among people about the relationship between food, health and nutrition. It includes training of officers at various levels of administration, training of village level functionaries, education of beneficiaries, strengthening of existing infrastructure and monitoring and evaluation of the programme. Besides, assistance

of different mass media, especially radio and television will be taken in disseminating the knowledge on nutrition.

13.50 Provision has been made to provide financial support to three Miltone plants located at Ranchi, Kanpur and Calcutta and for installation of additional plants for production of Ready to Eat (RTE) foods at few selected places.

13.51 To combat the problem of nutritional anaemia, a plant with a capacity of 15,000 MT per annum for fortification of salt with iron will be commissioned at Madras. Another plant for production of iron fortified salt is proposed to be set up in Rajasthan.

13.52 Under the Programme of Fortification of Milk with vitamin 'A', a target of 32 lakh litres per day is proposed against the present level of 26 lakh litres per day.

#### *State Sector*

13.53 An outlay of Rs. 310.78 crores has been provided for the nutrition programme in the State Sector. This is slightly on the lower side in comparison with the outlay in the Annual Plan for 1985-86, mainly because some States, viz., Andhra

Pradesh, Bihar, Karnataka, Himachal Pradesh and Punjab have either dropped the MDM Programme or reduced its coverage in the light of the performance in the previous year.

13.54 The SNP will be extended to all new ICDS projects. When they become fully operational, the cumulative coverage of SNP within ICDS blocks will be around 11.37 million. Efforts will be made to bring over a period all the beneficiaries of supplementary feeding programme within the ambit of ICDS. Assistance will be provided to States with predominance of tribal population under the newly introduced Centrally Sponsored Scheme of Wheat-based Supplementary Nutrition Programme.

13.55 The MDM Programme is not expected to be expanded significantly during 1986-87, as it is felt that without the convergence of related inputs like health care and safe drinking water supply the scheme would not be able to have adequate impact on the targetted group.

13.56 The approved outlay and revised estimates for 1985-86 and the approved outlay for 1986-87 for the Central and State Sectors are shown in Annexures 13.8 and 13.9 respectively.

## ANNEXURE 13.1

*Outlay for Health in the Central Sector**A. Central Schemes*

Sl. No.	Name of the Scheme	(Rs. in crores)		
		1985-86		1986-87
		Plan -Outlay	Anticipated Expenditure	Plan-Outlay
(1)	(2)	(3)	(4)	(5)
<b>I. Control of Communicable Diseases</b>				
1.	N.I.C.D., Delhi . . . . .	0.25	0.19	1.35
2.	N.T.I., Bangalore . . . . .	0.25	0.16	0.23
3.	B.C.G. Vaccine Laboratory, Madras. . . . .	—	—	0.30
4.	Pasteur Institute of India, Coonoor. . . . .	0.50	0.35	1.18
5.	Diarrhoeal Diseases Control . . . . .	0.10	0.08	0.10
6.	Leprosy S.E.T. Scheme . . . . .	0.25	0.30	0.50
7.	S.T.D. Control . . . . .	0.25	0.10	0.20
8.	Regional Institute of Training and Health Education under Blindness Control programme . . . . .	0.30	0.28	0.20
9.	Regional Institute of Training and Research under Leprosy Control Programme :			
	(a) R.L.T.R.I., Aska (Orissa) . . . . .	0.05		0.06
	(b) R.L.T.R.I., Raipur (MP) . . . . .	0.05	0.12	0.15
10.	R.L.T.R.I., Chingleput . . . . .	0.20		0.19
	<b>SUB- TOTAL I</b> . . . . .	2.20	1.58	4.46
	<b>II. Control/Containment of Communicable Disease</b> . . . . .	—	—	0.10
	<b>III. Hospitals and Dispensaries</b> . . . . .	10.04	9.38	16.02
	<b>IV. Medical Education, Research and Training</b> . . . . .	41.85	42.99	39.86
	<b>V. ISM and Homoeopathy</b> . . . . .	6.00	2.95	9.06
	<b>VI. Other Programmes</b> . . . . .	7.46	4.54	6.95
	<b>TOTAL (Central Schemes)</b> . . . . .	67.55	61.44	76.45

*B. Centrally Sponsored Schemes***I. Rural Health**

1.	Re-orientation of Medical Education. . . . .	0.50	0.24	0.20
2.	National School Health Services . . . . .	0.35	0.35	0.35
3.	Integration of Services and organisation at various levels (Training and Employment of M.P.Ws.) . . . . .	1.40	1.50	
4.	Training and Employment of Male M.P.W.S. and Male Health Assistant . . . . .	2.50	2.50	
5.	Continuing Education of PHC Staff . . . . .	1.50	1.50	3.50
6.	Training of Specialists and Para-Medical Workers . . . . .	1.50	0.85	
7.	Training of Community Health Officers . . . . .	0.10	0.05	
8.	Laboratory Facilities at PHC/Rural Dispensaries . . . . .	0.10	0.10	
9.	State Epidemiological Centres . . . . .	0.50	—	—
10.	Community involvement and voluntary efforts for PHC . . . . .	0.10	—	—
	<b>SUB-TOTAL</b> . . . . .	8.55	7.09	4.05

			(Rs. in crores)	
(1)	(2)	(3)	(4)	(5)
<b>II. Control of Communicable Diseases</b>				
1. Malaria Control	.	88.68	88.68	85.00
2. Filaria Control	.	1.32	1.63	1.50
3. T.B. Control	.	11.00	11.00	12.00
4. Leprosy Eradication	.	14.40	13.40	14.00
5. Control of Blindness	.	7.50	6.52	6.00
6. Guinea Worm Control	.	0.25	0.26	0.40
<b>SUB-TOTAL II</b>	.	<b>123.15</b>	<b>121.49</b>	<b>118.90</b>
<b>B. Centrally Sponsored Schemes</b>				
III. I.S.M. & Homoeopathy	.	0.55	0.69	0.55
IV. Central Schemes for Union Territories.	.	0.20	0.01	0.05
<b>TOTAL—I to IV (Centrally Sponsored Schemes)</b>	.	<b>132.45</b>	<b>129.28</b>	<b>123.55</b>

## ANNEXURE 13.2

## Outlay for Health—States/Union Territories

(Rs. Crores)

S.No.	State/U.T.	1985-86				1986-87	
		Plan Outlay		Anticipated Expenditure		Plan Outlay	
		Total	MNP	Total	MNP	Total	MNP
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Andhra Pradesh		19.99	10.00	18.58	6.62	24.16	8.10
2. Assam		15.00	5.00	15.00	4.88	19.20	8.18
3. Bihar		27.88	8.34	31.65	9.50	41.00	12.25
4. Gujarat		13.32	5.40	13.49	5.40	15.69	6.25
5. Haryana		13.55	5.47	12.78	5.47	12.28	4.50
6. Himachal Pradesh		5.10	2.80	4.27	2.25	5.75	2.00
7. J & K		13.80	4.25	14.09	4.54	14.00	4.60
8. Karnataka		20.81	10.00	20.81	10.00	25.96	14.68
9. Kerala		10.50	5.00	10.10	5.00	12.00	5.25
10. Madhya Pradesh		23.60	9.00	25.60	9.00	35.50	12.00
11. Maharashtra		52.73	35.00	41.61	27.94	65.20	29.00
12. Manipur		2.30	0.75	2.30	0.99	2.60	1.03
13. Meghalaya		2.60	1.80	2.66	1.26	3.00	1.73
14. Nagaland		3.00	0.75	3.00	0.75	3.20	1.02
15. Orissa		10.10	5.45	11.55	4.00	12.65	4.60
16. Punjab		15.55	6.50	11.54	0.95	14.84	2.45
17. Rajasthan		16.56	4.68	16.56	4.03	18.39	5.00
18. Sikkim		1.57	0.60	1.57	0.60	1.32	0.35
19. Tamil Nadu		20.00	8.40	21.05	6.36	26.76	7.50
20. Tripura		2.50	0.90	2.50	0.90	3.20	1.20
21. Uttar Pradesh		52.50	30.00	52.50	24.43	63.50	30.00
22. West Bengal		24.00	10.00	23.04	9.50	25.80	12.85
Total—All States		366.96	170.09	356.25	144.37	446.00	174.54
<i>Union Territories</i>							
1. Andaman & Nicobar Islands		0.65	0.35	0.65	0.35	0.65	0.40
2. Arunachal Pradesh		2.50	1.50	2.50	1.50	2.70	1.46
3. Chandigarh		2.40	0.28	2.40	0.28	1.87	0.02
4. Dadra & Nagar Haveli		0.28	0.13	0.28	0.13	0.27	0.13
5. Delhi		29.00	—	29.00	—	34.00	—
6. Goa, Daman & Diu		3.03	0.25	3.03	0.25	4.15	0.40
7. Lakshadweep		0.22	0.09	0.22	0.09	0.20	0.02
8. Mizoram		2.40	1.10	2.40	1.10	2.90	1.43
9. Pondicherry		1.30	0.20	1.30	0.20	1.50	0.20
Total—UTs		41.78	3.90	41.78	3.90	48.24	4.06
<i>Grand Total</i>							
(All States & UTs)		408.74	173.99	398.03	148.27	494.24	178.60

*Targets for 1986-87 and achievement during 1980-85 and 1985-86—Health  
Care Programme*

Unit	1980-85 Actuals	1985-86		1986-87 Targets (Additional)
		Target (Addl.)	Anticipated Achievement (Additional)	
1. RURAL HEALTH				
1. Health Guides Scheme				
(a) Health Guides Trained . . . . .	Not fixed		235593	
(b) PHCs covered . . . . .	Not fixed		1899	
2. Multi-Purpose workers scheme				
(a) Districts covered . . . . .	Not fixed		136	
(b) Key Trainers Trained . . . . .	300		481	
(c) District MOS trained . . . . .	600		511	
(d) DEMO/Dy. DEMO . . . . .	1100		183	
(e) MO PHCs . . . . .	7000		5155	
(f) B.E.Es. . . . .	2450		2094	
(g) H.A. (M) . . . . .	8000		9334	
(h) H.A. (F) . . . . .	4000		5562	
(i) H W (M) . . . . .	34000		34498	
(j) H W (F) . . . . .	25000		31733	
II. CONTROL OF COMMUNICABLE DISEASES				
(a) N.M.E.P.*				
(i) NEP (Rural Districts) All the distts. except those above 5000 ft. altitude.				
(ii) NMEP (Urban) Towns . . . . .	Target (133)	Actual (122)	Nil	Nil
(b) Filaria Control				
(i) Control Units . . . . .	Target (208)	Actual (188)	Nil	Nil
(ii) Survey Units . . . . .	(26)	(26)	Nil	Nil
(iii) Filaria Clinics . . . . .	(208)	(148)	Nil	Nil
(c) Prevention of Blindness				
(i) Mobile Units . . . . .	(X)	80		
(ii) PHCs to be strengthened . . . . .		2000	1000	1400
(iii) District hospitals to be strengthened . . . . .		404	..	..
(iv) Medical Colleges Assisted . . . . .		58	..	2
(v) Training Institutes . . . . .		37	..	..
(vi) District Mobile Units . . . . .		30	..	60
(vii) Regional Institute . . . . .		9	..	..
(viii) State Ophthalmic Cells . . . . .		18	..	..
(d) Hospital beds . . . . .		..	..	..
(e) Eye Banks . . . . .		..	..	24

(x) Figures are for 1985-86 only.

\*Malaria Units are established at District Headquarters and conform to geographical boundaries of all the the districts and NMEP Component exists at each district headquarter.

## ANNEXURE 13.4

*Family Welfare Programme*  
*Target and Achievements—Annual Plan 1985-86*

(In million)

	7th Plan 1985-90 Target	Annual Plan 1985-86		%age achieve- ments of targets during April- March, 1986
		Target	Achievement (Figures Prov. April-March 86)	
<b>I. Family Planning</b>				
1. Sterilisation . . . . .	31.0	5.56	4.89	87.9
2. IUD . . . . .	21.25	3.24	3.27	100.7
3. Eq. CC Users (Incuding OP Users) . . . . .	14.50	10.50	10.99	104.7
4. Effective couple protection rate (percentage) . . . . .	42.0% (89-90 level)		35.0% (as on 1-4-86)	
<b>II. MCH Beneficiaries**</b>				
1. Immunisation				
(a) TT for expectant mothers . . . . .	92.45	12.85	9.31	72.4
(b) DPT for Pre-school children . . . . .	87.55	14.04	13.34	93.0
(c) DT for school children . . . . .	73.00	11.19	11.10	99.2
2. Prophylaxis against nutritional anaemia among :				
(a) Mothers . . . . .	80.00	14.00	16.47*	117.6
(b) Children . . . . .	80.00	14.00	15.83*	113.0
3. Prophylaxis against blindness due to Vit. 'A' deficiency	150.00	24.96	25.01	100.2
<b>III. Expanded Programme of Immunisation</b>				
(a) Polio . . . . .	87.55	14.04	11.98	85.3
(b) Typhoid . . . . .	62.80	11.19	6.99	62.6
(c) Measles . . . . .	50.45	N.A.	N.A.	
T.T. (10 years) . . . . .		5.54	4.05*	73.7
T.T. (16 years) . . . . .		3.30	2.65	80.3

\*April 1985—February, 1986.

\*\*Achievement figures provisional and partly incomplete in respect of some states.

*Plan Target of Family Planning & MCH for 1986-87*

ANNEXURE 13.5

(Figures in Millions)

**I. Family Planning**

(i) Sterilisation	6.00
(ii) IUD	3.75
(iii) CC users	10.50
(iv) OP Users	1.00

**II. MCH**

**1. Immunisation**

(i) T.T. (P.W.)	15.20
(ii) D.P.T. of children	15.30
(iii) Polio	15.30
(iv) Measles	5.70
(v) B.C.G.	15.30
(vi) D.T. of Children	12.10
(vii) Typhoid	12.10
(viii) T.T.S.C. (10 years)	6.70
(ix) T.T.S.C. (16 years)	4.10

**2. Prophylaxis against nutritional Anaemia among**

(a) Children	19.43
(b) Women	18.64

**3. Prophylaxis against blindness due to Vitamin 'A' deficiency**

28.97



## Central Outlay on Family Welfare Programme, State-wise

Sl. No.	States	(Rs. crores)		
		1985-86		1986-87
		Outlay	Revised Estimate	Outlay
1	2	3	4	5
1.	Andhra Pradesh . . . . .	27.67	38.88	29.13
2.	Assam . . . . .	7.80	12.23	9.73
3.	Bihar . . . . .	29.93	25.80	27.28
4.	Gujarat . . . . .	21.83	27.94	21.90
5.	Haryana . . . . .	9.34	11.05	8.16
6.	Himachal Pradesh . . . . .	5.97	4.23	5.03
7.	Jammu & Kashmir . . . . .	3.20	2.68	2.92
8.	Karnataka . . . . .	25.23	27.89	33.77
9.	Kerala . . . . .	20.12	22.92	19.49
10.	Madhya Pradesh . . . . .	30.57	32.03	29.27
11.	Maharashtra . . . . .	32.30	42.55	37.11
12.	Manipur . . . . .	1.47	1.99	1.53
13.	Meghalaya . . . . .	1.14	1.04	1.09
14.	Nagaland . . . . .	0.57	1.05	0.59
15.	Orissa . . . . .	18.24	12.20	16.78
16.	Punjab . . . . .	10.60	11.96	10.43
17.	Rajasthan . . . . .	17.42	20.30	18.06
18.	Sikkim . . . . .	0.75	0.45	0.95
19.	Tamil Nadu . . . . .	23.83	21.12	28.25
20.	Tripura . . . . .	1.28	0.78	1.32
21.	Uttar Pradesh . . . . .	56.15	62.54	49.80
22.	West Bengal . . . . .	29.85	21.16	34.48
	Sub-Total All States . . . . .	375.26	402.79	387.07
23.	UTs/Central Sector/Goods supplied in kind. . . . .	124.74	97.15	142.93
	Total . . . . .	500.00	499.94	530.00

## ANNEXURE 13.7

## Central Outlay on Family Welfare Programme—Important Schemes

(Rs. Crores)

Programme	1985-86		1986-87
	Outlay	Revised Estimates	Outlay
1	2	3	4
1. Rural Family Welfare Centres and Sub-centres . . . . .	76.75	68.74	73.26
2. Urban Family Welfare Service . . . . .	29.29	27.33	29.37
3. Post Partum Programme . . . . .	15.04	14.98	19.55
4. Compensation for IUD and Sterilisation . . . . .	75.00	90.27	86.00
5. Procurement and maintenance of vehicles . . . . .	11.06	11.46	13.06
6. Family Planning programme in organised sectors . . . . .	3.28	2.98	3.52
7. Supply of IUD/Cu-T and conventional contraceptives . . . . .	13.91	14.32	14.82
8. Hindustan Latex Ltd. . . . .	10.78	10.78	5.00
9. Other Schemes . . . . .	18.24	17.40	21.82
<i>Sub-Total : Supplies and Services</i> . . . . .	253.35	258.26	266.40
1. Involvement of ISM Practitioners . . . . .	0.05	—	2.00
2. Health & FW Training Centres . . . . .	2.50	2.47	2.50
3. Other Training Programmes . . . . .	0.25	0.25	0.26
<i>Sub-Total : Training</i> . . . . .	2.80	2.62	4.76
1. Mass Education and Medical . . . . .	5.05	5.10	5.11
2. Innovative Publicity . . . . .	1.00	1.00	2.00
3. Programmes of I & B Ministry . . . . .	4.00	3.64	2.10
4. Programmes of Mass Education & Medical Division of Department of family Welfare . . . . .	0.85	0.75	1.02
5. Other Programmes . . . . .	1.10	1.15	3.13
<i>Sub-Total: Information, Education &amp; Communications</i> . . . . .	12.01	11.64	13.36
1. Maintenance of sub-centres for MCH . . . . .	61.34	58.34	69.91
2. Training of ANMS/LHVs/Indigenous Dais and supply of Kits . . . . .	1.00	10.00	11.87
3. Immunisation Programme including EPI . . . . .	24.11	21.34	39.73
4. Others . . . . .	0.47	0.42	1.37
<i>Sub-Total —Maternity &amp; Child Health</i> . . . . .	95.92	90.14	122.88
1. National Instt. of Health & FW, New Delhi . . . . .	1.36	0.80	1.36
Grant in Aid to ICMR . . . . .	..	..	11.50
Grant-in-aid to other organisations . . . . .	1.91	2.26	2.39
<i>Sub-Total—Research &amp; Education</i> . . . . .	3.27	3.29	15.25
State Level Organisations . . . . .	3.85	3.85	5.00
2. H.Q./Regional Offices & Other Offices . . . . .	1.65	1.82	1.65
Awards . . . . .	0.15	10.37	12.00
<i>Sub-Total : Organisations</i> . . . . .	5.65	16.05	18.65
Area Project . . . . .	72.00	72.01	49.45
Village Health Guides Scheme . . . . .	55.00	45.87	39.25
<b>Total :</b> . . . . .	<b>500.00</b>	<b>499.94</b>	<b>530.00</b>

## ANNEXURE 13.8—(Contd.)

## Outlay and Expenditure in the Central Sector—Nutrition—Department of Food

(Rs. in lakhs)

Programme	1985-86		1986-87
	Outlay	Revised Estimate	Outlay
<b>Central Schemes</b>			
I. Nutrition Education and Extension			
(a) Mobile Food and Nutrition Extension Units . . . . .	2.00	1.50	@
(b) Mass Media Communication and Extension . . . . .	2.50	3.00	@
(c) Integrated Nutritious Education . . . . .	10.00	10.00	23.00
II. Production of Nutritious Beverages . . . . .	25.00	12.00	9.90
III. Production of Nutritious Foods . . . . .	1.00	0.10	0.10
IV. Fortification of Foods			
(a) Fortification of Salt . . . . .	24.00	7.00	25.00
(b) Fortification of Milk . . . . .	9.00	6.00	20.00
V. Survey, Research and Evaluation . . . . .			
(a) Diet and Nutrition Surveys . . . . .	0.50	0.50	..
(b) Research and Development Activities and Evaluation . . . . .	4.00	4.00	2.00
<b>TOTAL :</b> . . . . .	<b>78.00</b>	<b>44.10</b>	<b>80.00</b>

@ Will form part of Scheme No. I. Item (c)

## ANNEXURE 13.9

## Outlay and Expenditure in the State Sector Nutrition

(Rs. in lakhs)

Sl. No.	State/UT			
		1985-86	1986-87	
		Outlay	Anticipated Expenditure	Outlay
<i>States</i>				
1.	Andhra Pradesh	372	80	540
2.	Assam	120	120	418
3.	Bihar	558	558	650
4.	Gujarat	11272	4772	7400
5.	Haryana	429	136	262
6.	Himachal Pradesh	30	71	83
7.	Jammu & Kashmir	150	150	165
8.	Karnataka	2445	2445	4131
9.	Kerala	538	1307	1333
10.	Madhya Pradesh	608	558	750
11.	Maharashtra	944	680	930
12.	Manipur	30	30	33
13.	Meghalaya	46	46	54
14.	Nagaland	66	66	156
15.	Orissa	200	300	350
16.	Punjab	252	227	245
17.	Rajasthan	108	108	200
18.	Sikkim	45	45	45
19.	Tamil Nadu	10337	10337	10812
20.	Tripura	275	275	338
21.	Uttar Pradesh	843	842	926
22.	West Bengal	870	439	500
TOTAL—STATES		30538	23592	30321
<i>Union Territories</i>				
1.	A & N Islands	12.50	12.50	13.00
2.	Arunachal Pradesh	27.50	27.50	47.00
3.	Chandigarh	48.50	48.50	48.90
4.	Dadra & Nagar Haveli	8.50	8.50	14.00
5.	Delhi	523.00	523.00	439.00
6.	Goa, Daman and Diu	20.00	20.00	62.00
7.	Lakshadweep	5.00	5.00	8.00
8.	Mizoram	33.00	33.00	56.52
9.	Pondicherry	43.00	43.00	68.69
TOTAL: (All U.Ts)		721.00	721.00	757.11
GRAND TOTAL:		31259.00	24313.00	31078.11

## CHAPTER 14

### HOUSING, URBAN DEVELOPMENT AND WATER SUPPLY

#### HOUSING

##### *Review of Plan Performance in 1985-86*

The Annual Plan 1985-86 provided for an outlay of Rs. 425.89 crores for Housing comprising Rs. 379.73 crores in the States and Union Territories Sector and Rs. 46.16 crores in the Central Sector. The outlay for Rural House-sites-cum-House Construction Scheme, an item of the Minimum Needs Programme as also of the 20-Point Programme, was Rs. 99.95 crores. Against the approved outlay of

Rs. 425.89 crores in 1985-86, the anticipated expenditure is Rs. 448.93 crores—Rs. 410.68 crores in the States and UTs Sector and Rs. 38.25 crores in the Central Sector. The expenditure on the Rural House-sites-cum-House Construction Scheme is placed at Rs. 101.36 crores.

14.2 According to the data reported by the State Governments and UT Administrations, the physical achievements during 1985-86 in respect of certain important schemes were as follows :—

TABLE 14.1

*Housing—Achievements in 1985-86*

Scheme	Unit of reporting	Target	Achievement
1	2	3	4
1. Economically Weaker Section's Housing . . . . .	Dwelling unit in lakhs	1.51	1.43
2. Low Income Group Housing . . . . .	Dwelling units (Nos.)	30928	30928
3. Middle Income Group Housing . . . . .	-do-	10824	10812
4. Village Housing Project . . . . .	-do-	147569	147709
5. Subsidised Industrial Housing . . . . .	-do-	338	123
6. Rental Housing . . . . .	-do-	29279	29048
7. Rural House-sites-cum-House Construction Scheme . . . . .			
(a) House-sites . . . . .	Families in lakhs	5.81	9.04
(b) House Construction . . . . .	-do-	4.13	4.11

14.3 It will be seen that there was a marked improvement in the achievement as compared to the target in the case of allotment of house sites under the Rural House-sites-cum-House Construction scheme due to speedier implementation of the scheme. The performance under Subsidised Industrial Housing, on the other hand, fell substantially short of the target.

##### *Annual Plan 1986-87*

14.4 The Annual Plan 1986-87 provides for an outlay of Rs. 522.06 crores for Housing, comprising Rs. 477.85 crores in the States and UTs Sector and Rs. 44.21 crores in the Central Sector.

14.5 Under the States and UTs Sector, an outlay of Rs. 105.18 crores is envisaged for the Rural House-sites-cum-House Construction Scheme. The targets are to allot house-sites to 6.33 lakh families and to provide construction assistance to 3.89 lakh families. It is needless to say that the achievement of these targets depends to a large extent on the State Governments adhering to the norms of assistance envisaged in the

Plan. During the Annual Plan 1985-86, a number of State Governments were providing larger assistance and were allotting sites of larger dimensions than envisaged in the Plan. This would not only involve larger financial outlays, but also result in lower order of physical achievement.

14.6 The balance of the outlay of Rs. 372.67 crores in the States and UTs Sector is for schemes like the Integrated Subsidised Housing Scheme for Industrial Workers and Economically Weaker Sections of the Community, Low Income Group and Middle Income Group Housing Schemes, Rental Housing Scheme and the Village Housing Project. It was noticed that during the year 1985-86 the State Governments were implementing various social housing schemes as per the norms concerning ceiling costs, ceiling of Government assistance and ceiling on income eligibility that were in vogue prior to the Seventh Five Year Plan. Substantial revisions and modifications in these norms have been made in the Seventh Five Year Plan. These modifications were long over due. It is necessary for the State Governments to adopt these norms during the remaining years of the Seventh Five Year Plan.

14.7 The Central Sector Plan includes an outlay of Rs. 11.00 crores for the Housing and Urban Development Corporation (HUDCO). The Corporation proposes to sanction loans to the extent of Rs. 345 crores in 1986-87 as against Rs. 353.52 crores in 1985-86. These loans are over and above the outlays provided in the State and UT Plans. The other important scheme in the Central Sector relates to General Pool Office and Residential accommodation for which an outlay of Rs. 30.00 crores has been provided.

14.8 Realising that non-availability of long term finance to individual house builders on any significant scale was the biggest weakness in the Housing Sector, the Seventh Plan suggested the setting up of a National Housing Bank. Immediate steps are required to be taken to set up this institution. For achieving the housing targets envisaged in the Plan, certain legal impediments in the way of larger housing activities need to be removed. It is, therefore, necessary to bring about the necessary modifications in respect of Rent Control Legislation and Urban Land (Ceiling and Regulation) Act.

#### URBAN DEVELOPMENT

##### *Review of Plan Performance in 1985-86*

14.9 The Annual Plan 1985-86 envisaged an outlay on Urban Development of Rs. 272.04 crores—Rs. 249.20 crores in the States and UTs Sector and Rs. 22.84 crores in the Central Sector. The outlay for the scheme of Environmental Improvement of Slums, an item of the Minimum Needs Programme as also of the 20-Point Programme, was Rs. 37.83 crores. Against the total outlay of Rs. 272.04 crores, the anticipated expenditure is Rs. 297.66 crores, the increase being entirely in the States and UTs Sector. The anticipated expenditure on the Environmental Improvement of Slums Scheme is Rs. 36.33 crores. Under this scheme, against the target of covering a population of 14.99 lakh slum dwellers in the year 1985-86, the number of people actually benefited is estimated at 20.47 lakhs, or 37 per cent more than originally envisaged.

##### *Annual Plan 1986-87*

14.10 The Annual Plan 1986-87 provides for an outlay of Rs. 337.13 crores for Urban Development—Rs. 315.94 crores in the States and UTs Sector and Rs. 21.19 crores in the Central Sector. The outlay in the States and UTs Sector includes a provision of Rs. 47.27 crores for Environmental Improvement of Slums, the target being to cover an additional 15.34 lakh slum population during 1986-87.

14.11 The other programmes in the States and UTs Sector include provision of loans and grants to local bodies for development schemes, matching provision towards the Centrally Sponsored Scheme of Integrated Development of Small and Medium Towns, preparation of Master Plans and Integrated Development of Calcutta Metropolitan Area and State Capital Projects.

