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FIVE YEAR PLAN

1978-83

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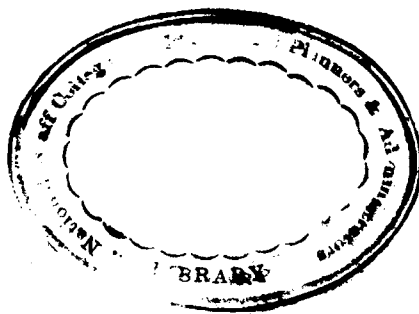
ANNUAL PLAN 1979-80

(Vol. II—Sectoral Reviews)

**UTTAR PRADESH
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CHAPTER I
AGRICULTURE AND ALLIED SERVICES
(1) AGRICULTURE

(i) AGRICULTURAL PRODUCTION

Agriculture is the predominant occupation of the population of Uttar Pradesh. It contributes about 50 per cent of the

total State Income and employs about 77.38 per cent of the total work force of the State. The role played by U. P.'s Agriculture in the national context would be apparent from the following table :

TABLE I--Production of important crops in U. P. and all-India during the year 1975-76

Serial no.	Product	Total Production		% of U.P. over all India	Productivity (in Qtls. per hect.)	
		(000) tonnes All-India	U. P.		All-India	U. P.
1	2	3	4	5	6	7
1	Wheat	28,336	8,552	30.18	14.09	13.57
2	Rice	49,457	4,294	8.68	12.46	9.29
3	Pulses	13,135	2,657	20.23	5.33	8.42
4	Other food grains	29,905	3,953	13.22	6.83	8.09
5	Total food grains	1,20,833	19,456	16.10	9.43	10.26
6	Total Oil seeds	10,173	1,855	18.23	6.58	4.95
7	Sugarcane	1,42,705	58,359	40.89	511.54	405.08
8	Potato	7,432	2,507	33.73	116.28	131.29
9	Cotton	1,037	3	0.29	1.39	0.95
10	Jute	803	8	1.00	13.69	10.84

1.1.2. In relation to future planning for the Agricultural Production sector, basic decisions have to be taken first of all with regards to the allocation of natural resources between crop production, horticulture, forestry, animal husbandry etc. Thereafter, it has to be decided as to which crop should be allocated, how much of the irrigated and unirrigated area available for agriculture and what measures should be taken to raise productivity levels feasible in the context of available technologies. In order to provide a proper conceptual framework for agricultural planning, it is essential that alternatives coming up for consideration should be examined in the light of the risk factor, financial returns, equitable distribution of benefits and maximisation of employment opportunities. In a State like U. P. with such a

variety of institutional socio-cultural and Agro-climatic conditions a realistic exercise on the lines proposed can be undertaken only on the basis of multi-level planning at the block, district and regional levels.

1.1.3. The foremost task of agricultural administration in Uttar Pradesh is to bring about a major improvement in per hectare yields which continue to be low inspite of the fact that in terms of natural resource endowments and agro-climatic factors, the State is more favourably placed than most other States of the Union. Uttar Pradesh has vast resources of surface as well as underground water for developing an efficient network for irrigating its generally fertile soils. Efforts made so far in stepping up agricultural

production have yielded good results, particularly with the adoption of high yielding varieties of major cereal crops. In fact, because of the adoption of these varieties the traditional cropping pattern of early sixties under which large areas were covered with low value cereals has undergone a radical change. Production of cereals has already increased to a point at which the State is self-sufficient in respect of these basic food-grains. On the other hand, production of pulses has registered a gradual decline. The production of oilseeds, which had been registering an upward trend till mid-sixties, has been stagnating since then chiefly because these cannot compete with high yielding varieties in terms of financial returns. Sugarcane, which is the most important cash crop of the State, has not been affected by the competition for high yielding varieties. Its production through increases in acreage and productivity rose to 80 million tonnes in the year 1977-78. It is becoming increasingly clear that whether from the national or the State's point of view, the entire cropping pattern will have to be reorganised so as to reduce the area under sugarcane and increase the coverage under fruit trees, pulses, oilseeds, vegetables, feed and fodder crops etc.

1.1.4. The Plan for 1978-83 has been prepared against this background and the individual measures proposed in it are all

expected to contribute not only to significant increase in value of per hectares product and maximisation of employment and other benefits to landless labour and small and marginal farmers but also to basic changes in cropping pattern, particularly in the hills and the rainfed areas of Bundelkhand which would concentrate much more on fruit and vegetable growing as well as play a significant role in meeting current deficits of pulses and oilseeds. The targetted increase in the production of cereals is sought to be brought about mainly through the adoption of package of practices resulting in significant improvement in per hectare yield. The State also envisages a significant break through in multiple cropping leading to a significantly higher level of cropping intensity than obtaining at present.

1.1.5. Before describing the programmes proposed to be undertaken during the 1978-83 plan period and in the year 1979-80, it seems appropriate to present a brief review of the progress of agricultural production programmes since 1950-51.

Land use and Cropping Pattern

1.1.6. The total reporting area of Uttar Pradesh is about 30 million hectares. In 1950-51, the net cropped area was 162 lakh hectares. The average figures of cropped and irrigated area for each plan period are shown in Table 2 below :

TABLE II—Plan-wise figures of average of total cropped area, net cropped area, gross irrigated area, and net irrigated area in different plan periods.

Plan Period	(lakh hectares)			
	Total Cropped area	Net Cropped area	Gross Irrigated area	Net Irrigated area
1	2	3	4	5
Pre-Plan (1950-51)	199.60	162.31	52.09	43.40
First Plan (1951-52 to 1955-56)	205.78	166.74	55.08	50.50
Second Plan (1956-57 to 1960-61)	215.29	170.27	54.04	49.40
Third Plan (1961-62 to 1965-66)	220.92	173.04	59.49	53.37
Annual Plan (1966-67 to 1968-69)	224.05	173.66	70.21	61.64
Fourth Plan (1969-70 to 1973-74)	230.27	172.68	82.81	71.17
Fifth Plan (1974-75 to 1977-78)	230.13	172.46	93.87	79.96

1.1.7. The average net cropped area during the First Five Year Plan was about 167 lakh hectares which further increased to 170 lakh hectares during the Second Plan period and to 173 lakh hectares during the Third Plan period. Thereafter, there was no increase in the net cropped area for obvious reasons. The gross cropped area, however, continued to register increases in the succeeding Plans.

1.1.8. The double cropped area increased steadily between 1950-51 and 1968-69. Since then the situation has stagnated, indicating that full advantage of the large increases in irrigated area have not been taken for the intensification of agriculture during this period. Table III below provides data in support of this conclusion :

TABLE III—Comparative position of double cropped area and net irrigated area
(lakh hectares)

Serial no.	Plan Period	Double Cropped area	Net irrigated area	Gap between net irrigated area and double cropped area (Col. 4—3)
1	2	3	4	5
1	Pre-Plan (1950-51)	37	43.40	6.40
2	First Plan (1951—56)	39	50.50	11.50
3	Second Plan (1956—61)	45	49.40	4.40
4	Third Plan (1961—65)	47	53.37	6.37
5	Annual Plan (1966—69)	51	61.64	10.64
6	Fourth Plan (1969—74)	58	71.17	13.17
7	Fifth Plan (1974—78)	58	79.96	21.96

1.1.9. It is evident from the above that area sown more than once does not bear any relationship with the area brought under irrigation. Thus, there is ample scope for increasing double cropped area with the existing irrigation facilities.

1.1.10. *Cropping Pattern*—In the year 1950-51, foodgrains accounted for about 170 lakh hectares of the total cropped area in the State. The area under foodgrains gradually increased to 193 lakh hectares by the end of the Fourth Plan period. Thereafter, a marginal decrease of about 4 lakh hectares was registered between 1974-75 and 1977-78. A large share of the increase in the area of foodgrains is accounted for by the cereal crops alone. The

area under wheat showed steep increase after Third Plan mainly due to the introduction of new technology of high yielding varieties. On the other hand, the area under pulses remained more or less stagnant upto the Third Plan period, and thereafter declined considerably during the subsequent plan periods. This decline in the area under pulses is largely attributable to the fact that with the steady increase in the irrigation facilities, there was a gradual shift in the area from pulse crops to the cereal crops, particularly wheat and rice. With regard to oilseeds also, there was a steady increase in the area upto the beginning of the Fourth Plan period. Thereafter, the total area under oilseeds has remained

more or less static. The broad cropping pattern in the State for the last 30 years is

presented through relevant figures in table IV below :

(Area in Lakh hectares)
(Production in Lakh tonnes)

TABLE IV—Figures of average of area and production of rice, wheat, total pulses, total foodgrains and total oilseeds pure and mixed in different Plan periods

Plan period	Rice		Wheat		Total Pulses		Total foodgrains		Total Oilseed	
	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
1	2	3	4	5	6	7	8	9	10	11
Pre-Plan (1950-51)	38.52	19.99	33.16	27.21	43.45	30.23	170.89	117.75	21.58	7.79
First Plan (1951-52 to 1955-56)	36.35	21.00	36.53	30.05	43.88	30.11	174.89	121.88	23.47	9.05
Second Plan (1956-57 to 1960-61)	40.43	26.62	38.94	32.48	45.92	33.41	182.39	129.84	26.96	10.41
Third Plan (1961-62 and 1965-66)	42.91	30.84	40.27	35.91	46.03	31.53	182.37	135.78	35.99	13.83
Annual Plan (1966-67 to 1968-69)	42.83	26.21	48.10	53.86	41.28	28.58	187.96	148.28	37.78	14.67
Fourth Plan (1969-70 to 1973-74)	44.69	35.69	59.09	70.11	36.38	28.18	193.06	176.50	37.63	15.86
Fifth Plan (1974-75 to 1977-78)	46.32	42.95	64.33	85.45	30.86	24.75	189.47	191.30	37.61	16.85

1.1.11. Area under rice which in 1950-51 was 38.5 lakh hectares rose to 46.3 lakh hectares during the Fifth Plan period. The increase of area under wheat was, however, much more dramatic as it almost doubled as compared to 1950-51 during the Fifth Plan period. It is thus evident that the cropping pattern in the State has by and large, undergone a significant change, particularly after the introduction of the high yielding varieties of wheat and rice. The percentage share of pulses as well as their absolute figures of area have considerably declined. It is now to be decided as to whether this needs to be encouraged, checked, reversed or modified in the light of demand, price and other relevant variables.

1.1.12. Trends in Production—For studying trends in agricultural production, the figures of total production of foodgrains, rice, wheat, pulses and oilseeds, averaged for various Plan periods, are given in Table IV above. It would be seen that the total food-grain production in

the State was about 118 lakh tonnes during 1950-51. There were marginal increases in the total foodgrain production up to the Third Five-Year Plan. During this period of 15 years, the average production increased by about 18 lakh tonnes. However, in the subsequent period of 13 years, average production increased by 56 lakh tonnes to the level of 191 lakh tonnes. A large bulk of this increase has been contributed by increases in productivity of wheat and rice, though increase in area too has not been inconsiderable. A very important feature of development in relation to agricultural production is that it is now in a far better position to absorb fluctuations in weather conditions. Before 1964-65, the total food-grains production fluctuated between 109 lakh tonnes to 152 lakh tonnes. After 1967-68, even though the State experienced consecutive droughts and floods, the minimum foodgrains production of 155.64 lakh tonnes during 1973-74, far exceeded the maximum production of 152 lakh tonnes during 1964-65.

1.1.13. *Production Programmes Implemented during Fifth Five-Year Plan*—Up to the Third Five-Year Plan, the strategy for increasing agricultural production relied largely on bringing more area under cultivation, augmenting irrigation facilities and popularising the use of improved cultivation practices. With the advent of high yielding varieties, the emphasis shifted in irrigated areas to entirely new packages of technology comprising new seeds, chemical fertilizers and pesticides. Measures for improvement of agricultural efficiency through better soil and water management also become important in direct proportion to the spread of the new relatively capital intensive technologies. Since chemical fertilizers have to be used on a significantly greater scale under the new high yielding technologies, organizational aspects for the delivery of credit as well chemical fertilizers assumed a crucial role and led to the opening of co-operative and commercial bank branches, fertilizer and seed distribution outlets on a large scale; provision of transport subsidy to even out costs in inaccessible areas; financial incentives for the use of phosphatic and potassic fertilizers; and laying out of a large number of demonstrations. As a result of these measures, fertilizer consumption increased rapidly during the last two plan periods. The average annual consumption of chemical fertilizers between 1966 and 1969 was of the order of 2 lakh tonnes. This increased to 4.6 lakh tonnes during the Fourth Plan period and to 6.2 lakh tonnes during the Fifth Plan period. Similarly, irrigation facilities have also expanded at a faster rate. A large number of tube-wells and pumping sets have been installed in the private sector and a number of major and medium irrigation projects have also been completed during this period. Owing to these measures, the gross irrigated area increased

from 70 lakh hectares in 1968-69 to 85 lakh hectares and 130 lakh hectares by the end of the Fourth and Fifth Plan periods respectively. This kind of rapid increase became possible only in the off take of fertilizers and area under irrigation because economic incentives were provided to the cultivators in the shape of subsidies for installation of tube-wells and other sources of irrigation and remunerative prices for agricultural produce.

1.1.14. Year-wise performance of some of the important programmes during the Fifth Plan period are briefly described below:

Consumption of chemical fertilizers

1.1.15. The progress in the distribution of this important input in the State from 1973-74 onwards is shown below:

TABLE V—*Distribution of Chemical Fertilizers*
(lakh tonnes)

Year	Distribution of fertilizers			
	N	P ₂ O ₅	K ₂ O	Total
1	2	3	4	5
1973-74	3.29	0.87	0.48	4.64
1974-75	3.29	0.49	0.32	4.10
1975-76	3.86	0.63	0.38	4.87
1976-77	5.72	1.02	0.55	7.29
1977-78	6.48	1.39	0.73	8.60

1.1.16. The consumption of fertilizers which was 4.64 lakh tonnes in 1973-74 went up to 8.60 lakh tonnes in 1977-78. A slight fall in consumption occurred in 1974-75 due to abnormal increase in the price of fertilizers in the wake of global oil crisis. Thereafter, there has been a steady growth in the consumption of fertilizers. As far as the balanced use of N, P and K fertilizers, is concerned, the

position obtaining at present is not at all in accordance with the recommended application rates.

1.1.17. *Area under high yielding varieties*—The area under high yielding

varieties of both *kharif* and *rabi* crops from 1973-74 onwards is shown in the table below :

TABLE VI—*High Yielding Varieties Programmes*

(’000 hectares)

Crops	1973-74	1974-75	1975-76	1976-77	1977-78
1	2	3	4	5	6
1. Paddy	1,278 (28.58)	1425 (32.20)	1593 (34.47)	1,679 (36.08)	1800 (37.28)
2. Maize	16 (1.26)	20 (1.62)	24 (2.00)	24 (2.23)	32 (3.28)
3. Jowar	2 (0.28)	.. (—)	.. (—)	2 0.28	3 (0.46)
4. Bajra	44 (4.14)	45 (4.50)	77 (7.64)	25 (2.47)	30 (3.03)
5. Wheat	3978 (66.20)	4152 (67.49)	4638 (73.60)	4800 (72.46)	5300 (79.65)
Total	5318 (27.75)	5642 (30.25)	6332 (33.39)	6530 (34.16)	7165 (37.62)

NOTE—Figures in parenthesis give the percentage represented by the area under H. V. P. to the total area under the Crop in the reference year.

1.1.18. The above figures indicate that while wheat and paddy farming has been responsive to new technology, the response in the case of minor cereal crops has not been so encouraging

1.1.19. *Distribution of Certified seeds*—The progress in relation to the distribution of certified quality seeds of various crops is shown in table below:

TABLE VII—*Certified Seeds distribution*
(’000 quintals)

Year	Food crops	Others	Total
1	2	3	4
1973-74	104.00	1.00	105.00
1974-75	88.70	4.60	93.30
1975-76	88.80	4.70	93.50
1976-77	93.10	5.00	98.10
1977-78	151.62	0.55	152.17

1.1.20. About 90 per cent of the total certified seed distributed in 1977-78 was of paddy and wheat alone. There is, however, still ample scope for increasing the supply of certified seeds of major as well as minor foodgrain crops.

1.1.21. *Plant Protection Measures*—The progress of plant protection measures since 1973-74 is shown in table below :

TABLE VIII—*Area covered under Plant Protection*
(Lakh hectares)

Year	Area covered
1	2
1973-74	107.62
1974-75	100.32
1975-76	115.34
1976-77	139.31
1977-78	134.56

1.1.22. *Irrigation potential and Irrigated area*—The position obtaining in respect of irrigation potential created and the area

actually irrigated from 1975-76 to 1977-78 is given source-wise in the following table :

TABLE IX—*Source-wise irrigation potential and area irrigated*

('000 hectares)

Serial no.	Item	Actuals		Estimated	Proposed targets	
		1975-76	1976-77	1977-78	1978-79	1982-83
1	2	3	4	5	6	7
1	<i>Major and Medium Irrigation—</i>					
	(a) Potential	4736	4928	5472	5867	7639
	(b) Irrigated Area	4054	4209	4399	4678	6144
2	<i>State Minor Irrigation—</i>					
	(a) Potential	2177	2262	2380	2568	3903
	(b) Irrigated Area	1100	1200	1300	1500	2200
3	<i>Private Minor Irrigation—</i>					
	(a) Potential (Gross)	6 854	7521	8252	8848	11774
	(b) Irrigated (Net)	5844	6202	6605	7036	9182
4	GRAND TOTAL—					
	(a) Potential	13767	14711	16104	17583	23315
	(b) Irrigated Area	10998	11611	12304	13214	17526

1.1.23. *Strategy of crop production for the 1978-83 Five-Year Plan*—Agricultural development leading to higher production takes place broadly through the operation of the following important factors :

(a) Increase in area either through extension of cultivation to new lands or through multiple cropping ;

(b) Provision of research and development inputs ;

(c) Improvement in management practices ;

(d) Provision of material inputs ;

(e) Providing economic incentives ;

(f) Expansion of infrastructure for distribution of co-operative credit, fertilizers and seeds and also storage, transport and processing of products ; and

(g) Institutional measures like land reforms.

1.1.24. The existing land use pattern does not hold out hopes for any significant

increase in the net area under cultivation. Gross cultivated area can, however, be increased through multiple cropping. Irrigation and availability of short duration varieties of crops are pre-requisite for increasing the extent of areas sown more than once. Higher level of production in respect of foodgrains, oilseeds and other agricultural produce is sought to be achieved mainly through the increased use of high yielding varieties of seeds, chemical fertilizers, plant protection chemicals and irrigation. All out efforts would be made to improve agricultural efficiency through soil and water management, research extension and farmers' training and education. Remunerative prices of crops are being provided for wheat, gram, rice, sugarcane and oilseeds. Besides, in price support, subsidies on the use of fertilizer for pulse crops are also being given so that the economics of cultivation of pulses can compare favourably with cereal crops at least in areas with scarce irrigation facilities. Credit facilities would be expanded further to meet about 70 to 80 per cent of

the cash needs of the cultivators for purchase of quality seeds, fertilizers, plant protection chemicals and implements. In accordance with these measures which constitute the broad strategy envisaged for

crop production during the 1978-83 Five Year Plan, the following targets for production of foodgrains, oilseeds and fibre crops have been proposed for years 1978-79, 1979-80 and 1982-83 :

TABLE X—Crop-wise Production Targets

Serial no.	Item	Unit	Average Base level production 1977-78	Target proposed in the Five Year Plan for			Addl. Production 1982-83 on base year
				1978-79	1979-80	1982-83	
1	2	3	4	5	6	7	8
<i>Foodgrains—</i>							
1	Rice	'000 tonnes	4574	5300	5500	6500	19226
2	Jowar	Do.	491	450	460	550	559
3	Bajra	Do.	721	700	750	800	779
4	Maize	Do.	1017	1090	1050	1100	883
5	Kharif pulses	Do.	55	100	140	250	1995
6	Other cereals	Do.	461	360	300	200	...
Total, <i>Kharif</i>			7,319	8,000	8,200	9,400	2,081
7	Wheat	Do.	9,002	9,800	10,150	11,000	1,9918
8	Barley	Do.	1213	1100	1150	1200	..
9	Gram	Do.	1270	1300	1400	1600	3310
10	Peas	Do.	372	370	450	600	2218
11	Arhar	Do.	759	800	810	1000	241
12	Masur	Do.	115	130	140	200	85
Total, <i>Rabi</i>			12731	13500	14100	15600	2869
Total, Foodgrains			20050	21500	22300	25000	49510
<i>Commercial Crops—</i>							
1	Oilseeds	Do.	1675	2300	2500	3000	1325
2	Cotton	Bales	16	25	26	30	14
3	Jute	Do.	64	110	150	200	136

1.1.25. The total population of the State according to the Census of 1971 was 88.3 million. If the net rate of growth of 1.9 per cent per annum is assumed, the population would be around 110 million in 1983. Taking the *per capita* requirement of foodgrains as 177 kg. per year on

the basis of norms proposed by the Planning Commission and making an allowance for cattle feed, seed, storage losses and carry over stocks for the lean years, the following quantities of foodgrains would be needed for U. P. by the year 1982-83 :

TABLE XI—Requirements of foodgrains by the end of 1982-83

Serial no.	Items	(Lakh tonnes)		
		Cereals	Pulses	Total
1	2	3	4	5
1	Human consumption	154.94	29.01	183.95
2	Cattle feed	15.50	2.90	18.40
3	Provision for seed	15.50	2.90	18.40
4	Storage losses	7.75	1.45	9.20
5	Reserve for lean year	7.75	1.45	9.20
6	Exportable surplus	7.85	3.00	10.85
Total		209.29	40.71	250.00

1.1.26. Thus, the targets for foodgrains fixed for the year 1982-83 will meet all these requirements.

targets of production of foodgrains, oil-seeds and fibre crops, the following physical targets have been set by the Department of Agriculture :

1.1.27. For purposes of achieving the

TABLE XII—Programme Targets

Serial no.	Item	Unit	Base level achievement 1977-78	Targets		
				1978-79	1979-80	1982-83
1	2	3	4	5	6	7
<i>I—High Yielding Varieties</i>						
(a)	Paddy	'000 hectares	1800	1900	2300	2600
(b)	Maize	Do.	32	40	42	100
(c)	Jowar	Do.	3	6	6	40
(d)	Bajra	Do.	30	50	52	160
(e)	Wheat	Do.	5300	5500	5600	6000
Total, High Yielding Varieties			7165	7496	8000	8900
<i>II—Local High Yielding Varieties</i>						
(a)	Paddy	'000 hectares	1390	1600	1560	2000
(b)	Maize	Do.	866	900	950	1200
(c)	Wheat	Do.	624	1,000	900	600
Total, Local High Yielding Varieties			2880	3500	3410	3800
GRAND TOTAL			10045	10996	11410	12700

TABLE XII—Programme Targets (Concl'd)

Serial no.	Item	Unit	Base level achievement 1977-78	Targets		
				1978-79	1979-80	1982-83
1	2	3	4	5	6	7
<i>III—Urban Compost</i>						
	(a) Quantity produced	.. .. '000 tonnes	934	1200	1250	1430
	(b) Quantity distributed	.. .. Do.	958	1200	1250	1450
	<i>IV—Rural Compost</i>	.. .. Do.	89107	86665	97000	97000
<i>V—Chemical Fertilizers</i>						
	(a) N	.. .. Do.	648	800	930	1600
	(b) P ₂ O ₅	.. .. Do.	139	200	205	350
	(c) K ₂ O	.. .. Do.	73	120	105	200
	Total—V	.. .. Do.	860	1120	1,240	2150
<i>VI—Green Manures</i>						
	Area under green Manures	.. .. Do.	900	1000	1100	1400
	Gobar Gas-plants	.. .. Numbers	5000	10000	10000	40000
<i>VII—Plants Protection</i>						
	(a) Seed treatment	.. .. '000 hectare	3473	3600	3950	5000
	(b) Control of field Rats	.. .. Do.	5138	5800	6320	8000
	(c) Control Operation against General pests	.. .. Do.	1410	1400	1580	2000
	(d) Intensive Plant protection measures	.. .. Do.	2803	2880	3160	4000
	(e) Weed control	.. .. Do.	632	720	790	1,000
	Total—VII	.. .. Do.	13456	14400	15800	20000

1.1.28. Besides the achievement of above targets through the Department of Agriculture, a complimentary programme of augmenting irrigation potential is to be carried out on a massive scale by the Irrigation Department. It is proposed to create additional irrigation facilities to the extent of 52 lakh hectares of which about 17.0 lakh hectares would accrue from major and medium works and about 34 lakh hectares would become available through minor irrigation devices including private Minor Irrigation works. As a result of this, it is expected that the gross cropped area would increase by 28 lakh hectares.

1.1.29. *High Yielding Varieties programme*—As already stated, the main strategy during the Five-Year Plan 1978–83 would be to replace the area

under local varieties by high yielding varieties wherever possible. The base level coverage of area of paddy, maize, jowar, bajra and wheat under high yielding varieties and local improved varieties is 71.65 lakh hectares and 28.8 hectares respectively. It is proposed to increase the area under the High Yielding varieties from 71.6 lakh hectares to 89.0 lakh hectares and the area under local improved varieties, from 28.8 lakh hectares to 38 lakh hectares.

1.1.30. *Chemical Fertilizers*—As already stated, the major share of additional production target for the 1978–83 Five-Year Plan would be achieved through the use of material inputs, mainly chemical fertilizers. With this objectives, the total

chemical fertilizer (N P K) to be distributed during 1982-83 would be 21.5 lakh tonnes, as compared to base level achievement of 8.6 lakh tonnes. This would be possible only if, besides systematic extension inputs, adequate arrangements are made for agricultural credit. The present level of short term agricultural credit from co-operative is of the order of about Rs.138 crores of which roughly 52 per cent is given in the shape of fertilizers. As against this the total value of 8.6 lakh tonnes of chemical fertilizers comes to about Rs.344 crores. The value of 21.5 lakh tonnes of chemical fertilizers would, at present prices, be about Rs.860 crores. It is, therefore, imperative that short term credit should become available on a much larger scale and it should be given almost entirely in the shape of fertilizers.

1.1.31. *Organic and Green Manure*—The supply of urban compost will be increased by about 5 lakh tonnes and that of rural compost by about 8 lakh tonnes. The area under green manuring crops is proposed to be increased by about 5 lakh hectares.

1.1.32. *Plant protection*—The additional area proposed to be covered by various plant protection measures by 1982-83 will be around 66 lakh hectares as compared to the base level achievement of 134 lakh hectares. In case of seed treatment, the area is proposed to be increased from 35 lakh hectares to 50 lakh hectares. The area to be brought

under intensive plant protection measures is proposed to be stepped up by about 12 lakh hectares.

1.1.33. *Distribution of registered seeds*—During the 1978-83 Plan, special emphasis would be laid on the distribution of certified seeds. Adequate care will also be taken to promote the production of seeds of fodder crops and food-grains to meet the requirement of the ambitious programme of cattle development in the State. In order to achieve this, the promotion of fodder production will be treated as an integral part of crop husbandry so that mixed farming is encouraged, particularly on the holdings of small and marginal farmers. For this a massive programme is proposed to be taken up for evolving and popularising high yield varieties of fodder crops, introduction of leguminous fodders in the existing crop rotation and production and distribution of high quality seeds with a view to meeting the requirements of cattle development programme during the 1978-83 Plan period. For this purpose adequate provision of funds has been made in the crop production plan and the targets of production and distribution of fodder seeds will be worked out in consultation with Animal Husbandry, Dairy Development and Forest Departments. The distribution of registered seeds of food and non-food crops contemplated for the year 1978-79 and 1982-83 in the background of actual distribution during 1977-78 is as follows :

TABLE XIII—*Crop-wise seed distribution*

(In Qtls.)

Serial no.	Crop	Actual 1977-78	Proposed target		
			1978-79	1979-80	1982-83
1	2	3	4	5	6
1	Wheat	84581	86500	92500	150000
2	Paddy	53220	56500	59200	100000
3	Maize	105	100	100	1000
4	Jowar	20	30	50	100
5	Barley	1016	1500	2500	5000
6	Others	2820	3000	2000	2000
7	Pulses	6339	18770	20650	24400
	Total	148101	166400	177000	282500
8	Oilseed	3517	4500	5500	800
9	Cotton	302	320	380	400
10	Jute	249	280	290	320

TABLE XII—Programme Targets (Concl'd)

Serial no.	Item	Unit	Base level achievement	Targets		
			1977-78	1978-79	1979-80	1982-83
1	2	3	4	5	6	7
<i>III—Urban Compost</i>						
	(a) Quantity produced	.. .. '000 tonnes	934	1200	1250	1430
	(b) Quantity distributed	.. .. Do.	958	1200	1250	1450
	<i>IV—Rural Compost</i>	.. .. Do.	89107	86665	97000	97000
<i>V—Chemical Fertilizers</i>						
	(a) N	.. .. Do.	648	800	930	1600
	(b) P ₂ O ₅	.. .. Do.	139	200	205	350
	(c) K ₂ O	.. .. Do.	73	120	105	200
	Total—V	.. .. Do.	860	1120	1,240	2150
<i>VI—Green Manures</i>						
	Area under green Manures	.. .. Do.	900	1000	1100	1400
	Gobar Gas-plants	.. .. Numbers	5000	10000	10000	40000
<i>VII—Plants Protection</i>						
	(a) Seed treatment	.. .. '000 hectare	3473	3600	3950	5000
	(b) Control of field Rats	.. .. Do.	5138	5800	6320	8000
	(c) Control Operation against General pests	.. .. Do.	1410	1400	1580	2000
	(d) Intensive Plant protection measures	.. .. Do.	2803	2880	3160	4000
	(e) Weed control	.. .. Do.	632	720	790	1,000
	Total—VII	.. .. Do.	13456	14400	15800	20000

1.1.28. Besides the achievement of above targets through the Department of Agriculture, a complimentary programme of augmenting irrigation potential is to be carried out on a massive scale by the Irrigation Department. It is proposed to create additional irrigation facilities to the extent of 52 lakh hectares of which about 17.0 lakh hectares would accrue from major and medium works and about 34 lakh hectares would become available through minor irrigation devices including private Minor Irrigation works. As a result of this, it is expected that the gross cropped area would increase by 28 lakh hectares.

1.1.29. *High Yielding Varieties programme*—As already stated, the main strategy during the Five-Year Plan 1978–83 would be to replace the area

under local varieties by high yielding varieties wherever possible. The base level coverage of area of paddy, maize, jowar, bajra and wheat under high yielding varieties and local improved varieties is 71.65 lakh hectares and 28.8 hectares respectively. It is proposed to increase the area under the High Yielding varieties from 71.6 lakh hectares to 89.0 lakh hectares and the area under local improved varieties, from 28.8 lakh hectares to 38 lakh hectares.

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chemical fertilizer (N P K) to be distributed during 1982-83 would be 21.5 lakh tonnes, as compared to base level achievement of 8.6 lakh tonnes. This would be possible only if, besides systematic extension inputs, adequate arrangements are made for agricultural credit. The present level of short term agricultural credit from co-operative is of the order of about Rs.138 crores of which roughly 52 per cent is given in the shape of fertilizers. As against this the total value of 8.6 lakh tonnes of chemical fertilizers comes to about Rs.344 crores. The value of 21.5 lakh tonnes of chemical fertilizers would, at present prices, be about Rs.860 crores. It is, therefore, imperative that short term credit should become available on a much larger scale and it should be given almost entirely in the shape of fertilizers.

1.1.31. *Organic and Green Manure*—The supply of urban compost will be increased by about 5 lakh tonnes and that of rural compost by about 8 lakh tonnes. The area under green manuring crops is proposed to be increased by about 5 lakh hectares.

1.1.32. *Plant protection*—The additional area proposed to be covered by various plant protection measures by 1982-83 will be around 66 lakh hectares as compared to the base level achievement of 134 lakh hectares. In case of seed treatment, the area is proposed to be increased from 35 lakh hectares to 50 lakh hectares. The area to be brought

under intensive plant protection measures is proposed to be stepped up by about 12 lakh hectares.

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TABLE XIII—*Crop-wise seed distribution*

(In Qtls.)