14.12 The outlay in the Central Sector is mainly for the Integrated Development of Small and Medium Towns (IDSMT) and the National Capital Region (NCR) Schemes. Under the IDSMT, 53 new towns were provided assistance during the year 1985-86. The outlay proposed for 1986-87 is for meeting the spill-over commitments of the towns already covered during the Sixth Plan and 1985-86 and providing assistance to 49 additional towns that are likely to be selected for development during the year. The NCR Plan envisaged shift of economic activity from the core area of Delhi to regional towns located in Haryana, Rajasthan and Uttar Pradesh. A provision of Rs. 425 lakhs has been made for the NCR for 1986-87 in the Central Sector. The Seventh Plan includes specific provision for the setting up of a National Urban Infrastructure Development Finance Corporation. It is necessary to set up this Corporation urgently in order to provide assistance to local bodies, which are short of resources.

#### WATER SUPPLY AND SANITATION

##### *Review of Plan Performance in 1985-86*

14.13 The Annual Plan 1985-86 included an outlay of Rs. 1138.30 crores—Rs. 838.30 crores in the State and UT Sector and Rs. 300 crores in the Central Sector—for water supply and sanitation programmes. Of this, Rs. 356.71 crores under the State and UT Sector and Rs. 298.88 crores under the Central Sector were meant for provision of rural drinking water supply under the Minimum Needs Programme (MNP). According to available information, the expenditure during the year is estimated at Rs. 1206.36 crores—Rs. 906.38 crores in the State and UT Sector and Rs. 299.98 crores in the Central Sector. This includes Rs. 720.11 crores under the Minimum Needs Programme—Rs. 421.23 crores in the State and UT Sector and Rs. 298.88 crores in the Central Sector (Accelerated Rural Water Supply Programme).

14.14 According to the reports from the State Governments and U.T. Administrations, water supply schemes under M.N.P. (including ARP) were completed in about 45,200 villages, against a stipulated target of 30,663 villages, during the year 1985-86. It is also reported that the water supply schemes (including augmentation schemes) in 193 towns and sewerage/drainage schemes (including augmentation schemes) in 39 towns were expected to be completed during 1985-86.

##### *Annual Plan 1986-87*

14.15 Keeping in view the objective of the Seventh Plan, the emphasis on the provision of safe drinking water and adequate sanitation facilities in rural as well as urban areas would continue during 1986-87. Realising the constraints on resources, the competing demands of other sectors as well as the critical importance of drinking water supply, an outlay of Rs. 1329.80 crores—Rs. 1000.10 crores in the State and UT Sector and Rs. 329.70 crores in the Central

Sector—has been provided for water supply and sanitation for 1986-87. This is 16.85% higher than the outlay for 1985-86 and includes Rs. 417.38 crores under the Minimum Needs Programme of the State and UT Sector and Rs. 316.75 crores under the Centrally Sponsored Accelerated Rural Water Supply

Programme for providing safe drinking water supply in the rural areas. A summary of the outlays for 1986-87 vis-a-vis the outlays and the anticipated expenditure for 1985-86 under the water supply and sanitation sector is given in Table 14.2 below.

TABLE 14.2  
Outlays & Expenditure—Water Supply and Sanitation

Sl. No.	Scheme	(Rs. crores)		
		1985-86	1986-87	
		Appd. Outlay	Anti. Expenditure	Appd. Outlay
1	2	3	4	5
<b>1. State/U. T. Plan</b>				
	(i) Rural Water Supply & Sanitation	370.50	437.23*	426.04
	Of which M.N.P.	(356.71)	(421.23)	(417.38)
	(ii) Urban Water Supply & Sanitation	467.80	469.15	574.06
	<b>Total : (State Plan)</b>	<b>838.30</b>	<b>906.38</b>	<b>1000.10</b>
<b>2. Central Plan</b>				
	(i) Centrally Sponsored Accelerated Rural Water Supply Programme	298.88	298.88	316.75
	(ii) Other Programmes	1.12	1.10	12.95
	<b>Total (Central Plan)</b>	<b>300.00</b>	<b>299.98</b>	<b>329.70</b>
	<b>GRAND TOTAL</b>	<b>1138.30</b>	<b>1206.36</b>	<b>1329.80</b>

\*Includes about Rs. 8 crores for Rural Water Supply other than M.N.P.

#### Rural Water Supply and Sanitation

14.16 Concerted efforts are necessary to achieve the objective of the International Drinking Water Supply and Sanitation Decade (1981—91). In view of the resources constraint, guidelines giving the following order of priority have been issued to the State Governments and U.T. Administrations :

##### Priority I

- Problem villages already identified as on 1-4-1980 but which could not be provided with drinking water supply facilities within the Sixth Plan period.
- Villages subsequently identified as problem villages as on 31-3-1985 based on the existing criteria, among them the highest priority being given to "guinea-worm affected villages."
- Adequate coverage of partially covered identified problem villages/habitations. Under this, priority coverage of habitations, especially of Scheduled Castes/Scheduled Tribes, should be given the first preference.

##### Priority II

New problem villages/habitations identified with the following criteria : Villages/habitations without a water source within a distance of 0.5 km. or within a depth of 15 m. or an elevation of 15 m. in hilly areas.

##### Priority III

Other villages.

14.17 It has also been suggested that priority I (a), I (b) & I (c) may be taken up concurrently whereas priority II and III are to be taken up seriatim after the earlier priorities have been covered.

14.18 The objective during the Annual Plan 1986-87 would be to cover only the spillover and the subsequently identified problem villages in those States which have a substantial number of such villages. The other States may, however, take up augmentation/improvement schemes also. It is also essential to ensure that the poorer sections of society like Scheduled Castes, Scheduled Tribes and landless agricultural labourers have an equal access to the facility of water supply where necessary, additional sources/water collection points for enabling the poor to obtain access to safe drinking water should be separately provided if access to the community sources provided under the general schemes for drinking water supply to villages is difficult for them. The existing arrangements for operation and maintenance of water supply system are far from satisfactory. Special attention will, therefore, have to be paid to this aspect. A provision under MNP to the maximum extent of 10% of the MNP outlay has, therefore, been allowed in the Plan for this purpose to supplement the efforts on the non-plan side.

14.19 The Annual Plan 1986-87 provides an outlay of Rs. 417.38 crores under the MNP for the Rural

Water Supply Programmes, including Operation and Maintenance. This will be further supplemented by Central assistance of Rs. 316.75 crores under the Centrally Sponsored Accelerated Rural Water Supply Programme. It is expected that about 36,000 villages will be provided with water supply facilities during the year 1986-87.

14.20 The rural sanitation programme is yet to take off in a big way. The Annual Plan 1986-87 provides for an outlay of Rs. 8.66 crores in the State Sector against an outlay of Rs. 13.79 crores and anticipated expenditure of Rs. 8.00 crores for 1985-86. For the first time, the Central Sector also includes an outlay of Rs. 10.65 crores for rural sanitation during 1986-87. Of this, Rs. 10 crores are for sanitation for women. The detailed scheme is under formulation.

#### *Urban Water Supply and Sanitation*

14.21 The objective in this area is to raise the service level in urban areas. The small and medium towns are growing at a faster rate and, therefore, the old system of water supply existing in these towns is not able to cope with the increasing demands and

need to be augmented. The coverage of urban population in respect of sanitation facilities is rather low. Keeping in view the great magnitude of the task, concerted efforts will be necessary and, in view of the severe resources constraint, it may not be possible to adopt very liberal norms or provide expensive or sophisticated water supply and sanitation services. It has, therefore, been decided to take up low cost sanitation schemes in the towns other than class I cities during the Seventh Plan. The Annual Plan 1986-87 provides for an outlay of Rs. 574.06 crores in the State and UT sector for urban water supply and sanitation schemes, including low cost sanitation. In addition, Central assistance will also be provided for the low cost sanitation scheme under the Centrally Sponsored Scheme of Integrated Development of Small and Medium Towns.

#### *Plan Outlay*

14.22 Details of Plan outlay for 1985-86 and 1986-87 under Housing, Urban Development and Water Supply and Sanitation sectors are given in Annexures 14.1, 14.2, 14.3 and 14.4.



## ANNEXURE 14.1

Scheme-wise outlays on Housing, Urban Development and Water Supply and Sanitation  
—Central Sector.

(Rs. in lakhs)

Sl. No.	Schemes	1985-86		1986-87
		Outlay	Anti. Expdr.	Outlay
1	2	3	4	5
<i>Housing</i>				
1.	General Pool Office and Residential Accommodation	3000	2674	3000
2.	Housing & Urban Development Corporation	1500	1000	1100
3.	National Building Organisation	36		35
4.	CPWD Training Institute	15		21
5.	Subsidised Housing Scheme for Plantation Workers	20		
6.	Hindustan Pre-Fab Ltd.	40	150	40
7.	I.Y.S.H.	5		5
8.	National Housing Bank	..	..	200
9.	Science & Technology	..	..	10
10.	Dock Labour Housing	..	1	10
TOTAL : Housing		4616	3825	4421
<i>Urban Development</i>				
1.	Integrated Development of Small & Medium Towns	1800	1800	1550
2.	National Capital Region	400	400	425
3.	Research & Training	40		42
4.	Development of Displaced Persons Colonies	22		21
5.	Removal of cattle in Calcutta & Howrah	22	92	21
6.	National Urban Infrastructure Development Finance Corporation	..		10
7.	Urban Basic Services	..		50
TOTAL : Urban Development		2284	2292	2119
<i>Water Supply and Sanitation</i>				
1.	Accelerated Rural Water Supply Programme :			
(a)	Grants to States/UTs	29838	29838	31275
(b)	Grants to Voluntary Agencies (PADI)	50	50	400
2.	W.H.O./UNICEF Assisted Programme for Ground Water Development— Handling charges for Drilling Rigs	25	25	25
3.	Public Health Engineering Training Programme	65	57.75	75
4.	Feasibility study based on demonstration schemes for sanitary latrines in Rural India	20	27*	4
5.	Project Management Cell (Urban Waste Disposal)	2	0.25	2
6.	Rural Sanitation Scheme :			
(a)	Grants to States/UTs	..	..	965
(b)	Grants to Voluntary Agencies (PADI)	..	..	100
7.	Monitoring & Management information system	..	..	25
8.	Capital contribution to Urban Finance Institute	..	..	5
9.	Research & Development	..	..	94
TOTAL : Water Supply & Sanitation		30000	29998	32970
GRAND TOTAL		36900	36115	39510

\*Includes Rs. 3 lakhs for feasibility study on Low cost sanitation (urban).

## ANNEXURE 14.2

## Outlays on Housing—States and Union Territories

(Rs. in lakhs)

Sl. No.	States/UTs	1985-86				1986-87	
		Total outlay	M.N.P.	Total Anti. Expdr.	M.N.P.	Total Outlay	M.N.P.
1	2	3	4	5	6	7	8
1.	Andhra Pradesh	5145	4600	6376	5250	6375	4800
2.	Assam	832	250	832	250	1032	250
3.	Bihar	2064	500	2755	250	2185	250
4.	Gujarat	1765	750	2614	750	1933	850
5.	Haryana	729	65	710	65	729	90
6.	Himachal Pradesh	395	..	445	..	604	1
7.	Jammu & Kashmir	592	50	700	50	1214	35
8.	Karnataka	2323	1500	2323	1500	3360	1773
9.	Kerala	1000	200	1045	200	800	149
10.	Madhya Pradesh	1613	506	1563	506	1800	525
11.	Maharashtra	3751	400	3275	252	5812	450
12.	Manipur	200	..	200	..	225	..
13.	Meghalaya	290	..	293	..	320	..
14.	Nagaland	396	..	396	..	396	..
15.	Orissa	699	100	1120	100	920	100
16.	Punjab	1160	74	1457	72	1593	69
17.	Rajasthan	690	125	690	100	700	110
18.	Sikkim	85	..	85	..	88	..
19.	Tamil Nadu	3317	350	3575	300	4710	300
20.	Tripura	260	35	270	40	317	50
21.	Uttar Pradesh	3219	310	3419	310	5205	510
22.	West Bengal	2800	135	2277	91	2864	95
TOTAL : States		33325	9950	36420	10086	43182	10407
<i>Union Territories</i>							
1.	A & N Islands	125	..	125	..	100	..
2.	Arunachal Pradesh	302.50	..	302.50	..	400	30
3.	Chandigarh	594	..	594	..	610	..
4.	Dadra & Nagar Haveli	30	2	30	2	16.30	1.70
5.	Delhi	2900	10	2900	10	2736	17
6.	Goa, Daman & Diu	190	6	190	6	195	12
7.	Lakshadweep	81	..	81	..	92	..
8.	Mizoram	160	2	160	7	187	10
9.	Pondicherry	265	25	265	25	267	40
TOTAL : UTs		4647	45	4647.50	50	4603.30	110.70
GRAND TOTAL		37972.50	9995	41067.50	10136	47785.30	10517.70@

@Excludes an amount of Rs. 512 lakhs on account of other programmes of Housing and Urban Development in the States of Assam (50 lakhs), Bihar (Rs. 170 lakhs), Orissa (241 lakhs), Meghalaya (35 lakhs) and West Bengal (16 lakhs).

## ANNEXURE 14.3

*Outlays on Urban Development—States and Union Territories*

(Rs. in lakhs)

Sl. No.	States/UTs	1985-86				1986-87	
		Total Outlay	M.N.P.	Total Anti. Expdr.	M.N.P.	Total Outlay	M.N.P.
1	2	3	4	5	6	7	8
1.	Andhra Pradesh	1495	450	2779	844	1650	550
2.	Assam	250	40	200	24	280	31
3.	Bihar	300	100	465	100	425	120
4.	Gujarat	913	65	1151	26	1534	30
5.	Haryana	400	140	237	100	400	100
6.	Himachal Pradesh	185	15	174	15	165	15
7.	Jammu & Kashmir	700	40	820	40	821	40
8.	Karnataka	500	200	500	200	494	325
9.	Kerala	440	50	440	50	340	35
10.	Madhya Pradesh	1640	230	1247	153	1850	185
11.	Maharashtra	2500	700	2300	527	3170	880
12.	Manipur	130	70	135	70	180	7
13.	Meghalaya	56	10	45	10	64	5
14.	Nagaland	177	..	177	..	177	..
15.	Orissa	120	25	320	20	720	30
16.	Punjab	818	65	818	31	911	62
17.	Rajasthan	115	70	115	55	128	55
18.	Sikkim	35	5	35	5	49	6
19.	Tamil Nadu	3000	500	3000	140	3300	600
20.	Tripura	140	40	169	15	171	21
21.	Uttar Pradesh	2030	330	2009	330	2500	400
22.	West Bengal	4275	400	5637	650	6020	655
TOTAL : States		20219	3545	22773	3405	25349	4152
<i>Union Territories</i>							
1.	A & N Islands	28	3	28	3	40	3
2.	Arunachal Pradesh	2	..	2	..	2	..
3.	Chandigarh	787	..	787	..	1135.50	..
4.	Dadra & Nagar Haveli	1	..	1	..	1	..
5.	Delhi	3400	200	3400	200	4562	545
6.	Goa, Daman & Diu	94	5	94	5	151	7
7.	Lakshadweep	..	..	..	..	..	..
8.	Mizoram	253	5	253	..	208	..
9.	Pondicherry	136	20	136	20	145	20
TOTAL : UTs		4701	233	4701	228	6244.50	575
GRAND TOTAL		24920	3778	27474	3633	31593.50	4727

## ANNEXURE 14.4

## Outlays on Water Supply and Sanitation—States and UTs

(Rs. in lakhs)

Sl. No.	States/UTs	1985-86				1986-87	
		Total Outlay	M.N.P.	Total Anti. Expdr.	M.N.P.	Total Outlay	M.N.P.
1	2	3	4	5	6	7	8
1.	Andhra Pradesh . . . . .	3800.00	1504.00	4700.00	2100.00	4500.00	1700.00
2.	Assam . . . . .	2500.00	1810.00	2416.00	1800.00	2881.00	2481.00
3.	Bihar . . . . .	3065.00	1771.00	3347.00	2045.00	3700.00	2300.00
4.	Gujarat . . . . .	4082.00	1237.00	4736.00	1237.00	4390.00	1135.00
5.	Haryana . . . . .	2610.00	2249.00	2510.00	2170.00	2610.00	2339.00
6.	Himachal Pradesh . . . . .	1580.00	1411.00	1557.00	1363.00	1700.00	1490.00
7.	Jammu & Kashmir . . . . .	3272.00	1852.00	3140.00	1921.00	3200.00	1500.00
8.	Karnataka . . . . .	3280.00	1555.00	3280.00	1555.00	3925.00	2000.00
9.	Kerala . . . . .	2230.00	1511.00	2345.00	1511.00	2100.00	1000.00
10.	Madhya Pradesh . . . . .	5054.00	2506.00	4429.00	2506.00	5400.00	2500.00
11.	Maharashtra . . . . .	21281.00	7327.00	26890.00	12552.00	28805.00	9700.00
12.	Manipur . . . . .	710.00	440.00	710.00	485.00	783.05	560.00
13.	Meghalaya . . . . .	885.00	429.00	825.00	400.00	850.00	550.00
14.	Nagaland . . . . .	460.00	247.00	460.00	247.00	500.00	300.00
15.	Orissa . . . . .	1316.00	821.00	1565.00	925.00	1700.00	1025.00
16.	Punjab . . . . .	1551.00	874.00	1505.00	1000.00	1636.000	1050.00
17.	Rajasthan . . . . .	2550.00	1204.00	2550.00	1100.00	2675.00	1400.00
18.	Sikkim . . . . .	440.00	261.00	440.00	261.00	385.00	200.00
19.	Tamil Nadu . . . . .	10000.00	2468.00	10000.00	2468.00	12500.00	3500.00
20.	Tripura . . . . .	520.00	287.00	520.00	355.00	625.00	400.00
21.	Uttar Pradesh . . . . .	3743.00	2014.00	3743.00	2268.00	4761.00	2524.00
22.	West Bengal . . . . .	1300.00	700.00	1369.00	661.00	1600.00	800.00
TOTAL : STATES . . . . .		76229.00	34478.00	83037.00	40930.00	9226.05	40454.00
<i>Union Territories</i>							
1.	A. & N. Islands . . . . .	236.00	109.00	236.00	109.00	140.00	72.00
2.	Arunachal Pradesh . . . . .	550.00	440.00	550.00	440.00	675.00	525.00
3.	Chandigarh . . . . .	501.06	..	501.06	..	501.41	..
4.	Dadra & Nagar Haveli . . . . .	25.00	16.00	25.00	16.00	25.00	19.00
5.	Delhi . . . . .	4700.00	189.00	4700.00	189.00	5573.00	200.00
6.	Goa, Daman & Diu . . . . .	850.00	113.00	850.00	113.00	975.00	150.00
7.	Lakshadweep . . . . .	34.00	30.00	34.00	30.00	40.00	35.00
8.	Mizoram . . . . .	555.00	259.00	555.00	259.00	715.00	250.00
9.	Pondicherry . . . . .	150.00	37.00	150.00	37.00	140.00	33.00
TOTAL : UTs . . . . .		7601.06	1193.00	7601.06	1193.00	8784.41	1284.00
GRAND TOTAL . . . . .		83830.06	35671.00	90638.06	42123.00	100010.46	41738.00

## CHAPTER 15

### SOCIAL WELFARE AND REHABILITATION

#### *Review of Social Welfare Programme for 1985-86*

In the Annual Plan 1985-86, an outlay of Rs. 135.17 crores was provided for Social Welfare. Of this, the Centre's share was Rs. 100 crores and the share of the States and Union Territories was Rs. 35.17 crores. The corresponding anticipated expenditure is Rs. 150.99 crores—Rs. 98.81 crores at the Centre and Rs. 52.18 crores in the States and Union Territories. An excess of expenditure was reported in the States of Andhra Pradesh, Haryana, Jammu & Kashmir, Orissa, Tripura, Uttar Pradesh and West Bengal mainly due to substantial expansion of the on-going schemes as well as inclusion of new schemes.

15.2 In the Central sector, the major scheme of 'Integrated Child Development Services' (ICDS) was expanded by sanctioning 212 new projects. With these, the total number of projects rose to 1231 since the inception of the scheme in 1975-76. The programme was continuously monitored. Upto December, 1985, progress reports were received from 998 projects, out of which 889 projects had become fully operational. Considerable improvement was noted in the utilisation of supplementary nutrition, Vitamin 'A', iron and folic acid and immunisation among pre-school children in ICDS projects compared to areas outside ICDS. An Apex Committee was set up for periodical review of the training programmes. Steps were taken to bring qualitative improvement in training curricula, development and production of slides and production of new manuals and other aids for instructors.

15.3 An additional 1,000 creche units were sanctioned for children of poor working and ailing mothers, raising the total number of creches to 8,000 covering about 2 lakh children. Financial assistance was given for covering about 2,000 more children under the scheme 'Services for Children in Need of Care and Protection'.

15.4 The schemes relating to Condensed Courses of Education and Vocational Training for Adult Women and Socio-economic Programme were further strengthened. Upto December, 1985, 808 condensed courses benefiting 18,568 women were organised and 551 socio-economic units of different types benefiting 6,772 needy women and disabled persons were provided with financial assistance. Forty seven short duration training courses in non-traditional trades were sanctioned to benefit 4,049 women in distress. Seventeen new projects for providing training and employment to women of weaker groups were taken up in public sector undertakings/corporations with the assistance of Norwegian Agency for International

Development (NORAD), besides continuing the existing 40 projects. Seventeen new hostels for working women were sanctioned with an intake capacity of 1,070 women and day-care facilities for 340 children. This raised the total number of hostels constructed to 404 with intake capacity of 25,100 women.

15.5 Scholarships were awarded to about 16,000 handicapped persons for education and technical training from 9th class onwards. Financial assistance was extended to 160 voluntary organisations working for the disabled. The scope of the scheme for assistance to disabled persons for purchase/fitting of aids/appliances was expanded to include aids/appliances for the visually handicapped. It was expected to benefit about 30,000 handicapped persons. The programme of 'District Rehabilitation Centres' was extended to 5 more States viz. Andhra Pradesh, Assam, Haryana, Madhya Pradesh and Rajasthan, in order to have a wider base for experimenting different models. Five more special cells in the normal employment exchanges were sanctioned for the placement of handicapped persons in jobs. The National Institutes for the handicapped, besides strengthening their existing activities, were actively involved in the development of suitable low cost aids and standardisation of training programmes. Five organisations were given grants for conducting research on appropriate aids and appliances for the handicapped.

15.6 The Central Social Welfare Board (CSWB) continued to expand its activities for promoting voluntary effort in the delivery of welfare services for children and women. It made special efforts to remove regional imbalances and to cover rural, tribal, hilly and backward areas. The Voluntary Action Bureau set up by the Board continued to provide counselling and guidance to women in family crisis and victims of social evils like dowry. Six committees were constituted to look into the various aspects of the programmes of the Board.

15.7 The Information and Mass Education Cell promoted greater involvement of the masses in the social development process through various types of publicity. To educate the masses about the ill effects of drinking and drug abuse, educative publicity was carried out by providing grants-in-aid to 39 voluntary organisations.

15.8 Research and evaluation studies were undertaken/sponsored in the various fields of social welfare, social policy and social development with a view to identifying the problems and make use of the

findings and suggestions for planning and implementation of policies and programmes. During the year, 32 research and evaluation studies were sanctioned to 29 institutions/universities/voluntary organisations. In addition, grants were given for organising 12 workshops/seminars which could help disseminate research findings, identify problem areas, discuss social problems and identify research needs etc. The National Institute of Social Defence (NISD) and the National Institute of Public Cooperation & Child Development (NIPCCD) continued to conduct research and evaluation studies and organise training courses, workshops/seminars, etc. in addition to providing advisory/consultancy services to governmental and non-governmental agencies in the field of social defence, public cooperation and child development. The NIPCCD also initiated and organised a study to develop a comprehensive system for monitoring and evaluation of social components of the ICDS scheme.

15.9 In the State sector, twelve new ICDS projects on the pattern of Central projects were sanctioned, raising the total number of State projects to 128. However, only 112 projects had reached fully operational status.

15.10 The other child care services such as creches/day care centres, balwadis etc. were expanded. Considerable emphasis was laid on promoting vocational training and income generating schemes so as to enable the needy women to earn an independent living. Scholarships upto 8th standard and prosthetic aids continued to be given to handicapped persons, besides providing institutional care to them. Steps were taken to enforce the various social legislations effectively by strengthening the administrative machinery at appropriate levels. Voluntary organisations were further encouraged through financial assistance to provide welfare services in the various fields of social welfare.

#### *Social Welfare Programme for 1986-87*

15.11 An allocation of Rs. 236.40 crores has been made for Social Welfare in the Annual Plan 1986-87. The break-up of this outlay and the outlay and anticipated expenditure for 1985-86, both in Central and State/Union Territory sectors, is given below :

TABLE 15.1  
*Outlays and Expenditure*  
(Rs. in Crores)

	1985-86		1986-87
	Outlay	Anticipated Expenditure	Outlay
1. Centre :			
(i) Department of Women and Child Development	84.96	84.74	150.00
(ii) Ministry of Welfare	15.04	14.07	15.00
2. States	31.40	48.41	66.72
3. Union Territories	3.77	3.77	4.68
Total	135.17	150.99	236.40

In 1986-87, priority will continue to be accorded to the welfare of women and children. Additional fillip will be given to the schemes supporting women's training-cum-employment programmes and supplementary nutrition for pre-school children and pregnant and nursing mothers.

15.12 In the Central Sector, emphasis would be on consolidation of the ICDS programme and improvement of training of the functionaries. Refresher courses would be organised for those recruited prior to 1980. Besides, workshops/seminars will be organised, research carried out and publications brought out on the problems and programmes for the development of children. Monitoring with regard to delivery of various inputs will be further improved. Priority will be given to meeting the needs of ICDS project areas in regard to (i) vaccines, drugs, vitamin 'A' and iron and folic acid tablets, (ii) completion of water supply schemes in problem, villages, and (iii) required personnel. A new scheme *viz.* supplementary nutrition for pre-school children and expectant/nursing mothers will provide additional support to the existing supplementary nutrition within ICDS. Substantial expansion will be taken up under the scheme of Creches/Day Care Centres for children of working and ailing mothers. Facilities for training of the creche workers, including supervisory staff, which had hitherto been lacking, will be provided. Financial assistance would be extended to the Indian Council of Child Welfare for the training of child welfare workers. With a view to tackle the growing menace of juvenile delinquency, a new scheme 'Prevention and control of juvenile maladjustments' will be introduced. It is proposed to provide financial support to States/Union Territories to bring qualitative improvement in the services required to be provided under the Children Acts and to promote voluntary action for prevention of juvenile maladjustment.

15.13 The thrust areas for women's programmes will be education, development of skills and provision of employment opportunities. The programmes in the Education sector take care of the education of women in general. However, there is a large number of girls who drop out of the main stream of education at early stages due to certain reasons. The scheme of 'Condensed Courses of Education' under Social Welfare sector would be further strengthened to provide coaching for such girls for middle/matriculation examinations for a period not exceeding two years. Vocational training courses would also be organised in selected trades to help them to become self-employed or to get employment in open market. With a view to increasing employment opportunities, the different programmes of training and income generation will be reorganised into a new scheme 'Support to training-cum-employment programmes for women'. Meanwhile, financial assistance will continue to be provided to individual/groups of women to take up different types of income generating activities under the existing 'Socio-economic Programme'. Financial assistance will also continue to be provided to public sector undertakings/institutions for imparting training in vocations suited to women in getting employment on a sustained basis

under the scheme of "Setting up of Employment and Income Generating Training-cum-Production Centres for women" supported by NORAD. Provision has been made for strengthening of Women's Development Corporations in States/Union Territories to expand the loan and marketing facilities for women entrepreneurs. The Centre would provide funds to the States through equity participation. The programme for construction of hostels for working women will be expanded with the help of voluntary organisations and local bodies. These hostels would also have the facility of day care centres for children of the hostellers. In order to promote qualities of leadership among rural women, assistance will be provided for organising training camps for rural women. Short stay homes for women in social and moral danger due to family problems, exploitation etc. will be continued. Services in these homes will include counselling, medical care, psychiatric treatment, vocational training, rehabilitation etc. A separate cell in the Department of Women and Child Development, Ministry of Human Resource Development will oversee the monitoring of the programmes being implemented for women by different Ministries/Departments.

15.14 The National Institutes working in the field of the physically handicapped will be assisted to equip themselves with the expertise, services and facilities so that they could reach the national level stature. Provision has been made to expand further the scheme of scholarships to handicapped students from Class IX onwards. Research on aids and appliances for the handicapped, improving the system of their distribution and development of the designs would be taken up.

15.15 The Central Social Welfare Board will continue to give assistance to the voluntary organisations for carrying on their welfare activities at local levels. The activities of the Voluntary Action Bureaux will be further expanded and organisation of campaigns against exploitation and atrocities on women and children intensified.

15.16 The NIPCCD will continue to plan, coordinate and monitor the training of ICDS personnel in addition to building the capabilities of institutions engaged in the training of child development workers, standardising the syllabi for different courses and developing suitable methods, aids and materials to ensure high quality of training. The National Institute for Social Defence will continue to provide to State Governments/UT Administrations necessary guidance in the formulation and implementation of correctional programmes and training of staff.

15.17 Grants for research in the various areas of social welfare and evaluation of Plan programmes will continue to be given to universities, research institutions etc. with a view to utilise their findings and recommendations in planning and implementation of policies and programmes. Priority would be given to research topics related to current social problems such as dowry, drug addiction etc.

15.18 A provision of Rs. 71.40 crores has been made in the State Sector for welfare activities relating to children, women and physically handicapped. The programmes for child welfare include creches, day-care centres, balwadis, foster care and institutional services for the socially and physically handicapped children. The States' ICDS programme will be continued and consolidated so as to have effective impact on the targetted groups. Skill development programmes will be further strengthened for providing better employment opportunities to the needy women. Propaganda and publicity work against atrocities on women and rehabilitation of women in social and moral danger would be taken up. The physically handicapped children will be given scholarships upto VIII standard. Provision has been made for purchase of aids and appliances and their fitment, education, training and rehabilitation, including sheltered workshops, for the physically handicapped. The vocational training programme in various institutions for the socially and physically handicapped persons will be modernised so as to enhance the earning capacity of such persons and improve job opportunities for them. Grants-in-aid will be provided to voluntary organisations working for the welfare of children, women and the physically handicapped. Services under the various social legislations like the Children's Acts, Probation of Offenders' Act, Suppression of Immoral Traffic in Women and Girls Act and Anti-Beggary Acts will be further expanded.

15.19 The outlay and estimated expenditure for 1985-86 as well as the outlay for 1986-87 for Social Welfare in the Central and State Sectors are given at Annexures 15.1A, 15.1B and 15.2.

#### REHABILITATION

15.20 The Rehabilitation Schemes included in the Annual Plan 1986-87 relate to rehabilitation of displaced persons from Pakistan, migrants from former East Pakistan (now Bangladesh), Indian nationals repatriated from Burma, Sri Lanka, Uganda, Mozambique, Zaire and Vietnam, displaced persons from Chhamb Niabet area in Jammu and Kashmir and displaced persons who entered Gujarat and Rajasthan during the Indo-Pak conflict of 1971. The schemes are fully financed by the Centre and are implemented directly by it as well as through the concerned State and Union Territory Governments.

15.21 The outlay in the Annual Plan 1985-86 for Rehabilitation was Rs. 23.50 crores against which the revised estimate of the expenditure was Rs. 19.77 crores. However, the latest available information indicates that the actual expenditure was substantially lower (Rs. 12.26 crores). The outlay for 1986-87 is Rs. 23.07 crores. The scheme-wise performance during 1985-86 and the outlay and targets for 1986-87 are indicated below :

#### 15.22 Rehabilitation of displaced persons from former East Pakistan (now Bangladesh).

##### (a) Old Migrants in West Bengal

Against the outlay of Rs. 1 crore for 1985-86 the actual expenditure was Rs. 76.85 lakhs. The outlay for 1986-87 is Rs. 85 lakhs. There were 1336 ex-camp site families at the beginning of the Seventh Plan, of which 500 families were given housing loans during 1985-86. The target for 1986-87 is also to assist 500 families.

(b) *Migrants outside West Bengal*

(i) *Dandakaranya Project*

Three Zones of this project have been normalised and the assets and institutions created in these zones are being transferred to the respective State Governments, which will be provided with requisite funds to complete the unfinished works. The settlement work in the fourth zone viz. Malkangiri will continue.

The Annual Plan 1985-86 outlay for Dandakaranya Project was Rs. 11.25 crores against which the expenditure was Rs. 7.63 crores. The outlay for 1986-87 is also Rs. 11.25 crores. The number of agriculturist families settled during 1985-86 was 151 against a target of 100. The target for 1986-87 is also to settle 100 agriculturist families. These families are provided reclaimed and developed land on the prescribed scale and assistance for housing, bullocks and agricultural inputs.

(ii) *New Migrants outside West Bengal and Dandakaranya Project settled in agriculture*

The Annual Plan 1985-86 outlay for resettlement of migrants in agriculture was Rs. 1.28 crores against which the expenditure was Rs. 49.74 lakhs. For 1986-87, the outlay is Rs. 81 lakhs. Against a target of 163 first year families, 169 families were settled during 1985-86. Besides, assistance was provided to 170 second year and 260 third year families. The target for 1986-87 is to settle 99 first year families and provide assistance to 169 second year and 170 third year families.

(iii) *New Migrants outside West Bengal and Dandakaranya Project settled in small trade, business and employment etc.*

The new migrants are given assistance for resettlement in small trade/business. The Annual Plan 1985-86 outlay for this purpose was Rs. 9.23 lakhs and expenditure Rs. 6.63 lakhs. The outlay for 1986-87 is Rs. 19 lakhs. The target for 1985-86 was to assist 57 families. However, more than 300 families sponsored for employment in the Madan Industries, Hastinapur were laid off as a result of the closure of the mill. It was, therefore, decided to provide resettlement assistance to all the eligible laid off families. Out of these laid off families, 53 families were to be settled in small trade/business during 1985-86. As such, the target for 1985-86 was raised from 57 to 110, which was achieved. The target for 1986-87 is to assist 75 families.

*Repatriates from Burma*

15.23 Resettlement of repatriates from Burma is almost complete. The residuary problem is confined to grant of second and subsequent instalments of housing and business loans to eligible families. The Annual Plan 1985-86 outlay was Rs. 35 lakhs and expenditure was Rs. 21.42 lakhs. The outlay for 1986-87 is also Rs. 35 lakhs.

*Repatriates from Sri Lanka*

15.24 The Annual Plan 1985-86 outlay was Rs. 8.90 crores against which the expenditure was Rs. 3.05 crores. The outlay for 1986-87 is also Rs. 8.90 crores. The target for resettlement of families during 1985-86 was 8000 which was subsequently revised to 2000. This target could not be achieved as no families were repatriated from Sri Lanka in 1985-86. The target for 1986-87 is 8000 families.

*Displaced persons from Chhamb Niabet Area*

15.25 The work of settlement of the displaced persons from Chhamb Niabet area in Jammu and Kashmir is nearly complete. There are, however, still about 30 families which have to be allotted land and about 780 families which have been allotted land less than that admissible at the prescribed scale. As it is difficult to find suitable land for these families, it is proposed to give them assistance on the pattern of the Integrated Rural Development Programme. The outlay for 1985-86 was Rs. 2 lakhs against which the expenditure was Rs. 3.02 lakhs. The outlay for 1986-87 is Rs. 10 lakhs.

*Displaced persons who entered Rajasthan and Gujarat during the Indo-Pak conflict of 1971*

15.26 The work relating to the rehabilitation of such persons in Rajasthan and Gujarat is almost complete and all the families have been settled. However, some residuary work relating to infrastructural facilities in the rehabilitation areas is to be completed by the Rajasthan Government. The Gujarat Government has been insisting on sanction of assistance for infrastructural facilities as was sanctioned to Government of Rajasthan. For 1985-86, the outlay was Rs. 25 lakhs against which the expenditure was only Rs. 0.60 lakhs. For 1986-87, the provision has been kept at Rs. 25 lakhs.

*Rehabilitation Industrial Development Corporation, Calcutta*

15.27 Out of a requirement of Rs. 153 lakhs for revitalization of the Corporation, a sum of Rs. 117 lakhs had been provided by the end of 1984-85. Provision for the balance of Rs. 36 lakhs was made during 1985-86, which remained unspent. As such, the same amount of Rs. 36 lakhs has been provided during 1986-87.



*Repatriates from Uganda, Zaire, Vietnam etc.*

15.28 The resettlement of repatriates from Uganda, Zaire and Vietnam is complete and no provision for this purpose has been made since 1985-86.

*Shifting of Displaced Persons from Kotla Feroz Shah Complex*

15.29 Displaced persons from West Pakistan rehabilitated at Kotla Feroz Shah Complex are proposed to

be shifted to other sites, as suggested by the Urban Arts Commission. An expenditure of Rs. 1.27 crores is estimated to be incurred on this scheme. Pending clearance of the scheme, a token provision of Rs. 1 lakh has been made for it in the Annual Plan 1986-87

*Plan outlay*

15.30 The scheme-wise Plan outlay for Rehabilitation is given in Annexure 15.3.

## ANNEXURE 15-1A

## Outlay and expenditure—Social Welfare—Department of Women and Child Development

(Rs. in crores)

Sl. No.	Programme	1985-86		1986-87 Outlay
		Outlay	Revised Estimates	
A. Central Schemes				
I. Welfare & Development of Children				
1.	Creches/Day Care Centres for Children of working/ailing mothers . . . . .	4.30	1.80	8.00
2.	Grants to National Dairy Development Board for Development Programmes.	0.50	0.50	0.50
3.	Social Work Education & Training :			
	(i) Training of non-ICDS functionaries . . . . .	0.30	0.35	0.45
	(ii) Training of ICDS functionaries . . . . .	7.00	6.95	7.00
II. Welfare & Development of Women				
1.	Functional Literacy for Adult Women . . . . .	0.01	..	..
2.	Hostels for Working Women . . . . .	1.70	3.70	3.55
3.	Setting up of Employment and Income Generating training-cum-production centres for women.	1.00	1.00	1.00
4.	Condensed Courses of Education and Vocational Training for Adult Women.	1.60	1.60	5.50
5.	Socio-economic Programme . . . . .	2.57	2.57	2.60
6.	Training of Rural Women in Public Cooperation. . . . .	0.10	0.10	0.10
7.	Women's Development Corporations . . . . .	0.04	0.04	0.50
8.	Women's Development Planning and Monitoring Cell. . . . .	0.01	0.01	0.05
9.	Support to Training-cum-Employment Programmes for Women . . . . .	..	..	5.00
III. Social Defence				
1.	Short Stay Homes . . . . .	0.08	0.08	0.05
2.	Education work for prevention of atrocities on women . . . . .	..	..	0.10
IV. Others				
1.	PREM & Innovative Action-cum-Research Projects . . . . .	..	0.10	0.10
2.	Grants-in-aid to all India Voluntary Organisations. . . . .	..	0.06	0.10
3.	Information and Mass Education Cell. . . . .	..	0.13	0.15
TOTAL A . . . . .		19.21	18.98	34.75
. Centrally Sponsored Schemes				
Welfare & Development of Children				
1.	Integrated Child Development Services . . . . .	65.50	65.50	70.00
II. Welfare & Development of Women				
1.	Assistance for setting up Women's Training Centres/Institutes for Rehabilitation of Women in Distress. (Welfare of Destitute Women and Children).	0.25	0.25	0.25
TOTAL B . . . . .		65.75	65.75	70.25
2. Supplementary Nutrition for pre-school children and expectant/nursing mothers.		..	..	45.00
GRAND TOTAL : . . . . .		84.96	84.74	150.00

## ANNEXURE-15-1B

## Outlay and Expenditure—Social Welfare—Ministry of Welfare

(Rs. in crores)

Sl. No.	Programme	1985-86		1986-87 Outlay
		Outlay	Revised Estimates	
A. Central Schemes				
I. Welfare & Development of Children				
*1.	National Institute of Public Cooperation and Child Development . . . . .	0.13	0.13	0.14
II. Welfare & Development of Women				
*1.	Grant-in-aid to Voluntary Organisations through Central Social Welfare Board.	4.65	4.65	5.00
III. Welfare of Handicapped				
1.	Expansion and improvement of National Institutes for the Visually Handicapped, the Orthopaedically Handicapped, the Hearing Handicapped and the Mentally Handicapped.	1.75	1.75	2.15
2.	National Institute for Rehabilitation, Training and Research . . . . .	0.10	0.10	0.10
3.	Scholarships, Research, Training, Sheltered Employment and Grants to Voluntary Organisations.	3.54	3.40	3.54
4.	District Rehabilitation Centres . . . . .	0.20	0.20	0.20
IV. Social Defence				
1.	Education Work for Prohibition . . . . .	0.20	0.20	0.20
2.	National Institute for Social Defence . . . . .	0.15	0.05	0.15
V. Others				
1.	PREM & Innovative Action-cum-Research Projects . . . . .	0.20	0.20	0.10
2.	Grants-in-aid to All India Voluntary Organisations . . . . .	0.20	0.20	0.18
3.	Information and Mass Education Cell in the Ministry of Welfare . . . . .	0.25	0.12	0.12
TOTAL A . . . . .		11.37	11.00	11.88
B. Centrally Sponsored Schemes				
I. Welfare & Development of Children				
1.	Services for children in need of care and protection . . . . .	2.50	1.90	2.50
II. Welfare of Handicapped				
1.	Placement of the Handicapped through Special Employment Exchanges . . . . .	0.17	0.17	0.17
III. Social Defence				
1.	Prevention and Control of Juvenile Maladjustments. . . . .	0.70	0.70	0.40
2.	Welfare of Prisoners. . . . .	0.30	0.30	0.05
TOTAL B . . . . .		3.67	3.07	3.12
GRAND TOTAL (A + B) . . . . .		15.04	14.07	15.00

\*Stands transferred to the Department of Women &amp; Child Development w.e.f. 19-2-1986.

## ANNEXURE 15.2

*Outlay and Expenditure in the State Sector—Social Welfare*

(Rs. in lakhs)

Sl. No.	States	1985-86		1986-87 Outlay
		Outlay	Anti. Expenditure	
1.	Andhra Pradesh	485	1262	1185
2.	Assam	70	70	87
3.	Bihar	51	51	80
4.	Gujarat	139£	139£	160£
5.	Haryana	137	147	137
6.	Himachal Pradesh	41*	48*	52*
7.	Jammu & Kashmir	41	60	70
8.	Karnataka	485	485	2014
9.	Kerala	93	87	104
10.	Madhya Pradesh	235@	173+	175+
11.	Maharashtra	126	93	200
12.	Manipur	40+	40+	41+
13.	Meghalaya	32	30	35
14.	Nagaland	31	31	32
15.	Orissa	40	95	105
16.	Punjab	120	115	430**
17.	Rajasthan	30	30	40
18.	Sikkim	13	13	11
19.	Tamil Nadu	400	400	230
20.	Tripura	41+	190+	37+
21.	Uttar Pradesh	300	975	1140
22.	West Bengal	190	307	307
TOTAL STATES :		3140	4841	6672
<i>Union Territories</i>				
1.	A. & N. Islands	10.00	10.00	6.50§
2.	Arunachal Pradesh	14.95	14.95	19.00
3.	Chandigarh	40.00§	40.00§	40.00§
4.	Dadra & Nagar Haveli	1.65	1.65	1.55
5.	Delhi	224.00	224.00	313.00
6.	Goa, Daman and Diu	15.00	15.00	12.00
7.	Lakshadweep	6.00	6.00	6.00
8.	Mizoram	35.00	35.00	37.00
9.	Pondicherry	30.00	30.00	33.00
TOTAL (U.Ts.) :		376.60	376.60	468.05
GRAND TOTAL :		3516.60	5217.60	7140.05

£ Includes provision for 'Social Inputs'.

\* Includes provision for 'Ex-servicemen's Corporation'.

+ Includes provision for 'Legal aid and advice'.

\*\* Includes provision for 'Defence Services Welfare'.

@ Includes provision for 'Legal aid to poor and Sanjay Gandhi Institute for Training in Youth Leadership'.

§ Includes provision for 'Welfare of Ex-Servicemen'.

## ANNEXURE 15.3

*Outlay and Expenditure—Rehabilitation*

(Rs. crores)

Scheme	1985-86		1986-87 Outlay
	Outlay	Actual Expenditure	
1	2	3	4
1. <i>Migrants from East Pakistan (Bangladesh)</i>			
(i) Old Migrants in West Bengal . . . . .	1 00	0.77	0.85
(ii) Migrants outside West Bengal :			
(a) Dandakaranya Project (DNK) . . . . .	11.25	7.63	11.25
(b) Other than DNK :			
(i) Agriculturists . . . . .	1.28	0.50	0.81
(ii) Non-Agriculturists . . . . .	0.09	0.06	0.19
2. Repatriates from Burma . . . . .	0.35	0.21	0.35
3. Repatriates from Sri Lanka . . . . .	8.90	3.05	8.90
4. Rehabilitation Industries Corporation Ltd., Calcutta . . . . .	0.36	..	0.36
5. <i>Western Border Area :</i>			
(a) Chhamb displaced persons . . . . .	0.02	0.03	0.10
(b) Displaced persons of Indo-Pak Conflict 1971—Gujarat and Rajasthan . . . . .	0.25	0.01	0.25
6. Repatriates from Uganda, Zaire and Vietnam . . . . .	..	..	..
7. Construction of tenements for the present occupants in Kotla Feroze Shah Complex . . . . .	..	..	0.01
TOTAL . . . . .	23.50	12.26	23.07

## CHAPTER 16

# SOCIO-ECONOMIC PROGRAMMES FOR SCHEDULED CASTES AND SCHEDULED TRIBES

*Review for 1985-86*

An outlay of Rs. 254.40 crores was provided in the Annual Plan 1985-86 for the development programmes of the Backward Classes Sector, besides the Special Central Assistance (SCA) of Rs. 140 crores for Tribal Sub-Plans (TSP) and Rs. 165 crores for the Special Component Plan (SCP) for Scheduled Castes. The estimated expenditure in the Backward Classes Sector is Rs. 265.07 crores. The amounts of Special Central Assistance provided for TSP and SCP in the Annual Plan were expected to be fully utilised.

16.2 The details of the outlay and the revised estimate of expenditure are given below :

*Outlay and Revised Estimate of Expenditure*

	(Rupees in crores)	
	Outlay	Revised Estimate of Ex- penditure
(A) <i>Backward Classes Sector</i>		
(i) State Sector	209.20	224.02
(ii) Union Territories	3.20	3.20
(iii) Centrally Sponsored Schemes	42.00	37.85
<i>Sub-total (A)</i>	254.40	265.07
(B) <i>Special Central Assistance</i>		
(i) Tribal Sub-Plan	140.00	140.00
(ii) Special Component Plan for Scheduled Castes	165.00	166.00
<i>Sub-total (B)</i>	305.00	306.00
<i>Total (A+B)</i>	559.40	571.07

In States' Sector, there is an increase in expenditure compared to the outlay, primarily on account of pre-matric scholarships/stipends. Many State Governments increased the rates of pre-matric stipends/scholarships due to price escalation.

16.3 During 1985-86, 29.56 lakh Scheduled Castes/Scheduled Tribes other backward classes students were benefited from pre-matric scholarship scheme and 24.91 lakh students received educational incentives like books, stationery, uniforms etc. Besides, 1883 new hostels were set up and 1355 existing hostels were maintained. Financial assistance as grants-in-aid was provided for setting up of cottage industries and for agricultural inputs to more than 57,000 persons

belonging to Scheduled Castes and Scheduled Tribes. Thirty thousand SC/ST families received assistance under the housing scheme for construction of houses and for development of house-sites. Under Backward Classes Sector, 674 drinking water wells were sunk.

16.4 The Plan provision for various Centrally sponsored schemes for 1985-86, together with the revised estimate of expenditure, is given in Annexure 16.1. The major part of the expenditure during the year continued to be on post-matric scholarships. Steps were taken for timely disbursement of scholarships as well as for the monitoring and concurrent evaluation of the scheme. The estimated number of SC/ST students who availed of post-matric scholarships was 9.90 lakhs compared to 9.02 lakhs in 1984-85.

16.5 Under the Protection of Civil Rights Act (PCR Act), measures relating to liberation of scavengers through improved sanitation in towns, free legal aid to victims of atrocities, supervision of cases of contravention of the provisions of the Act, survey and publicity for eradication of untouchability were taken up.

16.6 The Scheduled Castes Development Corporations set up in 17 States/Union Territories continued to function. An amount of Rs. 15 crores was released to States on 49:51 ratio between the Centre and the States in 1985-86 and 4.50 lakhs Scheduled Caste families were given financial assistance by way of margin money loan. The recovery of margin money loan in case of most of Scheduled Caste Development Corporations was not satisfactory. Upto March, 1985, it was as low as 0.7% in Bihar, 1.9% in Uttar Pradesh and 4.5% in Andhra Pradesh. It was 26.2% in Himachal Pradesh, 26.8% in Assam and 23.0% in West Bengal.

*Tribal Sub-Plans (TSP)*

16.7 The flow of funds from State-Plan to Tribal Sub-Plan during 1985-86 was Rs. 952.40 crores. Special Central Assistance amounting to Rs. 140 crores was provided for various economic development programmes to help the Scheduled Tribes to generate additional income and improve their quality of life. An amount of Rs. 119.41 crores out of the total Special Central Assistance was allocated for 181 Integrated Tribal Development Projects (ITDPs), Rs. 15 crores for 245 tribal pockets, Rs. 4.47 crores for 72 primitive tribes & Rs. 1.12 crores for ST Development Corporation as the Central share of margin money loan. During the year under review, 7.6 lakh tribal families (February 1986 figure) are estimated to have been economically assisted to cross the poverty-line against the target of 8.3 lakh ST families. The State Governments were requested to take stringent measures to implement

legislative measures in the fields of agricultural tenancy, money-lending, debt-relief, bonded-labour, forestry, excise and trade etc. The schemes which were given priority include agriculture, irrigation, soil conservation, animal husbandry, poultry, fisheries, forestry, input supply, credit and marketing, village and small industries, education, drinking water supply, health and housing.

#### *Special Component Plan for Scheduled Castes (SCP)*

16.8 An amount of Rs. 991.89 crores as flow of funds from State Plans to the Special Component Plan and an additive Special Central Assistance amounting to Rs. 165 crores were provided during 1985-86. The number of families estimated to have been economically assisted is 20 lakhs (upto February 1986) against the target of 21.40 lakh families. The main emphasis during the period under review was to raise the productivity of sectors (in which SC families participated) like agriculture, horticulture, fisheries, forestry, animal husbandry and village and small industries, by providing inputs like improved seeds, fertilisers, irrigation, institutional credit, marketing, supply of raw-materials etc. as well as imparting training in modern techniques. Greater attention was also given to other schemes like link roads, electrification, housing etc. for SC Basis. Educational facilities like schools, hostels and other educational incentives like stipends/scholarships, uniforms, books, stationary etc. were given high priority.

#### *Annual Plan 1986-87*

16.9 For the Annual Plan 1986-87, the outlays provided under the Backward Classes Sector and for Special Central Assistance for Special Component Plan and Tribal Sub-Plan are as follows :

##### *Annual Plan 1986-87 outlays*

(Rs. in crores)

#### *(A) Backward Classes Sector :*

(i) State Sector . . . . .	254.56
(ii) Union Territories . . . . .	4.05
(iii) Centrally sponsored Schemes . . . . .	42.00
Sub-total—A . . . . .	300.61

#### *(B) Special Central Assistance :*

(i) Tribal sub-Plan . . . . .	155.00
(ii) Special Component Plan for Scheduled Castes . . . . .	175.00
Sub-total—B . . . . .	330.00
Total (A+B) . . . . .	630.61

16.10 An outlay of Rs. 258.61 crores has been provided under the Backward Classes Sector in the State/UT Plans for the implementation of special schemes for promoting education, economic development and other activities for the benefit of Scheduled Castes/Scheduled Tribes/other backward classes. These schemes include pre-matric stipends/scholarships, hostels, residential and Ashram schools.

During 1986-87, about 22 lakh stipends/scholarships to SC/ST students are likely to be given at pre-matric stage. For economic development, financial assistance will be given for agricultural inputs, development of cottage and small industries etc. Financial assistance would also be given for development of house-sites and construction of houses, medical aid and drinking water.

#### *Centrally-sponsored Schemes*

16.11 Under Centrally-sponsored schemes, an outlay of Rs. 11 crores has been provided for award of Post-matric scholarships. Revision of the rates of scholarships is under examination. About 11 lakh SC/ST students are likely to avail of Post-matric scholarships during 1986-87. An amount of Rs. 1.59 crores has been allocated for voluntary organisations to strengthen their organisational set up and expand their activities. For pre-matric scholarships to the children of those engaged in unclean occupations like scavengers, tanners and flayers, Rs. 1.82 crores have been provided. The scheme is expected to benefit 20,000 children. The book bank scheme with a provision of Rs. 0.50 crore will cater to SC/ST Medical and Engineering students. For construction of SC/ST girls' hostel scheme, Rs. 4.55 crores have been provided, Rs. 0.46 crore have been allocated for 'Coaching and Allied' scheme, with thrust on improvement of infrastructural facilities for coaching centres as well as the quality of coaching. For implementation of Protection of Civil Rights Act, Rs. 8.57 crores have been provided for implementation machinery as well as for rehabilitation of liberated scavengers under the scheme. For Research & Training, Rs. 0.76 crore have been provided with emphasis on action-cum-problem oriented research. Training will be imparted to personnel working at various levels, particularly at Block and Project levels, so that the programmes for SCs and STs are implemented effectively.

#### *SC Development Corporations*

16.12 An outlay of Rs. 12.76 crores has been provided for the programmes of SC Development Corporations. The programmes will cover clusters of ST and SC families living outside Integrated Tribal Development Projects as well as SC concentration pockets by identifying economic activities for the target groups. If necessary, the administrative machinery of the Corporations lagging behind in performance will be strengthened, particularly by including persons of professional competence.

#### *The Tribal Sub-Plan*

16.13 Under Tribal sub-Plan, the number of Integrated Tribal Development Projects has increased from 181 to 184. These include three new Integrated Tribal Development Projects in Sikkim. Similarly, 11 new tribal pockets—three in Gujarat and eight in Orissa—have been added to the Tribal Sub-Plan for 1986-87. One more primitive Tribe has been identified. These bring the total tribal pockets to 256 and primitive tribal groups to 73. The State

Governments have been requested to prepare fresh action plans/project reports for the Integrated Tribal Development Projects, tribal pockets and the primitive tribal groups.

16.14 During 1986-87, Rs. 155 crores as SCA have been provided for TSPs and assistance would be provided to about 8.3\* lakh ST families. The State Governments have received guidelines from the Ministry of Welfare for undertaking concurrent evaluation of family beneficiary-oriented programmes through on-the-spot checks. Further, the State Governments have been requested to undertake detailed evaluation of tribal development programmes in a systematic and phased manner.

#### *Special Component Plans*

16.15 The 1986-87 Special Component Plan (SCP) of States/Union Territories for Scheduled Castes lays emphasis on increasing the income levels of SC families by providing agricultural inputs, supply of raw-material for village and small industries as well as giving training. Education, both formal and non-formal, is being given priority. Steps will be taken to provide drinking water supply in SC Bastis which still remain without access to drinking water and health facilities by locating Primary Health Centres and dispensaries in SC localities. An amount of Rs. 175 crores has been provided as Special Central Assistance for 1986-87 for Special Component Plans.

A target to assist 21.4\* lakh SC families has been set for the year. The State Governments are preparing two lists of beneficiaries, *i.e.* one that received assistance during the Sixth Five Year Plan but require further assistance to bring them above the poverty line, and the other listing families requiring assistance for the first time. The implementing authorities are to select the poorest of the poor first.

#### *Central Tribal Research Advisory Council*

16.16 A Central Tribal Research Advisory Council has been constituted under the Chairmanship of the Deputy Minister of Welfare. The functions of the Council are : (i) to coordinate the activities of tribal research Institutes; (ii) to lay down broad guidelines and policy to be adopted in research and evaluation of tribal problems and programmes; (iii) to formulate guidelines for reviews and to document the studies undertaken by State Tribal Research Institutes, other national level institutions and organisations and professional bodies entrusted with the work of taking up such studies; and (v) to identify the areas requiring in-depth studies for research, evaluation and advice on other related issues.