Serial no.	Crop	Actual 1977-78	Proposed target]		
			1978-79	1979-80	1982-83
1	2	3	4	5	6
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4	Jowar	20	30	50	100
5	Barley	1016	1500	2500	5000
6	Others	2820	3000	2000	2000
7	Pulses	6339	18770	20650	24400
	Total	148101	166400	177000	282500
8	Oilseed	3517	4500	5500	800
9	Cotton	302	320	380	400
10	Jute	249	280	290	320

1.1.34. *Soil and water conservation by agriculture department*—Soil and water conservation plays a vital role in the agricultural production process by protecting the cultivated land from the hazards of erosion, waterlogging and floods. Scientific soil conservation measures also

help in the conservation of moisture which in turn helps directly by ensuring higher yields and indirectly by recharging ground water and thus ensure gradual improvement in productivity. The physical targets of soil conservation proposed for the 1978–83 Plan period are as follows :

TABLE XIV—*Soil Conservation targets*

Serial no.	Item	Base Level 1977-78	Target		1978-83
			1978-79	1979-80	
1	2	3	4	5	6
<i>Soil Conservation Extension :</i>					
	(a) Soil and water conservation in Plains areas ..	38.00	38.00	43.00	230.00
	(b) Soil and water conservation in Hill areas ..	4.50	4.50	5.25	38.50
	(c) Under D.P.A.P.	15.00	15.00	18.00	96.00
	Total ..	57.50	57.50	66.25	354.50

1.1.35. *Crop-wise strategy*—While it is necessary to take Research and Development measure to develop specific cultural practices and provide for carefully identified inputs for individual crops, it is essential that the relevance of over all crops production strategy which looks at individual crops only as elements of crops rotations pertinent to various agro-climatic conditions and availability of irrigation integrated systems should be kept always in view. Otherwise there is a possibility that a farmer may lose out in terms of average annual income per hectare despite attaining high productivities for a particular crop. Subject to the above considerations, there is no choice but to work out production strategy for each crop and lay down the manner in which it would be implemented. The crop-wise broad strategies proposed are as follows :

1.1.36. *Rice*—The additional rice production target is 19.26 lakh tonnes. To achieve this increase, the following programmes are proposed :

(a) increase in the irrigated rice area by 9.8 lakh hectares :

(b) increase in the coverage under high yielding varieties by 17.00 lakh hectares :

(c) a micro-level approach for rice production programme will be adopted by identifying the varieties and practices suited to different conditions, viz., uplands, mid lands and low lands;

(d) increase in area under community nurseries by 1.82 lakh hectares at the end of 1982-83 ;

(e) increase in area under weed control and plant protection measures ; and

(f) emphasis on increasing the productivity in the rainfed areas which at present account for 68 per cent of the total area under rice. The other measures suggested are:

(i) ensuring timely sowing/transplanting;

(ii) water management and proper schedules for the release of canal water;

(iii) higher and better use of inputs ;

(iv) improving pest surveillance for timely control of various pests;

(v) in areas where paddy is direct seeded, line sowing with the help of seed drill or behind country-plough followed by early weeding and top dressing of fertilizer; and

(vi) introduction of suitable implements to achieve the above objective.

1.1.37. *Wheat*—The additional production of 19.98 lakh tonnes is proposed to be achieved through :

(a) increase in irrigated area under wheat by 14.00 lakh hectares ;

(b) high yielding varieties area will be stepped up by 7.00 lakh hectares.

(c) special measures will be taken for the control of obnoxious weeds viz. phalaris, Minor and Wild oats ;

(d) identification and spread of rust resistant/tolerant varieties in different areas ;

(e) balanced use of fertilizers.

(f) increasing efficiency of fertilizer through timely sowing, optimum plant population, placement of fertilizer and weed control;

(g) emphasis on adoption of dry farming technology in case of rainfed wheat ; and

(h) emphasis on adoption of late sown technology recently developed for wheat sown after *lahi*, *toria*, potato, late paddy and sugarcane.

1.1.38. *Coarse Grains*—Jowar, bajra and maize are the three most important coarse grains. These crops are grown largely under rainfed conditions. The proposed strategy for increasing their production includes :

(a) increased coverage under high-yielding varieties of hybrid jowar, bajra and maize by 43,000 hectares ;

(b) increase in irrigated area by 2.07 lakh hectares under these crops ;

(c) conservation of soil and moisture and adoption of other dry farming techniques on a large scale ; and

(d) integrated pest management particularly in case of jowar.

1.1.39. *Pulses*—The approach is to increase the area as well as the productivity with the following measures :

(a) higher use of inputs, particularly phosphatic fertilizers and rhizobium culture ;

(b) increasing the area under irrigated pulse by 10.08 lakh hectares ;

(c) control of pests, particularly the pod borer of gram and arhar;

(d) encouraging cultivation of short-duration irrigated arhar to fit into the cropping sequence of arhar-wheat ;

(e) inter cropping of pulses particularly arhar and gram with other crops;

(f) increase in the area under pulses during summer as cash crop after wheat; and

(g) strengthening of seed production and distribution programme.

Simultaneously, it will be necessary to provide suitable price support to make these crops economically competitive with other competing crops.

1.1.40. *Oilseeds*—The additional production of 13.25 lakh tonnes of oilseeds will be achieved by the adoption of the following measures :

(a) extension of area under oilseeds by bringing larger areas of groundnut and mustard as irrigated crop;

(b) emphasis on growing of pure crop of mustard/rai.

(c) emphasis on growing of toria T-9 an early maturing variety before wheat in irrigated area;

(d) higher use of phosphatic fertilizer, particularly in groundnut and higher dose of N. P. K. to Varuna rai crop.

(e) increased coverage under improved varieties of oilseed crops.

(f) control of pests, particularly mustard aphid and eradication of white grubs;

(g) strengthening of seed production and distribution programme; and

(h) extending the area under non-traditional oilseed crops, namely sunflower and soyabean;

1.1.41. *Cotton*—The proposed additional production of 14 thousand bales of cotton during the next Five-Year Plan will be achieved through the adoption of the following measures :

(a) increase in the area under irrigated cotton;

(b) increasing the productivity of medium staple cotton through the cultivation of high yielding hybrids/varieties;

(c) use of optimum quality of seed;

(d) control of insects/pests; and

(e) strengthening of seed production and distribution programme.

1.1.42. *Jute*—The additional production of 1.36 lakh bales of jute and mesta is proposed to be achieved as under:

(a) increase in area by providing remunerative prices to the cultivators;

(b) introducing jute cultivation where paddy crop is not successful:

(c) adoption of better management practices including weed control:

(d) use of balanced fertilizer; and

(e) use of improved variety of seed.

Action Programme for crop production

1.1.43. As already indicated the main strategy for the Five-Year Plan (1978–83) would be through (1) increase in area under multiple cropping, (2) higher and judicious use of material, particularly fertilizers and irrigation, and (3) providing plant protection measures to crops, especially pulses and oilseeds. Besides these important programmes, all out efforts would be made to increase agricultural production through better management techniques, soil conservation measures, etc. The detailed quantitative action programme to be undertaken on various crops in regard to the increase in areas, use of fertilizers and irrigation and plant protection measures is detailed below:

1.1.44. *Action Plan for 1978–83*—To obtain additional production following action plan is proposed :

TABLE XV—Allocation of additional inputs and their contribution

	Additional Inputs			Contribution to Addl. Production ('000 tonnes)			
	Area ('000 Hect.)	Fertilizer '000 tonnes (N+P+K)	Plant protection measures ('000 Hect.)	Area	Fertilizers	Plant protection measures	Total
1	2	3	4	5	6	7	8
I. Rice	200	200	700	160	1,600	140	1,900
II. Wheat	200	300	..	200	1,800	..	2,000
III. Other lands .. ..	..	130	..	..	..	..	..
IV. Pulses (including zaid.. moong).	250	150	250	150	700	250	1,100
V. Oilseed	400	200	450	200	900	200	1,300

NOTE : 1. No increase in production of the other cereals has been envisaged, but it is expected that the area would decline and loss in production due to decline in area would be made up through higher use of chemical fertilizers.

2. Of the additional quantity of fertilizers to be distributed during 1982-83, its expected that about 3.10 lakh tonnes of fertilizers would be used in sugarcane, potato, opium and other crops.

Some innovative measures for the Five-Year Plan 1978--83

1. 1. 45. The basic objective of the new plan is to increase productivity and profitability and to generate maximum employment opportunities in the rural sector. The new programmes proposed to achieve these objectives are as follows :

(i) *Buffer Stocking of Seed for Flood Prone Areas*—Flood has become a recurring feature in the State which brings about catastrophic situation every year. In order to meet the seed requirement of such flood prone areas, it is essential to provide buffer stocking facilities. Since these facilities are lacking at present, it is proposed to construct 12 buffer godowns each of 800 tonnes capacity, and having facilities of grain driers.

(ii) *Production of Quality Seeds*—In the State seed plan, it is proposed to distribute 12 and 5 per cent respectively of paddy and wheat seed at the end of 1982-83 against present distribution level of 6 and 3 per cent respectively. The quality seeds are proposed to be produced through U. P. Seed Corporation which has been constituted recently. The State Seed Certifying Agency which is already in operation will certify different categories of seeds.

(iii) *Production of Fodder Seeds*—Inadequate attention has been paid to fodder seed production so far. It is now proposed that the farms of the Animal Husbandry Department should undertake massive fodder seed production programme. In addition, farms of Agriculture Department will also include fodder seeds programme in their seed production plans.

(iv) *Facility of Testing of Micro-Nutrients*—So far the State does not have the facility for testing micro-nutrients of the soil even though these play a fairly significant role in relation to productivity. It has, therefore, been decided to provide such facilities during the coming Five-Year Plan period.

(v) *Inter Cropping of Pulse Crops*—Inter cropping of Moong

with early Arhar type-21 will be taken up during summer. For this a subsidy upto 50 per cent will be given on irrigation water taken by marginal and small farmers either from State tube-wells or canals.

(vi) *Adoption of Technology Developed for Late Sowing of Wheat*—About 7.00 lakh hectares of area of wheat is sown after lahi, early potato, late paddy and sugarcane. Consequently the yield of wheat goes down appreciably. The researches carried out to counter act this fall in productivity have revealed that good yield of wheat can be obtained by growing suitable varieties and adoption of late sown technology which comprises use of increased seed rate (125kg. hac.), sowing of water soaked seed increased use of phosphatic fertilizer to the extent of 25 to 50 per cent and reduction of the distance between the lines from 23cm. to 15—20 cm.

(vii) *Distribution of Plant Protection Machines and Spares*—In order to make the cultivators self-reliant in the matter of timely adoption of plant protection measures, it is necessary that the cultivators should have their own machines. Since most of the small cultivators are reluctant to spend money on the purchase of machines, a provision of 50 per cent subsidy on plant protection equipments has been made in order to encourage this category of farmers to purchase their own machines. It is also proposed to provide two machines to each Gram Sabha on subsidy basis. In all 1,52,000 plant protection machines will be distributed to cultivators during the coming Five-Year Plan period. It is also proposed to stock spare parts for these machines at plant protection units established in each blocks. Cycle mechanics in villages will be trained to repair these plant protection machines and provide spare parts to cultivators.

(viii) *Self Employment through Custom Service*—Programme for providing self employment to agricultural labourers, through custom

service for plant protection work will be taken in each Gram Sewak circle to cover an area of about 100 hectares.

(ix) *Increase in intensity of Cropping*—At present the double cropped area in the State is 61.00 lakh hectares with a cropping intensity of 134.89 per cent. This intensity is proposed to be increased to 150 per cent by bringing 88.00 lakh hectares under double cropped area by 1982-83. This will be achieved through introduction of short duration high yielding varieties in different crop sequences and also by substituting long duration varieties by short duration ones. Greater emphasis will be laid on companion cropping, relay cropping and other techniques to augment crop intensity in the State. A beginning has been made recently by increasing the intensity to 200–300 per cent at selected tube-wells in the State. This will also generate extra employment in the rural sector.

(x) *Popularising Dry Land Technology*—About 58 per cent of the cropped area in the State is rainfed. The only technique available for increasing crop production in these areas is to conserve moisture and use proper crop production technology in relation to moisture conserved. Therefore, emphasis will be laid on the popularization of dry farming technology adopted so far in selected areas only.

(xi) *Demonstration of improved agricultural implements*—So far no technical staff is posted at block level to demonstrate the usefulness of improved agricultural implements to the cultivators. A provision of one Assistant Development Officer (Agricultural Implements) at each block in the State has, therefore, been contemplated in the plan for demonstration and training purposes. Similarly, one Assistant Agricultural Engineer will be posted in each district to supervise the work of A.D.Os. posted in the blocks. Krishi Sewa Kendras will also be strengthened by providing one Additional Assistant Agricultural Engineer with some supporting staff to

cope with increased custom service work.

(xii) *Increased involvement of scientists, extension workers and farmers and establishment of mobile training units*—Expected results can only be achieved if large scale transfer of technology to the farmers is ensured. This is possible if the technologists, extension workers and the farmers are made part of an integral system which has well defined duties and responsibilities. The scientists are made responsible for imparting pragmatic field oriented training to the field staff and the field staff in turn transfers the technology to the fixed elite of the farmers alongwith proper supervision and spot guidance. This approach of intensive programme and farm planning will help in increasing agricultural production in the shortest period of time. The micro-planning technique advocated by the Agriculture Department in the last two years of the Fifth Five-Year Plan was a first step in this direction. The programme of intensive farm planning and supervision needs to be implemented in the new Plan. Agricultural Universities of the State will be made responsible for imparting training to the district, tehsil and block level staff and the district and block level technologists in turn would constitute the core of personnel to impart training as well as provide guidance and supervision to the VLWs and to some extent directly to the farmers. The VLWs will approach a fixed elite of farmers in the villages for imparting latest knowledge about agricultural programme. A mobile training unit will be set up in each division of the State by the Department of Agriculture to impart regular training to farmers and extension workers.

1.1.46. *Reduction in imbalances and disparities between regions*—Reduction of regional disparities through accelerated development of backward areas is one of the important national objectives. Uttar Pradesh is one of the largest States in India covering an area of 294 thousand square kilometers which is

about one-ninth of total area of the country. There is wide variation in its geographical and topographical conditions. There is Himalayan region in the North followed by the Gangetic Plain in the middle and the Vindhya Hills and Plateau in the South. Soils are of different types in these areas.

1.1.47. *Cropping Intensity*—Cropping intensity is an indicator of the level of use of land for agricultural purposes. The cropping intensity in the Western Region increased from 122.05 in 1950-51 to 139.00 in 1974-75. However, in the Eastern Region, this increased from 129.58 to 132.90 only. The corresponding figures for Central and Bundelkhand Regions were 122.54 to 128.69 and 106.32 to 109.30 respectively. The increase in Hilly Region has been rather appreciable. It increased from 116.91 to 157.35 during the above period. This shows that there is considerable scope for increasing the cropping intensity in Bundelkhand Region.

1.1.48. Cropping intensity needs to be increased appreciably in Bundelkhand and Eastern Regions. For this, in the Bundelkhand Region, dry farming practices will be intensified. In the Eastern Region, cultivators will be persuaded to adopt the practice of double/multiple cropping.

1.1.49. *Strategy for Reducing Regional Disparities during 1978-83 Plan*—In order to narrow down the gap of development amongst different regions of the State, the emphasis will be laid on area planning. The strategies proposed to be

adopted for the balanced growth of the different regions of the State have been listed as under ;

(1) Cropping intensity, especially in Bundelkhand and Eastern Region, will be increased by adopting programme of Dry Farming and mixed and intercropping;

(2) In the Eastern Region, where density of population is very high steps will be taken to divert the population from agriculture to rural agro-based industries.

(3) Labour intensive programme will be undertaken by adopting double and multiple cropping programmes. This will help in creating additional employment opportunities.

(4) Diversification of agriculture is one of the most important steps in the reduction of regional imbalances. For this, special programmes of Animal Husbandry, Poultry and Sheep rearing will be launched by respective departments.

(5) Top priority in the field of soil and water conservation will be given, specially in Bundelkhand and Western Regions;

(6) Scientific cropping pattern will be implemented through micro-planning.

1.1.50. The Five-Year Plan targets for each Region in the background of actual achievements for 1973-74 and 1977-78 are given in the following table :

TABLE XVI—Region-wise Targets and Achievement

Item	Unit	Eastern	Hill	Bundelkhand	Western	Central	State
1	2	3	4	5	6	7	8
<i>I—Foodgrains Production—</i>							
1. 1973-74 Actual	'000 tonnes	4947	981	1206	5786	2644	15564
2. Fifth Plan Target	Do.	7228	1490	1752	8960	3570	23000
3. Achievement's 1977-78 Estimated	Do.	6504	1200	1402	8301	3400	20807
4. Target 1978-79	Do.	6970	1140	1460	8240	3690	21500
5. Five-Year Plan Target 1982-83	Do.	8000	1520	1700	9480	4300	25000

TABLE XVI—(Concl'd.)

Item	Unit	Eastern	Hill	Bundel- khand	Western	Central	State
1	2	3	4	5	6	7	8
<i>II-Area under H. Y. P.</i>							
1. 1973-74 Actuals	'000 hectares	1862	141	191	2395	729	5318
2. Fifth Plan Target	Do.	2663	214	248	3380	1030	7535
3. Achievement 1977-78	Do.	2583	210	235	3127	1010	7165
4. Target 1978-79	Do.	2550	230	250	3476	990	7496
5. Five-Year Plan Target 1982-83	Do.	3000	300	400	4000	1200	8900
<i>III. Area under Plant Protection—</i>							
1. 1973-74 Actuals	Do.	3596	293	969	4352	1552	10762
2. Fifth Plan Target	Do.	5184	576	1152	5328	2160	14400
3. Achievement 1977-78	Do.	5464	557	756	4516	2163	13456
4. Target 1978-79	Do.	5184	576	1152	5328	2160	14400
5. Five-Year Plan Target 1982-83	Do.	8240	768	1200	6560	3232	20000
<i>IV. Chemical Fertilizers :</i>							
<i>A—Nitrogenous (N) :</i>							
1. 1974-75 Actuals	'000 tonnes	109	10	6	152	52	329
2. Fifth Plan Target	Do.	350	19	15	366	100	850
3. Achievement 1977-78	Do.	230	15	9	322	72	648
4. Target 1978-79	Do.	300	20	10	390	80	800
5. Five-Year Plan Target 1982-83	Do.	550	50	30	820	150	1600
<i>B. Phosphatic (P₂O₅)—</i>							
1. 1974-75 Actual	Do.	10	2	2	28	7	49
2. Fifth Plan Target	Do.	86	9	15	60	30	200
3. Achievement 1977-78	Do.	72	5	4	52	6	139
4. Target 1978-79	Do.	110	8	6	68	8	200
5. Five-Year Plan Target 1982-83	Do.	180	20	20	100	30	350
<i>C. Potassic (K₂O)—</i>							
1. 1974-75 Actuals	Do.	12	2	1	13	4	32
2. Fifth Plan Target	Do.	55	4	11	50	10	130
3. Achievement 1977-78	Do.	25	4	2	34	8	73
4. Target 1978-79	Do.	50	4	10	46	10	120
5. Five-Year Plan Target 1982-83	Do.	80	10	20	70	20	200

Generation of Employment Opportunities

1.1.51. Although it is difficult to qualify precisely the additional employment likely to be generated through the implementation of the crop production programmes proposed under the Five-Year Plan (1978-83), an exercise has been made to give some estimates of the additional manpower on the basis of norms given by the National Commission on Agriculture in their report on Rural Employment and Special Area Programmes are XIII. For working out the estimates of additional employment, only the following three important programmes have been considered:

(1) *Multiple Cropping*—It is proposed to increase the area under multiple cropping by 27.00 lakh hectares during 1982-83. The National Commission on Agriculture have indicated that an additional employment of 80 man years per 400 hectares is generated as a result of converting single cropped area into multi-cropped area.

(2) *Irrigation*—It is proposed to increase the irrigated area during Five-Year Plan (1978-83) by 52 lakh hectares. Taking additional employment at the rate of 50 man days per hectare due to irrigation, this 52 lakh hectares of irrigated area would generate an employment potential of 8.67 lakh man years.

(3) *High Yielding Varieties*—An additional area of 24.43 lakh hectares has been proposed to be brought under high yielding varieties during the year 1982-83. The National Commission on Agriculture have indicated that the high yielding varieties, wherever introduced in place of local varieties, increase the labour inputs by about 25 to 50 per cent depending on the nature and varieties of the crops and agro-climatic conditions. Taking this percentage to be 40 for Uttar Pradesh, an additional employment of 46 man days per hectare of area under high yielding varieties would be generated and thus a total additional employment potential of 3.75 lakh man years would be generated.

1.1.52. The above three programmes would generate an additional potential of about 18 lakh man years as detailed below:

TABLE XVII—Programme for generation of additional potential of employment

Serial no.	Item	Additional potential of employment ('000 man years)
1	2	3
1	Multiple cropping	540
2	Irrigation	867
3	High Yielding Varieties	375
Total ..		1,782

1.1.53. *Complementaries and Linkages*—Linkage between the supply of inputs and research techniques to the farmers will receive highest priority, so that the latest scientific knowledge could be harnessed by the farmers. An effective liaison will continue to be maintained between the Agriculture Department and the Agricultural Universities of the State for having a close link between the research conducted and actual work done in the field. These Universities will also be associated with the training programme of the Department of Agriculture. Since the success of agricultural programme depends crucially on the support from other departments like Irrigation, Power, Co-operation, Rural Development etc., these departments will be fully associated in launching *kharif*, *rabi* and *zaid* programmes in the State. Action Committees consisting of the officials of various allied departments and influential non-officials already exist under the Chairmanship of the District Collectors and the B. D. O.s at District and Block levels to monitor agricultural production programmes.

1.1.54. *Summing up*—The main object of the new Plan is to increase the production, productivity, and profitability of agriculture and to generate maximum employment opportunities in the rural sector. The strategies for achieving the contemplated target for crop production have been spelt out crop-wise in detail. The success of agricultural programme, however, largely depends on the activities and co-operation of other departments like Irrigation, Power and Co-operation, Rural Development etc., and most importantly on the willing participation of farmers who are the ultimate decision makers.

1.1.55. The gross value of agricultural produce per hectare depends to a great extent on the level of irrigation. Even high and medium rainfall does not compensate for lack of irrigation facilities. Therefore, in the matter of augmenting irrigation facilities, priority should be given to those districts which have low level of irrigation as well as low gross value of agricultural produce per hectare.

1.1.56. It has been observed that the districts having low value of agricultural produce per unit of area have low level of fertilizer consumption and irrigation. The Districts of Bundelkhand Region, Mirzapur, Etah and Lakhimpur-Kheri bear testimony to this fact. These districts, therefore, need special attention in the matter of augmenting irrigation facilities. The districts which have medium irrigation facilities but low consumption of fertilizer have already been taken under Fertilizer Promotion Programme. At present there are 16 such districts in the State. There are some districts where the existing irrigation potential is not fully utilized for which suitable crop rotations for different agro-climatic regions, irrigation intensities and soils have been worked out and suggested to the farmers.

1.1.57. Paddy cultivation has not shown any preceptable correlation with the gross value of agricultural production per hectare. Efforts are, therefore, being made to improve paddy yield by increasing coverage under H. V. P. and adoption of suitable package of practices according to the peculiarities of land i.e., up-land, mid-land and low-land. Paddy is also being grown extensively in hills at various altitudes for which suitable varieties are yet to be developed. At present the varieties grown in the plains are also being grown in the hills. However, the production of

rice in the hills will be increased further by evolving suitable varieties for different altitudes for which research is in progress. Simultaneously efforts will be made to increase the level of fertilizer consumption which is very low at present.

1.1.58. There are basically two crops having high degree of positive relationship with the value of agricultural produce, per hectare namely viz., Wheat and Sugarcane. Over the years, there has been a significant increase in the area under wheat in this State. Although the productivity of wheat has risen from 9.78 quintals per hectare in 1973-74 to 14.29 in the year 1977-78, it is still not commensurate with the consumption of fertilizer and increased irrigated area. Therefore the efficiency of fertilizer will have to be increased by timely sowing, optimum plant population, placement of fertilizer and weed control. Rescheduling for availability of canal or irrigation water at critical stages of crop growth would be another important measure in stepping up wheat production.

1.1.59. Greater priority has been assigned to oil seeds and pulse crops. The production of these crops continues to be on the low rise in this State on account of low investment in inputs by the farmers, risks involved in production and uncertainty of prices. These crops are generally pushed to marginal and un-irrigated lands, which also result in lower production of the crops. Efforts will have to be made therefore, to bring more area under these crops by providing 50 per cent subsidy to small and marginal farmers on irrigation water taken either from canal or State tube-wells for growing these crops.

1.1.60. Since there is a predominance of small holdings in the State, care has been taken to evolve the strategy for raising the agricultural productivity of such holdings to optimum level. This will

improve the economy of small and marginal farmers and will also generate new employment opportunities.

Financial Outlays Proposed For 1978—83 Plan

1.1.61. The total Plan outlay for the

Agricultural Production Sector including schemes of Agriculture Departments, Cane; Horticulture, Agriculture Research etc. proposed for the Plan period 1978—83 is Rs.206.94 crores. The programme wise details of the financial outlays are given in the following table:

TABLE XVIII—Financial Outlays and Expenditure for 1978—83

(Rupees in lakhs)				
Item	Fifth Plan 1974—78 Outlay (1974—79)	1974—78 Actual Expenditure	1978-79 Proposed Approved Outlay	1978—83 Proposed Outlay
1	2	3	4	5
<i>Agricultural Programmes—</i>				
(1) Consolidation of Holdings	3631.00	2804.60	775.00	4600.00
(2) Multiplication and Distribution of Seeds	21.12	6.42	2.35	18.50
(3) Agricultural Farms	446.07	345.83	107.17	1358.30
(4) Manures and Fertilizers	404.52	256.62	110.26	939.38
(5) High Yielding Varieties Programme	15.77	3.98	3.20	235.68
(6) Plant Protection	297.24	250.78	104.27	1372.95
(7) Commercial Crops	571.72	414.32	184.75	1724.51
(8) Extension and Farmer's Training	162.96	70.85	91.90	1196.12
(9) Agricultural Research and Education	1058.00	764.38	286.75	4000.00
(10) Agricultural Engineering	106.18	122.00	49.51	367.88
(11) Assistance to ICAR	3.21	1.88	0.93	4.56
(12) Agricultural Economics and Statistics	81.93	60.22	20.43	99.82
(13) Storage and Warehousing	56.00	64.25	37.00	100.00
(14) Agricultural Marketing and Quality Control	47.00	243.00	130.00	1230.00
(15) Horticulture	757.00	603.09	291.00	325.000
(16) Others	454.28	428.85	22.48	196.18
Total, Agricultural Production	8114.00	6441.07	2217.00	20693.88

1.1.62. *Targets of Crop Production 1979-80*—It is proposed to produce 223.00 lakh tonnes of foodgrains in 1979-80 (82.00 lakh tonnes in *kharif* and 141.00

lakh tonnes in *rabi*). In addition, a production target of 25.00 lakh tonnes of oil-seeds and 1.50 lakh bales of jute has also

been contemplated. The crop-wise break-up of these targets in the background of actual production for 1977-78 is given in the following table :

TABLE XIX—Production Targets for 1979-80

Serial no.	Crop	('000 tonnes)		
		Production 1977-78	Target 1978-79	Target 1979-80
1	2	3	4	5
<i>I—Foodgrains</i>				
1	Rice	5140	5300	5500
2	Jowar	528	450	460
3	Bajra	647	700	750
4	Maize	940	1090	1050
5	Kharif Pulses	71	100	140
6	Other Cereals	514	360	300
Total, Kharif		7840	8000	8200
7	Wheat	9511	9800	10150
8	Barley	1098	1100	1150
9	Gram	1198	1300	1400
10	Peas	298	370	450
11	Arhar	749	800	810
12	Masur	113	130	140
Total, Rabi		12967	13500	14100
Total, Foodgrains		20807	21500	22300
<i>II—Commercial Crops</i>				
1	Oilseeds	1538	2300	2500
2	Cotton ('000 bales)	18	25	26
3	Jute ('000 bales)	72	110	150

1.1.63. *Selected Physical Programmes*—
The targets for selected physical programmes as contemplated for 1979-80 in

the background of actual performance during 1977-78 are as follows :

TABLE XX—*Targets of important programmes*

Serial no.	Item	Unit	Actual			Target		
			1977-78	1978-79	1979-80	1977-78	1978-79	1979-80
1	2	3	4	5	6	7	8	9
<i>I—High yielding Varieties</i>								
1	Paddy	'000 hectares	1800	1900	2300			
2	Maize	Do.	32	40	42			
3	Jowar	Do.	3	6	6			
4	Bajra	Do.	30	50	52			
5	Wheat	Do.	5300	5500	5600			
Total, High Yielding Varieties			7165	7496	8000			
<i>II—Local High Yielding Varieties</i>								
1	Paddy	Do.	1390	1600	1560			
2	Maize	Do.	866	900	950			
3	Wheat	Do.	624	1,000	900			
Total Local High Yielding Varieties			2880	3500	3410			
GRAND TOTAL			10045	10996	11410			
<i>III—Chemical Fertilizers Consumption</i>								
(a)	Nitrogenous (N)	'000 tonnes	648	800	930			
(b)	Phosphatic (P ₂ O ₅)	Do.	139	200	205			
(c)	Potassic (K ₂ O)	Do.	73	120	105			
Total			860	1,120	1,240			
<i>IV—Plant Protection measures</i>								
(a)	Seed Treatment	'000 hectares	3473	3600	3950			
(b)	Weed Control	Do.	632	720	790			
(c)	Prophylactic spraying	Do.	1410	1400	1580			
(d)	Rat control	Do.	5138	5800	6320			
(e)	Intensive measures	Do.	2803	2880	3160			
Total			13456	14400	15800			
V	Soil Samples analysed	lakh No.	7.98	8.00	8.50			
VI	Community Nursery of Paddy crops	lakh hectares	0.68	1.00	1.25			

1.1.64. The proposed outlay for the various programmes listed above will be Rs. 2.19 crores during 1979-80.

(ii) SEWAGE UTILIZATION

1.1.65. Application of sewage water on land for irrigation purposes is the

cheapest method of gainfully utilizing wastes. In sewage utilization schemes, the treatment and disposal of sewage is accompanied with the utilization of manurial ingredients of sewage for better yield of crops.

1.1.66. In the Fifth Five-Year Plan, it was proposed to complete 23 schemes against which only 7 were completed, covering an area of 1352 hectares of land for sewage farming. During the year 1978-79, four schemes are expected to be completed which will cover 334 hectares of land.

1.1.67. A provision of Rs.320 lakhs is being proposed for sewage utilization schemes for the 1978-83 Five-Year Plan. This outlay would be utilized for completing the remaining works of on going schemes in addition to taking up some new schemes. Proposals for this purpose will have to be framed in consultation with the local bodies.

1.1.68. Past experience shows that most of the local bodies are generally not inclined to take up Sewerage and sewage utilization schemes mainly because a huge loan component is involved in the financing pattern of such schemes. This is partly because not many sewage utilization schemes have come into operation and thus, the manner in which returns from the capital investment might be maximised could not be worked out. It is hoped to demonstrate the viability of these schemes now and create adequate interest in them on present terms. However, as a second alternative it is proposed that up to 33 per cent of the estimated cost of sewage utili-

zation schemes should be borne as grant-in-aid by the Government in order to encourage implementation of these schemes. According to this alternative detailed proposals against the total allocation of Rs.320 lakhs shall be formulated. It is proposed to complete 40 schemes during 1978-83 Plan which would include both continuing and new schemes. The extent of area to be irrigated will be estimated when the location specific individual schemes are drawn up.

1.1.69. An outlay of Rs.40 lakhs has been proposed for the year 1979-80 for this sector.

(iii) CANE DEVELOPMENT

1.1.70. Basically, the activities of cane development are aimed at increasing per hectare average yield and percentage recovery of sugar. The central theme of various plan schemes over and above the non-Plan activities of the Cane Development Department is to accelerate the pace towards achieving these basic objectives. To measure the impact of these, it would be relevant to study the physical trends in respect of sugarcane acreage, production and average yield and resultant sugar production. The table given below indicates the general orientation of the production function as well as the incidence of wide fluctuations from year to year.

TABLE XXI—Year-wise Sugarcane Production and Average Yield

Year	Total area under cane in the State (Lakh hect.)	Cane hectarage in reserved areas (Lakh hect.)	Cane production (Lakh tonnes)	Average yield (Qtl. hect.)	Sugar production (lakh tonnes)
1	2	3	4	5	6
1960-61	13.29	9.28	380.15	410	14.26
1961-62	13.63	9.84	371.10	377	12.04
1962-63	12.62	8.64	303.90	352	8.50
1963-64	12.29	8.12	327.81	404	11.08
1964-65	13.89	9.83	404.80	412	12.51
1965-66	14.90	10.31	403.55	391	13.70
1966-67	11.90	8.26	300.88	364	7.11
1967-68	9.97	6.56	260.14	397	8.15
1968-69	12.03	8.79	384.88	433	11.75
1969-70	13.77	10.46	474.09	453	16.94
1970-71	13.45	10.78	458.85	426	13.01
1971-72	12.74	9.55	387.08	405	8.31
1972-73	13.08	10.30	473.62	460	13.39
1973-74	14.73	12.09	533.28	441	12.97
1974-75	14.72	12.53	523.52	418	14.31
1975-76	14.41	12.14	503.24	414	11.66
1976-77	14.56	11.62	536.60	462	14.71
1977-78	16.91	13.79	680.56	493	18.57

Note—Except for figures in column 2, all other figures relate to the reserved areas of Sugar Factories. The figures in respect of the year 1977-78 are provisional.

1.1.71. The following table showing five year moving average of yield/hectare, which eliminates seasonal fluctuations, indicates a slow moving trend towards rise in productivity.

TABLE XXII—Five Yearly Moving Average of Yield/Hectare.

Year	Five yearly moving average of yield/hectare of sugarcane (tonnes/hectare)
1	2
1967-68	40.9
1968-69	41.6
1969-70	42.4
1970-71	43.6
1971-72	43.7
1972-73	43.0
1973-74	42.8
1974-75	43.9
1975-76	44.6

1.1.72. To get a proper perspective in relation to productivity, it seems relevant to mention that in the year 1975-76 comparative levels of productivity for Punjab, Haryana and Rajasthan were 53.77, 43.48, 38.95 tonnes respectively. The Co-operative Cane Unions, Cane Development Councils and U. P. Sugarcane Research Council have a vital role to play in Cane Development activities in the State. The Co-operative Cane Unions, not only ensure the supply of sugarcane produced by member cane growers to sugar factories but also arrange necessary 'inputs' such as fertilizers, manures, insecticides, etc. to them, through their apex institution, i.e., the U. P. Co-operative Cane Unions Federation. The Cane Development Councils make arrangements for quality seed material of improved varieties, loans for minor irrigation projects channelised through U. P. Land Development Bank, better road facilities and culverts for facilitating sugarcane transport to sugar factories and also the extension of techni-

cal know-how on improved cane cultivation. The U. P. Sugarcane Research station has been re-organised into U. P. Sugarcane Research Council during the Fifth Plan period in the shape of an autonomous body to make it more effective.

1.1.73. The Co-operative Cane Unions/Cane Development Councils operating in the sugar factory areas have been organised by the Registrar, Cane Co-operatives, viz., the Cane Commissioner to deal with the marketing of sugarcane and its development in the reserved areas of sugar factories. The Cane Development Councils have been constituted under the U. P. Sugarcane (Regulation of Supply and Purchase) Act which clearly determines their area of operation. As such, the existing 'infra-structure' with the Cane Department is confined to the reserved areas of sugar factories only which ranges between 80 to 85 per cent of the total cane area. The sugarcane produced in the reserved areas of sugar factories is consumed by sugar, *khandsari* and *gur* industries, as well as the requirements of seed, chewing, etc. About 30-33 per cent of sugarcane production is utilized for sugar manufacture, about 17 to 20 per cent for chewing and seed while the remaining 50 per cent goes for *Khandsari* and *Gur* manufacture. As for the supplies for *Gur* manufacture are concerned, no effective regulation is possible. Supplies to *khandsari* industry are regulated through licensing, levy of purchase tax and also a charge in the shape of development commission on the ground that this industry also draws cane from reserved areas. Development commission forms a part of the budget of Cane Development Councils. It has been observed in the past that the *Gur* production increases whenever the market price of *Gur* is remunerative, affecting cane crushing by sugar factories.

1.1.74. The sugarcane which is grown outside the reserved areas of sugar factories is usually consumed for manufacture of *Gur* and for other purposes by the cultivators. Cane cultivation outside the reserved areas is usually controlled by the market forces.

1.1.75. The Five-Year Plan for 1978-83 for the development of Sugarcane and Sugar

Industry has assigned an important role to the U. P. Sugarcane Research Organisation under whose auspices, research with regard to problems of cane cultivation, evolution/testing of sugarcane varieties, and the multiplication of seed material at the main research station of Shahjahanpur and its sub-stations at Muzaffarnagar, Gola, Gorakhpur, Laxmipur, Daurala, Kashipur and Seorahi are carried out. About 20

improved sugarcane varieties have been evolved so far. These are in general cultivation. Another 10 varieties are in the testing stage at present.

1.1.76. In Northern India, Uttar Pradesh, Punjab and Bihar are the important sugarcane growing States. The sugarcane varieties which are in general cultivation are as under :

TABLE XXIII—Sugarcane Varieties under General Cultivation

Uttar Pradesh		Punjab		Bihar	
1		2		3	
Co	395	Co	1148	Co	1148
	1148	Coj	67	Bo	70
	1157	Coj	64		17
	1158				34
	1347				74
	6812				79
	6911				88
	62399				90
Cos	510				95
	633			Cop	1
	687				2
	758				
	770				
	771				
	776				
Bo	17				
	34				
	54				
	70				
	71				

Varieties such as Bo 88, 90, 95 Cop 1 and 2 have recently been released for general cultivation.

1. 1. 77. The following varieties viz. Cos 659, 763, 767, 786, 788, 790, 796, 797, 802, and Bo 74 are in the testing stage for their performance under restricted multiplication programme on grower's fields.

1. 1. 78. The main achievement of U. P. Sugarcane Research during the Fifth Plan period are as under :

(1) the period of flowering of different varieties, maturity of pollens, receptiveness of stigma, viability of pollens and their productivity were studied;

(2) successful breeding of varieties by adopting 'crossing lantern' method in open atmosphere at Seorahi, Gorakhpur and Shahjahanpur was undertaken;

(3) the behaviour of Epipyropes Melan (Fletcher), a parasite on pyrilla pest found in egg stage on the leaves of sugarcane during winter season was documented;

(4) parasite on Black-bug was identified and its behaviour is under study;

(5) Bag-worm was found to attack sugarcane crop. Its nature is under study; and

(6) the parasite on Bag-worm has been identified and its behaviour is also under study.

1. 1. 79. The year 1977-78 with which ended the Fifth Five-Year Plan, was an abnormal year as the cane area in this year rose to 13.79 lakh hectares and sugarcane production shot up to 680.56 lakh tonnes, giving an average yield of 49.34 tonnes/hectare. All the 85 sugar factories, as well as most of the *khandsari* units of the State, had to continue crushing up to the first week of August 1978, resulting in the production of 18.57 lakh tonnes of sugar. Sugar factories crushed about 206 lakh tonnes of sugarcane and their average sugar recovery was 9.05 per cent. The daily crushing capacity of the existing 85

sugar factories is 1.27 lakh tonnes. The sudden increase in area has resulted in excessive cane production which in turn created problem of crushing under adverse recovery condition. The abnormal increase in the cane area in 1977-78 may be attributed largely to higher financial returns from sugarcane in comparison to other agricultural crops.

1. 1. 80. On an average, about 3 irrigations are provided to the sugarcane crop and level of utilization of Nitrogen during 1977-78 stood at 51.5 Kgs. per hectare.

1. 1. 81. Due to additional irrigation potential created in the recent past, about 45 per cent of the cane acreage is getting productive irrigation (6-8 irrigations), about 35 per cent is getting protective irrigation ((2-3 irrigation). Efforts are in hand to provide irrigation facilities to the remaining 20 per cent unirrigated area and to bring protectively irrigated area into productively irrigated area.

1.1.82. All of the sugarcane varieties that are in cultivation in this State are responsive to higher doses of Nitrogen-120 to 150 Kgs. per hectare. As against the level of Nitrogen consumption which stood only at the level of 51.5 Kgs. per hectare during 1977-78, year-wise projections in this respect for the 1978-83 Plan are as follows:

TABLE XXIV—Year-wise Projections of Nitrogen Consumption for the Plan (1978-83)

year	Proposed per hectare consumption (kgs/Hect.)
1	2
1977-78	51.5
1978-79	70.0
1979-80	72.0
1980-81	75.0
1981-82	80.0
1982-83	85.0

1.1.83. Under the existing arrangements, the requisite quantities of fertilizers are arranged for the cane unions by the U. P. Co-operative Cane Unions Federation on the basis of short-term finance mobilised for co-operatives and banks on the basis of the State Government guarantee. Besides this, the cane unions also arrange credit for inputs for their member growers under the 'Vitta Poshan Yojana' through primary co-operatives and District Co-operative Banks.

1.1.84. The basic strategy proposed to be adopted during 1978-83 Plan would be to step up the per hectare average yield through the following measures :

(i) provision of assured irrigation to sugarcane crop;

(ii) application of a higher dose of Nitrogenous fertilizer with a view to reaching a level of 85 Kg. of N₂ per hectare by the year 1982-83; and

(iii) use of improved, healthy and fresh seed material for sowing the crop.

1.1.85. With these aims in view, the Cane Department would implement development schemes for which active co-operation of cane growers, Co-operative cane unions, Cane development councils and sugar factories would be enlisted. The U. P. Sugarcane Research Council would be the instrument for providing healthy nucleus seed material of improved sugarcane varieties. To meet the heavy demand of seed material of recommended varieties, foundation, primary and secondary nurseries, on grower's fields in all sugar factory zones would be raised under the supervision of departmental and research staff. For getting the desired results, assured irrigation to the crop is one of the most important factors as it leads to higher application of chemical fertilizer and also greater crop-care. These programmes though initiated during the Fifth Plan, are expected to fructify in the early part of the 1978-83 Plan period.

1.1.86. The National Planning Commission has proposed sugar production target for the country at the level of 62 lakh tonnes. Out of this, 57 lakh tonnes are for internal consumption and 5 lakh tonnes are for export. Assuming that the population of the country would be 69.7 crores in 1982-83, the *per capita* consumption of sugar by the end of the Five-Year Plan would be around 8.20 Kgs per annum. On a comparative basis, assuming U. P.'s population in 1982-83 to be 10.80 crores, with a *per capita* consumption equal to the national average (8.20 Kgs.), the requirement for internal consumption of sugar in U. P. is estimated at 8.86 lakh tonnes. The production target of U. P. however, has to be based not on require-

ments of internal consumption but on the share of U. P.'s sugar industry in national production. This share which has fallen to the level of 30 per cent in recent years is proposed to be raised to around 33 per cent during the current Five-Year Plan. On this basis, it is appropriate that the sugar production target for U. P. for 1982-83 should be fixed at the level of 20.56 lakh tonnes.

1.1.87. Keeping in view the basic objectives of the 1978-83 Plan the department has prepared programme for :

- (1) increasing sugar production to meet the requirement of increas-

ing population and maintain U. P.'s share in this industry;

(2) increasing employment opportunities through intensive cultivation of sugarcane ; and

(3) raising production and average yield of sugarcane with a view to increasing *per capita* income.

1.1.88. In addition to the above, the policy for reducing the area under sugarcane and providing full feed to the existing and some additional sugar factories and *khandsari* units from a minimum area around them has been adopted. In quantitative terms, the objectives for the 1978-83 Plan are enumerated below:

TABLE XXV—Objectives of the Plan for 1978-83 in quantitative terms

Items of Development	Units	Level of 1977-78	Proposed level 1982-83
1	2	3	4
1. Sugar Production	Lakh tonnes.	18.57P	20.56
2. Sugar Recovery	(%)	9.05P	9.70
3. Quantity of Sugarcane crushed	Lakh tonnes.	206P	212
4. Cane Hectareage	"	13.79	12.44
5. Sugarcane Production	"	681	672
6. Average yield	Tonnes/Hectare.	49	54
<i>Departmental Programmes</i>			
7. Additional Irrigation potential	Lakh hectares.	1.25	1.55
8. Per hectare Nitrogen consumption	Kgms.	51.05	85.00
9. Seed distribution	Lakh tonnes.	1.840	2.24
10. Additional storage capacity	"	..	0.72

P-Provisional.

1.1.89. In addition to the above broad parameters, proper care of planted as well as ratoon sugarcane crop would be ensured by enforcing strict supervision of cultural operations and also taking up of timely control measures as soon as the crops show signs of being affected by diseases and pests.

1.1.90. For implementing the cane development programmes, a total outlay

of Rs.1584.63 lakhs has been proposed. This figure, however, represents only the expenditure in the public sector through development schemes launched by the Government. In so far as the investments by growers in the shape of capital works or additional working capital is concerned no estimation is possible for want of data. The above outlay of Rs.1584.63 lakhs is proposed to be spent on providing grant-in-aid to

growers, U. P. Ganna Kisan Sansthan, U. P. Sugarcane Research Council and the Co-operative Cane Development Unions.

1.1.91. The proposed targets of essential items for the Plan 1978-83 are as under :

TABLE XXVI—Proposed Target for the Plan 1978-83

Proposed items of development	Units	Year-wise Phasing				
		1978-79	1979-80	1980-81	1981-82	1982-83
1	2	3	4	5	6	7
Cane hectaraage	Lakh hectares.	12.70	12.65	12.60	12.58	12.44
Sugarcane Production	Lakh tonnes.	622	620	630	653	672
Average yield	Tonnes/Hect.	49	49	50	52	54

1.1.92. Some of the specific schemes deserving mention here are discussed in the following paragraphs.

1.1.93. *Scheme for providing cane protection appliances to growers on subsidised rates*—The proposed scheme has two main aspects. Firstly, it provides a subsidy to the extent of 25 per cent of the cost of hand operated cane protection appliances to small growers who are economically weak and cannot afford to purchase them at full price. Secondly, it provides 25 per cent contribution of the State Government against the cost of protection appliances which are necessary for establishing cane protection units in factory zones.

1.1.94. *Scheme for control of pest epidemics of sugarcane through ground and aerial operations*—Under this scheme, 50 per cent cost of pesticides used for the control of pest epidemics is provided as grant-in-aid. For taking up timely control operations at the outbreak of pest epidemics, it is essential to store sufficient pesticides in factory areas where the pests occurred in epidemic form in the past.

1.1.95. *Scheme for replacement of seed and layout of nurseries*—Treatment of seed before planting has proved an easy means for controlling certain sugarcane diseases like 'Grassy-shoot' and 'Ratoon stuning' etc. consequently stress is being laid on establishing hot air/water seed treatment plants in the sugar factories. Under this scheme, 10 new seed treatment plants are proposed to be set up during the 1978-83 Plan period with a provision of subsidy to the extent of two-third of the cost of plants.

1.1.96. *Scheme for production of Foundation Seed Cane*—In order to provide healthy and pure seed material of new sugarcane varieties to growers, a three tier' seed nursery programme for establishing Foundation, Primary and Secondary nurseries in grower's fields is being implemented. Revision of the rate of grant-in-aid to Rs.1,000 on Foundation, Rs.750 on Primary and Rs.500 per hectare on Secondary nurseries has been proposed. During the 1978-83 Five-Year Plan, 775 hectares of Foundation, 3875 hectares of Primary and 38,750 hectares of Secondary nurseries will be established.

1.1.97. *Scheme for subsidising U. P. Sugarcane Research Council*—The expenditure incurred by the U. P. Sugarcane Research Council on research work on Sugarcane and multiplication of Seed material of new varieties of sugarcane is subsidised by the State Government. As these activities are necessary for the development of sugarcane as well as the improvement of the financial conditions of the Sugar factories, this scheme will be continued throughout the current Plan period.

1.1.98. *Scheme for Intensification of manuring facilities*—With a view to providing necessary 'inputs' such as chemical fertilisers, manures and pesticides to growers, it is necessary to store them in small godowns constructed by the Co-operative Cane Unions at sale points serving the remotest villages of their area. Twenty-five per cent of the cost of construction of these godowns is provided by the Government as grant-in-aid. Weak cane unions, if they are not in a position to undertake the construction of these godowns out of their financial resources, would be assisted

either with subsidy or long gestation loans. Three hundred godowns of 80 M. Tonnes capacity each are proposed to be constructed during 1978-83 Plan period.

1.1.99. *Scheme for strengthening 'Plan-cell' in the office of the Ganna Ayukta, U. P.*—Since the beginning of the Fourth Plan, emphasis has been laid on the creation of one compact 'Plan-cell' in the Cane Development Department. This cell has, however, failed to have much of an impact mainly because it has functioned as a subsidiary for finding ways of implementing pre-determined policies rather than for objective analysis of performance, programme formulation and critical appraisal of on-going activities with the objective of assisting in policy formulation. It is proposed to strengthen the Plan-cell in the office of the Ganna Ayukta, U. P. For this purpose, some technical and supporting staff has been proposed.

Annual Plan 1979-80

1.1.100. The Following cane development schemes will be implemented during the year 1979-80 :

(1) Scheme for providing Cane Protection Appliances to growers on subsidised rates.

(2) Scheme for controlling Sugarcane Pest epidemics through ground and aerial operations.

(3) Scheme for Cane Development Work in new Sugar Factory areas.

(4) Scheme for Seed Replacement and Layout of Seed Nurseries.

(5) Scheme for Subsidising expenditure on Transport of Seed Cane.

(6) Scheme for Production of Foundation Seed Cane.

(7) Scheme for Cane Grower's Institute.

(8) Scheme for Subsidising U. P. Sugarcane Research Council.

(9) Scheme for Intensification of Manuring Facilities.

(10) Scheme for Strengthening Plan-cell in the Office of the Cane Commissioner, U. P.

(11) Scheme for construction of Inter-village link roads in Sugar Factory areas on contributory basis.

(12) Scheme for Intensive Sugarcane Development in 16 Kms. Radius are around each Sugar Factory.

(13) Scheme for collection of information and data on khandsari sugar production.

(14) Scheme for technological research on khandsari sugar production.

(15) Scheme for providing soft loan as margin money for modernisation of khandsari units.

1.1.101. The outlay on the above mentioned plan schemes during the year 1979-80 will be Rs.333.38 lakhs.

1.1.102. As a result of the implementation of these plan schemes, following level in the area and production is expected to be achieved.

TABLE—XXVII—Level of achievement in area and production

Serial no.	Items	Units	Expedted achievement 1979-80
1	2	3	4
1	Sugarcane Area	.. Lakh Hect.	12.65
2	Sugarcane Production	.. Lakh M.T.	620.00

(iv) EXTENSION AND FARMER'S TRAINING PROGRAMME

1.1.103. The need for training of workers of the Rural Development Department and recognised leaders of the village community was recognized in this State long ago and accordingly, 21 extension training centres were established under this department at various places in the State. Subsequently, 21 farmer's training centres were also established exclusively for the benefit of farmers. Sixteen extension training centres have also the advantage of owning their own agricultural farms and twenty-one centres have attached workshops. Apart from providing facilities in imparting practical training to development workers, these farms and workshops serve as a forum for giving short but effective training to farmers and artisans in actual production processes. Eight of these workshops have production wings also and these are utilized for an intensive training of farm mechanics, apart from production of agricultural implements. The extension and training centres and farmers training centres have

qualified staff and other supportive services such as buildings, vehicles, library etc. They are supervised at the moment by a small training wing at the headquarters in the office of Agriculture Production Commissioner. It will, thus, be seen that the State has a fairly well developed infra-structure in the field of training as a supportive activity to the Rural Development programmes. In spite of the fact that efforts have been made from time to time to improve the content and quality of training and to make up deficiencies, as they came to be realized, a close and critical look at the programme brings out the need of the following few steps :

(1) Both with a view to ensuring that the training has the desired impact on upgrading the skills and effectively of the workers, farmers and artisans as well to evaluate this impact on a continuing and firmer basis, we have to have a much more strong and competent organization at the apex level to design and undertake suitable studies in the total field of Rural Development programmes to be utilized as a basis for defining the content and mode of training.

(2) Training is a specialized job and its success will always depend upon the quality of trainers and judging from this angle, we have to have a substantial qualitative improvement in the faculty of these training centres.

(3) The scope of training needs to be reviewed immediately in order to identify gaps and new disciplines which though very much required in the field today still do not find a place in the curriculum and to introduce these discipline with corresponding changes in emphasis on the various items of training.

(4) There is need for a much more massive effort to train village leaders for securing a higher degree of their enlightened participation in rural development work and farmers and artisans for increasing their productivity.

Apart from the need of taking suitable steps to achieve the objectives mentioned above, one has also to realize that the

approach to the Rural Development programmes is already undergoing a big change in the rural plan. The concepts of intensive rural development, spatial and multi-level planning including block level planning as an integral part of I. R. D. Antyodaya and democratic decentralization in planning and development have been introduced for the first time in the Rural Development programme. In order to translate these concept into operational programmes, staff at various levels have to be familiarized with techniques of integrated area development, project formulation, monitoring and evaluation and other tools of planning and projects management. Unfortunately, the training centres today do not have the orientation or qualified faculty to impart knowledge in these skills. There is, therefore, an urgent need of giving these centres a new look also in order to match the new demands.

1.1.104. Keeping the above in view, the State Government proposes to go into this question in much greater detail and to set up new organizations whereof warranted as a result of the above approach and to make such changes as may appear to be necessary in the existing Training Centres and the present infra-structure available in this field. There is already a strong feeling that the nature and volume of work involved in this venture is such that to the extent possible, the organization responsible for research, designing and evaluation of training programmes should be kept outside the control of State Government and should have maximum autonomy in its affairs. Again, some mechanism will also have to be developed to have some sort of link-up between this organization and the training centres which may work to the mutual advantage of both of them. One of the alternations can be to set up in the State an institute for Research and Training in Rural Development. The details of this and other organizational matters will have to be worked out in greater detail, once the basic approach outlined above is accepted in principle.

1.1.105. In order to provide the training support in the lines indicated above an outlay of Rs.607.25 lakhs has been kept for the Plan period (1978-83). The total outlay for Agricultural Production Sector is

Rs.206.94 crores and judging against this figure the amount kept for training works out to less than 2.9 per cent which is only too reasonable.

1.1.106. Following are the programmes proposed for the year 1979-80 :

(1) Establishment of State Institute for Rural Development at Bakshika-Talab, Lucknow and three Regional Institutes at Rudrapur, Ghazipur and Bichpuri for following objectives :

(i) To undertake and assist in the organisation of training and study courses, conferences, seminars and workshop for top level administrators and peoples representatives.

(ii) To aid, promote and coordinate research project.

(iii) To analyse and propose solution of specific problems encountered in the planning and implementation of Rural Development Programme.

(iv) To prepare suitable agricultural extension material in simple language for the benefit and guidance of the farmers and extension workers.

(v) To collaborate with Agricultural Universities Directorate of Agriculture and other Development Departments to promote extension programmes.

A provision of Rs.22.00 lakhs have been made for this in the annual plan of 1979-80.

(2) Upgrading of the remaining extension training centres for higher and specialised training to village level workers to make them more technically competent and professionally sound. A provision of Rs.8 lakhs has been made in the annual plan of 1979-80 for this.

(3) *Establishment of District Farmers Training Units*—Under the centrally sponsored scheme Farmers Training Centre are functioning in 21 districts of the State. It is expected that 10 such additional training centres will be allotted by the Government of India. Thus there is a proposal to establish Farmer Training

Units in the remaining 25 districts under the State Plan. Out of these it is proposed to establish Farmers Training Units in 10 districts during the year 1979-80. These training centres, apart from their own training personnel and physical facilities, will directly be linked with the appropriate extension training centre and Regional Institutes for their reinforcement and guidance. The District Farmers Training Centres together with the extension training centres located in various districts will also cater to the need of training of extension workers and farmer under the "Training and Visit Scheme". A provision of Rs.50 lakhs has been made for this in the annual plan of 1979-80.

(4) *Strengthening of State Headquarters*—It is proposed to strengthen the headquarters with the technical staff for providing regular guidance and concurrent evaluation of the training programme in the State.

A provision of Rs.8 lakhs has been made for this in the Annual Plan of 1979-80.

(5) *Strengthening of Extension Training Centres*—To take up new responsibilities and extension training programme, the existing training centre need be strengthened in terms of training aids, such as dairy, poultry units of physical training, additional units of physical training, additional hostel facilities, electrification, water supply, transport and communication, class rooms, laboratories, discussion hall and residential accommodation to the additional training and other staff members.

1.1.107. A provision of Rs.14 lakhs has been made for these items in the Annual Plan of 1979-80

The total outlay for 1979-80 is Rs.151.55 lakhs.

(v) AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION

1.1.108. Prior to the inception of Agricultural Universities in U. P., there was no organisation to undertake research, experiment with development techniques,

Innovate extension techniques and transmit new ideas to field departments responsible for assisting the farmers in improving their economic condition. In order to fill this critical gap and provide a back-up structure to find solutions of problems encountered by farmers, the Government decided to establish Agricultural Universities which were expected to function in a live environment through the integration of teaching, research and extension. Three Agricultural Universities have so far been established, Pant Nagar for dealing with agriculture of the Western region, Kanpur for the Central region and Faizabad for the Eastern region.

1.1.109. The achievements, progress and future plan of the various universities are given below :—

G.B. Pant University of Agriculture and Technology, Pantnagar, Naini Tal.

1.1.110. *Research Programmes*—The G. B. Pant University of Agriculture and Technology, Pantnagar, was established in 1960. Over the years, this University has developed adequate research support on important crops for the development of agriculture in the Tarai and Bhabar belts. It has, however, not been able to generate biological material and develop production technology for the other two distinctly different agro-climatic zones for which it is responsible, viz., the hills and the Indo-Gangetic plains. The zones to be served by the Pantnagar University could be broadly divided into the following four agro-climatic regions whose characteristics are described below :

(i) *Hills*—This region really consists of two sub-regions requiring different treatment viz., lower hills including valleys and the higher hills :

(ii) Narrow Bhabar belt in the foot hills of the Shivalik range :

(iii) Second narrow belt of tarai which divides the plains from Bhabar, and

(iv) The plains which can be further classified on the basis of climate and farming practices into Gangetic plains comprising Meerut Division and the Rohilkhand Division.

1.1.111. The agro-climatic situations obtaining in the above zones and sub-

regions linked with the Pantnagar University are distinctly different from each other and the biological material generated and the production technologies developed under tarai conditions at Pantnagar do not show the same results in other areas.

1.1.112. *Strengthening of the Existing Research Centres*—The University has acquired land at the following locations in order to develop location specific research centres and proposes to strengthen research activities there :

(1) Crop Research Centre, Pantnagar.

(2) Horticultural Research Centre, Patherchatta, Pantnagar.

(3) Livestock Research Centre, Nagla, Pantnagar.

(4) Hill Campus, Ranichauri, Tehri Garhwal.

(5) West U. P. Campus at Daurala, Meerut.

(6) Cotton Research Station, Bulandshahr.

(7) Rice Research Station, Nagina, Bijnor.

(8) Rice Research Station, Majhera, Naini Tal.

(9) Research and Implements Testing Station, Pauri-Garhwal.

1.1.113. The West U. P. Campus at Daurala (Meerut) has been acquired in January, 1978 only. This Campus would establish an adequate base for undertaking problem solving and production-oriented research and extension education programmes for better growth of agriculture in that area. The Campus will undertake inter-disciplinary research on different crops and livestock.

1.1.114. *New Proposals*—(i) It is proposed to establish a Regional Research-cum-Extension Centre in the Rohilkhand Division. This Centre would be developed on the pattern of the West U. P. Campus at Daurala. This Centre will undertake research on different crops of the area and on the livestock in order to identify suitable varieties of crops and develop appropriate production technology.

(ii) It is also proposed to start new inter-disciplinary projects, operational research projects, farming systems projects and pro-

jects on specific problems. The details of these projects are as follows :

Inter-disciplinary projects ..	8
Operational research projects ..	4
Farming systems projects ..	10
Projects on specific problems ..	105

These projects are proposed to be undertaken in order to bridge the gaps that have been identified on the basis of the past and present research findings.

(iii) It is also proposed to create seven central facilities and special study centres listed below :

1. Agricultural equipment and training centres.

Farm machinery and power clinic for technical uplift of farmers and village artisans.

3. Production-cum-training centre in agricultural engineering

4. Rice and pulse process engineering research and training centre.

5. Feed processing, research, equipment development and testing laboratory.

6. Central facility for evaluation of the nutritive value of animal feeds and grain varieties.

7. Central facility for protein, amino-acids, oil and moisture determination.

Extension Programmes

1.1.115. *Strengthening of the existing programmes : Expansion of on-going extension education programmes of the University*—The University has been operating the following projects, programmes and activities :

- (i) Crop production project
- (ii) Fruit production project
- (iii) Vegetable production project.
- (iv) Livestock production project.
- (v) Food processing and utilization Project.
- (vi) Soil and water testing project.

(vii) Problem soils reclamation project.

(viii) Soil conservation irrigation and drainage project.

(ix) Plant diagnosis project.

(x) Plant protection on surveillance project and adjustment for plant protection operations.

(xi) Fertilizers, pesticides and fungicides testing project.

(xii) Farm management project

(xiii) Farm power and machinery project.

(xiv) Extension literature project.

(xv) Farm radio project

(xvi) Film shows

(xvii) Training project

(xviii) Correspondence course

(xix) Self employment and custom service by graduates project.

(xx) Kisan mela

(xxi) Exhibitions

(xxii) Pantnagar farmer's club..

(xxiii) Establishment of krishi kendras.

(xxiv) Training for notified tribes.

(xxv) Agricultural Competitions and shows project.

1.1.116. The university has been executing above mentioned projects with its meagre resources. It is proposed to expand and strengthen the facilities at the field level in order to serve the farmer in a more effective way.

Continuing education through correspondence courses—The University made a modest beginning with a correspondence course in agriculture for farmers in May, 1973 :

(i) To carry new knowledge to the door-steps of farmers regarding the changing pattern of technology in the field of agriculture.

(ii) To educate farmers about latest technology for increased production of foodgrains, fruits, vegetables and livestock, resulting into higher income.

(iii) To educate the youth, engaged in farming regarding scientific

farm operations for increasing agricultural production.

(iv) To improve the socio-economic condition of the farmers as a result of higher agricultural production.

1.1.117. Nine courses dealing with the improved techniques of production of Maize, Paddy, Soyabean, Wheat, Potato, Sugarcane, Bajra, Rabi fodder crops, Rape-seed and mustard have been prepared. At present, there are 706 correspondent students enrolled for these courses. After an evaluation of the success of this course, steps are proposed to be taken to expand its scope and coverage.

1.1.118. *Working Plan*—The correspondence courses will be prepared on the following topics :

- (i) Field crops
- (ii) Vegetable crops
- (iii) Fruit crops
- (iv) Plant protection
- (v) Soil fertility and management.
- (vi) Dairy and poultry production.
- (vii) Fish production
- (viii) Operation and maintenance of farm machinery.
- (ix) Soil and water conservation
- (x) Farm forestry.

New proposals

1.1.119. *Establishment of regional centres for tapping the untapped production resources, identification of constraints and increasing the competence of delivery system*—On the basis of the statistics available, it has been found that there is a big gap of about 30–40 quintals per hectare between the production potential and the actual average yield obtained at the farmers level. To reduce this gap, it will be necessary to promote new technologies which includes use of high yielding seeds, fertilizer, irrigation in right amount at the right time and adoption of appropriate farming systems. The Government of Uttar Pradesh has assigned the responsibility of 4 divisions namely Rohilkhand, Kumaon, Garhwal and Meerut for extension education work to the Agriculture

University Pantnagar. These four divisions can be grouped into 3 larger areas on the basis of agro-climatic conditions i.e. (1) Hill areas, (2) Western U. P. areas comprising of Meerut division, and (3) Rohilkhand division. It is proposed to establish 3 Regional Centres for transfer of technology for increasing farm productivity. These will be located in Bareilly for Rohilkhand Division, in Meerut for Meerut division and at Rani-chauri for the hill areas.

1.1.120. *Working Plan of the centres*—(i) A group of 5 villages will be selected to serve as the nucleus of the operation of the project. Benchmark survey of the existing production potential will be made. Programmes for application of new technology will be prepared for the entire group of the villages. The programme will include improvement in the production of food crops, fodder and vegetable crops and also farm animals particularly milch animals. New farming systems and enterprises will be introduced to increase employment potential at the farm level and also increase production and net income.

(ii) This group of 5 villages would also serve as a training group and a teaching aid for extension workers of the State Departments of Agriculture, Planning and Co-operation posted at district, block and village levels and also for the progressive farmers of the districts. Frequent training programmes at monthly or even fortnightly intervals will be held, so that the extension staff and farmers are continuously in touch with the specialists for timely operations on their farms.

(iii) The difficulties observed in the field and also raised by the farmers in adopting new techniques will be clearly identified. These difficulties will then be referred to the research institutions for their solution. The other type of difficulties—financial and administrative, will be referred to the financing institutions and to other department of the State Government.

(iv) The group of villages will serve as a unit where the results of co-operative and co-ordinated effort of different agencies involved in Agricultural Development will be demonstrated. This will later become models for adoption in other areas.

(b) *Establishment of training-cum-research cells for management of Agriculture*—The University has been conducting more than 40 training programmes on its campus every year. These programmes, however, are conducted on *ad hoc* basis i.e. these programmes are organised only on the request of the different institutions. In order to make training programmes more effective it is necessary to teach some subjects in detail while presenting marginal aspects of other related subject. It is proposed to establish a Training and Research Cell for management in agriculture.

(c) *Establishment of Krishi Vigyan Kendra*—There is a vast gap between the present production level and potential production level in the country. The farmers have to be motivated and educated in newer techniques of agricultural production to increase their income. The education of the farmers can be done effectively by setting up Krishi Vigyan Kendra at regional levels. The Krishi Vigyan Kendras are proposed to be set-up for serving the following objectives :

(i) To educate the farmers and equip them with latest technology and skill for better production of food, fruits, vegetables and livestock.

(ii) To improve socio-economic condition of hill farmers through higher agricultural production.

(iii) To provide gainful employment to the farmers throughout the year, by developing multiple crop rotations, subsidiary occupations like poultry keeping, sheep rearing, bee-keeping, livestock keeping, fisheries on improved lines.

(d) *Communication System*—The need for an adequate communication service for transferring the results of agricultural research and technology to the field has been felt by Agricultural Universities. G. B. Pant University of Agriculture and Technology, Pantnagar established the first Communication Centre in the year 1970. The present activities for this Centres are as under :

(i) Production of radio and TV programmes.

(ii) News service (as a Central News Agency/Public relation wing of the University).

(iii) Publication of extension literature.

(iv) Agricultural exhibition and field publicity.

(e) Establishment of Instructional resource library.

(vi) Consultation service.

(vii) Art projection and photo services.

(viii) Academic programme in communication.

1.1.121. *Future Programme*—The centre plans to achieve the following goals during the 1978–83 Plan period :

(i) Development of undergraduate and graduate programmes in “Development Communication”.

(ii) Conducting various in-service-refresher and short-term training programmes for various categories of information—personnel and training of instructors and teachers.

(iii) Development of a sound research base with a view to formulate a scientific rural communication strategy.

(iv) Build up a strong instructional technology centre capable of producing and supplying instructional material for University teachers.

(v) Development of strong agricultural information service with facilities for radio and television recording and broadcasting, mass production of publications, mobile exhibition and field publicity programme.

(vi) Establishment of centre of continuing education to tackle the problem of adult education effectively.

Chandra Shekhar Azad University and Technology, Kanpur

1.1.122. *Area Responsibility*—The Chandra Shekhar Azad University of Agriculture and Technology, Kanpur came into existence on March 1, 1975. Later, U. P. Institute of Agricultural Sciences, Kanpur and U. P. College of Veterinary Science and Animal Husbandry, Mathura were transferred to this University in July, 1975 to form the two constituent Colleges of this University with campuses at Kanpur and Mathura respectively. This Univer-

sity has been entrusted with the responsibility for integrating teaching, research and extension education activities in the 21 districts of Allahabad, Jhansi, Agra and Lucknow divisions of U. P.