#### *Plan Outlay*

16.17 Details of Plan outlay for 1985-86 & 1986-87 are given in Annexures 16.1, 16.2 and 16.3.

\*Provisional.



## ANNEXURE 16.1

*Break-up of Plan outlay for Centrally Sponsored Schemes for 1985-86 and 1986-87—Backward Classes Sector.*

(Rs. in crores)

Sl. No.	Name of the scheme	1985-86		1986-87 Plan Outlay
		Plan Outlay	Anticipated Expenditure	
1	2	3	4	5
1.	Post-matric Scholarship scheme for SC/ST	10.00	10.00	11.00
2.	Aid to Voluntary Organisations	1.75	1.55	1.59
3.	Pre-matric scholarship to children of those engaged in unclean occupations	2.50	0.50	1.82
4.	Girls Hostel Scheme for SC/ST.	5.00	3.50	4.55
5.	Book Banks Scheme for SC/ST students in Medical & Engg. Colleges	0.55	0.40	0.50
6.	Coaching & Allied Scheme SC/ST students	0.70	0.45	0.46
7.	Research & Training scheme for SC/STs	1.00	0.95	0.76
8.	Implementation of Protection of Civil Rights Act.—Liberation of Scavengers	5.50	5.50	8.57
9.	Scheduled Castes Development Corporation	15.00	15.00	12.75
TOTAL		42.00	37.85	42.00

## ANNEXURE 16.2

*Special Central Assistance to States/UTs for the tribal Sub-Plan and Special Component Plan for Scheduled Castes For 1985-86 and 1986-87*

(Rs. in lakhs)

Sl. No.	States/Union Territories	Tribal Sub-Plan (TSP)			Special Component Plan (SCP)		
		1985-86		1986-87	1985-86		1986-87
		Allocation	Release	Allocation	Allocation	Release	Allocation
STATES							
1.	Andhra Pradesh . . . . .	702.20	740.00	760.04	1223.64	1444.42	1250.60
2.	Assam . . . . .	624.89	632.00	677.74	197.00	183.89	201.60
3.	Bihar . . . . .	1945.39	1964.41	2108.20	1688.94	1787.86	1752.80
4.	Gujarat . . . . .	1118.25	1126.66	1205.75	361.68	319.35	365.74
5.	Haryana . . . . .				354.10	345.10	358.76
6.	Himachal Pradesh . . . . .	204.90	205.36	219.23	158.74	177.54	164.84
7.	Jammu & Kashmir . . . . .				78.54	72.29	78.06
8.	Karnataka . . . . .	128.13	148.13	112.34	841.84	902.89	882.00
9.	Kerala . . . . .	69.57	70.01	75.32	387.74	347.97	400.04
10.	Madhya Pradesh . . . . .	3924.00	3969.98	4267.00	1172.83	1110.54	1220.10
11.	Maharashtra . . . . .	939.92	950.69	1020.09	648.44	862.21	1255.80
12.	Manipur . . . . .	249.21	252.85	271.16	3.30	2.72	3.50
13.	Orissa . . . . .	1884.73	1915.00	2048.67	613.80	645.08	633.14
14.	Punjab . . . . .				639.20	588.48	637.70
15.	Rajasthan . . . . .	903.13	910.28	986.46	912.78	1098.49	952.34
16.	Sikkim . . . . .	38.99	38.99	37.58	3.30	3.78	3.16
17.	Tamil Nadu . . . . .	145.39	145.93	156.82	1361.58	1338.98	1407.00
18.	Tripura . . . . .	227.39	250.17	247.24	48.52	40.01	49.00
19.	Uttar Pradesh . . . . .	27.34	27.87	30.56	3809.52	3334.15	3860.88
20.	West Bengal . . . . .	579.09	616.27	629.20	1808.74	1839.58	1837.86
UNION TERRITORIES							
1.	A. & N. Islands . . . . .	30.00	30.00	40.00			
2.	Chandigarh . . . . .				8.90	6.18	9.10
3.	Delhi . . . . .				157.40	121.61	158.90
4.	Goa Daman & Diu . . . . .	5.00	5.00	6.00	2.96	5.69	3.16
5.	Pondicherry . . . . .				14.52	14.19	14.00
CLUSTER APPROACH . . . . .		253.00	..	500.00	..	..	..
GRAND TOTAL . . . . .		14000.00	14000.00	15500.00	16500.00	16600.00	17500.00

## ANNEXURE 16.3

*Backward Classes Sector—State/Union Territory-wise Outlays and Expenditure for the Annual Plan 1985-86 and 1986-87.*

(Rs. in lakhs)

Sl. No.	State/UT	1985-86		1986-87
		Plan Outlay	Antd. Expr.	Plan Outlay
1.	Andhra Pradesh	5478	6514	7488
2.	Assam	392	392	588
3.	Bihar	1238	1238	1270
4.	Gujarat	1763	1770	2255
5.	Haryana	446	446	446
6.	Himachal Pradesh	141	147	104
7.	Jammu & Kashmir	90	90	137
8.	Karnataka	931	931	1420
9.	Kerala	415	415	450
10.	Madhya Pradesh	2458	2495	2800
11.	Maharashtra	1700	1453	2055
12.	Manipur	80	80	84
13.	Meghalaya	1	1	1
14.	Nagaland	..	..	..
15.	Orissa	300	350	510
16.	Punjab	500	399	500
17.	Rajasthan	140	140	221
18.	Sikkim	25	25	30
19.	Tamil Nadu	1412	1652	1550
20.	Tripura	730	771	262
21.	Uttar Pradesh	2120	2120	2123
22.	West Bengal	560	973	1162
TOTAL—STATES		20920	22402	25456
1.	Andaman & Nicobar Islands	1.75	1.75	1.50
2.	Arunachal Pradesh	..	..	..
3.	Chandigarh	17.80	17.80	12.40
4.	Dadra & Nagar Haveli	..	..	..
5.	Delhi	210.00	210.00	296.00
6.	Goa, Daman & Diu	15.00	15.00	15.00
7.	Lakshadweep	..	..	..
8.	Mizoram	..	..	..
9.	Pondicherry	750.0	75.00	80.35
TOTAL—UTs		319.55	319.55	405.25
GRAND TOTAL		21239.55	22721.55	25861.25

## CHAPTER 17

### SPECIAL AREA DEVELOPMENT PROGRAMME

#### *Hill Area Development Programme (HADP)*

The Hill Area Development Programme has been in operation from the inception of the Fifth Five Year Plan i.e. 1974-75 in the States of Assam (2 districts), Uttar Pradesh (8 districts), West Bengal (3 subdivisions of Darjeeling) and Tamil Nadu (the Nilgiris district) and the Western Ghats areas, covering 163 talukas in the States of Maharashtra, Karnataka, Kerala and Tamil Nadu and the Union Territory of Goa. This programme is being continued during the Seventh Plan. During 1986-87, the Special Central Assistance for this programme will be Rs. 189 crores as against Rs. 170 crores in the Annual Plan for 1985-86. The Sub-Plan outlay approved for 1986-87 together with the approved outlay and anticipated expenditure for 1985-86 is given in Annexure 17.1.

17.2 The main objective of HADP is to promote socio-economic development of the hill people in harmony with preservation of ecological balance. This implies that in the formulation of policies, plans, programmes and schemes, eco-restoration, eco-preservation and eco-development must be given due consideration. The focus is on fulfilment of basic needs, viz. food, fuel, fodder, health, education and drinking water supply, of the hill people and involvement of local people in the development programme. Close attention is being devoted to the following :

- (i) One of the major weaknesses of the Plans of the hill States/hill areas is that the integrated approach in inter-sectoral activities is lacking. The sectoral programmes are implemented in a disjointed manner, as a result of which resources are not being utilised optimally. Nor are ecological considerations kept in view. The thrust in hill plans is on schemes providing ecological security and, as such, measures for soil conservation, horticulture, afforestation, minor irrigation, rehabilitation of degraded forests and regulations of mining activities are required to be taken in an integrated manner.
- (ii) Emphasis on use of appropriate technology for upgradation of the traditional production system, exploitation of natural resources, meeting people's basic needs, reduction of drudgery of women in fetching water, fuel, fodder and transplanting, sowing, weeding etc. needs to be given. The technologies should be low-cost, need-based, productive and ecologically sustainable. The require-

ment of technology in each sector has to be assessed and met on package basis. Concerned institutions have to be intimately involved in the task.

- (iii) Physical planning should receive greater attention to meet the needs of the hill people keeping in view ecological considerations. Monitoring of HADP, both in financial and physical terms, has been weak. Quarterly monitoring proformas have been devised for the feed-back system so as to ensure its better implementation. A data bank on key financial and physical indicators of development is also being built up.

17.3 An Expert Group has been set up to evolve appropriate criteria for delineation of hill areas based on the recommendations of the Working Group on Development of Hill Areas and also keeping in view other factors such as altitude, rainfall, ecological vulnerability and to prepare a list of new hill areas i.e. outside the existing recognised hill areas.

17.4 The scheme for conducting integrated multi-disciplinary survey initiated during the Sixth Plan for preparation of Status Report on catchment areas of major river valley projects in the Himalayan and Western Ghats region will continue. Reports on the catchment area surveys from U.P., Assam, Meghalaya are expected during the year.

17.5 The Advisory Committee on Hill Areas including Western Ghats region has been reconstituted for the Seventh Plan period to advise on matters relating to planning for socio-economic development of the hill areas keeping in view : (a) the special regional endowments, the diverse agro-ecological features as well as socio-cultural ethos, (b) the threat to eco-system, and (c) the urgency to restore and conserve it.

#### *North Eastern Council (NEC)*

17.6 The North Eastern Council was constituted in 1972 for balanced development and formulation of unified coordinated regional socio-economic development plan for the north-eastern areas comprising the five States of Assam, Manipur, Meghalaya, Nagaland and Tripura and the two Union Territories of Arunachal Pradesh and Mizoram. Presently, the schemes of the NEC mainly aim at development of infrastructural facilities like power, transport, manpower while some are of experimental or demonstrative nature. The outlay for the NEC Annual Plan

1986-87 has been approved at Rs. 145 crores as against the approved outlay of Rs. 125 crores and expenditure of Rs. 113.89 crores for 1985-86. Annexure 17.2 shows sector-wise outlays/expenditure for the Fifth, Sixth and Seventh Plans, as well as for 1985-86 and 1986-87. As seen from the Annexure, the bulk of the approved outlay has been for power and transport sectors.

17.7 During 1985-86, the major shortfall in relation to the approved outlay was in the transport sector (Rs. 12.07 crores) owing to (i) rephasing of works programme for construction of the second bridge across the Brahmaputra river at Bhomoraguri (Rs. 3 crores), (ii) non-finalisation/non-sanction of estimates of roads of economic importance to be executed by the Border Roads Development Board (Rs. 3.59 crores) and (iii) non-finalisation of the scheme of inter-State roads to be taken up by State Public Works Departments (Rs. 548 crores). In order to remove the backlog early, the capabilities of the Border Roads Development Board and State PWDs have to be strengthened.

17.8 In the power sector, Khandung Units I & II ( $2 \times 25$  MW) of the 150 MW, Kopili Hydro-Electric Project (estimated cost Rs. 185.35 crores) were Commissioned in March, 1984. The remaining two units ( $2 \times 50$  MW) of the project are scheduled to be commissioned in 1986-87. The other on-going project namely Doyang Hydel Project ( $3 \times 35$  MW) having an estimated cost of Rs. 128.61 crores is targeted for being commissioned in 1990-91. However, land acquisition for this project is proceeding at a slow pace. The north-eastern region is presently marginally surplus in power having a total installed capacity of 786 MW. The possibilities of locating gas-based power projects are being explored.

17.9 Under Road sector, the second bridge over Brahmaputra at Bhomoraguri near Tezpur with an estimated cost of Rs. 83.45 crores is scheduled to be commissioned by December, 1986. The emphasis in the transport sector, will be on integrated and viable transport system having rail, road, inland water transport, air and ropeways for the region. A study in this regard was conducted by M/s. RITES. The report of the Planning Group, set up by the Planning Commission in July, 1984 to prepare master plans on roads in the North Eastern region, is expected during 1986-87.

17.10 In the agricultural sector, the main emphasis has been on creation of institutional infrastructure and integrated watershed management. The NEC has set up foundation seed farms for paddy, maize, pulses, wheat, oil-seeds, potatoes etc. The research stations of the Indian Council of Agriculture Research have been engaged in producing cold-tolerant, high-altitude variety of seeds. However, critical gaps and deficiencies in agronomic practices have to be

identified and steps for their removal taken. Four watershed management projects, namely, Popumpoma in Arunachal Pradesh, Shinga-Tsusang in Nagaland, Rangacherra and Maharanicherra in Tripura were sanctioned and the work on these projects started during the Sixth Plan. Project reports in respect of Umtongphar in Meghalaya and Teirei in Mizoram have also been approved by the Planning Commission.

17.11 In the industrial field, of the four mini-cement plants sanctioned, the one at Tezu (30 tpd.) in Arunachal Pradesh has been commissioned. The remaining three cement plants, namely Hundung (50 tpd.) in Manipur, Wazeho (50 tpd.) in Nagaland and Umrangshu (200 tpd.) in Assam, are in different stages of execution. Work on Pozzolana Plant at Kumarghat in Tripura has been started.

17.12 Development of manpower has continued to receive attention by way of sponsoring candidates for fellowship and training, strengthening of the existing technical and administrative institutions and setting up of new institutions. A Regional Institute of Science & Technology is being set up at Itanagar, Arunachal Pradesh and it has been decided to start certificates and diploma courses therein in the ensuing academic session.

#### *Desert Development Programme (DDP)*

17.13 The Desert Development Programme was introduced in 1977-78, on the recommendations of the National Commission on Agriculture, with the objective of controlling desertification and restoration of ecological balance of certain desert and semi-desert areas and creation of conditions for raising the level of production, income and employment of the people of these areas. This was sought to be achieved by afforestation, with special emphasis on shelter belt plantation; grass land development and sand dune stabilisation; optimum exploitation and conservation of ground water; construction of water harvesting structures; rural electrification for energising tube-wells and pumpsets and development of agriculture, horticulture and animal husbandry suited to the agro-climatic conditions of these areas.

17.14 During the Seventh Plan, the Programme is being implemented in 131 blocks and 21 districts of five States. The coverage is confined to the hot arid deserts comprising 11 districts of Rajasthan, 4 districts of Haryana and 3 districts of Gujarat and the cold arid deserts in Leh and Kargil districts of Kashmir and Spiti and Pooh sub-divisions of Himachal Pradesh.

17.15 The Programme will be 100 per cent Centrally funded during the Seventh Plan. The allocation norms have also been revised upwards. For hot desert areas, the Sixth Plan allocation of Rs. 10 lakhs has been raised to Rs. 15 lakhs per 1000 sq. kms., which will be stepped up to Rs. 25 lakhs in the terminal year of the Seventh Plan, subject to a ceiling of Rs. 4 crores per district per annum in the First year and Rs. 6 crores in the last year. For the cold arid area, Rs. 75 lakhs to Rs. 175 lakhs per annum per district would be allocated as against Rs. 50 lakhs during the Sixth Plan.

17.16 For 1985-86, a provision of Rs. 8 crores had been made in the Central budget on the assumption that an equal share was to come from the States. The Central provision was subsequently increased to Rs. 16 crores after the approval of the National Development Council to make the programme 100 per cent Centrally funded. As against this outlay, the actual expenditure reported till January, 1986 was

Rs. 12.78 crores. The physical achievements until December, 1985 were as follows :

TABLE 17.1  
*Achievements under DDP*

Key Indicator	Physical Achievement 1985-86
1. Plantation (ha) . . . . .	16,444
2. Irrigation potential created (ha) . . . . .	870
3. Area treated under soil and moisture conservation scheme (ha) . . . . .	1,124
4. Cross-bred lambs born/distributed (Nos) . . . . .	902
5. Employment generated (million mandays) . . . . .	0.06

A greater thrust for arresting desertification and the development of desert areas will be given during the Seventh Plan with higher allocations from 1986-87 onwards. An amount of Rs. 39 crores has been approved for 1986-87 which will be allocated amongst the States on area basis for hot arid deserts and on a lump sum basis for the cold deserts.

## ANNEXURE 17.1

Approved Outlay and Anticipated Expenditure for 1985-86 and Approved Outlay for 1986-87 under Hill Areas  
Development Programme

(Rs. Crores)

1	1985-86						1986-87		
	Revised Approved Outlay			Anticipated Expenditure			Approved Outlay		
	S.C.A.	S.P.	Total	S.C.A.	S.P.	Total	S.C.A.	S.P.	Total
2	3	4	5	6	7	8	9	10	
<b>A. HILL AREA</b>									
Assam . . . . .	22.20	28.70	50.90	22.20	28.70	50.90	25.90	35.00	60.90
Tamil Nadu . . . . .	6.76	6.24	13.00	6.24	6.24	12.48	7.30	7.50	14.80
Uttar Pradesh . . . . .	108.55	69.02	177.57	108.55	69.02	177.57	120.00	85.00	205.00
West Bengal . . . . .	9.26	15.50	24.76	9.26	15.50	24.76	9.50	13.68	23.18
Survey & Studies . . . . .	0.16		0.16	0.16		0.16	1.00		1.00
<b>TOTAL—A . . . . .</b>	<b>146.93</b>	<b>119.46</b>	<b>266.39</b>	<b>146.41</b>	<b>119.46</b>	<b>265.87</b>	<b>163.70</b>	<b>141.18</b>	<b>304.88</b>
<b>B. WESTERN GHAT</b>									
Kerala . . . . .	5.63	*	5.63	4.92	*	4.92	5.09	*	5.09
Karnataka . . . . .	4.57	*	4.57	4.57	*	4.57	6.33	*	6.33
Maharashtra . . . . .	7.29	*	7.29	7.29	*	7.29	8.26		8.26
Tamil Nadu . . . . .	4.11	*	4.11	3.73	*	3.73	4.34	*	4.34
Goa . . . . .	1.15	*	1.15	1.10	*	1.10	1.15	*	1.15
Survey & Studies . . . . .	0.29	*	0.29	—		..	0.10	*	0.10
Western Ghat Sec. . . . .	0.03	*	0.03	0.03	*	0.03	0.03	*	0.03
<b>TOTAL B . . . . .</b>	<b>23.07</b>	<b>*</b>	<b>23.07</b>	<b>21.64</b>	<b>*</b>	<b>21.64</b>	<b>25.30</b>	<b>*</b>	<b>25.30</b>
<b>GRAND TOTAL (A+B) . . . . .</b>	<b>170.00</b>	<b>119.46</b>	<b>289.46</b>	<b>168.05</b>	<b>119.46</b>	<b>287.51</b>	<b>189.00</b>	<b>141.18</b>	<b>330.18</b>

\*In respect of Western Ghats, State Plan flows are not worked out by the State Govt. concerned.

SCA—Special Central Assistance.

SP—State Plan flow.

*Outlets and Expenditure—North Eastern Council*

(Rs. crores)

Sectors	Fifth Plan		Sixth Plan		Seventh	Plan	Annual Plan		
	Allocation	Exp.	Allocation	Exp.	Allocation		1985-86		1986-87
							Allocation	Exp. (Ant.)	Allocation
1	2	3	4	5	6	7	8	9	
1. Agriculture & Allied Services . . .	18.16	13.63	30.00	19.2	46.46	5.23	4.44	8.50	
2. Water & Power Development . . .	48.00	38.88	115.00	140.7	278.08	45.07	46.35	57.81	
3. Industry & Mining . . .	2.10	2.63	15.00	10.6	10.60	3.25	3.10	1.75	
4. Transport & Communication } . . .	27.61	25.93	155.00	185.3	297.53	59.33	47.26	61.40	
5. Manpower Development . . . }	3.33	4.83	18.45	19.6	33.80	10.51	11.22	13.37	
6. Social & Community Services . . .			1.55	7.1	1.61	0.12	0.47	0.44	
7. General Services. . . . .	2.80	0.68	5.00	2.9	6.92	1.49	1.05	1.73	
<b>GRAND TOTAL . . . . .</b>	<b>100.00*</b>	<b>86.58</b>	<b>340.00**</b>	<b>385.14***</b>	<b>675.00£</b>	<b>125.00££</b>	<b>113.89££</b>	<b>145.00S</b>	

\*This was later reduced to Rs. 90 crores.

\*\*Includes Rs. 15 crores as LIC loan.

\*\*\*Includes Rs. 30 crores as LIC loan.

£Includes Rs. 100 crores as LIC loan.

££Includes Rs. 10 crores as LIC loan.

SIncludes Rs. 20 crores as LIC loan.



## CHAPTER 18

### SCIENCE AND TECHNOLOGY

With increased emphasis on harnessing science and technology as a major tool for various development programmes, efforts have been made to expeditiously clear and approve various programmes identified for the Seventh Five Year Plan. A sustained effort was made to develop science and technology in the States by providing the necessary technical expertise and support to many State Governments in identification and formulation of specific S&T schemes. A report on an integrated environmentally sound development strategy for Andaman and Nicobar Islands has been finalised. A similar strategy for the development of Lakshadweep Islands is being evolved. Science and Technology missions in the areas of agriculture, health, biotechnology and non-conventional energy sources were formulated and are in the final stage of approval. Five Missions in the areas of oilseeds, communication, drinking water supply, eradication of illiteracy and mass vaccination and immunisation programmes have already been approved and the concerned Ministries are implementing these. Thrust areas such as micro-electronics, informatics, lasers, new materials etc. have been identified for intensive R&D efforts. A new Department of Biotechnology has been created under the Ministry of Science and Technology.

18.2 Achievements in the S&T Sector, of the various S&T departments/agencies as well as in the various Socio-economic Ministries, in the first year of the Seventh Plan, 1985-86 and the programmes envisaged for the Annual Plan 1986-87 are briefly outlined below.

#### ATOMIC ENERGY

18.3 One of the significant achievements during 1985-86 was the attainment of the criticality of the Thermal Research Reactor (Dhruva) in August, 1985. Dhruva is a High Flux research reactor and will produce a number of radioisotopes of high specific activity. The following other ongoing schemes were completed :—

- (i) New Engineering Hall Stage-A.
- (ii) Special Equipment for Engineering Research and Development.
- (iii) Development of Special Organic and Inorganic materials.
- (iv) Advanced analytical chemistry with facility for Ultra Trace Analysis.
- (v) Laser Crystals & Devices.
- (vi) Extension of facilities for chemical work on Plutonium Fuel.

18.4 At Bhabha Atomic Research Centre (RARC), Bombay a Copper Vapour Laser (CVL) for pumping dye laser and a dye laser capable of spectral tuning and narrowing of the output has been developed. The Central workshop at Trombay has successfully designed and developed 6 axis multi purpose robot of 50 kg. capacity. A prototype 5 axis articulated robot was also designed, manufactured and tested. A total of 50,000 consignments of radioisotopes and related equipments valued at Rs. 2.3 crores was supplied to the users in the country and abroad; 29,000 consignments of radiopharmaceuticals were supplied to 100 institutions in the country for use in the nuclear medicine benefiting about 50,000 patients from the diagnostic and therapeutical applications of these products.

18.5 The Reactor Research Centre was renamed as the Indira Gandhi Centre for Atomic Research in December, 1985. In this centre, the first criticality of Fast Breeder Test Reactor (FBTR) was achieved in October, 1985. At the Atomic Minerals Division, an integrated multidisciplinary approach resulted in delineating many new areas of fair to high uranium potential and more reserves were proved in areas already taken up for drilling. Airborne Gamma ray Spectrometric and Magnetic (AGSM) surveys and application of remote sensing techniques were used to narrow down target areas for ground checking.

18.6 In the area of radio astronomy at the Tata Institute of Fundamental Research (TIFR), plans were finalised for construction of one of the largest Meter Wavelength Radio Telescope (GMRT) in the world, based on the know-how in building the Ooty Telescope. A suitable site was located near Narayangaon, district Pune. In the area of cosmic ray and high energy physics, the project "Anuradha" designed to study extremely low energy end of cosmic ray spectrum was executed as a collaborative effort of TIFR and Physical Research Laboratory (PRL) scientists with technological support from BARC, ISRO satellite Centre and using the facilities made available on the American Space Shuttle Challenger. This was successfully launched in April, 1985.

18.7 At the Homi Bhabha Centre for Science Education, a new activity of developing computer based learning packages in mathematics and science was initiated.

18.8 At the Tata Memorial Centre, the hospital wing commissioned 3 more operation theatres with modern equipment. A NORISK DATA ND 500-CX computer with 24 inter-active terminals was installed and commissioned for storing medical information about patients attending the hospital.

18.9 The Cancer Research Institute undertook studies on Methyl isocyanate (MIC) afflicted population at Bhopal and development of anti-leprosy vaccine.

18.10 At Saha Institute of Nuclear Physics, Calcutta, designs of basic machine and its accessories were completed for installing a tokamak machine.

#### Programmes for 1986-87

18.11 The medium energy heavy ion accelerator being set up at Colaba, Bombay at BARC in collaboration with TIFR made significant progress and installation of the accelerator is expected to be completed and be ready for research by the end of 1986.

18.12 At the Variable Energy Cyclotron Centre (VEC), Calcutta 3 new schemes, namely, development of Heavy Ion Source, Enhancement of IRIS-80 computer with dual processing and upgrading on data acquisition system are being taken up. Among the important ongoing schemes nearing completion at BARC are :—

- (i) Advanced Development Material Facility,
- (ii) Water & Steam Chemistry Laboratory, Kalpakkam,
- (iii) R-5 Utilisation for Basic Research in Material science, and
- (iv) Initial Studies in Laser Induced Inertially confined Fusion and related High Temperature and High Density Plasmas.

18.13 At the Centre for Advanced Technology (CAT), Indore, preliminary work like design/drawings, floating of tenders etc. would be taken up on the following 8 schemes :—

- (i) Advanced Laser Technology,
- (ii) Studies in Laser Fusion,
- (iii) Plasma Technology (pulsed Power Technology, Particle Beam Plasma Generation etc.).
- (iv) Synchrotron Radiation Source-National Programme,
- (v) Support technologies in Cryogenics, Ultra High vacuum and electronics,
- (vi) Laboratories for various Technologies, accelerator building etc.—infrastructural facilities—stage B,
- (viii) Computer, Library, Audiovisual and reprographic services, and
- (viii) Workshop.

18.14 At Indira Gandhi Centre for Atomic Research, the FBTR, which attained first criticality last year, would be raised progressively during 1986-87. The reactor is expected to be recommissioned in July, 1986 and the power operation is

likely to start by December, 1986. The following four new schemes would be taken up :—

- (i) Radiation Emergency & Medical Centre,
- (ii) Materials Science Laboratory Phase-II,
- (iii) Augmentation Facility in Analytical and Sodium Chemistry Studies and
- (iv) Computer capability Enhancement Project.

#### OCEAN DEVELOPMENT

18.15 The thrust areas in the ocean sector have been Antarctic Research, exploration of polymetallic nodules from the deep seabed, surveys and optimum utilisation of living and non-living resources and development of requisite manpower for ocean development. Under the Antarctic Research Programme, the 5th expedition to Antarctica has been undertaken and preparatory work for the acquisition of an ice-breaker completed. The preparatory work has also been done for the setting up of an Antarctic study Centre. For the survey and exploration of Polymetallic Nodules, 3 cruises have been undertaken hauling 5.83 tonnes of nodules by boomerang and photo boomerang grabs. The work on extractive metallurgy by the four laboratories, viz., RKL (Bhubaneswar), NML (Jamshedpur), HZL (Udaipur and Vaizag), HCL (Khetri) was continued. A plant capable of handling 250 kg. of nodules per day, fabricated in RRL (Bhubaneswar) using ammonia leaching process, has completed its trial run and another plant capable of handling 5 kg. per hour of Nodules by sulphation roasting has been installed. With regard to Under-Water Technology and Submersibles, the offer of the West German firm for a manned submersible capable of operating at least upto 600 metres, with complete transfer of technology, has been under negotiation. A general survey of fishery resources in the near shore areas of the Exclusive Economic Zone (EEZ) was undertaken by Sagar Sampada. Multi-disciplinary oceanographic studies and surveys for non-living resources have been conducted by Sagar Kanya. To constantly check the levels of various pollutants, work on the setting up of two pollution monitoring stations, one each in the west and east coasts, has been in progress.