1.1.123. *Specific Achievements*—The crop-wise research made in the University may be divided into four sections (1) Cereals, (2) Legumes, (3) Oil-seeds and Millets and (4) Fibre and tobacco, as per details below :

(1) Cereals

(a) *Wheat*—Wheat research has led to the release of high yielding and disease resistant varieties K 68 and K 65 for irrigated and barani tracts respectively. Among dwarf wheats, a triple gene dwarf K 816, resistant to all the three races of rust and K 852, a one gene dwarf less susceptible to rust than the present recommended Kalyansona variety have been developed.

(b) *Barley*—In barley, improved varieties namely Jyoti, Ambar, Vijaya and Azad have been developed to suit various agro climatic zones of the State.

(2) Legumes

In legumes the amous varieties like Gram Type 3, Pea Type 163, Lentil Type 36, Arhar Type 21, Moong Type 44 and Urd Type 9 are not only suited to the State, but have also been recommended on all-India basis. Another major achievement in legume research is the development of wilt resistant varieties, namely Kailash and KWR-1 of gram and Arhar respectively.

(3) Oilseeds and Millets

Oilseed research has also resulted in the development of a large number of high yielding varieties of different oilseed crops. In groundnut, remarkable success has been obtained with the development of Type 64—an early bold seeded high yielding, branch type of variety. Three rust and wilt resistant varieties of linseed viz., Hira, Mukta and Neelam and a mustard variety—Varuna, have been developed.

The work on improvement of Jowar led to the development of important varieties like Mau Type 1, Mau Type 2 and Type 22 to suit different agro-climatic zones of the State.

Breeding work on the development of varieties of smaller millets like Sawan,

Kodon, Cheena and Mandua resulted in the release of T 25 and T 46 of Sawan, T 2 B of Kodon, T 44 of Kakun and T 36 B of Madua.

(4) Cotton and Tobacco

A significant achievements in respect of cotton breeding has been the evolution of a high yielding variety namely C. A. 7. In the case of tobacco, high yielding varieties namely NPS 219, C 302 and Patiali have been developed.

Promising Varieties

(1) Cereals

(a) *Rice*—In rice KR 38-155, KR 30-100, KR 37-122 and KR 37-217 lines for saline-alkaline areas and KR 2-5 and KR 2-4 for water logged conditions have been developed.

(b) *Wheat and Barley*—In wheat, the strains K 7402, K 7229, K 7040, K 7503 and K 7244 have been found very suitable for different conditions in the State. Two strains of barley, K 141 and K 169 have been recognised for cultivation in North-Eastern plain zone in rainfed areas.

(2) Legumes

Recently two varieties of gram viz., K 468 and K 850 and one of Mung K 851 have been evolved and released.

(3) Oilseeds

Among oilseeds, crop variety AH-114 (Chandra) of groundnut and T-65 of Sunflower have been released by State variety Release Committee for general cultivation in different Agro-climatic zones of State. A variety—KR 5610 (Sekhar) is latest addition to the recommended varieties of Rai.

(4) Millets

Ragi strain, KM 1 promises to be an outstanding performer. It is being tested at the Regional Research Station.

1.1.124. *Future Programme*—In the Five-Year Plan for 1978–83 efforts will be made to dedicate this University to the farmers of this region by developing activities pertaining to education research and extension so as to serve the best interests of the farmers; like-stock breeders and other rural population, particularly the weaker sections of the society, landless labour, small and marginal farmers. Every effort will be made to provide new self-supporting employment avenues for the

unemployed educated youth. To achieve this goal, it is proposed to re-orient and re-organise the existing programmes on the following lines :

(1) To strengthen and expand the existing teaching and research facilities with a view to enhancing the practical content of the graduate courses and give them a rural basis and also provide facilities for the introduction of new techniques based on scientific advancement in the field of teaching and research.

(2) To strengthen the research potential in those subjects which have become important in the content of demand and supply disparities, especially oilseeds, legumes and cotton. It is also proposed to augment facilities for intensification of work pertaining to macro and micro analysis of soil, particularly for different micronutrients ; fruit and vegetable gardening and preservation of fruit and vegetables ; improved agronomical practices like multiple cropping and mixed cropping ; soil fertilizer cycle ; post-harvest technology ; germ plasm research in local breeds of cattle, buffaloes, goats and poultry ; fodder and pasture research ; and finally study of the economics of these programmes through computer analysis.

(3) Special efforts will be made to evolve and cultivate high yielding varieties of oilseeds and pulses in the Bundelkhand region, which is very suitable for these crops. In addition, crop production programmes will be taken up in different agro-ecological conditions, like *Usar* land of Dalip Nagar, eroded land at Hazratpur, Rocky soils in Bundelkhand and brackish water and saline soils at Chhatta. Efforts will also be made in establishing the germ plasm research centre for Barbari and Jamunapari goats at Hazratpur.

(4) It is proposed to establish new faculties in subjects like Home Science, Agro-forestry, Food Technology, Dairy Science, Horticulture and Fisheries and to create new departments essential for completing the training

programme of graduates in subjects like Agricultural Engineering, Nematology, Bio-chemistry, Animal Production and Management, Poultry Science etc.

1.1.125. *Extension Education*—Prior to the establishment of this University, there was a Department of Extension and Education which was concerned mainly with teaching of graduate and post-graduate students and in organising the training programmes for the farmers, extension workers and officers of Agriculture Department. Realising the importance of extension education in the Agricultural University, it has been envisaged that a full-fledged Directorate of Extension with Farm Advisory Service, Field Demonstration Programme, School for Training, a Communication Centre, a Regional Extension Centre, a Krishi Vigyan Kendra, Mobile Training Teams and poly-laboratory service should be set up in a phased manner. Proposals for “visit and learn programme” and “earn while you learn programme” for students and farmers have been formulated. In order to include rural training programme as part of the course work for the graduate students, a Department of Rural Training is sought to be established. The Director of Extension in collaboration with the Director of Agriculture, Animal Husbandry and Fisheries, will work out detailed programmes of training and act as a liaison unit between the farmers and field workers on one side and teaching and research staff on the other side, for transferring new technique from the University to the farmer's fields and transmit feed back information to the research and teaching departments regarding the problems facing the farmers.

Narendra Dev University of Agriculture and Technology, Faizabad

1.1.126. The Narendra Dev University of Agriculture and Technology, Faizabad came into existence on October 10, 1975. Its functional area of teaching research and extension education spreads over the entire Eastern Uttar Pradesh with 15 districts in the Division of Faizabad, Varanasi and Gorakhpur. The districts covered are Faizabad, Bara Banki, Sultanpur, Pratapgarh, Gonda, Bahraich, Gorakhpur, Azamgarh, Basti, Deoria, Jaunpur,

Ballia, Ghazipur, Mirzapur and Varanasi. The operational area within the jurisdiction of the University falls in three major sub-agro-climatic regions i.e., eastern tarai, plains and Vindhyan range.

Achievements and future programme

1.1.127. *Teaching*—The regular teaching programme of the University at graduate level (B. Sc. Ag.) has been started since October 5, 1978 in the accommodation provisionally spared for the college of Agriculture in the premises of the Extension and Training Centre, Dabhasamer, Faizabad.

1.1.128. *Research*—The main research work conducted so far relates to rice, jute, maize and model agronomic experiments. Although research on other important agricultural crops like wheat, barley, pulses (arhar, gram, pea, lentil, urd and moong), oilseeds (rape, mustard and linseed), forage crops, vegetables and fruits have already been initiated with the existing staff, but neither funds nor staff facilities are adequate for working on the above crops.

1.1.129. Notable contributions have been made on different aspects of rice and jute by the Research Stations of the University resulting in the evolution of suitable high yielding varieties of these crops for different situations and the development of agronomic and plant protection schedules for their cultivation. Keeping in view the various agro-ecological situations prevailing in Eastern Uttar Pradesh several varieties of rice have been released and recommended for general cultivation.

Irrigation condition	..	Saket 4
Water-logged area	..	Cross 116
Zaid season	..	Saket 3
Flooded area	..	Madhukar, chakja 59
Deep water	..	Jalmagna.

1.1.130. In addition to above varieties a number of promising varieties are in pipeline. The strains KR 5-142 and IET 2232 have been identified for rainfed upland situations. For irrigated situation a strain RH 132 has given consistently better performance than Jaya and IR 8. For flooded situation the strain FRG 7 and for deep water, the varieties GMS 14 and DW 48 have been found to show good promise.

The strains IET 6699, IET 6701, IET 4600 (Getu×IR 8) selection have done very well under 'Usar' soils. Some of the mutants selected from *Badshahpasand*, *Kalanamak* and *Basmati* have performed exceptionally well at high fertility level and have similar fragrance and other quality characters as the parental types. Some of the *Mahsuri* crosses are also showing promise under water-logged conditions. Some high-yielding strains having high level of resistance to bacterial blight like IET 5597 and IET 556, have been identified.

1.1.131. As a result of researches on jute and mesta, UPC 94, a variety of *Capsularies* jute for low lying areas, UPC 35 for midland condition and C. 513, a variety of Mesta have been identified. In maize *Diara Dholi* and Punjab selection have been found promising.

1.1.132. Although considerable work has been done in rice grown under irrigated, flood and deep water situation, there is only limited thrust on the problems of rice grown in different upland areas and rainfed water-logged situations. Problem of paddy grown under Alkaline *Usar* condition also received little attention in the past. For floods and deep water condition further work is required for developing high-yielding varieties suited for different agro-climatic conditions of Eastern Uttar Pradesh. The sources of resistance to important diseases of rice have been identified and further work is needed for combining multiple resistance in high-yielding varieties. However, local problems like sheath rot and panicle browning need further work for developing suitable control measures. The work on control of some pests like *armyworm* also needs intensification. In case of jute, evolution of drought and flood resistant varieties and the problems of nematodes, anthracnose and stem rot include the major areas requiring special attention.

1.1.133. The research information on rabi cereals, jowar, bajra and smaller millets, pulses, oilseeds, tobacco, poppy, vegetables, spices, forage crops and fruits for eastern U. P. is meagre and for some of these crops is totally lacking. Major part of cultivated area in the tract being un-irrigated, research on dryland farming needs special attention.

1.1.134. One of the most important reasons for the low productivity in eastern region is small *per capita* land holding. Therefore, special efforts have to be made for conducting researches in mixed farming systems including agricultural crops, vegetables and fruit culture, aquaculture and animal production. About 40,000 hectares of land in eastern tract is affected by floods. Therefore, special research efforts have to be made to evolve crop varieties which may fit in the appropriate cropping pattern of the area. In several places there is standing water upto a depth of 70 to 80 cm. This necessitates research to evolve tall rice varieties having higher yield potential. Research regarding the chemistry of sub-merged and flooded soils also need special emphasis. Suitable projects of water management also need to be undertaken in view of poor drainage in most of the areas in eastern U. P. As there is a sizeable area of *Usar* land in this region research for developing suitable reclamation technology and soil management practices requires immediate emphasis. A number of pests and diseases cause considerable loss both in field and storage. Many of them are specially important in this region and need special efforts for their control. The research on the post-harvest technology also needs priority for saving food grains, vegetables and fruit from the losses caused by diseases, pests and prolonged faulty storage procedures.

1.1.135. Very little work has been done so far for developing implements and grain storage structures suited to small and marginal farmers. Special efforts are also needed for working out soil conservation and water management technology to deal with peculiar problems of soils of different agro-climatic conditions and flood affected and water-logged areas of Eastern U. P. Location specific regional problems of *Bhat* soils and tribal areas of Vindhyan range also need immediate attention in view of their importance and scope for realising the production potential of these tracts.

1.1.136. The intra-structure facilities of staff, equipment personal and contingency grants are very limited and inadequate to cope with the numerous problems confronted as indicated above. There

is urgent need for providing adequate facilities for solving these problems and for providing linkage with other research and extension agencies to increase the productivity in the region.

1.1.137. *Extension Education* — In order to undertake the extension education programme, only limited organisational set-up could be developed so far with the appointment of a few Subject Matter Specialists at Faizabad only. In addition, the research staff located at University research stations also render advice and participate in training programme. Since the area of responsibility of the University with regard to extension education spreads over 15 districts of Eastern U. P., a comprehensive proposal has been made in the 1978-83 plan to cover advisory, training and information roles of the University to assist extension personnel, farmers and like agencies.

Adoptive Research

1.1.138. Under the present set up, there are only ten Regional Agricultural Testing and Demonstration Stations which carry out the adaptive research programme in the State. These stations are too few in number and do not cover the existing agro-climatic variations in the State. In order to cater to the needs of the State, it is necessary to establish twelve main and seven satellite stations. The main stations will be located in the broad agro-climatic zones of the State while the satellite stations will take care of the micro variations in climatic conditions. Accordingly, the main stations will remain located at Meerut, Bareilly, Mathura, Bharari (Jhansi), Hardoi, Varanasi, Bara Banki, Haldwani (Naini Tal), Moradabad, Allahabad, Deoria and Chinyali Saur (Uttar Kashi) districts while the satellite stations will be at Etawah, Rae Bareli, Gonda, Budaun, Azamgarh, Amrukh (Jhansi) and Gwaldam sub-territories.

1.1.139. The existing ten adaptive research centres need to be strengthened with additional staff, building construction and other working facilities if these stations have to remain deeply involved in the standardization of operational research and discharging training responsibilities. Since twelve main stations are needed in all, two such stations have to be established on the lines

similar to the existing stations. The summarized proposals for strengthening and establishing the adaptive research centres alongwith their programmes is given below :—

(i) Strengthening of 10 existing regional agricultural testing and demonstration stations.

(ii) Establishment of 2 new main stations.

(iii) Establishment of 7 satellite stations.

1.1.140. It is assumed that applied research findings will be tested in conventional programmes to assess adaptability at zonal level, sub-zonal level and at the farmer levels. To proceed beyond zonal stage towards the evolution of a programme for the development of crop production recommendation at the farm

level, several sets of information are needed :—

(i) *Physical*—Soils, agro-climatological data, extent of major sub-zones farm size distribution, availability of irrigation water, drainage and special factors (salinity/alkalinity, ravine etc.).

(ii) *Agronomic*—Present cropping pattern (reasons for these if known), agronomic practices including varietal distributions, incidence of major pests and diseases, and other special factors.

(iii) *Economic*—Credit/input supply situation, present distribution of net income, farmers attitude to risk, marketing facilities and prospects.

1.1.141. The requirement of funds for such stations and demand for new stations and 7 satellite stations are given below :

TABLE—XXVIII—Estimated cost for establishing the whole Project units.

Projects Units	(Rupees in thousands)	
	Expenditure required under different component	
	1979-80	1979-83
1	2	3
1. Strengthening of existing R.A.T. Ds.	3,500	15,000
2. Establishment of two new main stations	1,500	7,000
3. Establishment of 7 satellite stations	2,000*	8,000
Total	7,000	30,000

1.1.142. *Financial Targets*—For Agricultural Research and Education programmes an outlay of Rs.40.00 crores has been proposed for the Plan 1978-83 and out of which the outlay for the year 1979-80 would be Rs.9.06 crores.

(vi) AGRICULTURAL MARKETING

1.1.143. Two hundred and fifty main and 365 subsidiary markets in the State have so far been regulated under U. P. Krishi Utpadan Mandi Adhiniyam, 1964. One hundred and fifteen agricultural commodities have been brought within the ambit of the laws regulating marketing activities. The details of total arrivals and total income of all the Mandi Samitis are as under :—

TABLE—XXIX—Total arrival/Income

Year	Arrivals	Income
	(in lakh M.T.)	(in crore rupees)
1	2	3
1972-73	37.90	1.92
1973-74	39.52	4.63
1974-75	40.29	5.56
1975-76	84.25	8.75
1976-77	93.62	11.81
1977-78	88.66	12.24

1.1.144. In terms of arrivals as well as income, the mandi samitis have made considerable progress from year to year.

1.1.145. In order to provide suitable and well developed market yards in these regulated markets a project report envisaging the development of 120 main markets have been prepared with a view to obtaining financial assistance from the State and Central Governments, commercial bank etc. Upto the end of 1977-78, construction of 12 model market yards was completed, while another 55 market yards were under construction.

1.1.146. For the marketing of fruits and vegetables of the hill areas, a vegetable and fruit market yard at an estimated cost of Rs.115.50 lakhs is being constructed at Sahibabad (Ghaziabad). A new market yard at Haldwani (Naini Tal) at an estimated cost of Rs.85.00 lakhs is also being constructed. Both these market yards are nearing completion. Arrangement for obtaining land for construction of market yards at Kotdwar, Vikasnagar, Dehra Dun and Ramnagar is being made. Construction work will be started as soon as land is made available.

1.1.147. From the long term point of view, the objectives, of market development *inter alia*, include the provision of orderly marketing condition in all the regulated markets in the State through the provision of modern and suitably developed market yards, development of rural roads linking each village with the nearby assembling centres, development of existing mandies so as to provide certain basic facilities for orderly marketing right at the door of the farmer or within a negotiable distance of 5-10 Kms. from his village. The eastern and hill districts of the State which are economically backward and where the existing marketing facilities are comparatively not well developed will be given special attention. These measures would, it is felt, ensure fair and reasonable price to the farmers bringing their produce for sale in these markets thereby giving them an incentive for increasing further production. It is hoped that these measures would also help in raising the general standards of living and removal of poverty.

1.1.148. It is to be reasonably expected that the development of markets will also

catalyse the growth of these locations as centres for the sale of non-agricultural goods, the provision of repair and servicing facilities for equipment and in course of the lead to the establishment of small industrial units not only for processing of agricultural produce but also for the manufacture of consumer goods.

1.1.149. It is proposed to take up following programmes during the 1978-83 Five-Year Plan :

(1) Construction of about 20 market yards and 40 sub-market yards in eastern zone of the State is envisaged. For this, grant-in-aid for market yards amounting to Rs.80.00 lakhs is required from the state Government, during the 1978-83 plan period. Out of this, a provision of Rs.20.00 lakhs has already been made in the budget of 1978-79, and the remaining amount is proposed to be provided during the next four years.

(2) It is proposed to construct ten market yards, in the hill region for which grant-in-aid of Rs.50 lakhs is required from the State Government (Hill Development Department). It is estimated that the total cost of the project for construction of ten market yards in the Hill Region would be Rs.140 lakhs as per details given below :—

(In lakh rupees)

1. Total cost of the Project	..	140
2. Institutional finance	..	70
3. Mandi Samiti's own resources		20
4. Grant-in-aid (State Government Hill Development Department).		50

(3) It is proposed that 3,000 kms. of link roads should be made *pucca* during the 1978-83 plan period for which an amount of Rs.30.00 crores will be needed. It is difficult to envisage the generation of funds of this order right away. Therefore, to protect the earth work already done on *kacha* roads under the 'Food for work' programme and ensure that laboural expenditure already invested does not remain unutilized, it has been decided that as a first stage operation, at least culverts may be constructed whenever necessary and the tracks (

would also be paved with bricks. For construction of culverts on 3,000 kms. of roads an amount of Rs.6.00 crores will be required. In the year 1977-78 the State Government provided Rs.2.00 crores for this purpose, subject to this condition that 20 per cent of the cost of the construction of culverts will be must by the concerned Mandi Samitis. Work on culverts worth Rs.2.50 crores has, therefore, already been started. For the remaining work Rs.2.50 crores more would be required from the State Government against which Rs.1.00 crore will be provided by the Mandi Samitis concerned. For the pavement of *kachcha* roads with bricks on edge the cost per km. on an average will be about Rs.36,000. Thus Rs.9 crores will be required for paving 3,000 kms. of link roads.

1.1.150. On the basis of these calculations, it is apparent that the first stage operations on 3,000 kms. of *kachcha* roads will cost Rs.11.50 crores to the State exchequer during the 1978-83 plan period. However, a provision for only Rs.11.00 crores is being made in the 1978-83 plan under the expectation that at least Rs.50 lakhs

will become available from the resources of the Mandi Samitis. This outlay of Rs.11 crores includes Rs.1.00 crores already allocated for these works in the budget of 1978-79.

1.1.151. *Backward Area Plan*—It is expected that the Government of India will continue giving financial assistance for the construction and development of market yards in some specific areas like Command area, backward area etc. A sum of Rs.250.00 lakhs has been assumed as central assistance for the plan period for the programme. Thus, the total outlay for grant-in-aid including central assistance during the 1978-83 plan period comes to Rs.1480 lakhs of which, Rs.1230 lakhs will be under the State Plan. Rs.250 lakhs will be assistance from the Central Government. On an average, construction of a modern market yard involves a project cost varying from the Rs.20.00 to Rs.100.00 lakhs. Apart from the assistance given by the Government the cost of construction of the projects of market yards will be met by the Krishi Utpadan Mandi Samitis from their own funds as well as from commercial banks. The following table gives abstracts of physical and financial targets for the programmes under Marketing :—

TABLE—XXX—Physical Targets

Serial no.	Item	Unit	Target for 1978-83 Five year Plan	Target for 1978-79	Target for 1979-80
1	2	3	4	5	6
State Plan					
<i>I Development of Regulated Markets of U. P.</i>					
1	Construction and Development of Market yards :				
	(i) Eastern Zone	Nos.	20	10	3
	(ii) Hill region	Nos.	10	2	2
2.	Construction and development of sub-market Yard				
	Eastern Zone	Nos.	40	..	10
<i>II Development of Link Roads</i>					
1.	Construction of culverts	Nos.	7,500	7,500	..
2.	Pavement of link Roads	kms.	3,000	..	900
Central Plan					
<i>I Development of Regulated Markets of U.P.</i>					
1.	Construction and development of Market Yards ..	Nos.	73	20	15
2.	Construction and development of sub-market Yards ..	Nos.	62	2	15

TABLE-XXXI—Financial Outlays

(Rs. in lakhs)

Sl. no.	Item	State Sector Outlay			Contribution by mandisamities			Contribution by Central Government			Contribution by Institutional finance			Total outlay		
		For 1978-83 Five-year plan	For 1978-79	For 1979-80	For 1978-83 Five year plan	For 1978-79	For 1979-80	For 1978-83 Five year plan	For 1978-79	For 1979-80	For 1978-83 Five year Plan	For 1978-79	For 1979-80	For 1978-83 Five year plan	For-1978-79	For 1979-80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Development and construction of market yards and sub-market yards.	130	30	26	504	120	110	250	67	63	826	193	176	1710	410	375
2	Construction of culverts on Link roads and payment of roads.	1100	150	500	275	25	25	..	..	..	..	..	..	1375	25	25
	TOTAL	1230	130	326	779	145	135	250	67	63	826	193	176	3085	435	400

1.1.152. The construction of 73 principal market yards, 62 sub-market yards, pavement of 3,000 kms. of link roads and construction of 7,500 culverts on these roads is estimated to generate an additional employment potential of 122 lakhs man-days of skilled and unskilled labour which in terms of wages to be paid at Rs.8 per head on the average, works out to Rs.9.76 crores. A large part of these wage earnings would naturally accrue mostly to skilled and unskilled labour belonging to the weaker sections. It is also hoped that consequent to the development of modern market yards and rural roads as indicated above, the quantum of trade would also increase correspondingly thereby involving generation of further employment opportunities as weighmen, palledars, watchmen, sweepers, transporters etc. Considerable benefits would also accrue from the establishment of custom service centres, consumers stores, sale points for agricultural inputs like seeds and fertilizers etc. It is difficult to quantify all these indirect benefits since these would depend essentially on the strength of chain reaction resulting from market development.

(VII) STORAGE AND WAREHOUSING

1.1.153. U. P. State Warehousing Corporation was established by the U. P. Government in 1958 under the Central Agriculture Produce (Development and Warehousing) Corporation Act of 1956. Afterwards this Act of 1956 was repealed by the Warehousing Corporation Act of 1962. This Corporation is a statutory body in which the U. P. Government and the Central Warehousing Corporation hold interests in equal proportions.

1.1.154. The main functions of the Corporation are scientific storage of agricultural produce and storage of fertilizers, manures and other notified commodities. These functions are discharged by constructing warehouses and also hiring private godowns according to requirements.

1.1.155. *Fifth Five-Year Plan—Target and Achievements*—The working group of the Planning Commission had fixed a target of constructing 1 lakh M. T. capacity by the Corporation during the Fifth Plan period. Against this target the Corporation has been able to enhance its capacity during this period to the extent of 4,12,627

M. T. at an estimated cost of Rs.814.14 lakhs. Between 1974-75 and 1977-78, this Corporation received Rs.64.25 lakhs from the State Government towards its share capital and an equal amount was received from the Central Warehousing Corporation also. The remaining funds were arranged by this Corporation partly from its own resources and partly from the State Bank of India under the A. R. D. C. scheme.

1.1.156. *Construction Programme during 1978-79*—This Corporation aims to additional warehousing to construct capacity of 1,45,000 M. T. at an estimated cost of Rs.290 lakhs during the year 1978-79. Against this target, construction of 83,295 M. T. capacity had been completed by the end of July 1978. In addition to this, works for an additional capacity of 1 lakh M. T. have been entrusted to U. P. Nirmam Nigam. This year's target is therefore expected to be over achieved. The sanctioned outlay in the State Plan for 1978-79 is only Rs.37 lakhs. Matching contribution is expected from the Central Warehousing Corporation also. Thus out of the total estimated expenditure of Rs.590.00 lakhs during the year, only a sum of Rs.74.00 lakhs will accrue to this Corporation by way of equity from both the shareholders. The balance required for completing the above capacity will be met partly from its own resources and partly from the loan sanctioned by the State Bank of India under the A. R. D. C. scheme.

1.1.157. *Construction Programme for 1979-80 to 1982-83*—Construction of warehousing capacity in all the regulated mandies and markets is essential. At the moment dearth of godowns has resulted in the use of even some school buildings and of course open space on considerable scale of storage of foodgrains.

1.1.158. This Corporation has, therefore, proposed to construct an additional warehousing capacity of 30,000 M. T. at an estimated cost of Rs.75 lakhs in 12 regulated Mandi yards every year where land is made available by the Mandi Board. A total capacity of 1.20 lakh M. T. is proposed to be constructed by this Corporation at an estimated cost of Rs.300 lakhs by the end of the year 1982-83.

(VIII) DEVELOPMENT OF HORTICULTURE

A. Programme for Plains

1.1.159. Uttar Pradesh is one of the largest producers of fruits and vegetables in the country. The State has a very great concentration of orchards, producing a wide variety of fruits. Most of the orchards are, however, old and there has been considerable degradation of fruit trees over the years. Also, in many cases, relatively low yielding and low quality varieties have been planted. The foremost task confronting the department is the modernisation of these orchards with the application of available scientific inputs. A large-scale replacement of the existing trees through top work and other procedures is also necessary to rejuvenate these orchards. This will be possible only if an orchard by orchard survey of the more important fruit growing areas of the State is carried out and location-specific projects are formulated thereafter for upgrading existing orchards through intensive application of various scientific techniques.

1.1.160. It is also essential that the economic development of the State should be facilitated by increasing the export of fruits and fruit products from Uttar Pradesh. For this purpose, the existing machinery for processing, canning and marketing must be greatly strengthened. The Horticultural Development Corporation of the State would have to bear a major responsibility in this respect. In fact, it is envisaged that the corporation should, besides promoting processing and marketing, also collaborate with the Department of Horticulture in implementing programmes for increasing production.

1.1.161. Uttar Pradesh is a large producer of vegetable crops, specially potato. Enormous opportunities exist for the State to increase its export of potato and onion not only to other States in the country, but also to the neighbouring west Asian countries. It is therefore necessary to expand vegetable production programme to meet these potential export requirements.

1.1.162. Considerable progress has been made in India in producing quality seed of cereal crops like wheat and rice. The National Seeds Corporation and the Tarai Seeds Corporation have been set up for this purpose. More recently, steps have been taken to set up State Seeds Corporation in eight States including Uttar Pradesh. However, hardly anything has been done to organise propagation of improved material of horticultural crops. The result is that fruit growers find it extremely difficult to plant new orchards, or to replace the inferior varieties in their existing orchards. It is true that a large number of nurseries are there, but these are mostly in the private sector and there is not much control on quality. It will help immensely in the development of horticulture in the State, if suitable steps are taken at this stage to produce quality seeds. Basically, the State needs the same kind of mechanism for multiplication of propagation material of these crops as in the case of food crops.

1.1.163. With the progressive increase in the horticultural activities the number of nurseries, Government gardens vegetable seed multiplication farms and potato seed multiplication farms has also increased as would be evident from the table below :

TABLE XXXII—Establishment of fruit nurseries, potato seed, multiplication and vegetable seed farms.

Sl. no.		At the end of Fourth Plan	Capacity per year at the end of Fourth Plan	Established upto the end of 1977-78	Total	Capacity at the end of 1977-78	
1	2	3	4	5	6	7	
1	Government Gardens	..	8	12 lakh plants annually	..	8	} 1.00 crores plant (62 lakh fruit plants annually)
2	Government Nurseries	..	25	..	23	48	
3	Progeny orchards	..	7	..	..	7
4	Grape Nurseries	..	7	..	..	7
5	Vegetable seed production Farms	..	4	230 qt. veg. seed	3	7	1500 qt. annually.
6	Potato Seed multiplication Farms		6	10,000 qt. potato seed	5	11	40,000 qt. annually.
7	Multipurpose Horticultural Farms		1	..	2	3	

1.1.164. In addition to the above there are about 500 private nurseries spread all over the State producing about 150 lakh seedlings and grafts annually. As has been indicated above it is essential to regulate the working of these private nurseries so that quality seed plants are produced. It is for this purpose that a Fruit Nursery Act (1976) has been enacted and presently being implemented in the State.

1.1.165. The total capacity created through government and private nurseries up to the year 1977-78 is about 212 lakhs fruit plants and grafts. In addition to this, Government nurseries are producing 38 lakh seedlings/plants for general afforestation programme in the State. The Government Vegetable Seed Multiplication Farms have a capacity of producing 1,500 quintals of vegetable seeds. Similarly, the rated capacity of Government potato seed multiplication farms is 40,000 quintals per year. As has been indicated earlier, the main emphasis during the 1978-83 Plan will be on the production of quality planting materials and seeds for horticultural crops. For this purpose Fruit Nursery Act should be effectively enforced for ensuring that the vast resources of the private sector are geared to the production of quality planting material and seeds.

1.1.166. Another serious shortcoming, which prevents meaningful location and beneficiary specific planning for horticultural development, is the absence of reliable statistics of area and production of fruits and vegetables in the State. There is urgent need to compile basic statistics on a reliable basis so that the potentials and problems can be realistically assessed and achievements can also be evaluated correctly against expenditure incurred and targets included in the plans. During the Five-Year Plan 1978-83 necessary steps

would be taken to build up area statistics starting with concentrated belts of fruit and vegetable cultivation. Similarly, experiment on the lines of crop cutting experiments for agriculture are proposed to be carried out to estimate average yields of major fruit and vegetable crops in the State.

1.1.167. A decision has been taken that the Horticulture Department should immediately take up the preparation of a long term spatial plan for Horticulture which should be based on the one hand on reliable projections of demand of various products for internal consumption and export to other States as well as outside the country and on the other hand on the relative economics of growing different fruits and vegetables under the variety of agro-climatic conditions existing in different areas of the State. For obtaining economics of scale and also ensuring requisite concentration of supervision and management, the perspective plan will envisage operation generally in well defined but limited areas. One of the advantages of this selective approach would be that it will be possible to visualise and work out the details of supporting infra-structure for transportation, storage, producing and marketing and formulate integrated projects with data of benefits as well as cost, on this basis. It is expected that as the work for the preparation of the perspective plan gathers momentum, the proposals for the Five-Year Plan for 1978-83 will be integrated into it, with appropriate modifications wherever, these may be necessary.

1.1.168. Perhaps, it would be in place to reiterate that it is not intended to plan for horticulture department in isolation of other land based activities. The State Government has already accepted the philosophy of integrated block level planning and therefore, it will be its endeavour to see that horticulture programmes get full

support from other activities and infra-structural facilities while its own functions are also fitted into the overall strategies evolved for various blocks and districts for

removal of poverty, generation of additional employment and creation of potentials for sustained growth against a long term perspective.

TABLE—XXXIII—Achievements in horticulture development work up to the end of the fifth plan

Item	Unit	First plan achievement	Second plan achievement	Third plan achievement	Gap years 66—69	Fourth plan achievement	Fifth plan up to 77-78
1	2	3	4	5	6	7	8
1 Plantation of new orchards	Hect.	29,517	40,860	63,992	11,502	57,438	67,177
2 Rejuvenation of old orchard	„	13,752	18,400	62,723	10,400	52,920	48,249
3 Distribution of fruit (lakh plants)		62.73	61.30	127.91	31 01	135.17	N.A.
4 Distributizn of fruit (lakh plant)	Kg.	4,071	21,478	2,11,061	4,63,700	13,46,000	N.A.

1.1.169. Similarly, progress in relation to potato cultivation in the State is shown in the following table :

TABLE—XXXIV—Progress in potato cultivation

Period	Average area in lakh hect.	Average annual production (lakh tonnes)	Average production per hect. (tonnes)
1	2	3	4
First Five Year Plan period (1951-55)
Second Five Year Plan period (1956-60)
Third Five Year Plan period (1961-65)
Three Ad-hoc Plans—			
1966-67
1967-68
1968-69
Fourth Five Year Plan period (1969-74)
Fifth Plan (1974-78)

Strategy for the 1978—83 Five-Year Plans for Plains

1.1.170. Conditions in respect of soil temperature and rainfall throughout the plains are conducive to luxuriant plant growth. There is ample scope for the development of Horticultural crops in the State. During the 1978—83 Plan period, efforts would be made to intensify cultivation of horticultural crops in selected areas

having better potentiality and favourable marketing facilities. The following strategy will be adopted for achieving annual growth rates of 5 per cent and 8 per cent for fruits and vegetables respectively :

(1) Upgrading and rejuvenating the existing orchards.