18.16 At the National Institute of Oceanography (NIO), Goa, work on the establishment of a major remote sensing centre with extended facilities was nearing completion in collaboration with Space Applications Centre. At IIT Madras, the first phase of the Wave Energy studies has been completed. Under the Ocean Thermal Energy Conversion Project, site specific studies have been completed for Lakshadweep Islands and a feasibility report has been prepared. Training programmes—both short and long term were undertaken and the proposals for the establishment of post-graduate centres received from the Centres of Advanced Studies of Universities of Annamalai, Kerala, Berhampur, Andhra and Cochin were under scrutiny. As a focal point for inter-departmental coordination, for guidance in the formulation of integrated R&D programmes, for evolving appropriate

future policy options etc., in the ocean related areas, an Ocean Science & Technology Board has been set up in the Department of Ocean Development (DOD).

#### *Programmes for 1986-87*

18.17 The major programmes under Antarctic Research pertain to the sixth expedition to Antarctica, acquisition of an ice-breaker and the construction activity for the establishment of the Antarctic study Centre. The survey and exploration work in the EEZ and on the continental shelf will be continued with Sagar Kanya and Sagar Sampada. In order to further intensify the survey at closer grid intervals, one more vessel would be chartered and efforts will be made to acquire a small research vessel from the Danish International Development Agency (DANIDA). The R&D efforts on extractive metallurgy will be upscaled in all the four laboratories mentioned in para. 18.15. A 15-year action plan will be finalised for the associated systems of the polymetallic nodules programme involving survey and exploration, extractive metallurgy, mining, transportation and marketing.

18.18 Besides the remote sensing project under the All India Coordinated Projects, another project on telemetry data buoys system, oceanographic towers & underwater navigation systems would be initiated in collaboration with the India Meteorological Department (IMD), Indian Space Research Organisation (ISRO), Oil and Natural Gas Commission (ONGC), Port Trusts etc. The wave energy studies will be continued by IIT, Madras to finalise the design of system for a sea experiment by the end of 1986. Under the Ocean Thermal Energy Conversion (OTEC) Project, NIO, Goa will undertake R&D studies on parameters such as temperature, salinity, conductivity etc. at various depths on Environmental aspects; on the effect of OTEC Plant; tail water on the ecology etc. In the area of marine pollution a large scale country wide project, involving the two monitoring stations being set up at Coastal Institutes, and several universities will be launched. The strategy for manpower development includes sponsoring of short and long term training programmes and support for various academic and research organisations, specially those along the coastal belt, for improving the infrastructural facilities within them for training.

#### SCIENCE AND TECHNOLOGY

18.19 The functions and responsibilities of the Department of Science and Technology (DST) have been reorganised during the year 1985-86. The activities relating to technology development and utilisation, National Information System for Science and Technology, NRDC and Central Electronics Limited have been transferred to the Department of Scientific and Industrial Research. The India Meteorological Department and three aided institutions namely Indian Institute of Astro-Physics, Indian Institute of Geo-magnetism and Indian Institute of Tropical Meteorology have come under DST. In February, 1986, a separate Department of Biotechnology has been set up.

18.20 For the major activity of the Science and Technology Promotion Programmes and support for research in front line and emerging areas, Science and Engineering Research Council (SERC) has considered 200 projects of which 50 projects have been approved for funding. Four group monitoring workshops in the areas of Material surface, Chemical Sciences and Molecular Bio-physics, Genetic Engineering and Cellular Biology, Plant Physiology and Plant Chemistry have been organised. Under the young scientists scheme, research support has been provided to young scientists. Many new national R&D programmes/multi-institutional programmes in the areas of plasma physics, Satellite Research Programmes, Origin and Evolution of life, MST Radar and IMAP Phase-II have been initiated. The setting up of units/core groups in Natural Transplantation and Photo-Chemistry are in the final stages of evaluation.

18.21 A new facility for laser spectroscopy is being set up at Cochin University. Under the Science and Society related scheme, significant progress has been made in the programmes relating to women, weaker sections, assistance to professional bodies and scientific academies etc. There has been considerable increase in the use of the facilities created in the Regional Sophisticated Instrumentation Centres by outside organisations. Catalytic support has been provided to Punjab, Madhya Pradesh, Himachal Pradesh, Haryana and Mizoram for strengthening the S&T secretariat in the State S&T Councils. The scientific institutions under DST have done commendable basic research. Mention may be made of Development of technology for fabrication of Amorphous silicon Solar Cell by the Indian Association for Cultivation of Science, Calcutta : installation of 10.4 metre mm wave telescope fabricated indigenously at the Raman Research Institute, Bangalore : Development of prosthetic heart valve, successful completion of clinical trials of blood bag system etc. by Shri Chitra Tirunal Institute for Medical Science and Technology, Trivandrum, installation of two units of Fluxgate Magnetometer at Alibag and Trivandrum to study electro-magnetic behaviour of geo-magnetic pulsation in the low latitude, installation of a sensitive stable quartz magnetometer at Shillong by the Indian Institute of Geomagnetism trial photography using recently commissioned 234 CM telescope in the Indian Institute of Astro-physics etc.

18.22 Under the earth and atmospheric sciences programmes, new schemes on deep-sea fan of the Bay of Bengal, deep continental studies, all India co-ordinated project of Glacial Dynamics and all India Integrated project on arid zone research were launched in addition to the ongoing programmes on NFDMS and Seismicity and seismotectonics in the Himalayan Region. Three task forces namely, for cyclone warning dissemination, flood risk zoning maps and cyclone distress mitigation and air-craft probing cyclone research and training have been constituted. In the area of engineering sciences, technology development and application groups in eight broad disciplines have been set up and a State-of-Art Report on 24 specific thrust areas prepared. Programmes

are being formulated in the areas of low-head micro turbines, computer aided design of tall structures, development of spliced piles technology etc. So far 23 projects have been approved for funding.

18.23 The Central Electronics Ltd. (CEL) has completed 4 projects viz Tools and Test plates for lenses : control unit for multivision AVS : development of AVS soft-ware and pulsed Nitrogen and Dye lasers.

18.24 Some important achievements in the entrepreneurship development programme have been : holding 14 entrepreneurship camps setting up of four Science and Technology Entrepreneurship parks (STEPs) at BII, Ranchi ; CC Shroff Research Institute, Bombay, Jadavpur University, Calcutta and Shri Jayachamarajendra College of Engineering, Mysore ; setting up of two centres for entrepreneurship development in Haryana and Rourkela. In addition, 12 backward districts in the country have been selected for the preparation of project profiles on entrepreneurial opportunities.

18.25 The major activities initiated under S&T communication and popularisation included : generation of data base on voluntary agencies ; organising 2 pilot courses for training ; completion of scripts for a 13-part serial of science film, market survey to ascertain demand of the newsletters and also the field projects relating to astronomy on Halley's comet, popular science magazine for children in Hindi etc.

18.26 Some details have been worked out in respect of a technology mission on agro-meteorological services and linking up all habitations in the country through an efficient system based on modern communication technology.

18.27 There has been substantial progress in the activities of the Survey of India. It has brought out 719 departmental maps on various aspects e.g. topographical maps, geographical maps, State maps, guide maps etc. In addition, 983 extra departmental maps have also been printed. These include project maps, cantonment/IAF maps, topographical maps and other miscellaneous maps/charts. The National Atlas and Thematic Mapping Organisation has published 5 types of monographs on different subjects. Major activities on survey works under 3 integrated programmes on land use surveying and mapping, land forms surveying and mapping and urban studies have been completed.

#### Programmes for 1986-87.

18.28 Under the Science and Technology promotion programmes, support will be continued to multi-disciplinary research in science and engineering, particularly in the thrust area programmes under the Science and Engineering Research Council (SERC). Under Intensification of Research in High Priority Areas (IRHPA), units/core groups would be set up in the areas of natural transplantations, photo chemistry, bio-medical engineering, laser application, image

processing etc. In addition, national R&D programmes would be launched on newer materials, artificial intelligence, laser spectrography etc. The Science and Society related schemes for women, weaker sections, young scientists etc. would be further expanded. An All India Co-ordinated Project on Water Management, Sanitation and Health programme to reduce the drudgery and occupational hazards of women in industries such as coir and cashew, printing and dyeing, ceramics, tobacco processing etc. would be sponsored under S&T for women. Several projects under S&T for weaker sections relating to action oriented research in technology development in selected hill areas with emphasis on Scheduled Caste/Scheduled Tribes (SC/ST) ; training programme for identification, processing and cultivation of medicinal plants; improvement in equipment design and introduction of new products in pottery etc. would be initiated. The projects for development of appropriate technology and establishing their socio-economic feasibility will be supported. The Regional Sophisticated Instrumentation Centres will be strengthened in terms of equipment and training. It is proposed to provide major support to the Raman Research Institute, Indian Association of Cultivation of Science, National Institute of Immunology and Plasma Physics Programmes, particularly in terms of infrastructural facilities like equipment and manpower. The S. N. Bose National Centre for Basic Sciences will be set up at Calcutta. In addition, financial support would be provided to various professional bodies and science academies for preparation of scientific monographs, publication of scientific journals etc.

18.29 Schemes to be taken up under earth and atmospheric sciences would include : deep sea fans of Bay of Bengal, deep continental studies, paleoclimatic studies, natural disaster mitigation, glacial dynamics etc. The NRDMS programme is proposed to be further expanded in some selected districts. Areas of mining and mineral engineering, welding technology, computer aided ship design, analysis of structure, membrane processes, encapsulation and noise & vibration problems in automobile engineering and modelling simulation of optimisation of chemical plants etc. would be supported under the engineering sciences programme

18.30 Several new areas will be taken up under the Instrument Development Programme. These include geo-scientific instruments, analytical instruments, agro-electronic instruments, laser instruments and education promotional instruments. Under the national Co-ordination of testing and calibration facilities, R&D programmes on measurement standards will be taken up at educational and research institutions. Calibration facilities at echelon II and III levels will be established on regional basis. Support would be provided to the development of newer fibres and composites.

18.31 The major thrust of the entrepreneurship development programme would be on setting up of 6 new STEP's organising 60 EDP and 80 entrepreneurship camps etc. Preparation of project profiles for 6

backward districts will also be taken up. In addition, Schools for Entrepreneurship Development in 6 educational institutions and establishment of 3 group employment projects on Aquaculture, Medicinal plants etc. in 3 different States would be launched.

18.32 Under S&T communication and popularisation, the newsletters in Hindi and English would be published. Production of a 13-part serial of history of science film would be completed and telecast from November 1986. The nationwide market survey for the proposed newsletter would be completed. Several new projects on science clubs, science writing competition etc. would be sponsored. In addition, awards and fellowships for science communication would be instituted.

18.33 In the area of International S&T co-operation, the Indo-French Centre for promotion of Advanced Research is in the process of being registered as a Society. Action for setting up of a centre for S&T for non-aligned countries would be initiated. Some supernumerary posts are likely to be created for Scientists/Engineers settled and working abroad for suitable short/long term appointments in India.

18.34 A Management information System (MIS) for Science and Technology would be developed. Inter-action with leading scientists and technologists and also with the various Ministries/Departments would be continued for identification of new technology missions in the areas of high social relevance/high technology.

#### METEOROLOGY

18.35 The major achievements of India Meteorological Department (MD) during 1985-86 have been : installation of 100 disaster warning system receivers and 63 data collection platforms under INSAT programme; linking up of 5 secondary data utilisation centres to meteorological data utilisation centre at New Delhi for reception of data at forecasting centres; installation of multimet radars at Patiala and Srinagar for weather Surveillance; and installation of a multimet radar each at Machhilipatnam and Karaikal. A round the clock watch was introduced in the Cyclone Warning Centre at Bhubneshwar. There has also been an attempt to modernise the infrastructure for the service facilities in all the sectors.

#### Programmes for 1986-87

18.36 Multimet radars at Machhilipatnam and Karaikal and the storm defection radar at Bombay Airport will be made fully operational. In the area of weather forecasting, round the clock forecasting watch will be introduced at the Area Cyclone Warning Centre, Bombay. The Meteorological telecommunication activities will be strengthened by operationalising the switching computer at Bombay. Under the agricultural meteorology, agromet advisory units will be established in eight more States. The floodmet office at Agra will be made fully operational and the installation of mini computer at Calcutta and micro computer at Lucknow will be completed. Under the hydro meteorology programme, two more S-band radars will

be procured to replace the existing old radars at Madras and Bombay. It is proposed to set up a Cyclone Warning Directorate at New Delhi. Under the Seismology programme it is proposed to set up an observatory at Valmiki Nagar and commission a micro earthquake recorder. A nucleus for digital seismology studies will be set up. The Space meteorological programme would include designing a Secondary Data Utilisation Centre receiver by the Space Applications Centre (SAC), Ahmedbad for reception of processed cloud imageries from the Meteorological Data Utilisation Centre and forecasting officers. In addition, a number of research programmes like establishment of a monsoon activities centre, world climate programme, limited modelling programme etc. are proposed to be taken up. Construction of RS/RW buildings at Ranchi, Agartala, Seismological buildings at Imphal and Valmiki Nagar, extension of Mausam Bhavan, New Delhi etc. would be taken up.

#### BIOTECHNOLOGY

18.37 A new Department of Bio-technology has been set up on 27th February, 1986 to evolve an integrated Biotechnology plan; identify specific programmes of R&D; set up and support centres of excellence; evolve safety guidelines for Biotechnology R&D and manufacturing in India; act as a Central Agency for the import of genetically manipulated materials, culture, specimens etc; promote manufacture and applications of cell-based vaccines; set up International Centre for Genetic Engineering and Biotechnology etc. Prior to setting up of a separate Department, the programmes were implemented under the auspices of the National Biotechnology Board (NBTB).

18.38 A major thrust was provided to manpower development, creation of infrastructural facilities and support to inter-disciplinary biotechnology research. Fifteen integrated short-term programmes were organised, 5 Universities have started M.Sc and M. Tech. courses from the academic session in 1985. A proposal has also been formulated and approved for starting multi-disciplinary teaching and training programmes in agriculture, veterinary, medicine and engineering sciences. One junior and 3 senior national fellowships and 9 junior overseas associateships have been awarded. Essential infrastructural support/facilities have been approved in respect of microbial culture collection, plant tissue culture, gene bank, pilot plant and bio-chemical engineering, Biotechnology Information Network etc. Three major on-going programmes namely Biocides for larvae control, interferon and the fast growing of bamboo through tissue culture technique are being strengthened further. Provisional facilities for setting up of an International Centre for Genetic Engineering and Biotechnology are being finalised.

#### Programmes for 1986-87

18.39 The manpower development would be further intensified by introducing repeated short-term training courses and workshops in new subjects. The M.Sc. and M. Tech. courses on Biotechnology would be started in another 6 institutions

namely JNU; Puna University; M.S. University, Baroda; BHU; Jadavpur University, Calcutta and Madurai Kamraj University, Madurai. NBTB associateship, visiting scientists programmes as well as biotechnology course for industrial workers would be supported. Projects on biohydrometallurgical processes related to copper-leaching and a project on biological control of water hyacinth and related weeds are proposed to be taken up. In the areas of R&D manufacturing units, some of the products of new technology for solving problems in the areas of communicable diseases, agricultural productivity namely biological fertilisers, pest control and stress tolerance, conversion of agro industrial wastes to energy, fertiliser etc. would be taken up. It is proposed to initiate, encourage and, wherever necessary, establish high R&D manufacturing activities. The Standing Advisory Committee for North America held three meetings to identify and establish collaborative programmes with institutions in India. Under Indo-US vaccine programme, R&D in vaccinology is proposed to be taken up. The construction as well as procurement of equipment for the International Centre for Genetic Engineering and Biotechnology at the JNU complex would be started.

#### SCIENTIFIC AND INDUSTRIAL RESEARCH

18.40 The Council of Scientific and Industrial Research (CSIR) has taken steps to re-orient its research efforts towards projects that are time-bound, sponsored by outside agencies and lie in the frontier areas of basic scientific/technological research. Several measures have also been taken for improving the performance of CSIR, such as reconstitution of Research Advisory Councils of National Laboratories; introduction of the principles of zero base budgeting in each laboratory; data collection, processing and analysis through computers in order to have a common shared information system both for the headquarters and the laboratories; modernisation of office equipment and internal communication facilities etc. Efforts to establish linkages for the utilisation of CSIR technologies by a large number of organisations have been strengthened; involvement of NABARD in the utilisation of technology for rapid multiplication of plants through tissue culture is one such example. Sponsored work from various sectors with cash flow value of over Rs. 17 crores was completed by CSIR during 1985-86. Private industry is also increasingly sponsoring applied research programmes through CSIR laboratories in the areas of marine chemicals research, road research, leather technology, drug research etc. Many new projects have been initiated.

18.41 Some of the significant technological developments/achievements of the national laboratories during 1985-86 were: Development by National Chemical Laboratory (NCL) of a process for the manufacture of a novel polymeric product called 'Jalshakti'. It has some outstanding absorption properties and has applications in agriculture, horticulture and landscaping. The optical glass pilot plant at the Central Glass and Ceramic Research Institute (CGCRI) has achieved break-even point.

A process for the manufacture of full lead crystal glass has also been developed by CGCRI. Know-how developed by the Central Electro-Chemical Research Institute (CECRI) for the production of isoborneol has been released for commercial production. It has also developed the know-how for oxidation of isoborneol to camphor. The IIP-EIL process for automatic extraction for production of benzene has been accepted for the new unit to be erected at Cochin Refinery. Hindustan Antibiotics Ltd. (HAL) have recently commenced commercial production of 6-aminopenicillanic acid (6-APA) based on the immobilized penicillin acylases system developed jointly by NCL and HAL. Similarly commercial production of distilled grade zinc dust, based on NML know-how has commenced. A glass fibre reinforced gypsum (GRG) composite has been developed which can be used as a substitute of wood for various constructional and decorative purposes. A major break through in lemongrass oil production has been achieved by the Central Institute for Medicinal and Aromatic Plants (CIMAP) by developing a new high yielding variety of lemongrass. Pilot plant runs on vis-breaking of Arabian Mix Short Residue as part of technology development for Karnal Refinery and studies on North Gujarat Short Residue for Koyali Refinery were completed by the National Geophysical Research Institute (NGRI). Design of 72 KA membrane cell for caustic soda/chlorine has also been completed. An indigenous design for the cathodic protection of offshore oil jackets, using NML-HOPAL anode system has been developed for ONGC. Significant work has been done on the development of microprocessor/minicomputer controlled equipments for sugar, paper and mining industries. The National Metallurgical Laboratory (NML) has developed technology for the production of a high-strength, medium-conductivity aluminium alloy conductor (NML-PM 215) which has been released for commercial production. The Central Salt & Marine Chemicals Institute (CSMCRI) has gone ahead with the setting up of reverse osmosis plants for providing drinking water from brackish water in rural areas in Gujarat and Tamil Nadu. The major contribution of the National Physical Laboratory (NPL) during 1985-86 was the establishment of Josephson Voltage Standard.

18.42 The Department of Scientific and Industrial Research (DSIR) has concentrated on the preparation of a National Register of Foreign Collaborations and has initiated Studies for economic analysis and legal implications in this regard through the National Council of Applied Economic Research (NCAER) and Institute of Foreign Trade (IFT) respectively. For technology analysis, 100 priority areas/products have been identified. Many studies have been initiated through consultants. Three projects have been partially supported for absorption of imported technology under the Technology Absorption and Adaptation scheme. 50 major industrial units have been visited to assess the level of absorption of imported technology and to identify the gaps and further plan of action. The scheme of registration and support to in-house R&D units has been carefully reviewed and several publications brought out.



18.43 Efforts to identify, generate and disseminate appropriate technologies having potential to enhance the living standards and quality of life in rural and remote areas were continued. During the year, eight Rural Technology Demonstration-cum-Training Centres (RTDT) were opened in different states, raising the total number of RTDT centres in the country to 19. Two more models of Mini Milk chilling units were fabricated. The first phase of the project on growing of Blue Green Algae was completed. During the year 18 technologies were acquired from various research institutions, raising the total number of processes referred to National Research and Development Corporation (NRDC) to 2251. 138 agreements were concluded for commercialisation of indigenous technology. Five Processes, licensed in earlier years, have gone into commercial production. Central Electronics Ltd. made considerable progress in carrying out commercial production based on indigenous technologies. Under the scheme of National Information System for Science and Technology (NISSAT), facilities available in the 5 sectoral centres were further augmented. A cell on Transfer & Trading in technology has been set up.

#### *Programmes for 1986-87*

18.44 During the year 1986-87, CSIR has proposed to continue research programmes which, on fruition, will contribute to the achievement of national objectives viz., increase in productivity, food production and generation of employment. Emphasis will be laid on accomplishment of technological missions on the basis of national priorities, capability build-up and excellence in basic research in a few areas and modernisation and elimination of obsolescence in the national laboratories. Efforts will be continued to ensure that R&D programmes become part of major socio-economic sectors, such as coal, petroleum, electronics, chemicals, post-harvest technologies, water management, etc. As an organisational policy, CSIR proposes to take up large programmes in collaboration with users with commitment to utilisation. In every sector, attempts are being made to evolve, transfer, adapt and adopt technologies for utilisation as enunciated in the policy guidelines of the Technology Policy Statement. The approach will be to constantly review the functioning of the laboratories to ensure that their programmes are oriented towards projects that are time-bound, sponsored by outside agencies and lie in the frontier areas of basic scientific/technological research.

18.45 In accordance with the directives from the Prime Minister, a thorough review of the ongoing programmes of the national laboratories was undertaken with a view to firming up targets and identifying milestones in the coming months. The significant programmes have been projected in the form of a compendium for purposes of follow up, monitoring and evaluation later. Some of these programmes may transform into nuclei/sub-tasks of national missions and will be enlarged in that mode eventually. The projects are being delineated in six broad categories viz., participation in national S&T missions, identification of CSIR missions, thrust area research pro-

grammes, frontier areas/basic research (several areas identified are drugs delivery, immunological approaches to combat diseases, standards, very large scale Integrated Circuits (VLSI), genetic engineering, microbiology, environmental impact assessment, geo-mechanics, new composite materials etc.), contract/sponsored research programmes (significant areas are oil exploration, biotechnological research, design space cameras, laser glasses, tissue culture for forestry programmes, design of light combat aircraft, electronics etc.), and societal services such as R&D in rural housing, rural sanitation, rural/urban roads, environmental monitoring, grain storage structures, aromatic/medicinal plants, etc. Efforts would be made to forge linkages between national laboratories and importers of technology and especially with the in-house R&D centres of the public sector undertakings so that imported technologies would not only be absorbed and adapted but also updated. It has also been decided in consultation with user Ministries to make techno-economic evaluation of specific technologies by competent engineering consultancy companies so that decisions on their utilisation can be taken. Nine such technologies in non-ferrous metallurgy have been identified for this purpose. In all cases of transfer of technology, such studies will be invariably made and engineering consultancy companies will be associated.

18.46 CSIR has recently devised a system of examinations for award of fellowships. Stipends to research fellows have been rationalised to bring uniformity with other organisations/departments like UGC, DST, etc. About 3600 Junior/Senior Research Fellows have been pursuing research in 1985-86 under the scheme of research fellowships and the number is expected to be about 4840 during 1986-87. About 625 extra-mural research schemes have been operating in 1985-86. This number is expected to reach 700 during 1986-87. 43 Emeritus scientists were receiving financial assistance during 1985-86 and it is envisaged that the number of such scientists in 1986-87 will go upto 60.

18.47 The spill over construction programme of the major new laboratories viz., Institute of Microbial Technology, Chandigarh, Regional Research Laboratory, Bhopal, Structural Engineering Research Centre, Ghaziabad, CSIR, Complex, Palampur & Centre for Biochemicals, New Delhi initiated/established during the Sixth Plan will continue. Since a major constraint in the recruitment of scientific staff is housing, efforts are being made to complete the housing schemes rapidly. During 1985-86, 496 dwelling units were completed at various places. Construction work is going on at 17 different sites in respect of 860 units. Special emphasis is being laid on the revised scheme of provision of loans for acquiring living accommodation for staff.

18.48 The activities initiated during 1985-86 by DSIR under the schemes of technology absorption and adaptation, transfer and trading in technology, promotion and support to consultancy services, promotion of industrial research in industry, national register of foreign collaborations, etc. will be further

intensified. Under the scheme of National Information System for Science and Technology (NISSAT), it is proposed to augment the activities of the existing sectoral information centres and establish new centres in areas of critical importance during 1986-87. It is also proposed to strengthen the NISSAT headquarters and to undertake on-line and other computer based bibliographic information activities, manpower development etc. With the formation of the Technical Advisory Committee, to be followed by the establishment of Governing Board, the Asian and Pacific Centre for Transfer of Technology will function more effectively in pursuing its objectives with active support from member countries. CEL has proposed establishment of a pilot plant for manufacturing Amorphous Silicon Solar Panel. Another proposal is also being made for development of cast-multi-crystal silicon ingots as feedstock for the SPV cell line. Both activities are expected to be started during 1986-87. Out of the 25 R&D projects under way, seven will continue during 1986-87 and the rest are being terminated.

#### SPACE SCIENCE AND TECHNOLOGY

18.49 The year 1985-86 was marked by the readiness of all systems and facilities for the first developmental ASLV/SROSS mission; development and successful testing of the indigenous liquid propulsion Vikas engine; a major milestone in the development of PSLV; start of the indigenous INSAT-II Test Satellite development; and the rapid strides made in the setting up of the country's National Natural Resources Management System (NNRMS).

18.50 Preparation for the ASLV-D1 flight have begun with the start of the launch campaign at Sriharikota Range (SHAR). Ground qualification of all stage motors for the flight has been completed. Development activities relating to structural, engineering and thermal models of SROSS 1 satellite were realised. All launch facilities such as the ASLV launchpad, mobile service structure for vertical assembly of the vehicle and satellite preparation facility have been established. S-Band Telemetry, Tracking and Command (TTC) stations at Sriharikota, Car Nicobar and Trivandrum have been made operational to support the mission and tracking and acquisition exercises carried out. Integration of the flight model subsystems of ASLV-D1 and SROSS-1 are in various stages of progress. ISRO's efforts in the development of liquid engine technology crossed an important milestone when the 60-tonne thrust Vikas engine, meant for the PSLV's second stage, passed the first full-duration validation test at SEP, France. The first short-duration test of the engine's gas generator was also successfully carried out at ISRO's own facilities coming up at Mahendragiri. Most of the facilities required for the PSLV Project were commissioned. Augmentation of the Static Test & Evaluation Complex (STEX) and the Solid Propellant Space Booster Plant (SPROB) at Sriharikota Range (SHAR) is nearing completion. The INSAT-II test spacecraft. Project was sanctioned in April, 1985. The configuration, definition and the preliminary design of the test spacecraft were completed. Qualification

testing of IRS-I engineering model subsystems was completed and flight model fabrication of the IRS-IA progressed rapidly. A comprehensive IRS Utilisation Programme was drawn up and the facilities for receiving and processing of data products were being set up. The National Natural Resources Management System (NNRMS), with the participation of Central and State agencies, undertook a number of resources survey and monitoring projects. The Regional Remote Sensing Service Centres (RRSSC) are coming up fast in five different zones of the country.

#### Programmes for 1986-87

18.51 The activities in major ongoing projects, namely, PSLV, IRS and INSAT-II Test Spacecraft will gather momentum during the year. IRS-I is slated for launch in early 1987 and the PSLV in 1989-90. Although the first INSAT-II TS is expected to be launched only in 1990, procurement action, completion of civil works and certain other activities would need to be stepped up in 1986-87 in order to adhere to the project time schedules. The first flight of the ASLV/SROSS-I will be accomplished during the year. Advance action for the ASLV/SROSS Continuation Project (ASLV/SROSS-3 and ASLV/SROSS-4) is expected to be sanctioned during the year. Development work on the cryogenic engine for the Geostationary Launch Vehicle (GSLV) is to be taken up. At NRSA augmentation of the data products generation capability will be completed to meet the increased demand on satellite data.