(2) Increasing area under horticultural crops.

(3) Increasing the productivity of the existing area by using more inputs and their scientific application.

(4) Increasing cropping intensity and diversification of cropping intensity and diversification of cropping pattern through vegetable crops.

(5) Developing storage, processing and marketing facilities to ensure reasonable price to the producer.

Brief description of the specific measures proposed to achieve these objectives are discussed in the following paragraphs :

1.1.171. *Increase in productivity through mobile Horticultural Teams*—Even though, on the whole, Uttar Pradesh is one of the largest producers of fruit, most of the orchards are quite old. Their productivity has been deteriorating from year to year. These orchards are not cultivated. In some cases trees have been planted too closely and the trees have grown so much that sun light does not pass through them. In other cases the yield is relatively low because poor quality varieties have been planted. All these defects can, however, be remedied by the modernisation of orchard by the application of available scientific inputs.

1.1.172. It is proposed to take up a large scale programme of modernisation and rejuvenation of orchards with Government nurseries and farms as focal points. The staff employed in these institutions will also be actively involved in extensions work. In addition to this, some mobile teams are also proposed which will work in specific areas in a time bound frame. As has been indicated earlier, orchard to orchard survey will also be taken up in the course of upgrading and plantation of new orchards. In this way basic statistics will be gradually built up area by area. While horticultural extension staff will deal more specifically with the problems of selected areas to be covered with projects for intensive development of horticulture, in relation to activities like plant protection fertilizer distribution, soil and water conservation, soil testing, etc., the work will be handled by respective wings of the Agriculture Department. While assessing the requirement of staff for 1978–83 Plan, the present deployment of the full complement of staff from the Fifth and the earlier Plans,

which will now be borne on the non-Plan budget, is being kept in view.

1.1.173. *Establishment of Nurseries and Farms*—In the 1978–83 Plan, emphasis will be laid on the production of genuine and high quality seeds and other planting material for supply to growers. The capacity of existing nurseries, vegetable seed production farms and potato seed multiplication farms will be fully utilized. At the same time adequate control will be exercised on private nurseries for the production of quality planting materials.

1.1.174. *Cold Storage in Public Sector*—To maintain purity of the foundation seed produced at Government Seed Multiplication Farms, it is necessary that this seed is kept in separate cold storages and not mixed with other potato seed. At present there are two Government Cold Storages, one each at Daurala (Meerut) and Kasia (Deoria). Two more Government Cold Storages in Lucknow and Faizabad Divisions are proposed to be established.

1.1.175. *Cold Storage in the Private Sector*—It is envisaged that by the end of the current Five-Year Plan, total production of potato in the State will be about 45 lakh tonnes. For storing 40 per cent of the total production, a storage capacity of 18 lakh tonnes will be required, against which only 10 lakh tonnes capacity is available at present. An additional storage capacity of 8 lakh tonnes will, therefore, have to be added by the end of the 1978–83 Plan. To encourage construction of cold storage in private sector it is essential that loan on liberal terms may be made available by U. P. Financial Corporation and N. C. D. C.

1.1.176. *Intensive Vegetable cultivation around big towns*—In order to meet the increasing demand for vegetables in Delhi and the various urban centres of the State, it is proposed to take up vegetable production on an intensive scale in their periphery. If the vegetables to be grown in these areas are carefully identified on the basis of studies of demand and price trends in the respective consumption centres and organised within a tightly planned production cycle, the horticulturists would be able to earn very good profits. Small and marginal farmers can be greatly benefited by this kind of development since this process would be highly labour inten-

sive. The full promise of this approach would, however, fail to materialise if adequate and reliable arrangements for irrigation, credit, fertilizers, seeds and planting materials, transport etc. are not made and conditions are also not created for marketing to the exclusion of monopolist intermediaries. In addition to undertaking production of a variety of seasonal vegetables in the hinter land of urban centres, production of relatively less perishable vegetables such as potato and onions can be taken up on a large scale by small and marginal farmers all over the State for consumption within the State as well as for exports.

1.1.177. It is proposed that an area of 20,000 hectares should be taken up and this programme will be implemented on the basis of integrated location specific projects. It is expected that if these projects take care of the multifarious aspects concerned with production as well as marketing and are prepared with adequate care on the basis of reliable data, considerable support would be forthcoming for them from the financial institutions also.

1.1.178. *Quick growing fruits*—Quick growing fruits with brief gestation period, such as papaya, banana, pineapple, and grapes will receive special attention in the 1978-83 plan. The eastern region of the State has congenial agro-climatic conditions for growing bananas and pineapples while the western region is more suitable for raising papaya and grapes. For the current Five-Year Plan, the targets for Banana, pineapple, papaya and grapes are being fixed at the level of 1,000 hectares, 100 hectares, 1,000 hectares and 500 hectares respectively.

1.1.179. *Citrus cultivation* — Special efforts are proposed to be made for introducing an intensive package programme for the extension of area under citrus plantations, specially in the Bundelkhand region and Mirzapur districts. The district targets proposed for the 1978-83 plan are : Jhansi—200 hectares ; Jalaun—200 hectares ; Banda—200 hectares, Hamirpur—150 hectares ; Lalitpur —150 hectares ; Mirzapur—200 hectares.

1.1.180. *Collection of Statistical Data*—Reliable statistical data of area and production of horticultural crops are not available. In the 1978-83 Plan, necessary arrangement to collect Statistical data by conducting survey and crop cutting experiments, will be made. It will obviously not be desirable either to envisage or to wait for the appointment of additional staff for the collection of area, production and productivity data. The best, the most economical and the quickest way to getting this information would be to press all the existing staff of the horticultural department along with the field personnel functioning in the blocks for the first round of data collection. Thereafter appropriate arrangement for the regular updating of the collected information can be decided upon on the basis of work load and other relevant considerations.

1.1.181. *Financial outlays and physical targets*—The total outlay for horticultural department programmes is proposed to be Rs.10 crores. Out of this Rs.2.31 crores would be provided during the year 1979-80. The physical targets for important items of production are given in the table below :

TABLE—XXXV—Selected physical targets

Serial no.	Item	Unit	Level of achievement at the end of 1977-78	Target for 1978-79	Target for level of achievement at the end of 1982-83
1	2	3	4	5	6
1	Area under Orchards	.. .. ,000 Hectare	410	430	510
2	Area under Vegetable	.. .. "	440	475	610
3	Area under potato	.. .. "	225	230	250
4	Production of potato	.. .. lakh tonnes	31.50	31.90	37.50

B. Programme for Hills

1.1.182. The Hill region is gifted with various kinds of ecological habitats and has vast potentialities for horticultural development. The climate of hill areas which ranges from temperate to sub-tropical conditions is suitable for growing a tremendous range of vegetables and fruits. Temperate fruits like apples, pears, peaches, apricots, cherries, walnuts, hazelnuts, pecan nuts, almonds can be grown at elevations between 1600 to 2700 metres. Suitable areas with water supply are available where soft fruits like strawberries, raspberries, gooseberries, etc. can be grown successfully. Tropical and sub-tropical fruits like mango, citrus, guava, banana, litchi, papaya, flourish in the foot hills and valley areas.

1.1.183. The hill region is specially suitable for growing most of the temperate vegetables. Besides this, hill areas also provide ample scope for the production of crops like mushrooms, asparagus, saffron, spices, ginger, turmeric and hops. Ornamental shrubs and flower plants, bulbs and tubers can also be grown here as the agro-climatic conditions suitable for their cultivation are available in the region. As for the plains, for Hill region also reliable estimates regarding the area and production of different kinds of temperate and other types of fruits are not available. No potential surveys which could form the basis of systematic planning for the plantation of orchards of various kinds of temperate and sub-tropical fruits, has been conducted so far. Data is also not available for calculating the relative economics of crop husbandry and fruit culture, especially on high altitudes. Despite these data constraints, which obviously require to be dealt with on a priority basis, it is possible to formulate a policy framework for land use and on operational strategy for horticultural development, on the basis of qualitative judgments derived from past experience. For instance, it is reasonable to propose that in the long run, it might be desirable to encourage plantation of orchards only above an altitude of 1500 metres and concentrate in lower altitudes on growing potato and other high value vegetables, spices and ornamental plants. However, to proceed further from these general pro-

positions to location specific micro-planning, it would be essential to gather specific data about soil conditions, altitude, aspect, availability of irrigation, proneness to hailstorms etc. on the basis of village to village potential survey.

1.1.184. In addition to the consideration of this data, factors like accessibility, quality of communications, distance from marketing and transport networks and terminal consumption/processing centres would also have to be taken into account. Two basic points need to be kept in view while planning for horticultural development. The first relates to the recognition of the fact that a general dispersal of the programme without attempting to take into consideration the economics of concentration in well defined belts/areas would lead to an unnecessary proliferation of staff and infra-structural facilities. The second point pertains to the need for planning for Horticulture within the context of an integrated strategy based on comparative data regarding benefits and costs in relation to various land based activities.

1.1.185. While preparing the plan for Horticulture in the Hills, it has to be recognised that average farmers has very meagre holding so that if he plants an orchard, he is left with almost no other land to fall back upon for subsistence while his plants attain the age of 6 to 7 years and start bearing fruits. In these circumstances, it is essential that plans for orchard development should be supported with credit facilities which envisage not only a low rate of interest but also a moratorium of 6 to 7 years for loan repayment.

1.1.186. The scale at which Horticulture Programme needs to be expanded can not be supported entirely by outlays in the public sector. It is, therefore, essential to take steps to attract institutional finances which, however, will be available only if reliable benefit cost analysis for individual as well as co-operative "projects" can be attempted. It is precisely for this that arrangements have to be made for regular collection of reliable statistics pertaining to coverage of area, productivity, economics of production, cost of transport, storage, marketing and processing and price and demand trends for various products of

different centres of production, distribution and consumption. Financial institutions would advance credit only if they are satisfied on the basis of objective data that the growing of orchards of temperate fruits at higher altitudes is an economical and viable proposition. For this purpose, arrangement for collecting reliable statistics pertaining to the various aspects mentioned above would be made on priority basis.

Infra-structure

1.1.187. *Progeny Orchards/Nurseries*—For the production of genuine and true-

to-type planting materials of various horticultural crops, considerable attention has been paid to the establishment of Progeny Orchard/Nurseries. So far, 103 such institutions have already been established. Similarly, for the production of high quality vegetable and potato seeds, 8 Vegetable Production Farms and 6 Potato Seed Production Farms have been established. The annual production capacity of these institutions is about 15 lakhs fruit plants and 17,000 kg. of vegetable seeds. The district-wise position of progeny orchards, Vegetable Production Farms and Potato Seed Production Farms at the end of 1977-78 is shown below :

TABLE—XXXVI—*District-wise positions of progeny orchards, vegetable production farms and potato seed production Farms.*

Name of District	Progeny orchards/ Government Nurseries	Vegetable Seed pro- duction Farms	Potato Seed Production farms
1	2	3	4
1. Almora	15	..	..
2. Naini Tal	12	2	2
3. Pithoragarh	20	2	1
4. Pauri	10	1	1
5. Tehri	12	1	1
6. Chamoli	17	2	1
7. Uttarkashi	8	1	..
8. Dehra Dun.	9	..	..
Total	103	8	6

1.1.188. *Horticultural Extension Services*—For providing necessary technical guidance to the growers for establishing new orchards, rejuvenation of old orchards, control of pests and diseases and timely supply of horticultural in-puts, 146 mobile Horticulture-cum-Plant Protection Teams have been established in various blocks of

the 8 hill districts. Additional teams have also been provided for intensive horticultural areas. To extend facilities to new areas and pursue the programme on an intensive basis, selective strengthening of extension service are being proposed.

1.1.189. *Horticultural experiment and Training Centre*—Five Horticultural

Experiment and Training Centres at Chaubattia (Almora), Jeolikote (Naini Tal), Srinagar (Garhwal), Pithoragarh and Dunda (Uttar Kashi) have been established. These centres are carrying out experimental research work on the problems of temperate fruits, viz., Peach, Apple, Pear, Plum, Apricot, Cheery, Wal-

nut, Hazelnut, Chilgoza etc., fruit cultivation in valley and tarai areas viz., Culti-Mango, Litchi, Guava, Grapes, etc., and cultivation of vegetables.

1.1.190. *Physical Progress and Targets*—The progress of important programmes and targets for the 1978–83 plan are shown in the following table :

TABLE—XXXVII—Progress and Targets of Important programme

	Unit	Achievement upto the end of Fourth plan	Achievement up to the end of 1977-78	Target for 1978–83 Plan	Target For 1978-79	Target For 1979-80
1	2	3	4	5	6	7
Additional area brought under orchards	Hect.	64,767	84,931	30,300	6,300	6,000
Additional area brought under vegetable	Hect.	9,823	16,300	4,550	550	1,000
Additional area under potato	Hect.	20,400	24,787	4,670	670	1,000
Plant protection measures against pest and disease.	Hect.	107,430	182,789	117,000	17,000	25,000
Rejuvenation of old orchards	Hect.	51,589	71,735	29,500	5,500	6,000

Main Programmes of Hill Horticulture

1.1.191. *Scheme for extension for dwarf apple plantations and high density plantation of other fruit crops*—The climate of the Hills is most suited for production of apples. In order to intensify apple cultivation, a centrally sponsored scheme was implemented during the year 1974-75 under which dense plantation of apple plants is being undertaken. Instead of 100 plants normally planted in one acre, 250 dwarf plants per acre are planted under this scheme. For this, growers are imparted 5 days training to inform them of the benefits of the scheme and the cultural practices to be followed for its successful implementation. There has been good response from the growers since they start getting fruits within three years, and the returns per acre covered by densely planted dwarf apples are also considerably greater than that obtained from conventional plants. It is proposed to extend this programme as a normal horticultural ex-

tension activity in the hill areas on a large scale.

1.1.192. *Establishment of Garden Colonies by adopting compact plantation*—It is proposed to develop new areas under orchards in the form of garden colonies. During the 1978–83 Plan, an additional area of 30,000 hectares will be brought under orchards. Most of this area will be planted in compact blocks on the lines of "Saar Padhatti". Efforts will also be made to establish such orchards on both sides of roads wherever such possibilities exist.

1.1.193. *Scheme for subsidy on Vegetable and potato seeds in Tribal areas of U. P. hills*—In order to encourage the tribal people to take up vegetable and potato cultivation on an extensive scale in the five tribal blocks of U. P. hills, it is proposed to make high quality vegetable and potato seeds available to the growers on 75 per cent subsidised cost. Arrangements will

also be made for the collection and marketing of their products so that they are not exploited by middleman and are able to get return from their endeavours of an order which would encourage them to apply fertilizers and other scientific inputs to increase their productivity.

1.1.194. *Scheme for diversification of horticultural and allied crops like ginger, gladoli, strawberry, gooseberry, turmeric, etc.*—The climatic conditions of U. P. hills offer great scope for cultivation of crops like mushrooms, Ginger, Turmeric, Gladoli, Strawberry, Gooseberry, etc. It is proposed to bring about a large scale extension of area under these crops during 1978–83 plan period. For successful implementation of this programme, it is also proposed to provide some incentive to growers initially, by subsidising the cost of seeds, plants, fertilizers, plant protection material etc.

1.1.195. *Intensification of Nut Fruit Cultivation*—There is great potentiality for the cultivation of nut fruits like Hazelnut, pecannuts, etc. in the hill districts of U. P. To take advantage of this potential it is proposed to intensify the production of nut fruits on a larger scale than attempted hitherto in compact areas carefully selected because of their agro-climatic suitability and by making available genuine planting material to the orchardists on reasonable prices.

1.1.196. *Scheme for Development of Mushroom Industry in the Hill districts*—The hill districts are very well suited for production of edible mushroom. The product has a good market both within and outside the country. To take advantage of it, scheme for mushroom cultivation and imparting training, therefore, was launched during the Fourth Plan which has been continued during the Fifth Five-Year Plan as well. It is proposed to extend the programme during the 1978–83 Plan so that a larger number of people in the hills may be engaged in this industry and derive substantial income accruing from it.

1.1.197. *Scheme for Potato and Vegetable Seed Production and Certification in 8 hill districts*—Different areas in the Uttar Pradesh hills are agro-climatically suited for the production of a variety of vege-

tables such as frenchbean, tomato, potato, cauliflowers, cabbage, pea, capsicum, etc., which could yield very good returns if these were made available in urban centres at a time when climatic conditions in the plains do not favour their production. Of course, this would be subject very much to efficient arrangements for collection, grading, packing, transport and marketing. Vegetables like cabbage, knolkhol late cauliflower and european varieties of radish, turnip and carrot requires low temperature for production of seeds. It is proposed that the cultivators be encouraged to grow certified seeds of various vegetables and potatoes in their own fields by making foundation seed available to them from Government Farms. The seeds of vegetable and potato grown under prescribed conditions by the cultivators would be examined and certified by the department and the marketing of seed will be undertaken through the Regional Development Corporation.

1.1.198. *Intensification of Potato Development Programme in U. P. Hills*—Potato is the second most important commercial crop of the hills, next only to fruits. The area under potato production at present is about 25,000 hectares producing about 2.10 lakh tonnes potato every year. In view of the growing demand of hill potato particularly as seed, the present programme is being further intensified under which three new farms will be established in suitable places.

1.1.199. *Scheme for training to orchardist and Mushroom growers*—Under the programme, it is proposed to impart horticulture training to growers in the latest techniques and improved horticultural practices. Every year 10,000 growers will be imparted training for five days on stipendary basis at the rate of Rs.5 per day per trainee. In addition to 100 persons will be given short term training for 7 days in the techniques of Mushrooms cultivation on stipendary basis.

1.1.200. *Extension of Coordinated horticultural services at the block Headquarters of U. P. Hills*—Under this programme 51 Specialists in Horticulture are already working in selected blocks of the hill districts. These specialists are coordinating and assisting block agencies for

proper implementation of various horticultural programmes. They are also expected to explore new avenues and identify areas with a high potential for horticultural development. It is proposed to appraise the contribution of these functionaries and after such indefiniton of their role and work charts as may be necessary, the services of such functionaries will be made available to the remaining 25 blocks also.

1.1.201. *Grant-in-Aid to Orchardists and Vegetable Growers*—In the long run, any economic activity can not survive on the basis of grant-in-aid or subsidies. Such incentives wherever given, must be used only for introducing a new programme and these must be stopped as soon as possible to permit the programme to expand on the strength of its own viability, albiet with the active support of extension staff using a variety of techniques for generating awareness and motivation among the target beneficiaries. The programmes of orcharding and vegetable culture have been going on in the hills for quite some time. Normally, therefore, there should be no need for giving grant-in-aid. In spite of this, it is proposed to keep some provision for it merely to introduce new developments in technology or take the programme to areas which have some how been altogether neglected in the extension of these programmes.

1.1.202. *Scheme for distribution of improved horticultural tools in U. P. hills on subsidised cost*—In order to establish new orchards and maintain these already established in good condition, improved horticultural tools and implements are being supplied to the growers at a cost subsidised to the extent of 50 per cent. While it is recognised that such a grant-in-aid may be necessary for certain category of farmers for new types of implements and therefore, it must be continued during the 1978–83 plan. It is proposed, however, to review the items as well as the categories of farmers for whom the subsidy should be continued, so that grant-in-aid does not become a vested interest to be continued indefinitely.

1.1.203. *Provision of additional Research facilities and creation of new sections at Horticultural Research Station*

Chaubattia—The Horticultural Experiment and Training Centre, Chaubattia, has been playing a very important role in conducting researcnes on various aspects of horticultural development, especially the control of pests and diseases. It is proposed to strengthen some of the existing faculties of the centre. For this an outlay of Rs.3.95 lakhs has been earmarked for this purpose for 1978–83 plan.

1.1.204. *Scheme for research on apples, peaches, etc.*—This scheme was sanctioned in the year 1970-71 and is being implemented since then as a coordinated scheme financed by the I. C. A. R. As research work on apple and other stone fruits is of a continuing nature. It is, however, proposed to evaluate its results against the expenditure incurred and the objectives laid down and thereafter continue it, with suitable modifications with an outlay of Rs.3.60 lakhs.

1.1.205. *Scheme for registration and certification on virus free temperate fruit plants*—This scheme is being implemented in collaboration with the I. C. A. R. since 1971-72. Under this programme research on various temperate fruit plants are being carried out at the Horticultural Experiment and Training Centre, Chaubattia. As the programme is of long term experimental nature, it is being taken up as a State Plan Scheme during the 1978–83 Plan with an outlay of Rs.2.36 lakhs.

1.1.206. *Scheme for Research on Flower Cultivation*—This scheme aims at developing new varieties of Roses, Gladioli, Tulips, Lilies, Iris, Dafodils etc., and expansion of their cultivation in the private sector. It is believed that floriculture has a good economic potential provided appropriate arrangements are made for the marketing of cut flowers in big urban centres. It is proposed to appraise the technical developments brought about so far, survey the market potential, prepare a feasibility report and intensify floricultural activities on a sizeable sale in selected areas. An outlay of Rs.3.90 lakhs is envisaged for this work for the 1978-83 Plan period.

1.1.207 *Water Management for high rainfall areas*—This scheme was taken up in 1975-76 in collaboration with the

I. C. A. R. The object of the scheme is to find out horticulture practices in conjunction with suitable water management practices in the high rainfall areas. This programme will be continued during the current Five-Year Plan as a State Plan scheme, if on appraisal it is discovered that it has made a valuable contribution to the overall development of horticulture in Hill Areas.

1.1.208. *Scheme for estimation of production of fruit*—There is very great uncertainty about the data about the area covered and the productivity of different fruit crops in the hilly areas. This is because neither appropriate methodologies for survey and investigation nor an appropriate organization have been established in this regard. This has made it difficult to determine as to whether the present strategy, deployment of staff and schematic patterns have yielded results commensurate with the expenditure incurred on this sector. It has also created serious difficulties in making projects incorporating appropriate measures for storage, transport, marketing and processing of horticulture.

1.1.209. It is intended that the existing state of uncertainty should be ended firstly by conducting a comprehensive survey to determine the present baseline and secondly by strengthening the statistical and monitoring organisation. The outlay of Rs.3.89 lakhs for 1978–83 plan is being provided for this purpose.

1.1.210. *Construction of Cool houses in U. P. Hills*—In order to store the fruits of the growers in cool houses in different fruit growing areas, it is proposed to construct 20 cool houses in a phased programme during the Five-Years Plan for 1978–83 on the pattern adopted for similar facilities during the Fifth Plan period. With the provision of the proposed 20 cool houses at an average cost of Rs.60,000 each, growers in many areas will be enabled to phase the despatch of fruits to the markets, after, grading, packing etc., according to market intelligence about arrivals, demand and prices at consumption centres.

1.1.211. *Establishment of Transshipment Centre near Kathgodam*—In the

process of marketing of fruits and vegetables, it is very important to develop the capacity to regulate the flow of products according to market conditions and transportation arrangements. From this point of view, Kathgodam is a logical location for building up some short term storage facility because at this point, considerable quantities of fruit brought from the hills by trucks are unloaded and transhipped by rail. It is expected that in the near future, Kathgodam will get linked with the trunk lines with a broad gauge rail link. When this happens, much greater quantities of fruits and vegetables will move from Kathgodam to their ultimate destinations by rail. In view of this, it is proposed that a storage centre may be constructed here with a capacity to be determined on the basis of a detail project report based on the existing pattern of transshipment, the projected demand and supply parameters and the likely impact of the construction of a broad gauge line on present pattern of transportation. An outlay of Rs. 3.50 lakhs for 1978–83 Plan period has been proposed for this on a tentative basis.

1.1.212. *Managerial Subsidy to Marketing Co-operatives*—It is hardly necessary to elaborate on the benefits which can accrue to farmers if they can break the monopoly of commission agents and other intermediaries in the matter of marketing. For a variety of reasons, the 23 marketing co-operatives of producers have not met with much success. That is why Regional Development Corporations have been urged to step in to the bridge. It is necessary, to re-examine objectively the possibility of getting the above mentioned corporations to function properly. If it is found that these organisations can be gingered up to fulfil their obligations with some support in the form of managerial subsidy, the same will be made available to them in the 1978–83 Plan.

1.1.213. *Construction of Grading and Packing Centres in Fruit Producing Areas*—It is reasonable to assume that during the last two decades, the production of fruit in hill areas has increased considerably. According to rough departmental estimates, the present level of yearly yield of fruits.

is around 1.60 lakh tonnes. In the absence of proper grading and packing of fruits, the growers do not get reasonable cost of their produce. In order therefore, to provide grading and packing facilities in the fruit producing areas, it is proposed to construct 25 grading and packing centres during the Five-Year Plan for 1978-83.

1.1.214. *Longterm Horticulture Loan for Establishment of an Orchard*—Plantation of orchards generally involves large investment at the initial stage with a long gestation period. Technological measures to reduce the period of gestation by popularising quick maturing dwarf varieties of fruits are being taken but these have as yet not reached a stage of widespread and general application. In the circumstances in order to encourage horticultural development on the desired scale, long-term horticultural loan on liberalised terms and conditions is being distributed. During the fifth Plan period (up to 1977-78), an amount of Rs.131.88 lakhs had been disbursed to the growers for establishing orchards. This programme is proposed to be continued during the 1978-83 Plan for which an outlay of Rs.374 lakhs has been provided which includes an approved

outlay of Rs.170 lakhs for 1978-79. Attempts will also be made to mobilize finance from nationalised banks, and other institutional sources for this purpose.

1.1.215. *Scheme for development programme of Bee-keeping in the hills*—There is a vast scope of Bee-keeping in the hills. The main centre of Bee-keeping is situated at Jeolikoate (Naini Tal) under the direct control of State Apiarist. This activity has proved helpful to growers and providing them with some additional income. In view of utility of this programme, it is proposed to further augment the activity over a larger area during the 1978-83 Plan period.

1.1.216. *Financial Outlay*—The total outlay proposed for horticulture development in hill areas is Rs.22.50 crores, out of which Rs.10.00 crores are ear-marked as State share against World Bank aided project which is in the Pipe-line. An outlay of Rs.3.127 crores is proposed for the year 1979-80.

The targets for achieving different levels of production for various major and minor horticulture products, during the Five-Year Plan for 1978-83 are given below :

TABLE—XXVIII—*Horticultural crops in Hills*

Serial no.	Item	Unit	Level of production			
			at the end of	at the end of	at the end of	at the end of
			1977-78	1978-79	1979-80	1982-8
1	2	3	4	5	6	7
1	Apples	M.T.	69,000	1,06,500	1,17,800	1,35,000
2	Pears	"	4,800	[6,000	7,200	9,500
3	Peaches	"	12,500	13,800	14,900	20,500
4	Apricots and Plums	"	7,800	8,700	9,600	13,500
5	(a) Cherries	"	N.A.	N.A.	N.A.	N.A.
	(b) Strawberries	"	125	126	127	130
6	Nut Fruits, Wal nut	"	2,000	2,500	3,000	6,000
7	Sub-tropical fruits .. }	Lakhs M. T.	25.50	[26.95	28.40	33.00
8	Other fruits .. } .. .. .	"	..	..	..	..

TABLE—XXVIII—*Horticultural crops in Hills (Concl.)*

Serial no.	Item	Unit	Level of production			
			at the end of	at the end of	at the end of	at the end of
			1977-78	1978-79	1979-80	1982-83
1	2	3	4	5	6	7
9	Mushroom	.. .. Kgs.	3,056	15,000	20,000	25,000
10	(a) Spices	.. .. M.T.	N.A.	N.A.	N.A.	N.A.
	(b) Ginger and	.. .. "	..	..	..	..
	(c) Turmeric	.. .. "	..	..	..	..
11	Potatoes ..	.. .. (Lakh M. Tonnes)	35.00	37.00	39.00	45.00
12	Tomatoes "				
13	Other Vegetables	.. .. "	50.65	55.25	59.85	74.65

(2) LAND REFORMS AND CONSOLIDATION OF HOLDINGS

Land Reforms

The U. P. Imposition of Ceiling on Land Holdings (Amendment) Act, 1972 came into force on June 8, 1973 whereby the ceiling was reduced to 18 acres of irrigated land. At that time, it was estimated that about 2.50 lakh acres of surplus land would be available to the State Government. Till the end of July, 1978, an area of 2,72,227 acres has been declared surplus out of which possession over 2,32,983 acres of land had been taken. Out of the land on which possession has been taken, 1,80,835 acres have been settled. The number of beneficiaries are 1,56,444 which includes 1,17,296 persons belonging to SC/ST to whom 1,16,257 acres of land has been allotted. The remaining area of 52,148 acres includes 13,386 acres of land found unfit for agriculture, 6,011 acres land reserved for planned utilization and 26,346 acres of land for which settlement has been stayed by Courts. This leaves only an area of 6,405 acres of land cultivable land for distribution. Steps are being taken to expedite the distribution of this land also Adequate provisions for private M. I. works and supply of inputs to persons to whom surplus land has been allotted have been made in Agriculture sector.

1.2.2. Much of the work under the aforesaid Act has been completed at the level of the Prescribed Authorities. Further declaration of surplus land is held up on account of 4,167 cases pending before appellate courts and 6,022 writ petitions pending for disposal before the High Court. Efforts are being made to get the disposal of these cases expedited.

1.2.3. House sites have been distributed to 12,36,139 land less agricultural labourers and persons belonging to weaker section of society. The work of development of house sites and construction of houses is being taken up by Rural Development Department of the State Government.

Consolidation of Holdings

1.2.4. Consolidation of Holdings besides being an important instrument of land reform is also one of the prerequi-

sites for successful agriculture planning, consolidation works as a corrective to the ill effects of sub-division and fragmentation of holdings and also helps to rectify land records.

1.2.5. The Consolidation of land holdings in Uttar Pradesh was first taken up in 1925-26 through the agency of Co-operative Societies. In 1939, U. P. Consolidation of Holdings Act was passed which contained provisions for voluntary consolidation through regular staff of Revenue Department. After the abolition of Zamindari in the State, the scheme was taken up as integral part of land reforms and U. P. Consolidation of Holdings Act, 1953 was enacted which contained provisions for compulsory consolidation. Consolidation of Holdings was started in Muzaffarnagar and Sultanpur districts in 1954 and was subsequently extended to other districts, of the State.

1.2.6. Initially the total area of the State requiring consolidation was estimated to be 146 lakhs hectares. Out of this, by the end of Fourth Plan an area of 128.64 lakh hectares had already been consolidated and transfer of possession had also been effected over an area of 115.34 lakhs hectare at a cost of Rs.52 crores. The progress during the first and subsequent Five Year Plan is given in the table below :—

TABLE I—Progress during First and subsequent Five-Year Plans

Period	Area Consolidated (lakhs Hectares)	Total Cost (Rs. in lakhs)
1	2	3
Ist Five Year Plan	0.76	77.26
IIInd Five Year Plan	21.06	691.30
IIIrd Five Year Plan	45.61	1120.40
Three adhoc Plans	21.53	1045.03
IVth Plan	26.38	2311.24
	115.34	5245.23

1.2.7. The target for the Fifth-Year Plan was fixed at 23.65 lakh hectares. The Fifth Plan however ended after a span of only four years during which only an area of 19.14 lakh hectares could be consolidated at a cost of Rs.28.64 crores. The year-wise break-up of outlays, expenditure, targets and achievements is given in the table below :

TABLE II—Progress during 1974–78

Year	Outlay (Rs. in lakh)	Expendi- ture (Rs. in lakhs)	Physical Targets	
			Fixed (in lakh hectare)	Achieved (in lakh hectare)
1974-75	713.00	719.67	5.78	5.78
1975-76	676.00	658.21	4.85	4.85
1976-77	750.00	683.61	4.44	4.44
1977-78	775.00	743.11	4.83	4.07
Total	2914.00	2804.60	19.90	19.14

Thus by end of 1977-78 total delivery of possession was effected over 134.48 lakh hectares.

1.2.8. The Consolidation operations are presently concentrated mainly in eastern districts where the size of holding is small. The break-up of region-wise target and achievements is given in table—III below :

TABLE III—Region-wise break-up of targets and achievements

Region	(lakhs hectares)	
	Fifth Plan Target	Achievement (Addl.) 1974 to 1978
1. Eastern Region	10.17	9.29
2. Hill ..	0.004	0.004
3. Bundelkhand ..	7.37	5.29
4. Western	2.71	2.62
5. Central ..	2.86	1.94
Total :	23.65	19.14

Till 1972-73, hill areas had been left out of the ambit of Consolidation. On an experimental basis 135 villages of district Dehradun were notified under section 4 (2) C. H. Act in 1972-73, but due to local opposition, work could be started only in 24 villages. Consolidation scheme was actually framed in 13 villages and the remaining 11 villages were notified under section 6 of the Act. In non hill areas of Naini Tal district consolidation work has been completed in 106 villages.

1.2.9. Consolidation work has been almost completed in the Western Region of the State where average holding and the area of average plot is larger as compared to that Eastern Region. Some scattered villages, which were formerly excluded from the scheme due to local opposition, have now been included in the Scheme on public demand. In the Eastern Region where number of holdings are large and average area per holding small the work is still going on. In the Central Region of the State, the consolidation work is nearing completion. Work has been started in Bundelkhand Region where the scheme was extended last years. The scheme has even now, not been extended to Lalitpur district of Bundelkhand Region.

Proposals for Five-Year Plan (1978–83)

1.2.10. The total consolidable area in the State was initially worked out to be 146 lakhs hectares. After including the area of Lalitpur district and other isolated villages which were excluded from the scheme in the beginning, the total consolidable area of the State is likely to go up. Formerly villages having 60 per cent consolidable area were included in the Scheme. This percentage has since been reduced to 40. Consequently many villages of the State formerly excluded from the scheme have now become eligible. In the first round, consolidation work was completed in 25 tahsils of 23 districts of the State. The cultivators could not get full benefits under this scheme as initially rectangular chaks were not formed, chaks were allotted as a number of places, every chak was not provided with chak road and irrigation gul from State irrigation works, no provision was made for sector roads and inter-village roads and the new records prepared suffered from a number of defects. There was popular demand for reconsolidation in

these tahsils and the State has, in principle, decided to bring these 25 tahsils again under the scheme. This work will be taken up during the 1978-83 Five-Year Plan. The total area of these 25 tahsils which are proposed to be taken up in the second round of consolidation operations, out of 16.72 lakh hectares. The villages which were initially excluded from the scheme will also be taken up for consolidation work. The estimated area of such villages is 1.38 lakh hectares.

1.2.11. According to the present estimates, 8.52 lakh hectares of area will be left for delivery of possession at the end of Fifth-Five Year Plan, and about 3 lakh hectares area will be available for extension of the Scheme. As already stated earlier consolidable area in the 25 tahsils to be taken up for reconsolidation works out to 16.72 lakh hectares. Thus the total area requiring consolidation in the beginning of the Five Year Plan (1978-83) works out to 29.62 lakh hectares. The year-wise targets and

financial outlay proposed in the Plan are as follows :-

TABLE IV—*Financial outlays and Targets (1978-83)*

Sl. No.	Financial Year	Financial outlay (Rs. in lakhs)	Physical targets (in lakh hectare)
1	2	3	4
1	1978-79	775.00	3.75
2	1979-80	887.00	3.80
3	1980-81	931.00	3.90
4	1981-82	979.00	4.00
5	1982-83	1028.00	4.00
Total :		4600.00	19.45

1.2.12. The target of 19.45 lakh hectares proposed for 1978-83 includes 6.10 lakh hectares pertaining to the Command Areas of Sharda Sahayak, Gandak and Ramganga Irrigation Projects. The Consolidation works would be taken up in accordance with the execution of Area Development Schemes of these Command Areas.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual expenditure	1977-78 Actual expenditure	Five year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
Direction and Administration						
	(1) Schemes of Agriculture Department ..	2.64	0.72	31.15	..	..
	(2) Schemes of Horticulture Department ..	13.78	4.44	51.95	..	..
	Total (1) ..	16.42	5.16	83.10	..	..
(1) Consolidation of Holdings						
<i>Revenue Department—</i>						
	Consolidation of Holdings	2804.60	743.11	4600.00	..	..
	Total, (1) ..	2804.60	743.11	4600.00	..	..
(2) Multiplication and Distribution of Seeds						
<i>Agriculture Department—</i>						
CONTINUING SCHEMES						
1	Establishment of Seed Processing Plants in the Plains	6.42	6.30	18.50	2.00	..
	Total (2) ..	6.42	6.30	18.50	2.00	..
(3) Agricultural Farms						
<i>Agriculture Department—</i>						
(A) CONTINUING SCHEMES						
1	Establishment of Seed Multiplication Farms in the Hills.	16.35	5.92	36.30	7.00	..
2	Multiplication and Storage of Improved Seeds.	249.48	103.19	622.00	112.43	..
3	Establishment of U.P. Seed Multiplication Corporation at Faizabad.	30.00	..	..	..	..
4	Uttar Pradesh Seed and Tarai Development Corporation.	50.00	50.00	500.00	500.00	..
	Total (A)	345.83	159.11	1158.30	619.43	..
B—NEW SCHEMES						
1	Scheme for Development of Fodder in U.P.	..	..	200.00	..	..
	Total (3) ..	345.83	159.11	1358.30	619.43	..

EXPENDITURE

(Rupees in lakhs)								
1978-79			1979-80			1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
0.80	0.80	5.75	..	..	..	7.00	8.10	9.50
8.43	8.43	10.27	..	..	2.97	10.65	11.13	11.47
9.23	9.23	16.02	..	..	2.97	17.65	19.23	20.97
775.00	806.30	887.00	..	..	..	931.00	979.00	1028.00
775.00	806.30	887.00	..	..	..	931.00	979.00	1028.00
2.35	4.75	5.05	..	1.50	..	5.10	2.90	3.10
2.35	4.75	5.05	..	1.50	..	5.10	2.90	3.10
8.35	6.38	6.45	..	1.00	6.45	6.50	7.00	8.00
98.82	109.83	127.18	..	27.71	..	131.50	132.00	132.50
..	..	50.00	..	50.00	..	100.00	150.00	200.00
107.17	116.21	183.63	..	78.71	6.45	238.00	289.00	340.50
..	..	35.00	..	..	..	45.00	55.00	65.00
107.17	116.21	218.63	..	78.71	6.45	283.00	344.00	405.50

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(4) Manures and Fertilizers						
<i>(a) Agriculture Department—</i>						
A—CONTINUING SCHEMES						
1	Subsidising transport cost of agricultural inputs in the inaccessible areas of Mirzapur, Varanasi and Bundelkhand Districts.	2.45	..	..	..	..
2	Construction of Fertilizer-cum-Pesticides Godowns in the backward and inaccessible areas of Jhansi, Jalaun, Banda, Hamirpur and Mirzapur district (Spill over works).	26.53	2.20	7.00	7.00	..
3	Construction of additional fertilizer godowns under the Agriculture Supply Organization (Spill over works).	13.53	2.20	1.00	1.00	..
4	Establishment of laboratories for the enforcement of Fertilizers, Seeds and Pesticides Regulations.	4.17	1.39	1.12	..	..
5	Establishment of Soil testing and demonstration units in the Plains.	56.81	26.38	23.94	..	..
6	Establishment of mobile Soil testing laboratories in the Plains.	8.26	3.31	30.32	..	..
7	Construction of fertilizer-cum-pesticide godowns in the hills (Spill over works)	2.87	..	..	..	..
8	Establishment of mobile Soil testing laboratories in the Hills.	2.25	..	39.73	..	..
9	Subsidising transport cost of fertilizers in the Hills.	9.00	3.00	23.00	..	..
10	Quality control of fertilizer insecticides laboratories (State Share).	..	..	12.35	..	..
11	Award of Prizes to Gram Panchayats for best rural compost programme (State Share).	1.40	1.40	2.77	..	..
12	Intensification of Soil Testing Programme	..	..	110.68	..	6.00
13	Award of Prizes to Gram Sewak/Panchayat Sewak for installation of Gobar Gas Plants.	0.95	0.49	2.53	..	..

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outly	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16

Scheme dropped

1.00	5.75	6.00	..	6.00	..	1.00
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1.00	1.10	..	Work completed					
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1.12	1.04	}	Transferred to Non-plan					
23.94	25.50							

10.67	7.46	4.50	4.65	5.00	5.50
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Scheme dropped

6.56	2.50	7.17	7.17	8.50	8.50	9.00
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3.00	3.00	5.00	5.00	5.00	5.00	5.00
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0.06	..	2.97	3.04	3.11	3.17
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2.77	2.77	Scheme dropped						
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19.61	20.30	22.07	6.00	21.00	23.00	25.00
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0.49	0.51	0.51	0.51	0.51	0.51
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Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
14	Scheme for compensation for losses on transportation cost of fertilizers from Railway station to the most interior places of inaccessible areas to the apex bodies.	..	..	3.23	..	..
15	Establishment of Central Controlling Soil Testing Laboratory.	..	..	10.20	..	..
16	Establishment of Cell at the State level for the repairs and maintenance of equipments.	..	..	4.15	..	..
17	Establishment of Soil Testing laboratories in Jalaun and Pilibhit districts.	..	..	5.41	..	..
Total—A ..		128.22	40.37	277.43	8.00	6.00
B—NEW SCHEMES						
1	Expansion of soil testing facilities at district level.	..	..	118.00	..	..
2	Project for utilization of water Hyacinth and tank silt.	..	..	223.95	..	..
Total—B ..		..	..	341.95	..	..
Total (a) Agriculture Department ..		128.22	40.37	619.38	8.00	6.00
(b) L.S.G. Department						
	Sewage utilization ..	128.40	34.00	320.00	213.33	..
Total (4) ..		256.62	74.37	939.38	221.33	6.00
(5) High Yielding Varieties Programme Agriculture Department— A—CONTINUING SCHEMES						
1	Intensive cultivation Programme of Pulses in the Pulses growing areas.	3.03	0.21	0.20	..	..
2	Scheme for extension of Paddy cultivation in Bundelkhand.	0.95	..	..	..	..
	Subsidy on High Yielding Variety Seeds under Seed Exchange Programme in 5 tribal blocks of Hills.	..	..	14.00	..	..
4	Composite fertilizer demonstrations in 5 tribal blocks of hills.	..	..	5.00	..	..
Total—A ..		3.98	0.21	19.20	..	..

(Rupees in lakhs)								
1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
3.23			Scheme dropped					
0.61	0.47	2.09	..	..	..	2.00	2.50	3.00
0.20	0.08	0.60	..	..	..	1.00	1.10	1.25
..	0.24	1.01	..	..	..	1.15	1.50	1.75
74.26	70.72	50.92	6.00	5.00	12.17	47.85	50.22	54.18
..	..	25.00	..	..	..	28.00	31.00	34.00
..	..	31.95	..	..	..	64.00	64.00	64.00
..	..	56.95	..	..	..	92.00	95.00	98.00
74.26	70.72	107.87	6.00	5.00	12.17	139.85	145.22	152.18
36.00	36.00	40.00	..	26.67	20.00	60.00	80.00	104.00
110.26	106.72	147.87	6.00	31.67	32.17	199.85	225.22	256.18
0.20	0.24		Transferred to Non-plan					
			Scheme dropped					
2.00	1.60	3.00	..	..	3.00	3.00	3.00	3.00
1.00	2.00	1.00	..	..	1.00	1.00	1.00	1.00
3.20	3.84	4.00	..	..	4.00	4.00	4.00	4.00

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan 1977-78 (1974—78) Actual		Five Year Plan 1978—83 Proposed outlay			
		Actual Expenditure	Expenditure	Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange	
1	2	3	4	5	6	7	
B—NEW SCHEMES							
1	Strengthening of the scheme of intensive cultivation programmes of pulses in plains.	..	..	96.61	..	..
2	Intensive Cultivation Programmes of pulses in Hills.	..	..	9.87	..	..
3	Scheme for extension of package of practices in plains.	..	..	99.00	..	0.50
4	Scheme for Extension of package of practices in Hills.	..	..	11.00	..	..
	Total—B	..	..	216.48	..	0.50
	Total (5)	..	3.98	0.21	235.68	..	0.50
(6) Plant Protection							
<i>Agriculture Department—</i>							
A—CONTINUING SCHEMES							
1	Strengthening of Plant Protection Service in* the Plains.	197.82	66.63	750.30	12.50	..	
2	Strengthening of Plant Protection Service in the Hills.	19.18	6.91	48.52	..	..
3	Control and eradication of Kurmula pest in selected blocks of Almora and Pauri Garhwal Districts.	23.92	14.96	16.20	..	..
4	Popularization of Scientific techniques of foodgrains storage at farmers level (State Share).	7.02	4.16	340.54	..	..
5	Control of White Grubs on groundnut crops in U.P. (State Share)	2.84	2.84	71.17	..	..
6	Scheme of weed control in U.P. (State Share)	..	..	14.00	..	..
	Total—A	..	250.78	95.50	1240.73	12.50	..

*Committed expenditure as on 1-4-79 transferred to Non-Plan.

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	17.37	..	..	..	24.54	26.35	28.35
..	..	1.87	..	..	1.87	2.20	2.65	3.15
..	..	26.21	0.50	..	..	25.30	26.00	21.49
..	..	3.05	..	..	3.05	2.85	2.35	2.75
..	..	48.50	0.50	..	4.92	54.89	57.35	55.74
3.20	3.84	52.50	0.50	..	8.92	58.89	61.35	59.74
68.88	71.30	110.17	..	2.00	..	190.97	189.66	190.62
8.52	8.63	9.15	..	..	9.15	9.65	10.35	10.85
16.20	15.54		Scheme dropped					
5.50	10.16	56.58	..	..	..	91.18	92.45	94.83
5.17	16.10	33.00	..	..	..	33.00	..	..
..	7.00	7.00	..	..	..	7.00	..	..
104.27	128.73	215.90	..	2.00	9.15	331.80	292.46	296.30

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78)	1977-78 Actual Expenditure	Fives Year Plan 1978-83 Proposed outlay		
		Actual Expenditure		Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
1	Scheme for Surveillance of pest and Diseases of crops.	..	..	91.82	..	..
2	Scheme for Strengthening of Plant Protection Service in the Hills.	..	..	40.40	4.00	..
Total—B		..	..	132.22	4.00	..
Total (6)		250.78	95.50	1372.95	16.50	..
(7) Commercial Crops						
A—CONTINUING SCHEMES						
(a) Agriculture Department						
1	Scheme for Development of Sun-flower	13.25	2.81	15.30	..	..
2	Scheme for development of oil seeds in the* State.	61.20	18.91	108.87	..	..
3	Production of Oil seeds, soyabean and Sun-flower in the hills.	3.79	1.98	10.95	..	..
4	Scheme for the replacement of opium cultivation in Dehradun and Uttar Kashi districts.	0.49	0.21	..	..	..
5	Intensive scheme of Sunhemp	0.07	..	..	..	..
Total—A		78.80	23.91	135.12	..	..
B—NEW SCHEME						
1	Scheme for strengthening and Extension of Lac development work.	..	..	4.76	0.60	..
Total—B		..	..	4.76	0.60	..
Total (a) Agriculture Department		78.80	23.91	139.88	0.60	..

* Committed expenditure up to 1-4-79 transferred to Non-Plan.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed Outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
<i>(b) Cane Development Department—</i>						
A—CONTINUING SCHEMES						
1	Scheme for providing Cane protection appliances to growers on subsidised rates.	9.26	0.10	25.30	..	..
2	Scheme for Controlling sugarcane of pests on epidemics sugarcane through ground and aerial operations.	4.63	1.42	12.00	..	..
3	Cane Development work in new sugar factory areas.	146.48	39.21	175.18	..	..
4	Seed Replacement and layout of seed nurseries.	6.84	1.50	2.80	..	..
5	Scheme for subsidising expenditure on transport of seed cane.	2.05	..	10.45	..	..
6	Production of Foundation Seed Cane	40.98	15.87	204.65	..	..
7	Scheme for Cane growers Institute	7.75	2.01	14.10	..	..
8	Scheme for subsidising U. P. Sugarcane Research Council.	68.95	20.29	174.91	..	..
9	Intensification of Fertilisations programme	4.95	1.10	22.45	..	..
10	Scheme for strengthening Plan-Cell in the office of Cane Commissioner, U.P.	0.35	0.19	6.23	..	..
11	Constructions of Inter-village -link Roads on contributory basis in the reserved areas of sugar factories for improving village transport Communications.	..	3.20	289.00	289.00	..
12	Scheme for Intensification of Cane Protection activities on the lines of Package Programmes.	43.28	5.91	..	..	..
13	Scheme for construction of contributory roads.					
Total—(A)		335.52	90.80	937.07	289.00	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
9.80	9.80	2.50	..	..	0.10	3.00	5.00	5.00
2.00	2.00	2.50	..	..	0.10	2.50	2.50	2.50
43.55	43.55	31.51	..	..	1.75	32.90	33.14	34.08
..	..	0.70	..	..	..	0.70	0.70	0.70
1.70	1.70	2.00	..	..	0.20	2.25	2.25	2.25
20.25	20.25	46.10	..	..	2.40	46.10	46.10	46.10
2.65	2.65	2.75	..	..	..	2.80	2.90	3.00
17.05	17.05	38.79	..	..	3.20	38.20	39.75	41.02
1.45	1.45	3.37	..	..	..	4.88	6.00	6.75
1.00	1.00	1.36	..	..	..	1.27	1.29	1.31
..	..	52.00	..	52.00	..	65.00	78.00	94.00
Schemes dropped								
99.45	99.45	183.58	..	52.00	7.75	199.70	217.63	236.71

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan Proposed		1978-83 Outlay
				Total (Col. 8+10+14+15+16)	Capital		Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
1	Scheme for intensification of Cane Development activities around 16 kms. radius of reserved areas of each sugar factories.	..	..	523.66	..	..
2	Scheme for Collection and Completion of information/data on Khandsari Sugar Production.	..	..	22.30	..	..
3	Scheme for technological Research on Khandsari Sugar Production.	..	..	98.02	..	..
4	Scheme for providing soft loan as Margin money for modernization of the Khandsari units.	..	..	3.58	..	..
Total--B ..		..	..	647.56	..	..
Total, (b) Cane Development Department		335.52	90.80	1584.63	289.00	..
Total (7)		414.32	114.71	1724.51	289.60	..
(8) Extension and Farmers' Training						
<i>(a) Agricultural Department—</i>						
A—CONTINUING SCHEMES						
1	Organisation of agricultural Exhibitions and farmers fairs in the State.	1.71	1.78	14.78	..	..
2	Provisions of Farm/Radio/Television/Agricultural information service.	..	..	14.48	..	..
3	Crop Competition Scheme ..	1.35	0.77	4.76	..	..
4	Establishment of training units in tractor and farm machinery.	1.40	1.40	2.86	..	..
5	Establishment of Regional Agricultural Testing and Demonstration Centre in Pauri-Garhwal.	..	..	7.11	..	..
6	Organisation of Agriculture Exhibition in Hills	..	..	..	..	—
7	Scheme of Direct Mailing System	..	..	31.08	..	—
8	Strengthening and Reorganisation of Agricultural Extension Administration.	..	..	205.60	..	—
9	Scheme to bring Regional Testing and Demonstration Station, Barabanki at par with rest of the Stations.	..	..	6.20	..	..
Total—A ..		7.46	3.95	286.87	..	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
45.00	45.00	109.31	..	..	0.40	112.96	121.96	134.43
4.55	4.55	4.10	..	..	..	4.30	4.50	4.85
10.00	10.00	35.40	..	..	..	17.54	17.54	17.54
..	..	0.99	..	..	..	0.83	0.86	0.90
59.55	59.55	149.80	..	—	0.40	135.63	144.86	157.72
159.00	159.00	333.38	..	52.00	8.15	335.33	362.49	394.43
184.75	184.57	361.45	..	52.60	10.35	363.98	391.18	423.15
2.78	2.78	3.00	..	..	..	3.00	3.00	3.00
..	..	4.56	..	..	..	3.87	3.00	3.05
4.76	1.47	..	Scheme dropped		..	..	..	..
2.86	2.86	..	Transferred to Non-plan		..	..	..	..
0.86	..	1.00	..	..	1.00	1.25	1.50	2.50
Scheme dropped								
5.94	2.00	5.94	..	..	..	6.13	6.37	6.70
44.85	..	37.50	..	..	..	39.75	40.50	43.00
0.60	0.25	0.90	..	..	..	1.20	1.50	2.00
62.65	9.36	52.90	..	..	1.00	55.20	55.87	60.25

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01. Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan-1978—83 Proposed Outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEME						
1	Establishment of new adaptive Stations	—	—	300.00	50.00	—
Total—B		—	—	300.00	50.00	—
Total (a) Agriculture Department		7.46	3.95	586.87	50.00	—
<i>(b) Rural Development Department—</i>						
A—CONTINUING SCHEMES						
1	Establishment of Four new workshops at 4 Extension Training Centres.	11.66	3.57	20.05	..	..
2	Establishment of 13 production units at Extension Training Centres.	..	..	20.00	..	..
3	Establishment of instructional agricultural farms at 5 Extension Training Centres.	4.51	0.98	10.00	..	..
4	Strengthening of existing instructional Agricultural farms at 8 Extension Training Centres.	..	..	11.00	..	..
5	Establishment of printing press at Bakshi-Ka-Talab, Lucknow.	3.13	0.79	4.80	..	..
6	Replacement of condemned vehicles at Extension Training Centres.	..	..	20.00	..	..
7	Training Reserve for V.L.Ws.	10.27	1.70	20.00	..	..
8	Extension Training Centre at peoples College Haldwani (Nainital).	9.40	2.51	2.45	..	..
9	Construction work at Extension Training Centres	7.87	3.99	39.20	..	..
10	Construction of Hostel Building at Extension Haldwani.	10.00	6.00	3.75	3.75	..
11	Construction of Hostel at Extension Training Centre Pauri-Garhwal.	..	..	..	0.53	..
Total—A		56.84	19.54	151.25	4.28	..
B—NEW SCHEMES						
12	Strengthening of Head Quarter as Directorate of Extension Training.	..	..	20.00	..	..
13	Establishment of Farmer's Training Centres at district level.	..	..	250.00	60.00	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	70.00	..	15.00	..	73.00	77.00	80.00
..	..	70.00	..	15.00	..	73.00	77.00	80.00
62.65	9.36	122.90	..	15.00	1.00	128.20	132.87	140.25
4.25	4.25	4.00	..	..	2.00	4.00	3.90	3.90
4.00	4.00	6.00	..	..	2.00	4.00	3.00	3.00
4.00	4.00	1.50	..	..	..	1.50	1.50	1.50
1.80	..	2.00	..	..	..	3.00	2.50	2.50
0.80	0.80	1.00	..	..	..	1.00	1.00	1.00
2.20	2.34	4.45	..	..	..	4.45	4.45	4.45
1.80	1.80	4.55	..	..	..	4.55	4.55	4.55
2.45	2.64	..	..	Transferred to Non-Plan				
3.00	3.00	9.05	..	..	..	9.05	9.05	9.05
3.75	3.75	..	..	Scheme completed				
Scheme completed								
27.25	26.58	32.55	..	..	4.00	31.55	29.95	29.95
..	..	8.00	..	..	..	4.00	4.00	4.00
..	..	50.00	..	2.00	..	70.00	70.00	60.00

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan 1977-78 (1974-78) Actual expenditure	1977-78 Actual expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
14	Expansion and strengthening of Composite Training Centre Bakshi-Ka-Talab, Lucknow as State Level Extension Training Institute.	..	..	25.00	4.00	
15	Establishment of Regional Extension Training Institute.	..	..	45.00	5.00	
16	Upgrading of remaining 10 Extension Training Centres.	..	..	24.00	4.00	
17	Expansion and strengthening of Agriculture at Workshops attached to 17 Extension Training Centres.	..	..	20.00	5.00	
18	Expansion and strengthening of Extension Training Centres.	..	..	50.00	16.00	
19	Employment generating schemes for weaker section Scheduled castes and Scheduled tribes expansion and strengthening of Extension Training Centres Peoples College Haldwani.	..	..	12.00	..	
20	Establishment of motor mechanic Training services stations at Hawal Bagh and Pauri.	..	..	10.00	1.00	
	Total—B ..	..	..	456.00	95.00	
	Total, (b) Rural Development Department.	56.84	19.54	607.25	99.28	
	(c) P.R.A.D. Farm Management and Agricultural Training at Phulpur.	6.55	2.00	2.00	..	
		6.55	2.00	2.00	..	
	Total (8) ..	70.85	25.49	1196.12	149.28	

(9) AGRICULTURAL EDUCATION

Agriculture Department—

A—CONTINUING SCHEMES

1.	Grant-in-aid to private agricultural colleges for introducing three years degree course.	10.50	3.00	7.40	..
2	Grant-in-aid to private agricultural institutions.	35.00	1.25	6.25	..
3	Provision of additional facilities for the Government Agricultural Schools.	0.35	..	5.43	..
4	Stipend to the Agriculture Diploma students of Hawalbagh (Almora) and Pauri-Garhwal Training Centres.	3.61	0.97	7.90	..
5	Agricultural University, Pantnagar	353.69	210.81	1050.00	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	8.00	..	1.00	..	7.00	5.00	5.00
..	..	14.00	..	1.00	..	11.00	10.00	10.00
..	..	8.00	..	1.00	..	7.00	5.00	4.00
..	..	8.00	..	..	..	4.00	4.00	4.00
..	..	14.00	..	2.00	..	12.00	12.00	12.00
..	..	5.00	..	..	..	3.00	2.00	2.00
..	..	4.00	..	1.00	4.00	2.00	2.00	2.00
..	..	119.00	..	8.00	4.00	120.00	114.00	103.00
27.25	26.58	151.55	..	8.00	8.00	151.55	143.95	132.95
2.00	2.00	Transferred to Agriculture Department						
2.00	2.00	..	..	..	..	..	..	..
91.90	37.94	274.45	..	23.00	9.00	279.75	276.82	273.20
1.40	1.40	1.50	..	..	..	1.50	1.50	1.50
1.25	1.25	1.25	..	..	..	1.25	1.25	1.25
0.50	0.47	0.94	..	..	..	1.24	1.37	1.38
1.58	1.56	1.58	..	..	1.58	1.58	1.58	1.58
120.00	120.00	225.00	..	..	93.80	230.00	234.00	241.00

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Cols.8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
6	Agricultural University, Faizabad	233.34	153.38	1713.00	..	40.00
7	Agricultural Implements Testing Workshop, Chinhat, Lucknow.	5.58	1.88	1.85	..	..
8	Establishment of Training unit in mushroom cultivation at the Extension Training Centre, Hawalbagh (Almora).	0.24	0.12	0.17	..	..
9	Grant-in-aid to Chandra Shekhar Azad University of Agriculture and Technology, Kanpur.	122.07	40.00	1200.00	..	..
Total—A		764.38	411.41	3992.00	..	40.00
B—NEW SCHEME						
1	Strengthening of existing Government Agricultural Schools and expansion of training programme.	..	..	8.00	3.75	..
Total—B		..	..	8.00	3.75	..
Total (9)		764.38	411.41	4000.00	3.75	40.00
(10) Agricultural Engineering						
<i>Agriculture Department—</i>						
A—CONTINUING SCHEMES						
1	Establishment of Agro. Centres	108.68	30.51	35.05	..	..
2	Strengthening of Agricultural Workshop, Aligarh.	13.32	4.62	4.66	..	..
3	Pilot schemes for extension demonstration, improvement and distribution of improved agricultural implements in Bara Banki District.	..	..	22.86	..	..
4	Quality marking and standardisation of Agricultural implements.	..	..	6.74	..	..
Total—A		122.00	35.13	69.31	..	..
B—NEW SCHEMES						
1	Strengthening of the Scheme of Demonstration, Popularisation and distribution of Improved Agricultural Implements in the Plains.	..	..	175.02	..	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
100.00	100.00	449.33	40.00	..	..	471.60	347.43	344.64
1.85	2.07	..	..	Transferred to Non-Plan				
0.17	0.10	..	..	Scheme dropped				
60.00	60.00	225.00	..	..	..	275.00	300.00	340.00
286.75	286.85	904.60	40.00	..	95.38	982.17	887.13	931.35
..	..	1.37	..	0.35	..	1.79	2.47	2.37
..	..	1.37	..	0.35	..	1.79	2.47	2.37
286.75	286.85	905.97	40.00	0.35	95.38	983.96	889.60	933.72
33.05	39.95	..	Transferred to Non-Plan					
4.66	4.64	..	Transferred to Non-Plan					
3.06	2.50	4.50	..	..	..	4.80	5.10	5.40
6.74	..	..	..	Scheme dropped				
49.51	47.09	4.50	..	..	..	4.80	5.10	5.40
..	..	40.24	..	..	..	44.02	44.98	45.78

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
2	Strengthening of Scheme of Demonstration, Popularisation Manufacture and Distribution of Improved Agricultural Implements in the Hills.	..	..	17.92	1.00	..
3	Strengthening Scheme of establishment of Krishi Sewa Kendra.	..	..	105.63	7.00	..
	Total—B	..	..	298.57	8.00	..
	Total (10)	122.00	35.13	367.88	8.00	..
	(11) Agriculture Research*					
	(12) Assistance to I.C.A.R.					
	<i>Agriculture Department—</i>					
	CONTINUING SCHEMES					
1	Pilot studies on pre-harvest forecasting of crop yield.	0.49	0.13	0.31	..	..
2	Co-ordinated Scheme for sample surveys for methodological investigation into high yielding varieties programme.	1.03	0.30	2.29	..	..
3	Sample survey to estimate the incidence of pests and diseases on high yielding varieties of paddy and wheat.	0.16	0.13	1.96	..	..
4	All India Co-ordinated Rice Improvement Project (State Share).	0.09	..	..	..	..
5	All India Co-ordinated Jute Research Scheme (State share).	0.11	..	..	..	..
	Total (12)	1.88	0.56	4.56	..	..
	(13) Agricultural Economics and Statistics					
	<i>Agriculture Department—</i>					
	A—CONTINUING SCHEMES					
1	Improvement of Agricultural Statistics in U.P.	39.79	16.20	16.07	..	..
2	Survey or studying the extent of cultivation and estimation of production of fruit crops and estimation survey on food crops in the hilly areas.	18.69	3.54	22.00	..	..
3	Pilot Sample survey to estimate the cost of cultivation and to study the marketing practices of the important crops in the hilly areas.	1.74	..	..	..	..
	Total (A)	60.22	19.74	38.07	..	..
	B. NEW SCHEME					
1	Integrated Scheme of Agricultural Statistics	..	..	61.75	..	..
	Total—B	..	..	61.75	..	..
	Total (13)	60.22	19.74	99.82	..	..

*The Institute of Agricultural Sciences has been upgraded as Agricultural University and lump-sum grant is given to it which is shown under Agricultural Education at Serial 9.

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	2.07	..	0.50	2.07	4.50	5.50	5.85
..	..	30.78	..	2.00	..	30.99	21.66	22.20
..	..	73.09	..	2.50	2.07	79.51	72.14	73.83
49.51	47.09	77.59	..	2.50	2.07	84.31	77.24	79.23

0.14 0.15 0.17 Scheme dropped

0.43 0.33 0.44 : 0.46 0.47 0.49

0.36 0.33 0.39 0.40 0.40 0.41

Scheme transferred to Agriculture University, Faizabad

ditto.

0.93 0.81 1.00 0.86 0.87 0.90

16.07 16.94 Transferred to Non-Plan

4.36 3.78 4.48 4.48 4.30 4.42 4.44

Scheme dropped

20.43 20.72 4.48 4.48 4.30 4.42 4.44

.. .. 13.22 15.13 16.30 17.10

.. .. 13.22 15.13 16.30 17.10

20.43 20.72 17.70 4.48 19.43 20.72 21.54

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES**Sub-major Head of Development—1.01 Agriculture—(Contd.)**

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(14) Storage and Warehousing						
<i>State Warehousing Corporation—</i>						
1	Construction of Godowns	64.25	20.00	100.00	..	..
Total (14) ..		64.25	20.00	100.00	..	..
(15) Agricultural Marketing and Quality Control						
<i>Mandi Parishad—</i>						
1	Government Contribution in the Schemes of Mandi Parishad.	243.00	226.00	120.00	..	..
Total (15)		243.00	226.00	1230.00	..	..
(16) Horticulture						
<i>(a) Plains</i>						
A—CONTINUING SCHEMES						
1	Scheme for increasing production of fruits and its marketing in the State.	36.29	12.43	12.70	..	..
2	Scheme for intensification of vegetable cultivation reproduction of spices.	16.50	5.25	5.30	..	..
3	Scheme for re-organisation of Horticulture Directorate.	3.88	1.52	1.60	..	..
4	Scheme for imparting horticulture training to the staff and management training to the individuals.	3.18	0.91	0.95	..	..
5	Scheme for providing technical know-how to the orchardists at spot.	2.70	0.74	0.80	..	..
6	Scheme for planting fruit and flower plants at Barsana Hills.	2.99	0.58	0.70	..	..
7	*Scheme for intensification of potato cultivation in the State.	36.90	16.64	126.77	47.75	..
8	Scheme for grape cultivation in Agra District.	0.98	0.26	0.30	..	..
9	Maintenance and development of gardens established at Barua Sagar (Jhansi).	6.16	11.42	1.70	..	..