#### FORENSIC SCIENCE AND POLICE WIRELESS

18.52 The Plan component has been introduced for the first time in the activities of Forensic Science and Police Wireless for modernisation, manpower development, training, equipment, service facilities and providing substantial S&T inputs in the working of the organisations engaged in these fields. Expert Committees for Forensic Science and Police Wireless have been constituted and broad framework of the 7th Plan programmes has been worked out. The modernisation of infrastructural facilities in terms of equipment, training and building for the forensic science laboratories as well as laboratories for the Government Examiners of Questioned Document (GEQD) have been finalised. The details of the R&D projects in the field of toxicology, ballistics, serology etc. have been worked out. The training programmes/professional courses for the scientific and technical personnel from the forensic laboratories, orientation course and interactional courses for judiciary, police and correctional services are organised by the Institute of Criminology and Forensic Science (ICFS). In the area of police wireless, 16 intelligent terminals and 8 dedicated speech circuits were installed in Inter-State Police Wireless outstations. With a view to improving the efficiency of police information system, various other instruments like pocket radio, digital multi-axis radio telephone, automatic channel link etc. are being provided.



### *Programmes for 1986-87*

18.53 The major programmes in the area of Forensic science would be : construction of new building at CFSL, Chandigarh and expansion of the existing buildings at CFSL, Calcutta and Hyderabad. R&D programmes in the area of Toxicology, Spectrography, Ballistics and Serology etc. would be taken up. The ICFS would take up the studies on status of criminal data recording at the State level and utilisation of such data in crime investigation. The GEOD would also be strengthened in terms of equipment and training. In the area of police wireless, 40 more intelligent terminals, more dedicated speech circuits and other sophisticated instruments would be provided to strengthen the system. Efforts would be made to set up a few micro earth stations for using the satellite information, particularly in the North-Eastern Region, to build up communication link.

### SCIENCE AND TECHNOLOGY UNDER SOCIO-ECONOMIC ENVIRONMENT AND ECOLOGY

18.54 Science & Technology has to be an integral part of all major socio-economic sectors. During 1985-86, efforts were made to ensure that Science &

Technology programmes were identified, formulated and implemented under various Socio-Economic Sectors such as Agriculture, Health, Chemicals and Fertilizers, Industry, Electronics, Rural Development etc. Major Ministries/Departments were requested to set up Research Advisory Committees (RAC). Funds were earmarked for undertaking specific Science & Technology projects/programmes. The RAC's or similar bodies have been so far set up in the area of Civil Aviation; Coal; Communication; Food & Civil Supplies; Forestry; Heavy industry; Urban Development; Information and Broadcasting; Water Resources; Mines; Supply (National Test House); Railways and Shipping & Transport. In other sectors, similar action has been initiated. During 1985-86, the S&T outlays for all the sectors excepting for the Education, Railways and Textiles were available (Annexure 18.3). The programme content and progress are given under the respective sectors.

### *Outlays*

18.55 The outlays for 1986-87 for S&T sector are given in Annexures 18.1, 18.2 and 18.3.

*Science & Technology Plan Outlays Under Scientific Departments*

(Rs. in crores)

S. No.		1985-86			1986-87 outlays		
		BE	RE	Total	Centre	States	UTs
1	2	3	4	5	6	7	8
1.	Atomic Energy (R&D)	55.00	45.39	58.00	58.00	..	..
2.	Ocean Development (S&T)	20.00	12.90	20.00	20.00	..	..
3.	Science & Technology	108.17+	107.02\$	125.37	108.48‡	16.33	0.56
	(a) Science & Technology	95.67+	83.27\$	98.39	81.50‡	16.33	0.56
	(b) Meteorology Component of INSAT Space Segment@	12.50	23.75	26.98	26.98	..	..
4.	Scientific and Industrial Research	69.60	69.70	67.50	67.50	..	..
	(a) CSIR	67.00	67.00	64.52	64.52	..	..
	(b) DSIR schemes	2.60	2.70	2.98	2.98	..	..
5.	Space (S&T)	140.00	140.93	161.00	161.00	..	..
6.	Forensic Science and Police Wire- less	3.00	2.96	3.83	3.83	..	..
	TOTAL	395.77	378.90	435.70	418.81	16.33	0.56

@The Department of Space has operational/budget responsibility for this.

+Including Rs. 14.07 crores under States/UTs and Rs. 1.50 crores for Flood Plain Zoning Surveys.

\$Including Rs. 15.24 crores under States/UTs and Rs. 1.05 crores for Flood Plain Zoning Surveys.

‡Excluding Rs. 0.50 crore for Flood Plain Zoning Surveys.

## ANNEXURE 18.2

## Break up of Central Plan Outlays under Scientific Departments by Schemes/Activities

(Rs. in crores)

S. No.	Activities/Schemes/Projects/Programmes	1985-86		1986-87 Outlays
		BE	RE	
1	2	3	4	5
I.	ATOMIC ENERGY (R&D)	55.00	45.39	58.00
II.	OCEAN DEVELOPMENT			
1.	Research Expedition to South Indian Ocean (Antarctic Research)	9.50	7.10	9.50
2.	Polymetallic Nodules Programme	5.00	3.45	5.80
3.	Other Research Vessels	0.50	..	1.00
4.	All India Coordinated Projects on Remote Sensing, Telemetry data buoys system, oceanographic towers etc.	0.50	0.15	0.50
5.	Manpower Training for Ocean Research & Management	0.50	0.36	0.70
6.	Establishment of Postgraduate Centres	0.75	0.45	0.50
7.	Other Schemes	3.25	1.39	2.00
	TOTAL—II	20.00	12.90	20.00
III.	SCIENCE & TECHNOLOGY			
1.	R&D Schemes	10.00	10.00	9.50
2.	Science & Society Related Schemes	1.30	1.25	1.20
3.	Support Facilities	1.50	1.55	1.50
4.	Infrastructure for Science Promotion	19.20	23.04	21.50
5.	Sectoral Programmes	5.30	3.78	3.05
6.	Biotechnology Research	18.00	13.00	20.00
7.	Entrepreneurship Development	0.75	0.85	1.15
8.	Scientific Surveys	5.10	0.20	5.75
9.	S&T Communication and Popularisation	1.00	1.00	1.00
10.	Technology Missions	2.00	0.10	2.00
11.	Other Schemes	6.55	3.92	2.85
	SUB-TOTAL (DST)	70.70	58.69	69.50
12.	Meteorology	10.90	9.34	12.00
13.	INSAT Space Segment	12.50	23.75	26.98
	TOTAL—III	94.10	91.78	108.48
IV.	SCIENTIFIC AND INDUSTRIAL RESEARCH			
(a)	CSIR			
1.	National Laboratories	53.50	53.50	52.45
2.	Central Administration	2.00	2.00	1.80
3.	Special Research Schemes, Scholarships and Fellowships (Grants-in-aid)	2.00	2.00	2.00
4.	Industrial Research Associations	0.50	0.50	0.50
5.	Facilities and Amenities, including Staff Quarters	9.00	9.00	7.77
(b)	DSIR Schemes	2.60	2.70	2.98
	TOTAL—IV	69.60	69.70	67.50
V.	SPACE (S&T)	140.00	140.93	161.00
I.	FORENSIC SCIENCE & POLICE WIRELESS	3.00	2.96	3.83
	GRAND TOTAL	381.70	363.66	418.81

*S & T Outlays under Socio-Economic Ministries/Departments (Central Sector)*

(Rs. in crores)

S. Socio-Economic Sector No.		1985-86		1986-87 Outlays
		BE	RE	
1	2	3	4	5
1.	Agricultural Research (ICAR)	75.00	68.86	81.00
2.	Biomedical Research (ICMR)	30.00	27.87	30.00
3.	Chemicals and Fertilizers	6.16	NA	NA
4.	Civil Aviation	0.45	0.25	1.00
5.	Coal	5.00	NA	NA
6.	Commerce	2.87	2.86	3.17
7.	Communications	30.10	NA	17.85
8.	Drugs and Pharmaceuticals	1.88	NA	NA
9.	Education	58.75	NA	77.91
10.	Electronics	7.00	6.50	7.00
11.	Food & Civil Supplies	2.40	1.45	2.14
12.	Forests & Wild Life	6.45	6.00	4.75
13.	Heavy Industry	17.88	NA	NA
14.	Housing	0.90	NA	0.10
15.	Industrial Development	7.10	NA	NA
16.	Information & Broadcasting	0.91	0.92	0.77
17.	Irrigation (Water Resources)	6.59	6.65	5.37
18.	Labour	0.67	0.31	0.15
19.	Mines	4.38	3.13	5.57
20.	National Test Houses (Supply)	2.90	2.59	2.60
21.	Non-Conventional Energy Sources	25.96	28.41	25.61
22.	Petroleum & Petro-Chemicals	76.15	NA	NA
23.	Power	15.82	NA	NA
24.	Railways	..	..	1.00
25.	Rural Development	2.00	NA	2.00
26.	Shipping & Transport	3.22	NA	NA
27.	Social Welfare & Nutrition	0.25	NA	NA
28.	Steel	15.62	10.15	14.65
29.	Textiles	NA	NA	NA
30.	Urban Development & Water Supply	..	..	1.31

NA stands for not available.

## CHAPTER 19

# ENVIRONMENT AND ECOLOGY, FORESTRY AND WILD LIFE

### ENVIRONMENT AND ECOLOGY

The functions and responsibilities of the Ministry of Environment and Forests have been re-organised and the activities of the Department of Environment and the Department of Forests and Wild Life have been grouped together; a new integrated Department of Environment, Forests and Wild Life has been created on 25th September, 1985. The major thrust on environmental programmes continues to be in 10 areas identified for the Seventh Plan period.

19.2 Under pollution monitoring and control, the Central Board for the Prevention and Control of Water Pollution evolved specific guidelines for siting of industries. The minimal national standards (MINAS) for polluting effluents from 10 specific industries were formulated. The publication of Atlas on the zoning and classification of 14 major Inter-State Rivers; formulation of an action plan for the prevention and control of pollution of water bodies; identification of polluting sources in respect of several rivers such as Damodar, Subarnarekha, Brahmani-Baitarni, Krishna, Brahmaputra etc. were also completed. The Central Board has prepared a printed chart using climatological data to facilitate air pollution simulation modelling for better land use planning. The impact of pollution due to vehicular emission in Delhi is being studied. The department is working on a possible legislative and administrative framework for regulation and control of hazardous substances in relation to manufacture, import, storage, transport, diffusion and disposal.

19.3 For environmental impact assessment studies, questionnaires eliciting information and environmental aspect of development projects as well as specific guidelines in selected sectors such as multi-purpose river valley schemes, development of beaches, harbours, mining etc. have been designed. The guidelines for the environmental assessment of new towns as well as for the planning of military stations have been formulated. Comprehensive guidelines for thermal power plants are being compiled. For selected polluting industries, a formalised procedure has been evolved to ensure that environmental considerations are taken into account at the site selection stage itself.

19.4 The basic thrust of the eco-development programmes is on the speedy restoration of damaged eco-systems. This is being done through the public participation and mobilisation of ex-servicemen in ecological task forces and also organisation of eco-development camps, involving students and voluntary organisations. Projects for eco-regeneration of degraded areas have been undertaken by several voluntary organisations.

19.5 The Indira Gandhi Institute of Himalayan Environment and Development is being established as a decentralised network of 7 identified centres of advanced studies. A collaborative project on Deon Valley with UNIDO through the International Institute of Applied System Analysis, Vienna has been initiated.

19.6 Under the natural living resources conservation, the Botanical Survey of India has prepared more than 150 red data sheets pertaining to rare, endemic and endangered species of flowering plants and ferns and the first volumes of both the revised flora of India and the check list of flowering plants of India are being published. The Zoological Survey of India has given emphasis to studies on the ecology and population of rare and endangered birds as well as to investigation in unexplored regions of the Andaman and Nicobar Islands and Arunachal Pradesh. Eight Volumes of fauna of India have been published. The preparation of vegetative maps of India has been undertaken by the Forest Survey of India in collaboration with the National Remote Sensing Agency and was expected to be completed in June, 1986. The setting up of Nilgiri Bio-sphere reserve is in an advanced stage and the action plan and implementation strategies are being finalised in collaboration and consultation with State Governments of Karnataka, Tamil Nadu and Kerala.

19.7 For environmental research, several all India co-ordinated projects in the areas of heavy metals, ethnobiology, conservation of endangered plants by seed biology and tissue culture, effects of air pollutants on plants etc. are of special significance. Over 150 research projects were considered of which 50 projects have been approved for financial assistance. Integrated action oriented programmes have also been initiated on eco-development in the Himalayan Region, Western Ghats and Ganga. 16 projects have been sanctioned on Eastern Ghats.

19.8 In the areas of environmental education, awareness and information, 2 centres of excellence viz. Ecological Research and Training Centre at the Indian Institute of Science, Bangalore and the Centre for Environmental Education at Ahmedabad have undertaken many projects; these include ecological sciences focus on eco-development oriented research on Western Ghats; environmental studies focussing on training with special reference to air and water pollution. The Centre for Environmental Education at Ahmedabad has developed educational material for propagating environmental awareness, including interpretative programme for the Kanha National

Park and the National Zoological Park at Delhi. The National Museum of Natural History undertook setting up of a new gallery on conservation. In addition, Mysore and Lucknow have been identified for opening new regional museums. 10 distributed information centres under the Environmental Information System (ENVIS) programme have been established in the areas of toxic-chemical, pollution control and appropriate technology, non-governmental organisations etc. In addition, as the national focal point for the International Referral System for Sources of Information on Environment (INFOTERRA), the Department of Environment responded to over 200 national/international queries.

#### GANGA ACTION PROGRAMME

19.9 An action plan has been drawn up for clearing the polluted stretches of Ganga and to oversee its implementation. The Central Ganga Authority was set up on 16th February, 1985 under the Chairmanship of the Prime Minister and its membership includes Chief Ministers of U.P., Bihar and West Bengal and many Central Ministers. A Steering Committee and a Monitoring Committee have also been set up. The Steering Committee has identified schemes to be taken up under the Ganga Action Plan for the States of U.P., Bihar and West Bengal. The work programme has been taken up in 9 towns located on the bank of Ganga under which the works at Rishikesh, Haridwar and Ramnagar near Varanasi have been completed. The major work programmes relate to diversion, sewer cleaning and renovation of pumping stations. The nodal department for co-ordinating the implementation of the schemes under the plan have been designated in the three States, which, in turn, have identified the implementing agencies. A special action programme for Varanasi City has been prepared with emphasis on drainage and sewerage schemes and treatment plants. Task forces have been constituted to consider the feasibility of integration of schemes under the Plan with those of urban development. To promote the plan as a "People's Project" a multimedia programme is being finalised by the Ministry of Information and Broadcasting.

#### *Programmes for 1986-87*

19.10 Under the Pollution control and Monitoring activities, 25 additional water quality monitoring stations of fresh water bodies and five coastal water monitoring stations along West Bengal and Orissa Coast would be set up. In basin and sub-basin Inventory, survey work for the river Cauvery would be initiated in addition to pollution assessment for Brahmani, Brahmaputra and Sabarnati. Industry specific implementation of pollution control measures will be undertaken in respect of fertilizer, pulp, paper, cement, oil refineries, man-made fibres and integrated steel plants. Vehicular emission standards as evolved for enforcement will be introduced in a phased manner. The water and air quality laboratory at Delhi will be equipped for Biomonitoring of Water bodies. Ambient air quality measuring techniques are being evolved and standardised for adoption. Effluent limits for 4 specific industries will be evolved and

demonstration plants for distillery effluent will be set up. A comprehensive legislation covering air, water pollution and hazardous substances will be taken up. 9 more air quality stations would be added. Institutional mechanisms and legislative measures for control of hazardous substances will be devised.

19.11 The Eco-development programmes will be further intensified through the organisation of eco-development camps involving a number of voluntary agencies and students. Field action Programmes on restoration of selected eco-systems would be initiated. A project on mined area reclamation is proposed to be started under the Indo-US Sub-Commission on Science and Technology. The integrated action oriented research, development and extension projects will be extended in Cauvery basin. Development of integrated management strategies for conservation of natural resources and sustainable development in the Himalayan region will be taken up on a decentralised basis in the Indira Gandhi Institute of Himalayan Environment and Development.

19.12 Multi-disciplinary environmental research programmes and All India Co-Ordinated projects would be intensified under the environment research promotion programmes. Centres of excellence in the areas of mangrove, ornithology etc. are likely to be set up.

19.13 The major programmes of the Botanical Survey of India would be to complete work on 20 families covering about 600 species for publication of the first volume of flora of India and a checklist of plants in India covering about 5000 species will be prepared. Under State and district flora analysis, work for four districts will be completed. Multiplication of endangered, endemic species through captive breeding and their conservation will be undertaken in the experimental gardens, including gene sanctuaries to be set up in different regions of the country. Survey will be continued to collect data on medicinal and economic plants from the tribal areas of Andaman and Nicobar Islands, Arunachal Pradesh, Nagaland etc. under Ethnobotanical studies; marine flora would also be studied. A book on economic plants of India, red data book on endangered species of Indian flora and a volume of chromosome data of Indian plants will be published.

19.14 The Zoological Survey of India would undertake studies on the ecology and population of endangered species, eco-system of fresh water, estuarine, mangrove, mountain, arid, tropical rain forest etc.

19.15 Environmental appraisal of projects in the areas of mining, hydro-electric and thermal power and industrial projects would be further streamlined to cut down delay. Environmental guidelines would be brought out for setting up of few cantonments, on construction of roads, specially in hill areas, and location of development projects in industrially backward or ecologically fragile regions.

19.16 The major programme under the Ganga Action Plan during 1986-87 would be :

1. Continuation of the interceptor, sewers and diversion schemes at 4 towns in West Bengal.
2. Renovation of existing sewage treatment plants at 5 towns in West Bengal, UP and Bihar.
3. Continuation of the work on pumping stations to divert sewage at 3 towns in U.P. and
4. Continuation of construction of new sewage treatment plants at 3 towns in U.P.

19.17 It is proposed to launch low cost sanitation and biological conservation schemes. A management information and monitoring system for assessing the progress of work will be established in the Ganga Project Directorate with the help of project management consultant. Under the Ganga Monitoring Committee, a computerised monitoring mechanism is being evolved with the help of experts. Chemical, bacteriological and biomonitoring of river quality are proposed to be initiated in collaboration with the Central Board for the Prevention and Control of Water Pollution and selected scientific institutions. Creation of public awareness will be undertaken in collaboration with various voluntary organisations. Integrated urban development projects, combining schemes under the Ganga Action Plan with the urban development schemes, are proposed to be prepared for selected area.

19.18 The plan outlays for Environment and Ecology are given in Annexures 19.1 and 19.2.

#### *Forestry and Wildlife*

19.19 Several new initiatives were taken in 1985 to accelerate the pace of development in the Forestry Sector on scientific lines. The ongoing programmes were carefully reviewed and certain schemes were merged with a view to consolidating the efforts in respect of afforestation, research programmes, ecological protection and conservation etc.

19.20 The setting up in May, 1985 of a National Wasteland Development Board to co-ordinate and catalyse the programmes which will enable the country to achieve a target of planting 5 million hectares of land annually with fuelwood and fodder species on the wastelands, was an important measure. Besides, the programmes in the area of Wildlife were taken up as per the strategy approved in Wildlife Action Plan.

19.21 Greater emphasis was laid during the year on strictly enforcing the provisions of the Forest (Conservation) Act, 1980. Various directives were issued and guidelines laid down for compensatory afforestation while allowing diversion of forest lands, in unavoidable cases, for non-forestry purposes. For the protection of forests, 14 specific areas of action were identified and all the States were addressed in this regard. The action taken by the States is being monitored by the Union Ministry of Environment and Forests. The Central Board of Forestry, the

highest advisory body, in particular considered the forest conservation and protection aspects to ensure the implementation of programmes relating to these.

19.22 For integration of various afforestation schemes/programmes and to increase the forestry component of rural development programmes, a decision has been taken to step up the earmarking of funds for forestry under NREP and RLEGP from 20 per cent to 25 per cent. The increase of 5 per cent would be utilised for the establishment of 'Decentralised Nurseries'. A computer based monitoring system for afforestation programmes of waste land development is being evolved.

#### *Progress during 1985-86*

19.23 The progress of expenditure during 1984-85 and 1985-86 in the Forestry and Wildlife Sector is given below :—

TABLE 19.1  
*Outlays and Expenditure*  
(Rs. crores)

	1984-85 Actual Expend.	1985-86	
		Outlay	Anticipated Expenditure
Centre . . . . .	36.74	54.25	52.43
States . . . . .	202.81	228.02	235.49
U.Ts. . . . .	9.45	11.54	11.54
Total . . . . .	249.00	293.81	299.46

#### *Wasteland Development Programmes*

19.24 The National Wastelands Development Board is responsible for total afforestation effort in the country, including its monitoring. The physical targets and achievements in respect of the afforestation programme during 1984-85 and 1985-86 are given in the following Table :—

TABLE 19.2  
*Afforestation Programmes*

Programmes	1984-85 Achievements	No. of Seedlings Planted in crores	
		1985	1986
		Targets	Achievements
1. Social Forestry . . . . .	90.10	104.80	105.60
2. Farm Forestry . . . . .	127.10	126.00	139.13
3. Other Schemes . . . . .	36.00	50.66	57.28
Total Afforestation . . . . .	253.30	281.46	302.01

19.25 It will be seen that there has been a marked progress in the afforestation effort and the number of seedlings planted increased from 253.3 crores in 1984-85 to 302 crores in 1985-86. It was even

higher than the target. The plantation is estimated to have gone up from 12.6 lakh hectares in 1984-85 to about 15 lakh hectares in 1985-86.

19.26 Several schemes in the area of social forestry were taken up in the State sector. Besides, a Centrally sponsored scheme of social forestry, including rural fuelwood plantation, on the basis of equal sharing of the expenditure between the Centre and the States was also initiated during the Sixth Plan. It continued during 1985-86 in 157 fuelwood deficit districts selected from all the States and four Union Territories of Arunachal Pradesh, Delhi, Goa, Daman and Diu and Mizoram. Under this scheme, an area of 0.97 lakh hectares was covered and 29.49 crores seedlings distributed during 1985-86, for which Central assistance of Rs. 15.91 crores was made available to the States/Union Territories.

19.27 The scheme of Soil, Water and Tree Conservation in the Himalayas (operation soilwatch) continued during 1985-86 as a Centrally sponsored scheme with 100 per cent central assistance in 12 States and 2 Uts, namely, Assam, Haryana, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Nagaland, Punjab, Sikkim, Tripura, Uttar Pradesh, West Bengal and UTs of Arunachal Pradesh and Mizoram. An area of 0.36 lakh hectares is estimated to have been treated against a target of 0.30 lakh hectares during 1985-86.

#### Forest Research, Education and Training

19.28 A number of research projects were undertaken by the Forest Research Institute and Colleges (FRI&C) Dehra Dun. B.Sc. (Forestry) Degree Course was started in six State Agriculture Universities. In-service training of Indian Forest Service (IFS) Officers, State Forest Service (SFS) Officers and Forest rangers was undertaken. A reorientation course for middle level IFS Officers was also completed.

#### Forest Survey of India

19.29 The Forest Survey of India (FSI), Dehra Dun in collaboration with the National Remote Sensing Agency (NRSA), completed estimates of area with forest cover using satellite imagery in a few selected States/Union Territories, namely Gujarat, Karnataka, Tamil Nadu, West Bengal and Andaman and Nicobar Islands. The physical progress under different programmes is summarised below :—

TABLE 19.3

Forest Survey of India—Targets and Achievements

	1985-86	
	Target	Anticipated Achievement
1	2	3
(a) Inventory of growing stock (M. ha.)	3.6	3.6
(b) Data Processing (M. ha.)	3.6	3.6

	1	2	3
(c) Photo interpretation			
(i) Thematic mapping sheet of 1:5 million scale (No.)		150.00	138.00
(ii) Vegetation mapping sheets, of 1:6 million scale (No.)		23	23
(d) Wood consumption studies (Residual areas) (No.)		5	3
(e) Training (No. of persons)		45	55

#### Lodging Development Institute, Dehra Dun

19.30 Besides contributing to the overall national economy in the form of minimum wastage of timber, this Institute is engaged in ameliorating socio-economic conditions of forest workers who are mostly tribals and rural folk. The physical progress under different activities of the Institute is as follows :

TABLE 19.4

Logging Development Institute—Targets and Achievements

Activities	Unit	1985-86	
		Target	Anticipated Achievement
I. Training of Forestry personnel	No. of Persons	130	550
II. Tool testing and allied short duration courses, including special courses.	No. of courses	25	25
III. Workers training programme	No. of Persons	3000	3000

#### Lac Development

19.31 Under this scheme, extension and package programmes were undertaken for Lac cultivation in blocks and maintenance of Broodka Farms-cum-Demonstration Centres in States. A pilot sample survey scheme for the estimation of lac production in important lac growing regions of India was also taken up. The programme of lac development was implemented in 13 blocks through respective State Forest Departments. A pilot sample survey was conducted in Bhandara District of Maharashtra. Production of stick lac in India during 1985-86 is estimated at 15000 tonnes against 12985 tonnes in 1984-85.

#### Wildlife Programmes

19.32 The ongoing activities related to preservation of wildlife, management of National Parks and Sanctuaries and development of Zoological Parks in the country were continued with greater impetus and special emphasis was laid on captive breeding of rare and endangered animals. Research studies were



conducted regarding animal behaviour and reproduction and on nutrition aspects in addition to improving the veterinary and hygienic facilities in zoos.

The Wildlife Institute of India, Dehra Dun which is the nodal autonomous agency for initiating and monitoring programmes and projects with the help of the States and Union Territories for wildlife protection and development, was further strengthened.

#### Programmes for 1986-87

19.33 In the Annual Plan for 1986-87, greater emphasis has been laid on afforestation programme with massive people's participation to provide fuel and fodder to local people. Research and Development programmes, conservation activities and demonstration and extension efforts would be further geared up to enhance the productivity of forests and preserve the natural eco-systems. The main activities/programmes for 1986-87 are briefly indicated below :

#### Wasteland Development Programmes

19.34 The physical target for afforestation will be 342.85 crores seedlings to cover an area of about 18 lakh hectares in 1986-87. Under the afforestation programme, alongwith ongoing Centrally sponsored schemes, externally aided social forestry projects in 15 States and other plantation programmes, certain new schemes for increase of fuel, fodder production and to ensure ecological restoration will also be implemented. In order to promote people's participation in afforestation, schemes of Decentralised Nurseries, financial assistance for voluntary organisations, and tree patta will be implemented on a large scale. Tribal development and forest protection programmes will also be started during 1986-87. The physical targets under various Centrally sponsored schemes will be as follows :

TABLE 19.5

*Physical Targets under various Centrally Sponsored Schemes*

(000 hectare)

	1986-87
(i) Soil, water and tree conservation in Himalayas (Area to be treated)	26.40
(ii) Rural Fuelwood plantation and Afforestation in Ecologically Sensitive non-Himalayan areas (Area to be treated)	88.65
(iii) Establishment of Silvipastoral farms	21.00
(iv) Beneficiary oriented Tribal scheme for Tribal Development	6.00*

\*Advance work.

19.35 The problem of fuelwood and deforestation of eco-sensitive non-Himalayan areas is integrally related; therefore, the scheme of Social Forestry including Rural Fuelwood Plantation and the proposed scheme of Afforestation of Ecologically Sensitive Areas other than Himalayas have been merged from 1986-87 and the new scheme is renamed as a "Rural

Fuelwood Plantation and Afforestation of Non-Himalayan Eco-Sensitive Areas". The Rural Fuelwood Plantation component will continue in the 157 fuelwood deficit districts identified during the Sixth Five Year Plan. It is now proposed to create fuelwood and fodder plantations in denuded forest areas and other public land close to habitation to meet the needs of the rural poor. The other component of the scheme aims at soil conservation measures, check dams, gully plugging, afforestation, shelter belt plantation in habitations etc. On the basis of detailed discussions with States and UTs, an agreed definition of wastelands has been arrived at. Time-bound schedules for identification of wastelands and a plan of action for their development are being evolved.