*Committed expenditure on account of this scheme has been transferred

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	
37.00	40.00	16.00	..	..	3.50	16.00	16.00	15.00
37.00	40.00	16.00	..	..	3.50	16.00	16.00	15.00
130.00	130.00	326.00	..	..	10.00	326.00	324.00	124.00
130.00	130.00	326.00	..	..	10.00	326.00	324.00	124.00
12.70	15.50	}	Transferred to Non-Plan		}	}	}	}
5.30	6.30							
1.60	1.60							
0.95	0.95							
0.80	0.80							
0.70	0.70							
12.77	16.00	27.00	..	15.00	..	28.00	29.00	30.00
0.30	0.35	}	Transferred to Non-Plan		}	}	}	}
1.70	1.50							

to Non-Plan w.e.f. April 1, 1979.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outly		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
10	Horticulture Institute of Food Technology ..	8.23	2.75	2.80	..	..
11	Expansion of Fruit Preservation Extension and Community canning-cum-Training Services.	11.67	4.24	4.00	..	..
12	Scheme for production and export of rose flowers.	0.30	..	..	..	..
13	Pilot Project for resin making	0.05	..	..	..	..
14	Scheme for construction of production Hall for Fruit Preservation and Canning Institute, Lucknow.	0.52	..	..	..	..
15	Scheme for Cold Storage Regulation Order	0.47	0.28	0.35	..	..
16	Horticulture Crop competition in the State	..	..	..	..	..
17	Intensive Horticulture Development in Rae Bareli district.	0.49	0.36	0.80	..	..
18	Intensification of Horticulture Development in Meerut and Bulandshahr districts.	4.48	2.76	2.50	..	..
19	Scheme for Fruit Nursery Control Act ..	1.23	1.03	0.60	..	..
20	Scheme for Food Craft Training in 4 big towns of Uttar Pradesh.	7.07	4.35	4.00	..	..
21	Scheme for improvement of gardens ..	16.60	13.22	0.37	..	..
22	Scheme for publicity and extension of Horticulture.	1.38	0.50	0.50	..	..
23	Special Scheme for Horticulture in Bahraich, Mainpuri, Etah, Fatehpur, Pratapgarh and Jaunpur.	0.35	0.23	0.80	..	..
24	Establishment of district level nursery in the State.	18.27	15.40	9.33	2.00	..
25	Co-ordinated scheme of Mango and Gauva at Basti (I.C.A.R. aided).	0.36	0.12	0.18	..	..
26	Scheme for Bee-keeping*	2.49	1.18	17.10	0.50	..
27	Scheme for beautification of Lucknow ..	21.25	2.87	3.50	..	..
28	Scheme for beautification of Agra ..	22.04	3.32	2.20	..	..
29	Scheme for establishment of Multi-purpose Horticulture Farm and nurseries in the State.	24.61	23.51	21.38	13.00	..
30	Establishment of vegetable Seed Processing Centre at Aliganj, Lucknow.	0.11	0.11	0.50	..	..
31	Scheme for Social Security and Welfare ..	..	..	0.10	..	..
Total—A ..		251.55	115.98	221.83	63.25	..

*Committed expenditure on account of this scheme has been transferred to non-Plan from 1-4-79.

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Exendi- ture	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
2.80	3.35	Transferred to Non-Plan						
4.00	4.00	do						
..	..	do						
..	..	do						
..	..	do						
0.35	0.25	Transferred to Non-Plan						
..	..	do						
0.80	0.50	do						
2.50	2.80	do						
0.60	0.70	do						
4.00	3.60	Transferred to non-Plan						
0.35	7.38	do						
0.50	0.50	do						
0.80	0.40	do						
9.35	10.00	do						
0.18	0.20	do						
1.10	1.10	3.50	..	0.50	..	4.00	4.00	4.50
3.50	3.50	..	..	..	..	..	..	..
2.20	2.11	Transferred to non-Plan						
21.38	21.38	do						
0.50	0.40	..						
0.10	0.15	..						
91.83	106.02	30.50	..	15.50	..	32.00	33.00	34.50

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
1	Scheme for establishment of Horticulture Mobile teams.	..	..	236.22	..	..
2	Scheme for development of vegetable cultivation around big towns, river beds and kitchen gardens.	..	0.96	66.17	6.00	..
3	Scheme for planning monitoring and statistical Cell in Horticulture Directorate.	..	..	13.28	..	..
4	Scheme for establishment of Audit and Administrative Cell in Horticulture Directorate	..	..	7.00	..	..
5	Scheme for improvement of existing gardens, Farms and Nurseries.	..	..	15.00	12.00	..
6	Scheme for development of Fruit cultivation in the State.	..	..	6.00	..	..
7	Scheme for establishment of district and block level Nurseries.	..	..	40.00	20.00	..
8	Scheme for establishment of Progeny Orchards and model orchards in the State.	..	..	15.00	6.00	..
9	Scheme for establishment of vegetable Seed multiplication Farms and Seed Processing units.	..	..	30.00	15.00	..
10	Scheme for special crops. Sweet potatoes, parwal and spices etc.	..	..	10.00	1.00	..
11	Scheme for enforcement of different horticultural Acts in the State.	..	..	6.00	..	..
12	Scheme for development of flowers cultivation of essential oils, parks and gardens in religious and urban centres.	..	..	15.00	5.00	..
13	Scheme for strengthening of Fruit-Preservation and Canning Institute, Lucknow	..	..	102.00	70.00	..
14	Scheme for establishment and strengthening of training and experiment centre in the State.	..	..	56.00	1.00	..
15	Scheme for Higher Service Training Centres at Lucknow.	..	..	4.00	1.00	..
16	Scheme for strengthening of Community Canning and Preservation Service.	..	..	25.00	1.00	..
17	Scheme for establishment of Food Craft Centres in the State.	..	..	15.00	..	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay.	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
5.00	3.00	46.72	..	..	..	53.65	61.21	69.64
8.17	8.90	13.00	..	4.00	..	14.00	15.00	16.00
2.18	0.60	2.30	..	..	..	2.50	2.80	3.50
1.12	0.60	1.23	..	..	..	1.35	1.49	1.81
2.70	2.70	3.00	..	2.50	..	3.00	3.00	3.30
..	..	1.00	..	..	..	1.50	1.50	2.00
..	..	7.00	..	4.00	..	11.00	11.00	11.00
..	..	4.00	..	2.50	..	5.00	3.00	3.00
..	..	10.00	..	7.00	..	10.00	5.00	5.00
..	..	2.00	..	1.00	..	2.50	2.50	3.00
..	..	1.00	..	..	..	1.50	1.50	2.00
..	..	3.00	..	2.00	..	4.00	4.00	4.00
..	..	28.00	..	20.00	..	28.00	28.00	18.00
..	..	12.00	..	6.00	..	14.00	15.00	15.00
..	..	1.50	..	1.00	..	1.00	0.75	0.75
..	..	5.00	..	1.00	..	6.00	6.50	7.5
..	..	3.00	..	..	..	3.50	4.00	4.50

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
18	Scheme for strengthening of Food Craft Institute, Lucknow.	..	..	6.00	..	..
19	Scheme for Crop cutting experiment on different Horticultural Crops.	..	..	30.00	..	..
20	Scheme for organisation of exhibition and publicity.	..	..	12.00	0.75	..
21	Scheme for providing subsidy on interest under ARC Scheme in backward areas.	..	..	2.00	..	..
22	Scheme for strengthening of Horticulture Directorate.	..	..	5.00	..	..
23	Scheme for Horticulture development in tribal areas.	..	..	50.00	5.00	..
24	Scheme for Horticulture development in backward areas.	..	..	10.00	2.00	..
25	Scheme for State share (token) for proposed world Bank Project.	..	..	1.50	..	..
Total B		..	0.96	778.17	156.75	..
Total, Horticulture (a)		..	251.55	116.94	1000.00	220.00
<i>(b) Fruit Utilization (Hills)</i>						
A—CONTINUING SCHEMES						
1	Schemes for subsidising cost of transport of fruit plants, vegetable seeds and vegetable seedlings.	24.69	8.51	27.55	..	..
2	Establishment of Pest control Station and subsidy on Plant Protection operation.	*	*	16.89	..	..
3	Horticultural Training to Fruit growers and inservice persons.	8.80	2.18	21.73	..	..
4	Establishment of Model orchards for distribution to the Growers.	6.01	1.63	9.52	..	..
5	Mushroom cultivation and training in Hills.	3.36	1.04	11.07	1.35	..
6	Long term horticultural loan to fruit growers.	131.89	85.15	486.00	486.00	..
7	Long term horticultural loan in 5-Tribal blocks of U. P hills.	†	†	84.00	84.00	..
8	Long term crop loan for Mushroom growers.	1.62	1.50	23.00	23.00	..
9	Expansion and Coordination of Horticultural Programme at block Headquarters of U. P. Hills.	8.82	3.33	9.52	..	..

* Amount included in scheme no. 1

† Amount included in scheme no. 6

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
..	..	1.50	..	..	..	1.50	1.50	1.50
..	..	3.00	..	..	..	5.00	10.00	12.00
..	..	2.50	..	0.50	..	2.75	3.25	3.50
..	..	0.50	..	..	..	0.50	0.50	0.50
..	..	1.00	..	..	..	1.00	1.50	1.50
..	..	10.00	..	2.00	..	12.00	13.00	15.00
..	..	2.00	..	1.00	..	2.50	2.50	3.00
..	..	0.25	..	..	..	0.25	0.50	0.50
19.17	15.80	164.50	..	54.50	..	188.00	199.00	207.50
111.00	121.82	195.00	..	70.00	..	220.00	232.00	242.00
8.85	8.35	3.92	..	..	3.92	4.42	4.93	5.43
*	*	10.37	..	..	10.37	2.83	1.84	1.85
3.29	2.89	4.59	..	..	4.59	4.60	4.62	4.63
1.36	1.36	1.99	..	..	1.99	2.03	2.06	2.08
0.95	0.95	3.46	..	0.20	3.46	2.96	1.84	1.86
70.00	70.00	104.00	..	104.00	104.00	104.00	104.00	104.00
†	†	21.00	..	21.00	21.00	21.00	21.00	21.00
3.00	3.00	5.00	..	5.00	5.00	5.00	5.00	5.00
3.54	3.54	0.94	..	..	0.94	1.65	1.68	1.71

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01 Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
10	Subsidy on transportation charges of Hills fruits for encouragement to marketing.	1.22	0.48	13.50	..	..
11	Subsidy on principal of longterm horticultural loans.	0.58	0.17	3.51	..	..
12	Extension and strengthening of existing big orchards.	0.18	..	35.88	..	..
13	Scheme for certified seed production of Potato and Vegetable through Growers.	..	..	46.38	..	..
14	Diversification of horti. crops.	..	..	22.16	..	..
15	Scheme transferred to Non-Plan as a committed expenditure.	164.37	62.73	76.42	..	..
Total—A		351.54	166.72	887.13	594.35	..
B—NEW SCHEMES						
1	Scheme for subsidising costs of Plant growth regulators for increasing colour and obtaining more production of Fruits.	..	..	5.50	..	..
2	Scheme for expansion of dwarf apple plantation and high density planting of other fruit crops.	..	..	8.00	..	..
3	Intensive cultivation programme of Vegetable in irrigated areas of U. P. Hills	..	..	3.60	..	..
4	Scheme for production of high quality material and vegetable seeds.	..	..	111.44	..	..
5	Development of garden colonies in remote areas by adopting compact plantation.	..	..	32.00	..	..
6	Intensification and expansion of potato development programme in U. P. hills.	..	..	23.92	..	..
7	Strengthening of Horticulture development service at region and central Headquarters,	..	..	12.52	..	..
8	Expansion of Plant Protection Services in U. P. hills.	..	..	4.93	..	..
9	Strengthening of horticultural development services at district level.	..	..	13.66	..	..
10	Establishment of Food Craft Institute in U. P. hills.	..	..	8.46	..	..
11	Strengthening of horticultural research Services in U. P. hills.	..	..	5.54	..	..
12	Establishment of Fruit Preservation and Training Centres in U. P. hills.	..	..	8.02	..	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
1.50	1.50	3.00	..	..	3.00	3.00	3.00	3.00
0.28	0.28	0.35	..	..	0.35	0.84	0.89	1.15
4.40	3.06	7.58	..	..	7.58	8.06	7.90	7.94
4.25	1.60	12.29	..	..	12.29	9.91	9.94	9.99
2.16	2.15	5.00	..	..	5.00	5.00	5.00	5.00
76.42	68.09	..	..	..	..	..	..	..
180.00	166.77	183.49	..	130.20	183.49	175.30	173.70	174.64
..	..	1.00	..	..	1.00	1.25	1.50	1.75
..	..	2.00	..	..	2.00	2.00	2.00	2.00
..	..	0.90	..	..	0.90	0.90	0.90	0.90
..	..	27.50	..	..	27.50	27.94	27.98	28.02
..	..	8.00	..	..	8.00	8.00	8.00	8.00
..	..	6.03	..	..	6.03	6.07	5.90	5.92
..	..	2.97	..	..	2.97	3.15	3.13	3.27
..	..	1.68	..	..	1.68	1.05	1.09	1.11
..	..	2.43	..	..	2.43	3.64	3.74	3.85
..	..	1.57	..	..	1.57	3.22	1.82	1.85
..	..	0.98	..	..	0.98	1.48	1.52	1.56
..	..	1.70	..	..	1.70	2.08	2.11	2.13

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.01—Agriculture—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
13	Scheme for survey and estimation of hill fruits.	..	..	12.35	..	..
14	Organisation of shows and exhibitions in State and Outside.	..	..	4.31	..	..
15	Establishment of horticulture Information centres at regional level.	..	..	3.35	..	..
16	Rejuvenation of old orchards by adopting demonstration practices.	..	..	10.00	..	..
17	Expansion and Intensification of nut-fruit cultivation in U. P. hills.	..	..	6.00	..	..
18	Distribution of improved horticultural tools in U. P. hills.	..	..	3.10	..	..
19	Development of Olive cultivation in U. P. Hills.	..	..	18.56	..	..
20	Scheme to provide marketing facilities in KAVAL Town for hill fruits.	..	..	9.64	..	..
21	Grant-in-aid to existing Fruit Co-operative Societies in U. P. Hills.	..	..	7.82	..	..
22	Formation of additional fruits and vegetable Co-operative Marketing Societies.	..	..	23.45	..	..
23	Composite demonstration of Vegetable cultivation in Tribal areas of U. P. hills	..	..	1.60	..	..
24	Distribution of subsidised Potato and vegetable Seeds in tribal areas of U. P. hills.	..	..	2.00	..	..
25	Scheme for Research on Apple and Stone fruits.	..	..	3.33	..	..
26	Scheme for registration, certification and Inspection of virus free plants of Temperate fruits.	..	..	1.98	..	..
27	Scheme for Research on new Roses and cut flowers at Chaubattia.	..	..	3.43	..	..
28	Expansion and Intensification of Bee-keeping programme in U. P. hills.	..	..	23.75	..	..
29	Establishment of horticultural farm for production of flowers seeds and bulbs.	..	..	18.56	..	..
30	Spill-over expenditure on building work	..	..	11.13	..	..
31	World Bank Project Programme.	..	..	960.92	..	..
Total—B		..	..	1362.87	..	..
Total, Fruit Utilisation (hills.)		..	351.54	166.72	2250.00	594.35
Total (16)		..	603.09	283.66	3250.00	814.35

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	2.21	..	..	2.21	3.31	3.39	3.44
..	..	1.04	..	..	1.04	1.08	1.09	1.10
..	..	0.65	..	..	0.65	0.89	0.90	0.91
..	..	2.50	..	..	2.50	2.50	2.50	2.50
..	..	1.50	..	..	1.50	1.50	1.50	1.50
..	..	0.58	..	..	0.58	0.83	0.84	0.85
..	..	3.41	..	..	3.41	4.81	5.18	5.16
..	..	2.11	..	..	2.11	2.48	2.51	2.54
..	..	1.42	..	..	1.42	2.09	2.13	2.18
..	..	3.65	..	..	3.65	4.04	7.86	7.90
..	..	0.40	..	..	0.40	0.40	0.40	0.40
..	..	0.50	..	..	0.50	0.50	0.50	0.50
..	..	0.80	..	..	0.80	0.82	0.84	0.87
..	..	0.48	..	..	0.48	0.49	0.50	0.51
..	..	0.82	..	..	0.82	0.85	0.87	0.89
..	..	2.10	..	0.10	2.10	6.40	11.55	3.70
..	..	3.41	..	..	3.41	4.81	5.18	5.16
..	..	3.07	..	3.07	3.07	5.06	3.00	..
..	..	41.80	..	..	41.80	319.12	300.00	300.00
..	..	129.21	..	3.17	129.21	422.76	410.43	400.47
180.00	166.77	312.70	..	133.37	312.70	598.06	584.13	575.11
291.00	288.59	507.70	..	203.37	312.70	818.06	816.13	817.11

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES**Sub-major Head of Development—1.01—Agriculture—(Contd.)**

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(17) Other Expenditure						
<i>Agriculture Department—</i>						
A— CONTINUING SCHEMES						
1	Extension of Agricultural Directorate building under the Scheme for rationalising the efficiency of Directorate of Agriculture.	3.33	..	..	..	..
2	Construction of an Auditorium in the Agriculture Directorate building.	0.60	..	17.40	17.40	..
3	Construction of fourth wing of the Agricultural Directorate building.	3.75	0.60	..	..	..
4	Intensification of bee-keeping Programme in the plain	1.10	..	..	..	..
5	Grant-in-aid to Banwasi Sewa Ashram, Mirzapur.	1.20	..	..	..	..
6	Financial assistance to the families of the surrendered dacoits of Chambal valley and also to the affected families.	1.15	..	..	..	..
7	Scheme for development of bee-keeping programme in the hills.	0.90	..	..	..	..
8	Scheme for the Integrated Development of Chakrata Block, Dehradun.	0.82	0.11	..	..	..
<i>State participation in the share Capital of—</i>						
9	U. P. State Agro Industrial Corporation ..	76.00	10.00	141.17	141.17	..
10	Central Development Corporation	340.00	10.00	1.00	1.00	..
11	Western Development Corporation					
12	Eastern Development Corporation					
13	Establishment of Monitoring Cell	..	..	2.14	..	..
14	Establishment of Research Extension Cell	..	..	..	..	..
15	Strengthening of administrative set up of the Department of Agriculture.	..	..	12.44	..	..
16	Establishment of Election sub-Station in the campus of Agriculture Directorate,	..	..	2.78	2.78	..
Total—A		428.85	20.71	176.93	162.35	

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16

Work completed

3.00	4.98	4.00	..	4.00	..	4.00	3.40	3.00
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Work completed

Transferred to Horticulture and Fruit Utilization Department

Scheme dropped

..	1.10
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Transferred to Horticulture and Fruit Utilization Department

Scheme dropped

15.00	15.00	31.17	..	31.17	..	30.00	30.00	35.00
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1.00	1.00	Scheme dropped						
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2.14	..	Scheme dropped						
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Scheme dropped

1.34	..	2.00	2.50	3.00	3.60
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..	0.67	1.78	1.00
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22.48	22.75	38.95	..	35.17	..	37.50	36.40	41.60
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Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development— 1.01—Agriculture—(Concl'd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
(1)	Strengthening of Planning Section of the Directorate of Agriculture	..	..	9.55	..	..
(2)	Creation of Embazzlement cell and strengthening of Accounting Wing of the Directorate of Agriculture	..	..	9.70	..	..
	Total—B	..	..	19.25	..	..
	Total (17)	428.85	20.71	196.18	162.35	..
	Total, Agriculture (Excluding Land Reforms)	3636.47	1492.90	16093.88	2286.59	46.50
	Total, Land Reforms	2804.60	743.11	4600.00	..	..
	Total, for 1.01. Agriculture	6441.07	2236.01	20693.88	2286.59	46.50

(Rupees in lakhs)

1978-79			1979-80		1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expendi- ture	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
..	..	2.00	..	..	..	2.25	2.50	2.80
..	..	1.75	..	..	..	2.25	2.60	3.10
..	..	3.75	..	..	..	4.50	5.10	5.90
22.48	22.75	42.70	..	35.17	..	42.00	41.50	47.50
1442.00	1419.57	3199.56	46.50	431.87	512.37	3846.57	3814.12	3791.63
775.00	806.30	887.00	..	..	..	931.00	979.00	1028.00
2217.00	2225.87	4086.56	46.50	431.87	512.37	4777.57	4793.12	4819.63

Land Utilization Statistics

(Thousand hectares)

Serial no.	Item	Actuals		Estimated	Proposed	Target
		1975-76	1976-77	1977-78	1978-79	1982-83
1	2	3	4	5	6	7
1	Reporting Area for Land utilization ..	29,848	29,813	29,813	29,813	29,813
2	Forests	5,142	5,075	5,180	5,200	5,400
3	Miscellaneous crop and groves not included in the net area sown.	791	786	680	650	600
4	Permanents pastures and other grazing lands	279	277	282	284	300
5	Culturable waste	1,493	1,432	1,420	1,380	1,200
6	Net available for cultivation—					
	(a) Barren and unculturable land ..	1,213	1,192	1,150	1,120	900
	(b) Land put to non agricultural uses ..	2,162	2,166	2,200	2,300	2,800
	(c) Total (a+b)	3,375	3,358	3,350	3,420	3,700
7	Fallows—					
	(a) Current	962	893	885	879	613
	(b) Others	605	602	520	500	400
	(c) Total (a+b)	1,567	1,495	1,405	1,379	1,013
8	Net Area sown—					
	(a) Irrigated	7,933	8,256	8,400	8,700	9,200
	(b) Un-Irrigated	9,268	9,134	9,096	8,800	8,400
	(c) Total (a+b)	17,201	17,390	17,496	17,500	17,600
9	Cultivated area (8+7 (a))	18,163	18,283	18,381	18,379	18,213
10	Gross irrigated area	9,213	9,741	13,035	13,740	18,022
11	Gross area sown	23,098	23,152	23,600	23,850	26,400
12	Area sown more than once	5,897	5,762	6,104	6,350	8,800
13	Cropping Intensity (Percentage) ..	134.28	133.13	134.89	136.29	150.00
14	Irrigation Intensity (Percentage) ..	116.36	117.99	155.17	157.93	195.89

Crop production : Achievements and Targets

Serial no.	Item	Unit	Actual production		Target 1982-83
			1973-74	1977-78	
1	2	3	4	5	6
I—Foodgrains :					
<i>(a) Cereals</i>					
(a)	Rice	'000 tonnes	3,859	5,140	6,500
(b)	Jowar .. .. .	..	472	528	550
(c)	Bajra .. .. .	..	790	647	800
(d)	Maize .. .. .	..	1,088	940	1,100
(e)	Wheat .. .. .	..	5,879	9,511	11,000
(f)	Small millets .. .. .	..	460	514	200
(g)	Barley .. .. .	..	1,166	1,098	1,200
	Total—Cereals .. .. .	..	13,714	18,378	21,350
	<i>(b) Pulses</i> .. .. .	..	1,850	2,429	3,650
	Total—Foodgrains .. .. .	..	15,564	20,807	25,000
	II—Sugarcane (Cane): .. .. .	..	53,328	68,056	67,200
III—Oilseeds:					
(a)	Groundnut .. .. .	..	286	245	500
(b)	Til .. .. .	..	113	104	250
(c)	Castor .. .. .	..	1	1	10
(d)	Repeseed Mustard .. .. .	..	1,005	964	1,700
(e)	Linseed .. .. .	..	145	150	250
	Total (Major Oilseed) .. .. .	..	1,550	1,464	2,710
(f)	Soyabean .. .. .	..	..	42	150
(g)	Sun-flower .. .. .	..	..	25	90
(h)	Saf-flower .. .. .	..	..	7	50
	Total (Minor Oilseeds) .. .. .	..	..	74	290
	Grand total—Oilseeds .. .. .	..	1,550	1,538	3,000
IV—Cotton .. .. .	..	'000 bales	29	18	30
V—Jute .. .. .	..	..	79	72	200

Crop Production : Targets For Terminal Years

Serial no.	Item	Achievement, 1977-78			Target 1982-83		
		Area (thousand hectare)	yield (Qtl/ha)	Production (Thousand tonnes)	Area (Thousand hectare)	Yield (Qtl/ha.)	Production (thousand tonnes)
1	2	3	4	5	6	7	8
1	Foodgrains :						
	(a) Rice	4,828	10.65	5,140	5,000	13.00	6,500
	(b) Wheat	6,654	14.29	9,511	6,800	16.18	11,000
	(c) Maize ..	1,251	7.52	940	1,200	9.17	1,100
	(d) Jowar ..	657	8.04	528	600	9.17	550
	(e) Bajra ..	989	6.55	647	950	8.42	800
	(f) Other Cereals ..	1,675	9.62	1,612	1,350	10.37	1,400
	(g) Pulses ..	3,001	8.09	2 429	3,500	10.43	3,650
	Total—Foodgrains	19,055	10.92	20,807	19,400	12.89	25,000
2	Sugarcane (Cane)	1,379	49.35	68,056	1,244	54.02	67,200
3	Oilseeds :						
	Major—						
	(a) Groundnut ..	326	7.52	245	400	12.50	500
	(b) Til ..	57	1.35	104	80	2.70	250
	(c) Castor ..	1	3.15	1	4	6.00	10
	(d) Rapeseed ..	384	4.76	964	580	6.50	1,700
	(e) Linseed ..	97	2.52	150	180	4.00	250
	Total (5 Major Oil—seeds)	865	3.94	1464	1244	6.00	2,710
	Total—Oilseeds	965	4.00	1538	1400	6.00	3,000
4	Cotton ('000 bales)	31	1.00	18	40	1.28	30
5	Jute ('000 bales) ..	8	16.20	72	15	24.00	200
6	Potato						
	(i) Plains ..	225	147.11	3310	250	168.40	4210
	(ii) Hills ..	25	76.00	190	30	96.67	290

Selected Programmes—Achievements and Targets

Serial no.	Item	Unit	Actual Achievement		Target
			1973-74	1977-78	1982-83
1	2	3	4	5	6
1	<i>High Yielding Varieties—</i>				
	(a) Paddy	'000 hect.	1278	1800	2600
	(b) Wheat	"	3978	5300	6000
	(c) Maize	"	16	32	100
	(d) Jowar	"	2	3	40
	(e) Bajra	"	44	30	160
	Total—1	"	5318	7165	8900
2	<i>Consumption of Chemical Fertilizers—</i>				
	(a) Nitrogenous (N)	'000 tonnes	329	648	1600
	(b) Phosphatic (P ₂ O ₅)	"	87	139	350
	(c) Potassic (K ₂ O)	"	48	73	200
	Total—2	"	464	860	2150
3	Increase in Gross Cropped Area	'000 hect.	23007	23600	26400
4	Soil and water conservation or Agricultural land	"	1836	2116	2375
5	Minor Irrigation	"	6883	8985	13084
6	<i>Plant protection—</i>				
	(a) Technical grade material	tonnes	2243	3000	5000
	(b) Area covered	'000 hect.	10762	13456	20000

Selected Programme : Achievements and Targets

Serial no.	Item	Unit	Achievement 1977-78	Target 1982-83
1	2	3	4	5
1 Organic Manures and Green Manuring—				
	(a) Urban Compost	'000 tonnes	958	1450
	(b) Green Manuring	'000 hec.	900	1400
2 Plant Protection—				
(Technical Grade Material)				
	(a) Consumption of pesticides	tonnes	3000	5000
	(b) Seed treatment (Chemical)	"	45	56
	(c) Fungicides	"	120	198
	(d) Others	"	2835	4746
3 Certified Seed Quantity distributed—				
A—Food Crops—				
(I) Cereals—				
	(i) Rice	Qtls.	53220	100000
	(ii) Wheat	"	84581	150000
	(iii) Jowar	"	20	100
	(iv) Bajra	"	739	2000
	(v) Maize	"	105	1000
	(vi) Barley	"	1016	5000
	(vii) Others	"	2820	2000
	Total-Cereals :	"	142501	260100
(II) Pulses—				
	(i) Urd	Qtls.	502	1500
	(ii) Moong	"	1403	1500
	(iii) Arhar	"	3403	10,700
	(iv) Gram	"	419	8,000
	(v) Peas	"	517	2500
	(vi) Masur	"	95	200
	Total-Pulses :	"	6339	24400

ANNEXURE IV
AGR-22 (Contd.)

Serial no.	Item	Unit	Achievement 1977-78	Targets 1982-83
1	2	3	4	5
<i>B—Others—</i>		Qtls.		
	(i) Cotton .. .. .	..	302	400
	(ii) Oilseeds .. .. .	..	3517	8000
	(iii) Jute .. .. .	..	249	320
	(iv) Potato .. .. .	..	46200	88000
	(v) Vegetable Seeds .. .. .	..	2128	6000
	Total (A) and (B) .. .. .	..	2,01,236	3,87,220
4	<i>Agriculture Machinery and Implements—</i>	Nos.		
	(a) Tractors .. .. .	..	500	5500
	(b) Power tillers .. .. .	..	1	—
	(c) Threshers .. .. .	..	450	1500
	(d) Seed-cum-fertilizer drills .. .. .	..	13	100
	(d) Sprayers/dusters—			
	(i) Hand operated .. .. .	..	800	5000
	(ii) Power operated .. .. .	..	20	250
5	<i>Agricultural Machinery Hiring Centres—</i>	..		
	(a) Operated by Agro-industries Corporations Nos. .. .. .	..	5	50
	(b) Operated by Others—	..		
	(i) Agro-industries corporation .. .. .	..	39	400
	(ii) Agriculture Directorate .. .. .	..	14	..
6	<i>Land Reclamation—</i>			
	(i) Alkaline .. .. .	.. '000 hec.	4.00	190.00
	(ii) Others .. .. .	..	45.82	281.50
7	(a) Regulated Markets	Nos.	7	73
	(b) Sub-market Yards .. .. .	..	..	62
	Total (7) .. .. .	..	7	135
8	<i>Storage and Warehousing—</i>	'000 tonne		
	(a) Owned capacity of State Warehousing Corporation .. .. .	..	285.00	265.00
	(b) Owned capacity of other State Godowns .. .. .	..	..	..
	(c) Co-operative Godowns .. .. .	..	265.90	467.75
	Total (8) .. .. .	..	550.90	732.75

ANNEXURE IV
AGR—22 (Concl.d.)

Serial no.	Item	Unit	Achievement 1977-78	Target 1982-83
1	2	3	4	5
9 Short-term Agricultural Credit—				
	(a) Advances during the year by Co-operatives	.. Rs. in crores	137.73	355.00
	(b) Advances by Commercial Banks during the year	„	1.90	N.A.
	Total (9)	„	139.63	335.00
10 Investment Agricultural Credit—				
	(a) Medium-term advances by co-operatives during the five years of Plan.	Rs. in crores	12.36	125.00
	(b) Medium-term advances by Commercial Banks during five years of Plan.	„	10.20	N.A.
	(c) Long-term advances by Land Development Bank during five years of Plan (Both ordinary and special loans)		49.27	380.00
	Total (10) ..	„	61.83	505.00

Head-wise/sub-head-wise breakup of the financial outlays

(Rupees in lakhs)

Serial no.	Head of Development Programmes	Fifth Plan approved outlay	Approved outlay 1978-79	Proposed outlay 1978-83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
I—Agricultural Research Education :						
(1)	Agricultural Research	1058.00	286.75	4000.00	3.75	40.00
(2)	Agricultural Education					
	Total I	1058.00	286.75	4000.00	3.75	40.00
II—Agricultural Extension and Administration ;						
(1)	Direction and Administration	9.75	9.23	83.10	..	..
(2)	Agriculture Extension	162.96	91.90	896.12	199.28	..
(3)	Extension education and farmers training					..
(4)	Adaptive Research	..	..	300.00	50.00	..
(5)	Agricultural Economic and Statistics	85.14	21.36	104.38	..	..
	Total II	248.10	113.26	1300.50	249.28	..
III—Agricultural Inputs :						
(1)	Seeds	467.19	109.52	1376.80	621.43	..
(2)	Fertilizer and Manures	404.52	110.26	939.38	221.33	6.00
(3)	Plant Protection	297.24	104.27	1372.95	16.50	..
(4)	Implements and Machinery	106.18	49.51	367.88	8.00	..
	Total III	1275.13	373.56	4057.01	867.26	6.00
IV—Crop Oriented Programmes ;						
(1)	H. V. P.	12.50	3.00	129.00	..	0.50
(2)	Pulses	3.27	0.20	106.68	..	..
(3)	Commercial Crops	571.72	184.75	1724.51	289.60	..
(4)	Horticultural Crops and Plantation	757.00	291.00	3250.00	814.35	..
	Total IV	1344.49	478.95	5210.19	1103.95	0.50
V—Land Reforms :						
(1)	Updating of Land Records	..	..	..	..	..
(2)	Consolidation of holdings	3631.00	775.00	4600.00	..	..

Agriculture and Rural Development, Employment Generation

Serial no.	Head of Development/Programme	Likely Employment Generation in Man years					
		Scien- tists	Techni- cians	Adminis- trative	Skilled	Un- skilled	Total
1	2	3	4	5	6	7	8
I—Agricultural Research and Education—							
	(a) Agricultural Research ..	482	301	242	422	251	1698
	(b) Agricultural Education ..	367	85	146	175	79	852
	Total I ..	849	386	388	597	330	2550
II—Agricultural Extension and Administration—							
	(1) Direction and Administration ..	..	..	45	..	10	55
	(2) Agriculture Extension ..	80	532	128	800	132	1672
	(3) Extension education and Farmers Training.	3	3	3	..	3	12
	(4) Adaptive Research ..	52	455	167	208	55	937
	(5) Agricultural Economics and Statistics	10	250	12	..	12	284
	Total II	145	1240	355	1008	212	2960
III—Agriculture Inputs—							
	(1) Seeds ..	9	9	..	9	9	36
	(2) Fertilizers ..	91	94	139	184	90	598
	(3) Plant Protection ..	27	1350	134	3722	968	6201
	(4) Implement and Machinery ..	25	480	220	318	335	1378
	Total III	152	1933	493	4233	1402	8213
IV—Crop Oriented Programme—							
	(1) H.V.P ..	11	42	20	30	6	109
	(2) Pulses ..	10	39	18	28	3	98
	(3) Commercial Crops (Cane) ..	..	111	19	421	10151	10702
	(4) Horticulture Crops and Plants ..	27	1377	14	2105	760	4283
	Total IV	48	1569	71	2584	10920	15192

Agricultural Education and Training during Five Year 1978—83

(In numbers)

Serial no.	Item	Agri-culture	Animal Husbandry	Dairy	Fish-eries	Fores-try	Agri-cultural Engg.	Home Science	Basic Science
1	2	3	4	5	6	7	8	9	10
I. University Education—									
(i) <i>State Agricultural University—</i>									
	(a) Graduates	..	28	..	..	..	50	..	..
	(b) Post Graduates—								
	M.S.	..	850	170	..	..	17	..	..
	Ph.D.	..	292	128	..	..	9	..	..