#### Forestry Research, Education, Training and Survey

19.36 Research efforts will be intensified in the field of afforestation of wastelands, social forestry, tree improvement, reclamation of degraded lands, cost effective wood-preservative treatment, utilisation of secondary species and bamboo for various end uses and surveillance and control of pests/pathogens. In order to achieve the above objectives, forestry research education and training will be re-organised. The preparatory work in this regard has already been done taking note of the recommendation made by Advisory/Expert Committees. Once the suggested organisational changes are approved by the Government, the forestry research, education and training programmes of FRI, Dehra Dun and the Regional Centres would be re-oriented with much greater thrust on introducing modern biological concepts and biotechnologies.

19.37 The B.Sc. (Forestry) degree course will be introduced in eight more State Agriculture Universities by the Indian Council of Agricultural Research, thus making the total number as 14. Syllabi/course contents of the Institutions imparting in-service training and pre-service training will be revised so that the trainees could imbibe modern concepts of eco-development, forest management and rural development.

19.38 Almost all the States have Resources Divisions which carry out inventory work. On the other side, Forest Survey of India is also doing almost the same work. The FSI would be re-organised in such a fashion as to avoid duplication. The physical targets under different activities of F.S.I. will be as follows :

TABLE 19.6

*Forest Survey of India—Targets for 1986-87*

Programme	Unit	1986-87
(a) Field inventory programme	000 Sq. Km.	24.00
(b) Photo interpretation	" "	150.00
(c) Data processing	" "	36.00
(d) Wood consumption studies	Nos.	5
(e) Training	No. of trainees	90

### *Logging Development Institute, Dehra Dun*

19.39 The activities of the Institute would be further strengthened in terms of training of forestry personnel, tool testing and short duration courses and workers training programme. Training will be imparted to forest officers in the field of planning, basic logging and use of machinery and to forest workers in improved logging practices and in the use of modern logging tools, so as to improve the efficiency, minimise losses and increase outturn and safety. Under training programme, 165 supervisors will be trained in logging and transport equipment and 3500 workers will be trained in basic logging.

### *Lac Development*

19.40 Activities relating to market survey and programme implementation for lac cultivation would be taken up in 9 new blocks in addition to blocks already covered. The proposed target for lac cultivation in 1986-87 is of the order of 17,000 tonnes.

### *Programmes for wildlife protection, conservation, development and management*

19.41 For the development of wildlife, schemes have been prepared in line with "Wildlife Action

Plan". Emphasis has been laid on development of National Parks, Sanctuaries, project tiger wildlife-education and protection and captive breeding of endangered species. In order to achieve these objectives, the funding pattern under the schemes of National Parks and Sanctuaries has been revised. Specific new schemes will be started for conservation of Rhinos in Assam, control of poaching and illegal trade in wildlife etc. In order to provide more scientific inputs for wildlife projects, the expertise of the existing institutions would be fully utilised. A status report of the existing Sanctuaries/parks is under finalisation.

### *Financial Aspects*

19.42 The financial allocations for forestry and wildlife sector during 1986-87 are as follows :

	(Rs. crores)
Centre . . . . .	75.00
States . . . . .	292.02
U.Ts. . . . .	13.68
Total . . . . .	380.70

The scheme-wise break up of the outlays in the Central sector is given in Annexure 19.3.

## ANNEXURE 19.1

*Plan Outlay for Environment and Ecology*

(Rs. Crores)

S. No.		1985-86			1986-87 Outlays		
		BE	RE	Total	Centre	States	UTs
1	2	3	4	5	6	7	8
1.	Environment and Ecology/Prevention and Control of Air and Water pollution . . . . .	38.98*	33.81†	41.35	23.00	17.89	0.46
2.	Ganga Action Plan . . . . .	10.00	8.50	52.00	52.00	..	..
	Total . . . . .	48.98	42.31	93.35	75.00	17.89	0.46

\*Including Rs. 13.23 crores under States/UTs.

†Excluding capital works and including Rs. 14.11 crores under States/UTs.

## ANNEXURE 19.2

*Break-up of Central Plan Outlays for Environment and Ecology*

(Rs. Crores)

Sl. No.	Activities/Schemes/Projects Programmes	1985-86		1986-87 Outlays
		BE	RE	
2	2	3	4	5
1.	Pollution Monitoring & Control	6.05	5.60	5.85
2.	Natural Living Resources & Conservation	5.60	2.66	4.45
3.	Eco-Development Programme	5.30	5.30	5.20
4.	Environment Research Promotion	5.50	5.25	4.50
5.	Ganga Action Plan	10.00	8.50	52.00
6.	Other Schemes	3.30	0.89	3.00
	Total	35.75	28.20	75.00

## ANNEXURE 19.3

## Plan outlay for Forestry and Wildlife in Central Sector

(Rs. in lakhs)

S. No.	Name of scheme	1985-86		1986-87 Outlays
		BE	RE*	
A. Forestry				
1.	Forest Research, Education and Training . . . . .	600.00 (200)	309.88	820.00 (165)
2.	Forest Survey of India . . . . .	250.00 (100)	125.00	395.00 (80)
3.	Logging Development Institute Dehradun . . . . .	70.00 (10)	36.10	55.00
4.	Strengthening of Forest Deptt. (headquarter) . . . . .	58.00	44.80	53.00
5.	Development of Infrastructure for the protection of Forest from Biotic Interference . . . . .	..	..	50.00
6.	Beneficiary Oriented scheme for Tribal Development . . . . .	..	..	100.00
7.	Forestry Extension Network in the country . . . . .	..	..	100.00
8.	Other schemes . . . . .	22.00	28.80	45.10
B. National Wastelands Development Board				
9.	Headquarters and schemes** . . . . .	..	190.00	1500.00
10.	Soil, water and tree conservation in Himalayas (Operation soilwatch) . . . . .	1200.00	1200.00	1078.00
11.	Rural fuelwood plantation and Afforestation of Ecologically sensitive area of non-Himalayan region . . . . .	2600.00	2410.00	2210.00
12.	Establishment of silvipastural farms. . . . .	..	..	260.00
13.	Indian Institute of Forest Management, Bhopal . . . . .	200.00	200.00	200.00
C. Wildlife				
14.	Wildlife Institute of India . . . . .	50.00 (20)	29.19	130.00
15.	National Zoological Park . . . . .	40.00 (30)	2.00	33.00 (30)
16.	Project Tiger . . . . .	175.00	175.00	200.00
17.	Assistance for Development of Sanctuaries . . . . .	55.00	55.00	75.00
18.	Assistance for the Development of National Parks . . . . .	50.00	50.00	75.00
19.	Assistance for the Development of selected zoos . . . . .	25.00	15.00	30.00
20.	Conservation of Rhions in Assam . . . . .	..	5.00	40.00
21.	Other schemes . . . . .	30.00	7.50	50.90
TOTAL . . . . .		5425.00	4883.27	7500.00

Figures in brackets represent outlay on capital works.

\*Excluding capital works programmes.

\*\*Includes schemes of Decentralised People's Nursery, Assistance for voluntary organisation, etc.

## CHAPTER 20

### CRAFTSMEN TRAINING AND LABOUR WELFARE

Human resource development, improvements in productivity, alleviation of poverty and reduction in unemployment are among the major objectives of the Seventh Five Year Plan. The programmes initiated during 1985-86 and 1986-87 in the sector "Craftsmen Training and Labour Welfare" have a bearing on skill development, promotion of industrial safety including safety in mines, workers' education, strengthening and modernisation of the employment service, enforcement of minimum wages in agriculture, enforcement of labour laws relating to women and child labour, identification and rehabilitation of bonded labour and research on problems of labour. The schemes for enforcement of minimum wages in agriculture and rehabilitation of bonded labour also form part of the 20-point programme, in view of their importance in improving the quality of life and productivity of the less privileged sections of society. Annexure 20.1 indicates the approved outlays for the programmes in the different sub sectors under "Craftsmen Training and Labour Welfare."

#### *Review of Performance during 1985-86*

20.2 The approved outlay for 1985-86 was Rs. 60.95 crores comprising Rs. 18.50 crores for the Central Sector Plan and Rs. 42.45 crores for the Plans of the States and Union Territories. The Central Sector outlay included an amount of Rs. 4.74 crores for civil works. The Revised Estimates for 1985-86 place the total expenditure at Rs. 51.66 crores—Rs. 14.03 crores at the Centre and Rs. 37.63 crores in the States and Union Territories. The shortfall in the Central Sector is generally attributed to difficulties and delays in the creation and filling up of posts and delays in the implementation of civil works. The progress of the important programmes in the Craftsmen Training and Labour Welfare Sector during 1985-86 is reviewed in the paragraphs that follow.

#### *Enforcement of Minimum Wages for Agricultural Labour*

20.3 The rates of minimum wages in agriculture (for unskilled workers) are indicated in Annexure 20.2. The Centrally Sponsored Scheme launched on a pilot basis for giving financial assistance to four States, namely, Madhya Pradesh, Rajasthan, Orissa and Manipur, for strengthening their enforcement machinery for implementation of minimum wages in agriculture envisages the appointment of 200 Rural Labour Inspectors (RLIs) in blocks in which the population of agricultural workers belonging to Scheduled Castes and Tribes is more than 70%. The provision made for the scheme in

the Central Plan for 1985-86 was Rs. 30 lakhs. The Government of Manipur are reported to have appointed Rural Labour Inspectors (RLIs) while others are still to do so. Expenditure in the Central Sector on the scheme during 1985-86 is placed at about Rs. 5 lakhs. One of the reasons for the tardy progress of this scheme has been the difficulties experienced by the States in the recruitment of RLIs on the basis of the guidelines laid down for their selection. The guidelines have since been revised.

#### *Rehabilitation of Bonded Labour*

20.4 The outlay approved for this Centrally Sponsored Scheme for 1985-86 was Rs. 10.27 crores, including Rs. 5 crores in the Central Sector for providing matching grant assistance. Targets for rehabilitation were fixed for 11 States where incidence of bonded labour was reported namely, Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh. The overall target for rehabilitation was fixed at 30,593 bonded labourers and 21,673 of these, or 70.8%, were rehabilitated upto the end of March, 1986. The shortfall in achievement has been attributed to (i) delays in the formulation and sanction of rehabilitation schemes by the State Governments, (ii) delays in the release of the State's share of funds for sanctioned schemes and (iii) delays in the submission of utilisation certificates for the grants released to the State Governments in the previous year. With a view to accelerating the pace of rehabilitation of bonded labour, the procedure for sanction of rehabilitation schemes and the release of grants has been simplified in September, 1985 the State Governments have been allowed to delegate powers for sanction of rehabilitation schemes to the District Collectors/Divisional Commissioners by setting up screening Committees at the district level. The ceiling of Rs. 4000/- for rehabilitation per bonded labourer under the Centrally Sponsored Scheme has also been enhanced to Rs. 6250/- with effect from February, 86.

#### *Scheme for Organising Rural Workers*

20.5 The Centrally Sponsored Scheme for Organising Rural Workers, which was introduced in 1980-81 and aims at educating the rural workers on their rights and duties, value of organisation, etc., had covered 1500 blocks in 15 States at the end of 1985 and 815 Honorary Rural Organisers had been deployed for the purpose. A provision of Rs. 80 lakhs had been made during 1985-86 in the Central Sector Plan to meet the cost of honorarium and conveyance allowance for the Rural Educators/Organisers. According to

available information, the total release during the year is placed at Rs. 14.53 lakhs. A review of the scheme was taken up in Karnataka, Rajasthan, Maharashtra and Assam in order to assess the impact of the scheme on rural workers.

### *Training*

20.6 Against a budget provision of Rs. 207 lakhs (excluding civil works) for training in the Central Sector for 1985-86, the anticipated expenditure is Rs. 178 lakhs. The shortfall in the utilisation of the provision was mainly in the staff salary component due to posts remaining unfilled and the delay in the creation of additional posts.

20.7 At the end of December, 1985, Craftsmen Training was being imparted in 38 engineering and 26 non-engineering trades in 1447 Industrial Training Institutes/Centres. Apprenticeship Training was being provided to 1.34 lakhs apprentices in 140 trades designated under the Apprentices Act in 217 categories of industries. 13,101 of these apprentices belonged to Scheduled Castes, 3781 to Scheduled Tribes and 15,296 to minority communities. 3457 apprentices were women and 583 were physically handicapped. A cumulative number of 38,700 industrial workers had received training under the Advanced Vocational Training System from the inception of the scheme upto the end of 1985. The National Vocational Training Institute, Delhi (NVTI) and the Regional Vocational Training Institutes in Bangalore, Bombay and Trivandrum (RVITs) trained 4,065 women in various trades till the end of 1985. In the four Model Industrial Training Institutes, which conduct training programmes consisting of a common broad based basic training for a group of trades in the first year followed by specialisation in one or more modules, 304 trainees were undergoing training in February, 1986.

### *Employment Service*

20.8 The approved provision for Employment Service for 1985-86 was Rs. 100 lakhs and the anticipated expenditure during the year is Rs. 52.00 lakhs. The shortfall was mainly in schemes relating to computerisation of the Data Processing Unit in the Directorate General of Employment & Training (DGET), construction of the building for VRC, Delhi, construction of the skill training workshop at VRC, Bombay and strengthening of Employment Exchanges UEIGBX for promotion of self-employment.

20.9 At the end of 1985, there were 800 employment exchanges, providing registration, guidance and placement services. During 1985, 5.8 million persons were registered with the employment exchanges and 0.39 million placements were made.

An evaluation of the pilot scheme to strengthen, with Central assistance, Employment Exchanges, University Employment Information and Guidance Bureaux (UEIGBX) in 30 selected districts to guide and motivate job seekers to take up self-employment was undertaken by the Central Institute for Research and Training in Employment Services (CIRTES).

20.10 As for special schemes for the weaker sections of society, the fourteen Vocational Rehabilitation Centres (VRCs) for the physically handicapped and the 16 Coaching-cum-Guidance Centres (CGCs) for scheduled castes and tribes continued to function in their respective areas of operation. The VRCs rehabilitated 4,990 physically handicapped persons during 1985. Two more CGCs were set up during 1985-86, one at Guwahati and one at Mandi.

### *Industrial Safety*

20.11 The Directorate General of Factory Advice Service and Labour Institutes (DGFASLI) and the Central and Regional Labour Institutes under its control continued to provide consultancy services on matters relating to industrial safety and health, besides research and training activities in the field of industrial safety and environmental problems. A shortfall in expenditure compared to the approved outlay, is expected during the year as posts envisaged in the scheme had not been created.

### *Mines Safety*

20.12 In the Central Sector, the outlay for mines safety in the Annual Plan 1985-86 was Rs. 152 lakhs, which included a construction component of Rs. 74 lakhs. The expenditure, excluding expenditure on construction, was reported to be only about Rs. 15 lakhs upto January, 1986. The shortfall was mainly due to factors relating to creation of posts and procurement of equipment.

### *Workers' Education*

20.13 The provision for workers' education in the Central Sector was Rs. 60 lakhs during 1985-86 against which utilisation is placed at about Rs. 54 lakhs. The number of persons trained under the programme during 1985-86 is estimated at about 74,000 persons in the rural and unorganised sectors, about 4,000 under the Leadership Development Programme, over one lakh workers in unit level classes and about 30,000 workers in functional adult literacy classes.

### *Other Programmes*

20.14 The National Labour Institute continued its activities of training Government officials in labour administration, leadership training among trade union functionaries and research and consultancy in the field of labour and allied subjects. The Annual Plan 1985-86 outlay for the Institute was Rs. 126 lakhs, including Rs. 112 lakhs for the construction of the Institute's campus at NOIDA (Ghaziabad District, U.P.) The construction work has commenced. The Labour Bureau continued its work in the field of labour research and statistics.

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20.15 A total outlay of Rs. 68.11 crores has been approved for 1986-87 comprising Rs. 18.50 crores for the Central sector Plan and Rs. 49.61 crores for the Plans of the States and Union Territories.

20.16 In the scheme for enforcement of minimum wages in agriculture, progress is expected during the year in the recruitment of RLIs in the remaining three States, viz. Madhya Pradesh, Orissa and Rajasthan.

20.17 A provision of Rs. 5.20 crores has been made in the Central Sector, and of Rs. 5.31 crores in the State sector, for the rehabilitation of bonded labour. Steps to involve voluntary agencies effectively in the work of identification of bonded labour will be taken up during 1986-87. A target of rehabilitation of 19,728 freed bonded labourers spread over Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh has been fixed for the year.

20.18 The review of the scheme for organising rural workers is expected to be completed and suitable modifications based on this review would be made in the scheme.

20.19 Improvement in the quality of training is of high relevance to raising productivity levels. The most important factor affecting quality of training is old and obsolete machinery in the Industrial Training Institutes (ITIs). A large number of ITIs, which are more than two decades old, are functioning with old and worn out machines. A centrally sponsored scheme for replacement of old and obsolete equipment in ITIs has been approved for the Seventh Plan on the basis of 50 : 50 sharing of expenditure between the centre and the States. The Ministry of Labour are working out the modalities for implementing the scheme. A provision of Rs. 42 lakhs has been made in the Central Sector for 1986-87. A scheme to provide Central assistance, by way of non-recurring grant, for the upgradation of ITIs in minority (other than Scheduled Castes/Tribes) concentration areas in a few States is also proposed to be taken up for which an outlay of Rs. 8 lakhs has been provided.

20.20 Provision has been made for a number of other training schemes in the Central sector. These include, expansion and development of supervisory training, setting up of an Instructional Media Institute at Coimbatore, further development of Advanced Training Institutes functioning under the Directorate General of Employment and Training and strengthening of National Vocational Training Institute (NVTI), Delhi for women and the Regional Vocational Training Institutes (RVTIs) for Women and diversification of their training programmes.

20.21 Computerisation has been given considerable importance. Three schemes have been approved, namely: (i) Computerisation of Data Processing Unit of DGE&T, (ii) a Centrally sponsored scheme of

assistance to States/Union Territories for the computerisation of employment exchange operations and (iii) Modernisation of the Machine Tabulation Unit of Labour Bureau, with an outlay of Rs. 67 lakhs for 1986-87.

20.22 A National Child Labour Programme is being taken up in order to improve the condition of Child Labour in selected areas where there is a concentration of such labour. Initially, it is proposed to take up two pilot projects, one in the match and fire-works industry in Sivakasi in Tamil Nadu and the other in the carpet weaving industry in Mirzapur-Bhadohi areas of U.P. The Sivakasi project has already been approved and is likely to be implemented from 1986-87. The other project is under formulation. These projects envisage an integrated approach for protection, welfare and development of Child Labour. Provision of education, health and welfare facilities and raising the income levels of the children's families through income generating schemes are essential components of the projects.

20.23 A new Centrally Sponsored scheme for strengthening of the Enforcement Machinery for implementation of labour laws and legal provisions relating to women labour and child labour has been approved. This scheme envisages creation of a separate enforcement machinery on a pilot basis initially in selected districts of four States. The need for such a scheme has arisen because the inspecting staff under the Labour Department in the states looking after the implementation of various labour laws has very little time for giving attention to laws specifically relating to women labour and child labour.

20.24 In the area of industrial safety, a Centrally Sponsored Scheme to strengthen facilities and services for monitoring work environment in hazardous chemical industries in the States and Union Territories is being taken up. A provision of Rs. 20 lakhs has been made for 1986-87 for giving Central assistance to State Governments and Union Territory Administrations for infrastructure, books, printing, etc.

20.25 The Plan outlay for important schemes in the Central Sector for 1986-87 is given in Annexure 20.3.

20.26 In the State sector, the important schemes to be implemented during 1986-87 relate to the improvement of quality of training in Industrial Training Institutes (ITIs), introduction of emerging trades in the ITIs, setting up of new ITIs exclusively for women, strengthening of the enforcement machinery for various labour laws and promotion of industrial safety. The outlays approved for different States and Union Territories are shown in Annexure 20.4.



## ANNEXURE 20.1

*Labour and Labour Welfare Sector : Outlays*

(Rs. in lakhs)

Sl. No.	Groups of schemes	Seventh Five Year Plan 1985-90 Approved Outlay	Annual Plan 1985-86		Annual Plan 1986-87 Approved Outlay
			Approved Outlay	Revised Estimates	
1	2	3	4	5	6
A. Centre :		9544	1850	1403	1850
	(i) Training	4184	366		465
	(ii) Employment Service	580	100		110
	(iii) Labour welfare	3280	874	1403	755
	(iv) Rehabilitation of Bonded Labour	1500	510		520
B. States .		21975	3935	3453	4615
C. Union Territories .		1853	310	310	346
GRAND TOTAL (A+B+C)		33372	6095	5166	6811

## ANNEXURE 20.2

*Statement of minimum wages in agriculture (for unskilled workers) as fixed by the Central Government and reported by the State Governments/ Administrations*

Name of the State	Date from which effective	Rates of wages	Remarks
1	2	3	4
Central Government . . . . .	12-2-85	Rs. 8.50 to 12.75 according to areas.	
Andhra Pradesh . . . . .	7-9-83	Rs. 7.00 to 18.00 per day according to areas and nature of work.	
Assam . . . . .	22-2-85	Rs. 12.50 per day.	
Bihar . . . . .	12-4-82	5 Kg. paddy or any other kind of grain of the same value besides one time nashta or Rs. 8.50 in cash.	Draft notification proposing revision issued on 13-4-85.
Gujarat . . . . .	2-10-82	Rs. 9.00 per day or Rs. 3,200 per year.	Steps to revise the minimum wages are being taken.
Haryana . . . . .	1-1-86	Rs. 13.46 with meals and Rs. 17.46 without meals.	Minimum wages are linked to consumer Price Index.
Himachal Pradesh . . . . .	25-1-86	Rs. 12.00 per day.	Workers are entitled to 12½% to 25% higher wages in certain areas.
Jammu & Kashmir . . . . .	7-7-84	Rs. 10.50 per day.	
Karnataka . . . . .	30-1-85	Rs. 9.50 to Rs. 14.00 per day according to class of work and type of land.	
Kerala . . . . .	24-5-84	Rs. 12.00 per day for light work and Rs. 15.00 per day for hard work.	
Madhya Pradesh . . . . .	1-1-82	Rs. 7.00 plus special allowance per day linked to C.P.I. compiled half-yearly. The wages have been increased w.e.f. 1-7-1985 at the rate of Rs. 9.19 per day.	The rate of Special Allowance is 45 paise per month per point for every point rise in the average CPI No. above 447 (1960=100).
Maharashtra . . . . .	1-2-83	Rs. 6.00 to Rs. 10.00 per day according to areas	Revision is under consideration.
Manipur . . . . .	2-3-83	Rs. 10.00 to Rs. 10.50 per day according to areas.	
Meghalaya . . . . .	1-10-85	Rs. 11.00 per day.	
Nagaland . . . . .	1-2-84	Rs. 10.00 per day.	
Orissa . . . . .	5-11-84	Rs. 7.50 per day.	
Punjab . . . . .	1-4-86	Rs. 14.40 per day with meals or Rs. 17.40 per day without meals	
Rajasthan . . . . .	16-1-85	Rs. 11.00 per day.	
Sikkim . . . . .		Minimum Wages Act, 1948 has not yet been extended to the State. However, the State Government has fixed by executive orders minimum wages for an unskilled worker at Rs. 11.00 per day w.e.f. 1-4-85.	

1	2	3	4
Tamilnadu . . . . .	5-4-83	Rs.8.00 per day for employee engaged in sowing,plucking of seedlings or weeding and Rs. 10.00 to Rs. 11.00 per day for other operations.	Constitution of Advisory Committee for the revision of minimum wages is under consideration.
Tripura . . . . .	12-3-84	Rs. 10.00 per day.	
Uttar Pradesh . . . . .	13-7-83	Rs. 8.00 to Rs. 9.50 per day according to areas.	
West Bengal . . . . .		Not Available	
Andaman & Nicobar Islands . . . . .	19-8-84	Rs. 10.60 per day.	
Arunachal Pradesh . . . . .	1-1-84	Rs. 11.00 to Rs. 12.00 per day according to areas (by executive order).	
Chandigarh . . . . .	1-f-86	Rs. 17.72 per day	These minimum rates of wages are linked with Consumer Price Index number. Neutralisation is at the rate of 4 paise per point on the rise or fall of CPI Nos (Punjab series).
Dadra & Nagar Haveli . . . . .	3-9-83	Rs. 9.00 per day.	
Delhi Administration . . . . .	15-10-85	Rs. 15.90 per day.	
Goa, Daman & Diu . . . . .	2-10-83	Rs. 6.75 per day.	
Pondicherry			
(i) Mahe region. . . . .	4-8-83	Rs. 7.45 to Rs. 9.20 per day according to nature of work :	Revision is under consideration
(ii) Yanam region. . . . .	5-4-83	Rs. 10.00 per day	
(iii) Pondicherry . . . . .	28-11-83	Rs. 8.00 per day	
(iv) Karaikal . . . . .	5-8-82	Rs. 7.00 per day	

*Outlay of Important Schemes in the Central Sector for 1986-87*

(Rs. in lakhs)

Sl. No.	Scheme	Plan Outlay
1.	Vocational training for women . . . . .	51.00
2.	Strengthening of National Vocational Training Institute and Regional Vocational Training Institutes for women, including diversification activities . . . . .	35.00
3.	Development of Vocational Training other than Apprenticeship Training . . . . .	40.00
4.	Advanced Vocational Training System . . . . .	26.50
5.	Setting up of 4 Model Industrial Training Institutes . . . . .	50.00
6.	Upgradation of State Govt. Industrial Training Institutes for improving quality of training (replacement of machinery)* . . . . .	42.00
7.	Strengthening of the Central Industrial relations machinery . . . . .	30.00
8.	Strengthening of enforcement machinery for implementation of minimum wages in agriculture* . . . . .	40.00
9.	Working class family income and expenditure survey . . . . .	39.20
10.	<i>Computerisation Schemes</i>	
	(a) Modernisation of machine tabulation unit in Labour Bureau . . . . .	43.28
	(b) Computerisation of Data Processing Unit of Directorate General of Employment & Training . . . . .	14.00
	(c) Assistance to States/UTs for computerisation of employment exchanges operations* . . . . .	10.00
11.	Workers' Education . . . . .	70.00
12.	Rehabilitation of Bonded Labour* . . . . .	500.00
13.	Organising Rural Workers* . . . . .	42.00
14.	Other Schemes . . . . .	817.02
	<b>TOTAL . . . . .</b>	<b>1850.00</b>

\*Centrally sponsored schemes.

## ANNEXURE 20.4

*Labour & Labour Welfare Sector : States & Union Territories Approved outlays for Annual Plans 1985-86 & 1986-87 and Anticipated Expenditure for Annual Plan 1985-86*

(Rs. lakhs)

Sl. No.	States/Union Territories	1985-86		1986-87 Plan Outlay
		Plan outlay	Anticipated Expenditure	
1	2	3	4	5
<i>(a) States :</i>				
1.	Andhra Pradesh	161.00	179.00	196.00
2.	Assam	120.00	114.00	124.00
3.	Bihar	85.00	85.00	110.00
4.	Gujarat	989.00	836.00	1025.00
5.	Haryana	65.00	92.00	209.00
6.	Himachal Pradesh	20.00	8.00	31.00
7.	Jammu & Kashmir	60.00	10.00	86.00
8.	Karnataka	308.00	308.00	328.00
9.	Kerala	83.00	83.00	97.00
10.	Madhya Pradesh	114.00	131.00	212.00
11.	Maharashtra	870.00	377.00	760.00
12.	Manipur	20.00	20.00	25.00
13.	Meghalaya	15.00	6.00	14.00
14.	Nagaland	27.00	27.00	50.00
15.	Orissa	105.00	225.00	290.00
16.	Punjab	70.00	69.00	90.00
17.	Rajasthan	37.00	37.00	71.00
18.	Sikkim	10.00	10.00	8.00
19.	Tamil Nadu	399.00	393.00	199.00
20.	Tripura	20.00	20.00	21.00
21.	Uttar Pradesh	302.00	258.00	590.00
22.	West Bengal	55.00	165.00	79.00
TOTAL (A)		3935.00	3453.00	4615.00
<i>(B) Union Territories :</i>				
1.	Andaman & Nicobar Islands	4.00	4.00	5.00
2.	Arunachal Pradesh	16.00	16.00	17.00
3.	Chandigarh	18.50	18.50	20.76
4.	Dadra & Nagar Haveli	21.40	21.40	26.10
5.	Delhi	102.00	102.00	112.00
6.	Goa, Daman Diu	110.00	110.00	115.00
7.	Lakshadweep	1.00	1.00	2.00
8.	Mizoram	12.00	12.00	13.46
9.	Pondicherry	25.00	25.00	34.90
TOTAL (B)		309.90	309.90	346.22
GRAND TOTAL (A+B)		4244.90	3762.90	4961.22

Note : Labour and Labour Welfare Sector consists of Craftsmen Training, Apprenticeship Training, Employment Service and Labour Welfare Programme.

## CHAPTER 21

### THE 20 POINT PROGRAMME

The 20-Point Programme forms an integral part of the Plan and focuses attention on crucial areas. While the thrust of the programme continues to be on providing better living conditions to the under-privileged sections of society, it also aims at all-round improvement in productivity.

21.2 The new Ministry of Programme Implementation at the Centre acts as the nodal agency for effective, regular, and timely monitoring of the programme. The machinery for monitoring has been established in all the States/UTs and the concerned Central Ministries. In the States/UTs, high level implementation and monitoring committees have been set up under the Chief Minister and Chief Secretaries at headquarters. At the district and block level too, Committees have been set up which include representatives of the people. These monitoring bodies also identify problems for initiating suitable remedial measures.

#### *Review of performance in 1985-86*

21.3 The Annual Plan 1985-86 provided a total outlay of Rs. 13117.88 crores—Rs. 4756.30 crores at the centre and Rs. 8361.58 crores in the States/UTs. As against this, the Revised Estimates place the expenditure at Rs. 13186.73 crores—Rs. 4758.61 crores at the Centre and Rs. 8428.12 crores in the States/UTs.

21.4 The performance has been very good (*i.e.* above 90 per cent of the target) under creation of irrigation potential; dry land farming; National Rural Employment Programme; Rural Landless Employment Guarantee Programme; Welfare of Scheduled Caste and Scheduled Tribe Families, Rural Water Supply, Provision of House-Sites-*cum*-Construction assistance to landless agricultural labour; environmental improvement of urban slums and housing for economically weaker sections; electrification of villages and energisation of pump sets, plantation of trees and installation of bio-gas plants, opening of sub-centres, primary health centres and ICDS blocks; elementary education and adult education. The performance has been good (*i.e.* between 80 to 90 per cent) in the case of pulses, oilseeds, distribution of ceiling surplus land, and family planning sterilisations. However, the progress has been below 80 per cent of the target under Integrated Rural Development Programme (IRDP) and rehabilitation of bonded labour. The achievement indicated here in regard to IRDP is with reference to the original target; this target was subsequently reduced and the performance was in excess of the revised target. Unsatisfactory progress under the scheme of rehabilitation of bonded labour is attributable to delays in provision of funds by the

States and in the submission of utilisation certificates which affected the release of Central share.

21.5 Although the progress has not been even and uniform under all the points and in all the States, the implementation of the programme as a whole was quite satisfactory. The results during the year are superior in quality because of the much greater monitoring of the programme undertaken at all levels.

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21.6 During 1986-87, the programme will continue to lay particular emphasis on the betterment of the conditions of the poor. The Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP), Rural Landless Employment Guarantee Programme (RLEGP), distribution of ceiling surplus land, and development of village and small scale industries will continue to be the main programmes for generating employment and strengthening the resource base of the rural poor and raising their incomes. Efforts will be made to dovetail the various poverty alleviation programmes into a package so as to enable the beneficiaries to cross the poverty line. Besides, there will be a degree of selectivity based on the incidence of poverty, in terms of approach, outlay and programmes for different areas. People's representatives will be involved much more closely in the identification of beneficiaries and projects. A better climate of awareness will be created amongst the beneficiaries by organising them. An additional 1 million tonne of foodgrains each has been provided under the NREP and RLEGP so as to create greater employment opportunities. 25 per cent of the funds under these programmes are being earmarked for social forestry in order to meet the fuelwood and fodder requirements of the rural poor.

21.7 The programmes for welfare of Scheduled Castes and Scheduled Tribes will be pursued more vigorously. Intensive efforts will be made to identify, release and rehabilitate bonded labourers by strengthening the implementing machinery and integrating the special programme for them with the programmes of poverty alleviation as well as with those for betterment of Scheduled Castes/Scheduled Tribes and other weaker sections of the society. Under the Rural Water Supply Programme, priority will be given to the identified problem villages and for providing additional water points for Scheduled Castes/Scheduled Tribes and landless labourers. The shelterless rural workers would be provided house-sites and construction assistance.

21.8 Under elementary education, special emphasis will be laid on enrolment of children belonging to

Scheduled Castes/Scheduled Tribes, and girls. Appropriate incentives will be given to children in these categories to reduce the drop out rate. Under the adult literacy programme, cooperation of voluntary agencies, *Nehru Yuvak Kendras*, students, teachers, and public at large will be enlisted. The goal of 'health for all by 2000 AD' will be pursued by an integrated approach to the problem through preventive, promotive, and curative measures. The three-tier rural health infrastructure of sub-centres, primary health centres and community health centres will be strengthened in a phased manner and trained personnel provided to man these centres. The incidence of leprosy, tuberculosis, and blindness will be brought down by intensifying the effort under the special programmes for control of these diseases. Family planning will be propagated and promoted on a voluntary basis and supported by universal immunisation and nutrition programmes for pregnant women, nursing mothers, and children so as to reduce the rate of infant and maternal mortality.

21.9 The utilisation of irrigation potential will be increased so as to realise the full benefits of the investment made. Special efforts will be made to increase the production of pulses and oilseeds through better water conservation, improved agricultural practices, crop protection measures, and suitable post harvest technology in the semi-arid and dry regions of the country.

21.10 Measures will be taken to maximise power generation, reduce slippages in the commissioning of new units, and improve managerial efficiency and

financial performance of the State Electricity Boards/Undertakings. Under rural electrification priority will be given to the North-Eastern region, districts in other States with less than 65 per cent electrification and areas under Tribal Sub-Plan. For meeting the growing rural energy needs, raising of fuelwood plantations and development of bio-gas and other alternative energy sources will be pursued vigorously in order to conserve forest wealth and maintain ecological and environmental balance.

21.11 The public distribution system will be expanded and strengthened so as to supply essential consumer goods at reasonable prices to all, particularly the vulnerable sections living in rural as well as remote and backward areas. A strong consumer protection movement will be developed. The working of public sector enterprises will be improved by increasing their efficiency, capacity utilisation and generation of internal resources. Appropriate steps will be taken to maintain a healthy investment climate and promote balanced industrial growth.

21.12 A total outlay of Rs. 15999.77 crores—Rs. 5951.81 crores in the Central sector and Rs. 10047.96 crores in the States/UTs—will be available for the 20-Point Programme during 1986-87. This marks a 22 per cent increase over the previous year's outlay. The physical targets under different items of the programme have been derived from the targets under different developmental heads. The point-wise financial outlays and physical targets are given in Annexures 21.1 and 21.2 respectively.

## ANNEXURE 21.1

## 20-Point Programme Financial Outlay &amp; Expenditure

(Rs. in crores)

Items	1984-85 Actual Expenditure			1985-86 Revised Estimates			1986-87 Approved Outlays			
	Centre	States/ U.Ts	Total	Centre	States/ U.Ts.	Total	Centre	States/ U.Ts.	Total	
1	2	3	4	5	6	7	8	9	10	11
1A Irrigation . . . . .	21.73	2255.00	2246.73	23.84	2374.79	2398.63	38.20	2681.25	2719.45	
1B Dryland . . . . .	4.40	—	4.40	0.52	—	0.52	54.54	53.84	108.38	
2 Pulses/Oilseeds . . . . .	34.00	27.00	61.00	34.50	27.00	61.50	29.64	—	29.64	
3A IRDP* . . . . .	223.61	225.86	449.47	225.48	237.10	462.58	309.05	286.20	595.25	
3B NREP . . . . .	240.12	270.39	510.51	337.21	243.80	581.01	442.65	248.49	691.14	
3C RLEG <sup>P</sup> . . . . .	399.51	—	399.51	606.34	—	606.34	633.65	—	633.65	
4 Land Reforms . . . . .	5.38	72.16	77.54	3.70	70.31	74.01	4.05	68.42	72.47	
5 Minimum wages for Agri. Labourers . . . . .	—	0.57	0.57	0.05	0.37	0.42	N.A.	0.22	0.22	
6 Bonded Labour rehabili- tation . . . . .	5.29	4.86	10.15	5.07	4.60	9.67	5.20	5.31	10.51	
7 SC/ST Welfare . . . . .	64.30	298.89	363.19	37.87	227.21	265.08	42.00	265.98	307.98	
8 Rural Water Supply . . . . .	288.96	388.73	675.69	298.88	421.23	720.11	316.75	417.38	734.13	
9 House sites/ Construction assistance . . . . .	—	92.64	92.64	—	101.36	101.36	—	105.18	105.18	
10 Slum Improvement . . . . .	10.00	41.34	51.34	—	36.33	36.33	—	47.27	47.27	
11 Power . . . . .	1653.25	3005.25	4658.51	2197.49	3521.23	57.8179	2984.73	4420.98	7405.71	
12A Afforestation . . . . .	36.74	212.26	249.00	52.43	247.03	299.46	75.00	305.70	380.70	
12B Biogas Plants . . . . .	47.52	—	47.52	66.21	—	66.21	59.00	—	59.00	
13 Family Planning . . . . .	389.99	—	389.99	499.94	—	499.94	530.00	—	530.00	
14 Primary Health Care . . . . .	1.09	99.96	101.05	7.00	148.27	154.57	3.5	178.60	182.10	
15 Nutrition . . . . .	0.19	127.27	127.46	0.44	243.13	243.57	0.80	310.78	311.58	
16 Elementary/Adult Education	67.18	113.19	174.97	64.63	274.52	339.15	94.80	362.79	457.59	
17 Public Distribution System	0.28	9.16	9.44	0.30	6.78	7.08	0.50	11.22	11.72	
18B Village & Small Industries.	336.26	284.62	620.28	297.41	243.06	540.47	327.75	278.35	606.10	
TOTAL . . . . .	3829.81	7522.15	11351.96	4758.61	8424.12	13186.73	5951.81	10047.96	15999.77	

\*Includes provision for allied programmes.



## Physical Performance under 20-Point Programme

Point No.	Items	Unit	1984-85		1985-86		1986-87	
			Target	Achievement	Target	Achievement	Target	
1	2	3	4	5	6	7	8	9
1A.	Irrigation potential	'000 ha.	2310	2279	2320	2224	2420	
1B.	Dryland Farming	No. of Micro Water sheds	4608	7420	8430	13472	14015	
2A.	Pulses Production	'000 tonnes	13300	12503	14362 (13500)	12900	15253	(14000)*
2B.	Oil seeds Production	-do-	13600	13000	15059 (13600)	11200	16487	(14800)*
3A.	IRDP	No. of families (Lakh)	30.27	39.82	40.10	30.2	40.09**	
3B.	NREP	Lakh mandays	3091	3523	2280.0	2887		2500.83
3C.	RLEGP	-do-	3000	2549	2057.3	2118.6		2364.47
4.	Land Reforms	'000 Acres	198.760	158.232	125.18	109.4	82.27	
6.	Bonded Labour	Nos.	31326	23382	30593	21673	19728	
7A.	S.C. Welfare	No. of Families (Lakh)	25.26	25.31	21.40	20.0	21.4**	
7B.	S.T. Welfare	-do-	9.61	10.63	8.35	7.6	8.3**	
8.	Rural Water Supply	No. of villages	415.30	56059.8	28177	45198	36000	
9A.	House sites allotted	Lakh Nos.	7.98	10.35	5.8	9.0	6.3	
9B.	Construction Assistance	-do-	4.73	4.32	4.13	4.1	3.9	
10A.	Slum Improvement	-do-	18.30	24.15	14.99	20.5	15.3	
10B.	EWS Houses	-do-	1.68	1.84	1.5	1.43	1.2	
11A.	Villages Electrified	Nos.	23105	21780	20698	19909	21592	
11B.	Pumpsets Energised	Lakh Nos.	3.86	3.97	3.9	4.4	3.92	
12A.	Tree Plantation	-do-	25097	25300	28146	30201	34285**	
12B.	Biogas Plants	No.	150410	180430	150000	193000	151118	
13.	Sterilisation	Lakh Nos.	58.75	40.21	55.09	48.9	60	
14A.	Primary Health Care	Nos.	192	1155	1455	1777	1554	
14B.	Sub-Centres	Nos.	9071	8782	6132	6598	8766	
15.	ICDS Blocks	Nos.	183	197	210	224	246	
16A.	Elementary Education	'000 Nos.	5029	5251	5272	5822	5661.0	
16B.	Adult Education	-do-	6155	6500	7546	7264	8360.3	

\*subject to revision in case of U.P.

\*The targets for Pulses and Oilseeds are operational targets for the States/UTs.

National targets are given in brackets.

\*\*Provisional

\*\*Subject to revision in case of U.P. and Mizoram.

## CHAPTER 22

### MINIMUM NEEDS PROGRAMME

The Minimum Needs Programme, which had been launched in mid-seventies, is being continued in the Seventh Plan in a substantially expanded forms. This programme seeks to establish a net-work of basic services and facilities of social consumption in all areas upto nationally accepted norm within the stipulated time perspective. It comprises education, health, drinking water supply, nutrition, rural housing, environmental improvement of urban slums, rural roads, electrification, and domestic cooking energy. The allocations are earmarked and cannot be diverted.

22.2 The anticipated expenditure for 1985-86 and the approved outlay for 1986-87 for each component of the programme are given in Annexure 22.1, while State-wise break-up of the approved outlay for 1986-87 is given in Annexure 22.2.

#### *Elementary Education*

22.3 With a view to achieving universalisation of elementary education by 1990, about 50 million additional children would have to be enrolled both in the formal and non-formal systems of education during the Seventh Plan. Focus has been shifted from additional enrolment to reduction of drop out rate and qualitative improvement so as to achieve the learning objectives. Special attention will be given to the education of girls and students from poor and backward sections of the community.

22.4 During 1985-86, it was proposed to enrol 52.72 lakh additional children under the formal system of education in schools in classes I to VIII but the actual enrolment was higher at 58.22 lakh additional children. During 1986-87, it is proposed to enrol 56.61 lakh additional children under the formal system for which an outlay of Rs. 360.73 crores has been provided.

22.5 For encouraging enrolment of Scheduled Castes, Scheduled Tribes and other weaker sections of the society, the incentives such as free supply of books, school uniforms and payment of attendance scholarships will be expanded during 1986-87. For reducing the drop out rate of girls, who have to look after younger siblings in the family, provision of play centres/baiwadis adjunct to the primary schools will be further encouraged. Improvement of infrastructure and teaching materials will be taken up on a priority basis.

#### *Adult Education*

22.6 It is proposed to cover 100 per cent illiterate persons in the age group of 15 to 35 years by 1990 under the adult education programme.

22.7 For 1985-86, against the target of 7.55 million persons, the achievement has been 7.26 million. For the year 1986-87, a target of covering 8.36 million persons has been fixed and an outlay of Rs. 96.86 crores (Rs. 63 crores in the Central sector and Rs. 33.86 crores in the State sector) has been provided. This programme of mass education will be taken up through teachers, students, social workers and voluntary organisations. The resource centres set up to undertake training of functionaries and production of learning materials will be strengthened.

#### *Rural Health*

22.8 For achieving the objective of health for all by 2000 AD, the strategy of development of health care delivery system in rural areas would be pursued vigorously. Action has been taken to consolidate the health infrastructure already developed by making up the deficiencies in respect of trained personnel, equipment and other physical facilities. The targets and anticipated achievements for 1985-86 in regard to the establishment of the three tier system of sub-centres primary health centres and community health centres are as follows :

	1985-86	
	Target	Anticipated Achievement
Sub—Centres	6132	6598
Primary Health Centres	1446	1777
Community Health Centres	298	182

22.9 During 1986-87, additional 8766 sub-centres, 1554 primary health centres and 278 community health centres are proposed to be set up. Construction works would be taken up in areas where rented buildings are not easily available.

22.10 Continuing education of staff of primary health centres and training of specialists and paramedical workers required for proper manning of health care infrastructure, which made no effective progress hitherto, is expected to pick up in 1986-87. The scheme of training of village health guides is under review.

22.11 A sum of Rs. 182.10 crores has been allocated for the rural health programme during 1986-87 of which Rs. 174.54 crores is for States, Rs. 4.06 crores for UTs and Rs. 3.50 crores for Central sector schemes.

### *Rural Water Supply*

22.12 The Sixth Plan had aimed at covering 2.31 lakh problem villages under the Rural Water Supply Scheme. A massive programme was launched to provide potable water for most of the identified villages. The results have been impressive. Out of the total of 2.31 lakh villages identified as problem villages, 1.92 lakh such villages and 47,000 other than problem villages are estimated to have been provided with water supply facilities by the end of the Sixth Plan. With this, 54 per cent of the population in the rural areas had been covered by the Rural Water Supply Scheme.

22.13 The objective in the Seventh Plan is to cover all the remaining problem villages and upgrade the level of services in the other villages, both through piped water supply and spot sources.

22.14 Against the target of 28177 villages to be covered in 1985-86, 45198 villages were actually covered. In the Annual Plan 1986-87, the approved outlay is Rs. 734.13 (Rs. 417.38 crores for States/UTs and Rs. 316.75 crores for the Centre) and the target fixed is 36000 villages. Priority will be given to the left over problem villages. Besides, additional water points will be provided for the Scheduled Castes/Scheduled Tribes and landless labourers in the already covered villages.

### *Rural Electrification*

22.15 In the Seventh Plan, this component aims at ensuring minimum coverage of 65 per cent villages by all States/UTs by 1989-90. The priorities will be as follows:

- (i) All North-Eastern Hill States and UTs;
- (ii) Districts in other States with less than 65 per cent electrification (the districts having least percentage coverage will be given priority over others);
- (iii) All areas included in the Tribal Sub-Plan.

22.16 During 1985-86, villages totalling 19909 were electrified as against the target of 20698 villages. The number of pump sets energised was 4.43 lakhs against the target of 3.96 lakhs. For 1986-87, the target for electrification of villages is 21592 and for pump-sets 3.92 lakhs. The total allocation for 1986-87 for rural electrification, including energisation of pumpsets, is Rs. 92.59 crores.

### *Rural Roads*

22.17 During the Seventh Plan, concerted efforts will have to be made by the States, particularly those below the national average viz. Andhra Pradesh, Himachal Pradesh, Orissa, Rajasthan, Tamil Nadu and West Bengal, to take up a well prioritised programme for construction of rural roads. In view of the problems of linking villages in hill, tribal and desert areas, the norms have been liberalised as follows:

- (i) *Hill Areas*:
  - (a) 100 per cent linkage during a 10 year time frame of villages with population over 500; and

- (b) 50 per cent linkage during a 10 year time frame of villages with population between 200—500.

### *(ii) Tribal, Coastal and Desert Areas:*

- (a) 100 per cent linkage during a 10 year time frame of villages with population over 1000; and
- (b) 50 per cent linkage during a 10 year time frame of villages with population between 500—1000.

22.18 The target for 1985-86 was to link up 3440 villages with roads. As against this, 2944 villages had been linked up with roads. In the Annual Plan 1986-87, an outlay of Rs. 241.94 crores has been approved with the target of linking up 3016 villages with roads.

### *Rural Housing for Landless Workers*

22.19 The Minimum Needs Programme and the 20-Point Programme give a high priority to the rural house-site-cum-house-construction assistance scheme. It is estimated that out of the total 12.2 million landless families, 0.72 million landless families were yet to be provided with house-sites at the beginning of the Seventh Plan. It was felt that, before extending the coverage of the scheme to smaller municipalities and families having higher incomes, efforts should be made to provide construction assistance to those families who had already been provided house-sites according to the original criterion of the scheme.

22.20 House-sites were provided to 9.0 lakh families and construction assistance given to 4.1 lakh families during 1985-86. An outlay of Rs. 105.18 crores has been provided for the scheme for 1986-87 and a target of providing house-sites to 6.33 lakh families and construction assistance to 3.89 lakh families has been fixed.

### *Environmental Improvement of urban slums*

22.21 The Sixth Plan target was to cover 10 million slum dwellers under the scheme but the achievement was only 9.17 million. The norm of per capita assistance has been revised to Rs. 300 and it is proposed to cover 9 million slum dwellers during the Seventh Plan.

22.22 During 1985-86, the target was to cover 14.99 lakh slum population against which the coverage has been 20.5 lakh slum population. In the Annual Plan 1986-87 an outlay of Rs. 47.27 crores has been provided to cover 15.34 lakh slum dwellers.

## **NUTRITION**

### *Special Nutrition Programme (SNP)*

22.23 This programme covers children below 6 years of age, pregnant women and nursing-mothers. It provides supplementary feeding of 300 calories

with 8-12 grams of protein for children and 500 calories with 25 grams of protein for mothers for 300 days in a year. The majority of the beneficiaries are covered through the Integrated Children Development Services (ICDS) scheme and special nutrition programme centres.

22.24 During 1985-86, 2.33 million additional beneficiaries were covered under the SNP. More beneficiaries were brought within the ambit of ICDS so as to ensure better impact of the programme. In the Annual Plan 1986-87, emphasis would continue to be on consolidation of the programme within ICDS areas and on the convergence of related services in the feeding centres outside the ICDS. It is estimated that over 11.37 million beneficiaries would be covered under the SNP by the end of March, 1987.

#### *Mid-day Meals (MDM) Programme*

22.25 The Mid-day Meals (MDM) Programme is meant for the school going children in the age group of 6-11 years and it provides supplementary food containing 300 calories and 8-12 grams of protein for 200 days in a year. In the Annual Plan 1985-86 the main emphasis under this programme was on consolidation rather than on expansion. By the end of the year 1985-86, the coverage was estimated at 15.62 million beneficiaries. The emphasis on consolidation will continue and the programme is not expected to be expanded significantly during 1986-87 as it is felt that community programmes without related inputs like health care, nutrition, education, safe drinking water, etc. would not bring the desired impact on the targetted beneficiaries.

22.26 An outlay of Rs. 310.78 crores has been provided for both the SNP and MDM programme in 1986-87.

#### *Rural Domestic Cooking Energy*

22.27 This programme has two components viz., installation of improved *chullahas* and rural fuelwood plantations. The main objective of the programme

is to meet the fuelwood, fodder and small timber requirement of rural people in and around the villages as well as to provide thermally efficient *chullahas*. This would also minimise deforestation and help maintaining the ecological balance.

22.28 During 1985-86, against the target of installing 10 lakh improved *chullahas* the actual achievement was 12 lakhs. In the Annual Plan 1986-87, a provision of Rs. 5.19 crores has been made with a target of providing 5 lakh improved *chullahas*. In addition, R&D activities will be intensified to improve efficiency of stoves, and the training programmes will be made more broad based.

22.29 The implementation of rural fuelwood plantation scheme has been expanded during the Seventh Plan to cover all the fuelwood deficit districts of the country. The scheme includes distribution of about 100 crores seedlings to benefit at least 2 million rural poor families belonging to the Scheduled Castes, Scheduled Tribes and other backward classes. It would also cover the programme "A Tree for Every Child" to enthuse youth and the children in particular in tree planting and after care. Small and marginal farmers would be encouraged to raise nurseries and provide support services like technical guidance and inputs. Active participation of voluntary organisations would also be enlisted for ensuring the success of the programme.

22.30 Rural Fuelwood plantations are being raised under the scheme on all available land viz.; community land, waste land, sides of roads, canals, railway lines and in an-around individual farms; houses, schools and public buildings. During 1985-86, 29.49 crores free seedlings were supplied and an area of 0.97 lakh hectares planted. The scheme has been expanded and renamed as "Rural Fuelwood Plantation and Afforestation of Non-Himalayan Eco-sensitive Areas". It is proposed to treat an area of 0.89 lakh hectares under this scheme during 1986-87, for which a provision of Rs. 22.10 crores has been made in the central sector.

## ANNEXURE 22.1

*Outlays for Minimum Needs Programme*

(Rs. lakhs)

Sl. No.		1985-86 Anticipated Expenditure	1986-87 Approved outlay
1.	Elementary Education . . . . .	27147	36073
2.	Adult Education . . . . .	6768	9686
3.	Rural Health . . . . .	17969	18210
4.	Rural Water Supply . . . . .	72036	73413
5.	Rural Electrification . . . . .	7608	9259
6.	Rural Roads . . . . .	24966	24194
7.	Rural Housing . . . . .	10136	10518
8.	Slum Improvement . . . . .	3633	4727
9.	Nutrition . . . . .	24313	31078
10.	Improved Chullahs Scheme . . . . .	985	519
11.	Rural Fuelwood Plantation Scheme . . . . .	2490	2210
	<b>TOTAL . . . . .</b>	<b>198051</b>	<b>219887</b>

## Minimum Needs Programme Approved Outlay : 1986-87 Centre, States &amp; UTs

(Rs. lakhs)

Sl. No.	Name of the State / Union Territories	Elementary	Adult Education	Rural Health	Rural Water Supply	Rural Electrification	Rural Roads	Rural Housing	Slum Improvements	Nutrition	I.C. Scheme	RFP Scheme	Total
<b>A. States :</b>													
1.	Andhra Pradesh	2336	400	810	1700	..	450	4800	550	540			11244
2.	Assam	3207	140	818	2481	1207	889	250	31	418			9441
3.	Bihar	3300	700	1225	2300	1500	3200	250	120	650			13265
4.	Gujarat	748	150	625	1135	..	380	850	30	7400			5718
5.	Haryana	920	30	450	2339	..	5	90	100	262			4196
6.	Himachal Pradesh	300	11	200	1490	57	900	1	15	83			1057
7.	Jammu & Kashmir	520	37	460	1500	..	446	35	40	165			3202
8.	Karnataka	1120	275	1468	2000	..	970	1773	325	4131			12062
9.	Kerala	120	..	525	1000	..	900	149	35	1333			4062
10.	Madhya Pradesh	1783	232	1200	2500	1500	2000	525	185	750			106.
11.	Maharashtra	1416	400	2900	9700	..	726	450	880	930			1744
12.	Manipur	205	35	103	560	200	275	..	7	33			14
13.	Meghalaya	200	8	173	550	140	175	..	5	54			13
14.	Nagaland	160	9	102	300	25	—	..	..	156			734
15.	Orissa	1521	37	460	1025	800	950	100	30	350			5273
16.	Punjab	402	10	245	1050	..	—	69	62	245			2083
17.	Rajasthan	1700	100	500	1400	100	900	110	55	200			5065
18.	Sikkim	350	19	35	200	15	345	..	6	45			1006
19.	Tamil Nadu	3450	198	750	3500	..	706	300	600	10812			20308
20.	Tripura	770	20	120	400	97	450	50	21	338			2266
21.	Uttar Pradesh	2525	250	3000	2524	2500	8012	510	400	926			20649
22.	West Bengal	2156	150	1285	800	800	460	95	655	500			6901
Total All States :		29209	3234	17454	40454	8941	23139	10407	4152	30321			167311
<b>B. Union Territories :</b>													
1.	Andaman & Nicobar Islands	105	3	40	72	..	160	..	3	13			396
2.	Arunachal Pradesh	750	65	146	525	150	472	30	..	47			2185
3.	Chandigarh	112	6	2	..	..	..	..	..	49			16
4.	Dadra & Nagar Haveli	52	3	13	19	..	25	2	..	14			12
5.	Delhi	2297	54	..	200	..	..	17	595	439			355
6.	Goa, Daman & Diu	107	12	40	150	..	7	12	..	..			3
7.	Lakshadweep	16	1	2	35	..	6	..	..	8			0
8.	Mizoram	150	5	143	250	168	350	10	..	56			113
9.	Pondicherry	95	3	20	33	..	35	40	20	69			315
Total : Union Territories		3684	152	406	1284	318	1055	111	575	757			8342
Total (States & Uts)		32893	3386	17860	41738	9259	24194	10518	4727	31078			175653
Central Sector		3180	6300	350	31675	..	..	..	..	..	519	2210	44234
Grand Total		36073	9686	18210	73413	9259	24194	10518	4727	31078	519	2210	219887

\*I.C. Scheme-Improved Chullah Scheme

\*RFP Scheme-Rural Fuelwood Plantation Scheme.