P. S.—The information pertains to the undernoted Universities only.

1. Chandra Shekhar Azad University of Agriculture and Technology, Kanpur.
2. Narendra Dev. University of Agriculture and Technology, Faizabad.

(3) MINOR IRRIGATION

Minor Irrigation Works provide the most important input of assured irrigation for cultivation of high yielding varieties, for increasing the intensity of cropping and for general increase in productivity of different crops in areas served by them. Three agencies of the State are responsible for different aspects of this programme. The Irrigation Department is responsible for construction of larger capacity tube-wells, lift schemes, hill channels, bundhis and small storage works mainly in the Southern Region of the State. The Minor Irrigation Department is concerned with construction of masonry wells, Persian wheels, smaller private tubewells and pumping sets and some minor works concerning water-conveyance and storage namely guls, hauzes and bundhis. Both these organizations depend upon the groundwater organization for providing data about the availability and state of exploitation of underground water in various parts of the State.

1.3.2. The construction of minor irrigation works has to be viewed in the context of the over all irrigation requirements of the State. The overall irrigation intensity will require to be raised to about 200 per cent in order to develop the agricultural production potential of the State fully. The assessment of surface and groundwater availability indicates that this will be possible only by judicious and conjunctive use of surface and groundwater. To economise on budgetary finances of the State as also for encouraging private enterprise, the construction of private minor irrigation works is being encouraged to the greatest possible extent. These works, however, are not able to benefit certain sections and areas. Difficulties arise in the case of small holdings where owners are not able to provide or mobilize finances for constructing their own irrigation works. In other areas, the water bearing strata is so deep that its economical utilization through the limited financial resources of private individuals is not feasible. Thus the programme of construction of State tube-wells has to be accelerated, alongside the construction of private works, utilizing groundwater, in

order to benefit small and marginal farmers and for difficult areas.

1.3.3. Lately a new element has entered the overall situation pertaining to the development of private minor irrigation. In certain areas, the level of exploitation of underground water resources has reached such a point that projects for surface water are being taken up to recharge the fast depleting underground reservoirs. In these circumstances, the State will have to lay down variable special policies and priorities in respect of private as well as State Minor Irrigation and in addition, it will also have to find ways of regulating further exploitation as well as the equitable sharing of existing water resources through the enforcement of appropriate crop rotations.

(a) Ground Water Survey Organization

1.3.4. This organization was created in 1970 for investigating and assessing groundwater resources in each block of the State. It was transferred from the administrative control of Irrigation Department to the organization of the Agriculture Production Commissioner in 1975 for better co-ordination between Agriculture Production and Minor Irrigation Works.

The main activities of the organization are :

1. Phreatic (water) level observation in 2500 hydrograph stations.
2. Basin-wise and command area-wise groundwater potential studies.
3. Exploratory drilling up to 300 meters.
4. Resistivity surveys for location of productive water bearing zones in the difficult areas of the State.
5. Chemical analysis of water and mechanical analysis of soil through laboratories set up at Lucknow and Roorkee.
6. Sedimentological analysis of soil samples collected during exploration.

1.3.5. The entire Minor Irrigation programme of the State is based on the studies carried out by the Groundwater Organization. For this purpose nearly

150 block-wise and district-wise reports have been prepared to assess the feasibility of various schemes. These reports are reviewed and updated from time to time with geohydrological observation and data.

1.3.6. Groundwater exploitation in the State at the commencement of the Fifth Plan was of the order of 24,000 MCM which is likely to increase to about 35,000 MCM by the end of 1978-79. As against this the annual safe has been assessed at 62,000 MCM of a total recharge of 79,000 MCM. It is anticipated that by the end of 1978-79, about ten development blocks of the State will have entered into the stage of over-exploitation whereafter various areas will be reaching saturation point at the rate of 60 blocks every year. It is, therefore, proposed to carry out intensive studies in about 60 blocks, especially the blocks reaching the limits of safe exploitation to decide upon the specific measures to safeguard against general distress, including stoppage of institutional loans for minor irrigation works, introduction of surface irrigation schemes, regulation of the use of water etc. will be suggested.

1.3.7. During the Five-Year Plan (1978-83), various State agencies concerned with the construction of medium to deep tube-wells viz., Irrigation Department, Nalkoop Nigam, Jal Nigam etc., propose to construct about 15,000 deep tube-wells. Most of these will be located in areas hitherto untapped and unexplored. A programme on this ambitious scale will require a large number of exploratory drilling to be made every year. The facilities of the Central Ground Water Board located in the State for exploratory drillings will not be adequate to carry this programme through. The State Ground Water Organization will, therefore, have to take measures to augment the capacity for exploratory drillings in order to generate the necessary information. The State Departments will have to purchase drilling rigs for this purpose.

1.3.8. Against the Fifth Plan outlay of Rs.2.20 crores for groundwater survey organization a sum of Rs.1.64 crores was spent during the first four years of the Fifth Plan. An outlay of Rs.3.60 crores has been proposed for the Five-Year period 1978-83.

1.3.9. An outlay of Rs.60 lakhs has been proposed for 1979-80 for Groundwater Survey Organizations. It is proposed to carry out semi-detailed investigations in 60 blocks. It is also proposed to locate good quality water bearing horizons, buried valleys and zones of weak planes (fractured and faulted structure) with weathered rock cover etc. With the help of electric resisting methods, aerial photographs, remote sensing and similar techniques.

(b) State Minor Irrigation

1.3.10. The outlay for State Minor Irrigation Works for the Fifth-Five Year Plan was Rs.160.28 crores. The actual expenditure incurred during the first four years has been Rs.94.38 crores as per detailed below :

TABLE I—Utilization of outlays 1974-78

(Rs. in crores)		
Year	Outlay	Expenditure
1974-75	.. 17.22	23.51
1975-76	.. 12.87	12.25
1976-77	.. 19.65	28.20
1977-78	.. 30.25	30.42
1974-78	.. 79.99	94.38

1.3.11. The outlay for 1978-79 has been fixed at the level of Rs.33.20 crores. The actual expenditure in first four years was restricted on account of a deliberate policy of encouraging private minor irrigation works, especially since difficulties were being experienced in the energisation of State tube-wells.

TABLE II—Creation of Irrigation Potential during 1974-78

(Lakh hectares)		
Year	Additional	Cumulative
1	2	3
1974-75	.. 1.13	20.93
1975-76	.. 0.84	21.77
1976-77	.. 0.85	22.62
1977-78	.. 1.18	23.80
1974-78	.. 4.00	23.80

1.3.12. It is expected that additional irrigation potential of 2.04 lakhs hectares would be created during 1978-79.

1.3.13. Details of the utilization of irrigation potential are given in the following table :

TABLE III—Utilization of Irrigation Potential 1974—78

Year	Irrigation potential created. (lakh hect.)	Utilization (lakh hect.)	Percentage Utilization.
1973-74 ..	19.80	8.31	42
1974-75 ..	20.93	9.90	47
1975-76 ..	21.77	11.00	51
1976-77 ..	22.62	12.00	52
1977-78 ..	23.80	13.00	55

1.3.14. The gap between utilization and irrigation potential created is mainly on State tube-wells and lift schemes. The main reasons for shortfall in utilization of irrigation potential of State tube-wells have been shortage of power and lack of proper extension support to introduce intensive cropping patterns. Steps are being taken to improve the situation. The tube-well organisation is also being strengthened to improve performance, specially in respect of the following :

- (i) investigation and planning ;
- (ii) design, research and standardization ;
- (iii) mobile repairs units ;
- (iv) training of technical staff ;
- (v) monitoring.

TABLE V—Number of Tubewells in different stages

Year	No. of Tubewells drilled	Pumpsets installed.	Pump Houses constructed.	No. of Tubewells energised	No. of Tubewells in operation.
1	2	3	4	5	6
End of 1973-74 ..	14,111	13,206	13,239	12,838	12,447
End of 1974-75 ..	14,708	14,107	14,229	13,749	13,297
End of 1975-76 ..	14,865	14,608	14,604	14,397	13,692
End of 1976-77 ..	15,986	15,198	15,284	14,847	14,079
End of 1977-78 ..	17,391	16,179	16,440	15,522	14,483
End of 1978-79 (Anticipated)	18,627	17,579	17,840	16,822	15,633
1979-80 (Target) ..	20,227	19,279	19,540	18,372	17,033

State Tube-wells

1.3.15. There were only 2305 State tube-wells in operation in Uttar Pradesh at the beginning of the First Five Year Plan. The increases which took place in the number of tube-wells in operation during various Plan periods are indicated below :

TABLE IV—Number of State Tube wells

Period	Cumulative number of State Tubewells in operation
1	2
Pre-Plan ..	2,305
End of First Plan ..	4,260
End of Second Plan ..	6,668
End of Third Plan ..	8,235
End of Fourth Plan ..	12,447
End of 1977-78 ..	15,200
End of 1978-79 (Target) ..	16,600

1.3.16. Initially 7,000 State tube-wells were proposed to be constructed during the Fifth Plan period but essentially due to shortage of power during the past few years, tube-wells programme of the State had to be curtailed. The total number of State tube-wells that are likely to be constructed during five years ending 1978-79 would be 4,709 only. The number of tube-wells which were under various stage of construction during the different years of the Fifth Plan are shown in the following tables :

1.3.17. The position of area irrigated and hours of State tube-wells as a whole is given below :

TABLE VI—Area Irrigated and hours run on State Tube-wells

Year	Tube-wells in operation at the beginning of the year	Area irrigated in thousand hectares			Hours run			
		Kharif	Rabi	Total	Kharif	Rabi	Total	
1	2	3	4	5	6	7	8	
1974-75	..	12,447	1,85	5,68	7,53	48,69,368	1,23,70,397	1,72,39,765
1975-76	..	13,297	1,84	8,18	10,02	52,31,585	1,90,15,093	2,42,45,678
1976-77	..	13,692	2,63	8,04	10,67	85,60,267	2,31,75,703	3,17,35,975
1977-78	..	14,079	2,29	6,99	9,28	72,52,362	1,41,49,765	2,22,02,128
1978-79 (Anticipated)	..	14,483	2,31	9,50	11,81	71,60,504	2,55,00,000	3,26,60,504

1.3.18. The State tube-wells as designed at present are expected to irrigate an area of 120 hectare annually and run for at least 2500 hours on an average. The actual performance is given below :

TABLE VII—Overall Programmes/State Tube-wells

Year	No. of Tube-wells running on the 1st day of the Kharif/Rabi	Rated capacity (Ha) irrigated area Average per Tube-well	Area Irrigated (Ha) Total/Average per Tube-well	Rated capacity Hours run/Average Hours per Tube-well	Hours run Total/Average per Tube-well	Hours lost due to Rostering and defect Total/Average per Tube-well	Hours lost due to mechanical defects Total/Average per tube-well	Hour un-utilised due to demand Total/Average per tube-well	
1	2	3	4	5	6	7	8	9	
1970-71	..	9596	1161960	876792	29049000	22357279	9591085	1585055	51717003
		9770	120	90	3000	2305	983	162	5310
1971-72	..	10041	1218240	769302	30453000	16113017	9830655	1430515	61833858
		10262	110	75	3000	1580	951	128	6101
1972-73	..	10832	1317240	835697	32931000	22137555	23998340	2704802	47856860
		11123	120	76	3000	2014	2141	246	4359
1973-74	..	11645	1411800	638632	35295000	15155157	39960345	2619674	N.A.
		11885	120	54	3000	1284	3328	220	N.A.
1974-75	..	12447	1513680	752559	37842000	17239765	56800784	3316000	32968892
		12782	120	59	3000	1321	4383	263	2793
1975-76	..	13297	1602360	1001841	40059000	24245678	35165879	8483000	57225570
		13409	120	75	3000	1811	2609	186	4154
1976-77	..	13692	1653120	1066577	41328000	31735975	18769785	6656000	55123326
		13861	120	77	3000	2297	1354	478	4309
1977-78	..	14079	1689480	427874	42237000	22202128	43990630	6378517	52004886
		14179	120	66	3000	1569	3180	449	3655

1.3.19. While inadequate and non-assured availability of power for running the State tube-wells has largely been responsible for their inadequate performance, there have been some other factors such as delays in repairs specially at critical period of demands and unsuitable cropping pattern in tube-well commands. These factors will receive due attention in

1979-80 and 1978-83 Plan.

Proposals for Five Year Plan 1978-83

1.3.20. An outlay of Rs.253.00 crores has been proposed for State Minor Irrigation, so as to create additional irrigation potential of Rs.15.22 lakhs hectares during the period 1978-83. The year-wise break-up of outlays and targets is given below :

TABLE VIII—*Outlay Targets for State Minor Irrigation*

Year	Outlay (Rs. in crores)	Irrigation potential proposed (Lakh Hect.)	
		Additional	Total
1	2	3	4
Level by end of 1977-78 .. ..	..	..	23.80
1978-79	33.20	1.88	25.68
1979-80	49.20	3.14	28.82
1980-81	56.50	3.38	32.20
1981-82	56.45	3.41	35.61
1982-83	57.65	3.41	39.02
Total ..	253.00	15.22	39.02

1.3.21. The yearwise and programmewise details of physical targets are given below :

TABLE IX—*Programme-wise/year-wise details of physical targets under State Minor Irrigation*
(Lakh hectare)

Programme	Total Target (1978-83)	1978-79	1979-80	1980-81	1981-82	1982-83
1. State Tubewells	9.60	1.68	1.86	1.98	2.04	2.04
2. Minor Lift Irrigation Schemes	0.25	0.10	0.05	0.04	0.03	0.03
3. Surface flow	0.50	0.10	0.11	0.11	0.09	0.09
4. Tubewells Corporation	4.87	..	1.12	1.25	1.25	1.25
Total ..	15.22	1.88	3.14	3.38	3.41	3.41

1.3.22. State Tube-wells will continue to constitute the major portion of the State Minor Irrigation programme and out of the total investment of Rs.253.00 crores proposed for the State Minor Irrigation Works

during the Five-Year Plan period (1978-83) Rs.200.00 crores are proposed to be utilized for construction of State Tube-wells. Year-wise programme of State tube-wells is proposed as below :

TABLE X—*Programme of State Tube-wells*

Year	Proposed outlay (Rs. in crores)	No. of tubewells
1	2	3
1978-79	26.30	1,400
1979-80	38.70	1,550
1980-81	45.00	1,650
1981-82	45.00	1,700
1982-83	45.00	1,700
Total ..	200.00	8,000

1.3.23. The total number of tube-wells energised to the end of 1977-78 was 14754. Thus, by the end of 1982-83, 22754 State Tube-wells are anticipated to be in operation. The total additional potential to be created by these 8000 State Tube-wells

during the Five-Year Plan period (1978-83) will be 9.60 lakhs hectare. The programme of construction and energisation of tube-wells and reconstruction of old and failed wells during the year 1979-80 will be as below :

TABLE XI—Construction and energisation of Tubewells

Serial no.	Programme	Rupees in Crores
1	2	3
1	Drilling and development of 1,600 tubewells @ Rs.75,000 each	12.00
2	Construction of pump houses, installation of pump sets, motors etc. on 17,00 tubewells @ Rs.30,000 each.	5.10
3	Construction of 2500 km. of lined guls @ Rs.40,000 per km.	10.00
4	Construction of Kachha guls 3000 km. @ Rs.6,000 per km.	1.80
5	Energisation of 1550 tubewells @ Rs.20,000 each	3.10
6	Reconstuction of tubewells	2.50
7	Overhead charges	4.20
	Total	38.70

Minor Lift Irrigation Schemes

1.3.24. Minor Lift Irrigation Schemes also play an important role in providing irrigation facilities to small areas, specially along the banks of small rivers, which are not otherwise suitable for the tube-wells or canal irrigation. Around Rs.2.00 crores are proposed to be utilized during 1977-78 for completing schemes carried out from the Fifth Five-Year Plan. Provision for subsequent years has been kept on a more moderate scale in view of comparatively high cost of operation and maintenance of these minor lift irrigation schemes. Anticipated potential from these schemes is 25,000 hectares.

Surface Flow Schemes

1.3.25. Hill channels, bundhis, tanks, minor drains and construction of small minors guls come under this category. Anticipated potential from these schemes is 50,000 hectares. In hill areas, hydrums also play an important role in providing irrigation facilities to small holdings. Adequate provisions is being provided for this item.

Survey and Investigation of surface water schemes

1.3.26. No separate outlay has been provided for this sub-head as the work of

survey and investigation of minor surface water scheme is priposed to be carried out by Investigation and Planning Organization of the State Irrigation Department which is being financed out of the outlays for major medium irrigation schemes.

Share Capital Contribution of Tube-wells Corporation

1.3.27. The State Government has established Tube-well Corporation for increasing the tempo of the exploitation of the ground water resources by mobilising institutional finances. With investment of only 25 per cent of the capital cost of work by the State Government, it will be possible to attract the balance in the shape of loans from banks and other financing bodies. It is proposed to make provision for the contribution of Rs.20.00 crores during the Five-Year Plan of 1978-83 towards the share capital contribution of this Corporation on the basis of the programme put forward by Tube-well Corporation. Only a sum of Rs.2.00 crores were contributed as share capital during 1976-77, against which the Corporation proposes to get Rs.8.00 crores loan from ARDC during 1978-79. If the share capital is raised to Rs.22 crores, it will be possible for the Tube-well Corporation to mobilise another about Rs.80.00 crores by

way of institutional finance through Agricultural Refinance Development Corporation. Thus, works worth more than Rs.108 crores are proposed to be executed with investment of only Rs.20.00 crores from State funds.

1.3.28. The Tube-well Corporation has proposed the construction of 6000 Augmentation Tube-wells of 2 to 3 cusecs capacity on the basis of the additional share capital proposed above. It is anticipated

that about 50 per cent of the water made available by these Augmentation Tube-wells will be utilized for improving the quality of irrigation in the existing irrigated areas by providing more frequent waterings for high yielding varieties of crops. The balance 50 per cent of the water will generate additional potential which is estimated to be 4.87 lakhs. The yearly programme of outlays and creation of additional potentials as indicated by the Tubewell Corporation, is as follows :

TABLE XII—Programme of outlays and Creation of additional potentials

Year	State outlay (Rs. crores)	Contribution of ARDC (Rs. crores)	Total (Rs. crores)	Potential (Lakh ha.)
1	2	3	4	5
1978-79	Nil	8	8	Nil
1979-80	4	16	20	1.12
1980-81	5	20	25	1.22
1981-82	5	20	25	1.25
1982-83	6	24	30	1.25
Total	20	88	108	4.87

Development of potential during 1978-79 has been kept nil, as the work of construction of augmentation tube-wells is still in planning stages and it may not be possible to energise any augmentation tube-wells during 1978-79 this year itself.

Rates for tube-well irrigation

1.3.29. Up to 1975-76 the irrigation rates for State tube-wells were based on volumetric system. In 1974-75, water rates were fixed at 600 gallons per rupee from November to June and 12,000 gallons per rupee from July to October in order to encourage paddy irrigation. During 1975-76 while water rates for the period of November to June were left unchanged, rates for paddy irrigation were reduced further from 12,000 gallons per rupee to 16,000 gallons per rupee between July to October. From April 1, 1976 two part

tariff was introduced under which an annual fixed charge of Rs.21.00 per acre of commanded area was levied in addition to irrigation charges as applicable to canal irrigation. These rates have been further revised from April 1, 1977. Fixed charges of Rs.21.00 per acre have again been deleted and water rates have again been brought to the previous level of 6000 gallons per rupee from November to March and 16,000 gallons per rupee from July to October. With this simplification and reduction in water rates, utilization of potential of State tube-wells is likely to increase.

Financial losses in Minor Irrigation Works Financial Statement

1.3.30. Details of gross receipts, working expenses, interest charges and net receipts for the year 1977-78, 1978-79 and for the four years 1979-83 are given in the table below :

TABLE XIII—Financial Returns from Irrigation Projects (State Minor Irrigation Schemes)

(Rupees in lakhs)

Item	1977-78	1978-79	1979-83
1	2	3	4
1. Gross receipts	1450.00	1541.00	7912.00
2. Working expenses	2040.53	2955.00	13445.00
3. Interest charges	1020.69	1425.65	8682.85
4. Depreciation	476.02	551.00	3600.00
Net receipts (1+2+3+4)	(-)-2087.24	(-)-3390.65	(-)-17816.85

1.3.31. One of the main reasons of such excessive losses through State tube-wells is poor utilisation of potential created primarily due to shortage of power. Efforts are being made to improve the power supply position for tube-wells and lift irrigation schemes by preferential allocation. The State tube-well organization is also being geared up to ensure that defective tube-wells are repaired promptly. The difficulties of maintaining open channels are being minimised by changing the main conveyance system to underground pipelines. Tube-well utilization is also proposed to be improved by suitable changes in cropping patterns to be brought about by intensive extension work. Even with power supply constraints, it is proposed that with the above measures, the level of utilisation should rise from about 2000 hours annually at present to about 2500 hours annually within the next years or so.

Annual Plan 1979-80—

1.3.32. An outlay of Rs.49.20 crores has been proposed for State Minor Irrigation Works during 1979-80. It is proposed to create an additional irrigation potential of 3.14 lakhs hectares during 1979-80 as per details below :

TABLE XIV—Additional Irrigation Potential 1979-80

Programme	1979-80	
	Proposed outlay (Rs. crores)	Additional Irrigation potential (Lakh hectares)
1	2	3
1. State Tube wells ..	38.70	1.86
2. Minor Lift Schemes ..	1.00	0.05
3. Surface flow Schemes ..	5.00	0.11
4. Construction of Tubewells by Tubewells Corporation.	4.00	1.12
5. Equipment and machinery	0.50	..
Total ..	49.20	3.14

(c) Private Minor Irrigation

1.3.33. The main aim of private minor irrigation works is to equip the cultivator with assured means of timely irrigation at his will. For multiple cropping and intensive cultivation, for which the culti-

vator has to make heavy investments, he wants an irrigation facility which would be wholly under his control. The number of private minor irrigation works is increasing also because in terms of opportunity cost of water at critical stages of plant development, these are extremely valuable for supplementing the supplies available from canals and State tube-wells.

1.3.34. *Growth of Irrigation Potential in previous plans*—Up to the end of March, 1961, an irrigation potential of 16.65 lakh hectares had been created through construction of private minor irrigation works. The potential increased to 49.03 lakh hectares at the end of the Fourth Five-Year Plan. An additional irrigation potential of 17.02 lakh hectares was created during the period from 1974-75 to 1977-78. Thus the total potential created reached the level of 66.05 lakh hectares at the end of March, 1978.

1.3.35. Since it is not possible to separately determine the actual irrigated area of each individual work, the overall potential created by private minor irrigation works is worked out on the basis of certain norms determined by experience and various kinds of studies carried out from time to time. To arrive at the net irrigation potential, annual depreciation at the rate of 5 per cent is also deducted from the gross potential. The norms of irrigation potential created by different categories of works as enforced up to March 31, 1978 are given below. To arrive at the net irrigation potential, an annual depreciation at the rate of 5 per cent had also been deducted till March, 1978.

1. Irrigation well	..	1.21 hect. (3 acres)
2. Persian wheel-additional		0.81 hect.(2 acres)
3. Pumping set	..	3.24 hect.(8 acres)
4. Private Tubewell	..	8.08 hect.(20 acres)

1.3.36. The Central team visiting the State from time to time have been persistently pointing out that there is an immediate need of downward revision of these norms and rationalisation of the manner in which depreciation of works should be accounted for. It is necessary that realistic norms are fixed so that the figures of irrigation potential created and the areas actually irrigated tally and can be inter-

preted in relation to the growth rate of food production in the State. With the introduction of high yielding variety of seeds and growing awareness for multiple cropping, the norms of calculating potentials for M. I. works used earlier have become unrealistic. Consequently, on the basis of careful deliberations and studies, the following revised norms have been adopted with effect from April 1, 1978 :

1. Irrigation well 1 hectare
2. Persian wheel-additional .. ½ hectare]
3. Pumping set on surface sources .. 2 hectares
4. Private tube-well or a pumping set with boring. 5 hectares
5. Boring of small and marginal farmers done with loan assistance and operated by rented Pumping sets. ½ hectare

The depreciation norms have also been revised to 2.5 per cent per annum. Often the command area of State works and private works overlap but the extent of overlapping has not been ascertained so far. Studies are being carried out to determine the same.

1.3.37. According to the available figures about 32,00,000 private minor irrigation works have been constructed in the State so far. Many of these have become derelict due to continuous use. A census of private minor irrigation works is being organized and such works will be identified through the field surveys.

1.3.38. *Available Ground Water Resources and Existing Works*—The total recharge of sale yield of ground water in

this State as worked out by the Ground Water Investigation Organisation are 79,000 and 62,000 MCM. On present assessment, the balance ground water available is roughly of the order of 30,000 M. C. M. The is expected to be exploited within the next 10 years. Out of more than 50 per cent ground water resources of the State already exploited, major share has gone to the big and richer farmers who have been able to muster adequate financial and technical resources. It is proposed to pay more attention to small and marginal farmers hereafter and for this, apart from enabling them to obtain loan without security under the Anatayodya scheme, it is planned to find organizational and technological solutions for benefiting them in a specific manner.

Review of Fifth Five Year Plan (for four-year period 1974—78)

1.3.39. *Performance against Main Physical Targets*—Against the target for the construction of 85,024 Masonary Wells, 3,51,200 borings, 48,995 Persian Wheels 1,13,693 Pumping Sets, 2,24,855 Private tubewells, Bundhies in 1,23,940 hectares and Guls and Hauzes for 6,800 hectares in hill areas fixed for the period from 1974-75 to 1977-78, respectively. 59,423 Masonary wells, 3,66,720 Borings, 33,704 Persian wheels, 1,30,421 Pumping sets, 2,69,271 Private tube-wells, Bundhies in 1,86,840 hectares and Guls and Hauzes for 4,454 hectares in the hills have been constructed.

1.3.40. The progress made under various items of the programme during the period 1974—78 is given in table below :

TABLE—XV—Physical Progress during 1974—78

Item	Unit	Before Planning era	Works Constructed		Achievement by 1974—78	Achievement by end of 1977-78
			by end of Fourth Plan	Target Additional (1974—78)		
1	2	3	4	5	6	7
Masonry Wells	Lakhs no.	6.24	10.06	0.85	0.59	10.62
Borings	Do.	0.20	7.24	3.51	3.67	10.91
Persian Wheel	Do.	0.43	4.22	0.49	0.33	4.55
Pvt. T. Wells	Do.	0.03	3.53	2.25	2.70	6.23
Pumping Sets	Do.	0.01	1.95	1.14	1.39	3.26
Bundhies	Lakh Hect.	..	2.80	1.24	1.87	4.67
Guls and Hauzes	Do.	0.06	0.24	0.07	0.04	0.28

1.3.41. On the revised norms the irrigation potential created through private

works during the period 1974-77 works out as follows :

TABLE XVI—Irrigation Potential as per revised norms

Period	Cross Irrigation potential	Depreciation	Net Irrigation Potential
1	2	3	4
Level by end of 1973-74..	53.59	(-)4.56	49.03
Vth Plan Target	36.64	(-)16.81	19.83
1974-75	8.10	(-)2.65	5.45
1975-76	6.85	(-)2.89	3.96
1976-77	6.67	(-)3.09	3.58
1977-78	7.30	(-)3.27	4.03
Total .. .. .	..	..	66.06

PLAN OUTLAYS :

1.3.42. Against an approved outlay of Rs.936.00 lakhs fixed for the Fifth Five-Year Plan (1974-75 to 1978-79), an expenditure of 947.89 lakhs has been incurred during the first four years (1974-75 to 1977-78) and a further provision of Rs.734.00 lakhs has been made in the Plan for 1978-79, which includes Rs.50.00 lakhs for the execution of hydrums in the Hills.

1.3.43. *Constraints and remedial measures*—Minor irrigation programme has so far proceeded more or less, in an arbitrary and ad hoc manner, by fixing district and block-wise targets of various types of works and monitoring the progress at district and State levels. Information is lacking about the locations of the works, their present state, accurate geographical distribution of areas where large scale exploitation of groundwater has been undertaken, size of aquifers etc. It is, therefore, not possible to plan the future thrust of the programme scientifically and in the context of the existing socio-economic, institutional, managerial and other constraints.

1.3.44. The consequences of unplanned orientation of the programme are now quite visible as more than 50 per cent of the ground water resources have already been exhausted whereas the small and marginal farmers who constitute more than 80 per cent of the farming population have benefited only marginally from this pro-

gramme. Co-ordination to the desired extent between rural electrification programme and Minor Irrigation has also been lacking. Power shortage has also had serious set-backs to the programme. Efforts are being made to dovetail the programmes by developing private M. I. programme in areas already covered under various rural electrification schemes by the M. I. organisation on one hand and selecting further areas for rural electrification in consultation with the M. I. organisation.

1.3.45. Minor Irrigation programme is dependent entirely on private enthusiasm and extension effort. It can be sustained only if a proper climate is generated by embarking on dynamic programme for energization of tube-wells, and ensuring that this corresponds with the size of the overall minor irrigation programme. Assured power supply for a minimum and convenient period has also to be provided. For this systems studies of demand and supply are being made.

1.3.46. A total of 9.18 lakhs private tube-wells and pump sets have been installed in the State up to the end of March, 1978 of which only 2.79 lakhs are electrically operated. 1,20,000 new borings will be made in the year 1978-79. This level of achievement is proposed to be kept up during the subsequent years of the 1978-83 plan. The target for energization for the year 1978-79 has been kept at the level of 40,000. To keep pace with the enlarged activity in the minor irrigation sector, the

tempo of energisation will have to be increased considerably and taken to about 1,00,000 tube-wells every year. It is expected that during the current Five Year-Plan, the demand for new connections will account for about 70,000 tube-wells and for conversions of old diesel pump-sets to electrical sets, for about 30,000 annually.

1.3.47. Every year about Rs.50 crores are advanced as loans to the cultivators by the State Land Development Bank and other commercial banks under different schemes for construction of minor irrigation works. To sustain the accelerated pace of minor irrigation activities, it will be necessary to improve the efficiency of the arrangements for disbursement of loans in existing branches and also expand the net work of branches of Land Development Banks in areas in which Minor Irrigation Programme is proposed to be expanded in a systematic manner.

1.3.48. Lack of field data, insufficiency of technical staff and farmers' ignorance about improved technology and the problems of its management have generally resulted in the programmes for expansion of area sought to be benefited by tube-wells and lifting devices being designed without due consideration to :

(1) adoption of the most suitable and most economical ground water structures ;

(2) selection of proper size of prime movers which would consume the least fuel for given conditions and would cause least trouble and need minimum repairs ;

(3) installation of centrifugal pumps which would operate at more than 60 per cent pump efficiency, under given conditions of discharge and total dynamic head ;

(4) selection of suitable cropping patterns which would maximise the use of irrigation potential created and consequently augment returns from agricultural produce to enable farmers not only to repay interest and principal amount of loans but also improve his standard of living ;

(5) adoption of modern methods of conveying irrigation water to fields and suitable water management practices.

1.3.49. The number of pumps in operation in the State is so large that even the slightest improvement in pump efficiency will result not only in considerable saving of power but also sizeable monetary gain to the State and maximisation of profits for the farmers.

1.3.50. While ground water as well as surface water minor irrigation projects have been playing a key role in increasing agricultural production in the country, it has been felt that investigation, planning and engineering design of these schemes at present leave much room for improvement. Reinforcement of the Minor Irrigation Department in related areas/disciplines is, therefore, considered extremely necessary. The organisational set up for the development of Minor Irrigation, apart from the setting up of additional units for investigation, planning and design work at the apex level, needs to be strengthened substantially at the intermediate level. Proposals in this regard are under consideration of the Government.

1.3.51. Private surface water minor irrigation works in U. P. are constructed generally in hill districts and the Bundelkhand division of the State. In the hills, where most of agricultural land is in the uplands, irrigated area is a mere 10 per cent. of the cultivated area. The total irrigated area as percentage of agricultural area in the Bundelkhand region also is only 20 per cent.

1.3.52. Due to difficulty of access, remoteness of a large part of the area, lack of rail heads, absence of well connected and all weather road transport network, lack of institutional and banking and credit facility, nonavailability of electric power etc. the development of irrigation facilities in the hills has been negligible. Bundelkhand too has left behind because the sub-soil conditions are not as favourable in this region as in the Gangatic Plains. Despite these obvious drawbacks, if hill areas and Bundelkhand area to develop agriculturally, considerable effort will have to be made in the form of research and micro-level studies for both underground as well as surface water. These will obviously require substantial scientific break-up from an appropriate research, design and planning organisation.

1.3.53. From the preceding paragraphs, it must have become evident that the dimensions of the minor irrigation programme are proposed to be implemented during the 1978-83 Five-Year Plan in U.P. will be truly gigantic. Unless these dimensions of the plan are matched by organizational development, it would become practically impossible to calibrate resource studies, micro-planning of projects, execution of works, technical guidance for dieselisation electrification, management of manpower, equipment and materials, provision of credit facilities, intensification of agricultural extension inputs and prevention of either over exploitation or inequitable appropriation of resources by large farmers.

1.3.54. For better spatial planning, Shajra maps of each gram sewak circle of the State have first to be prepared, giving details of all existing private minor irrigation works and State Works showing their command areas. Apart from identifying areas which have no irrigation works, exact information regarding size and location of such areas in the command of State irrigation works as receive only one or two watering will have to be collected to prepare a plan for providing additional irrigation facilities. As stated earlier detailed information regarding the condition of each private minor irrigation works is to be collected by carrying out complete census of all works in the shortest possible time. The contribution of State works in providing irrigation facilities has to be evaluated in the context of the development of need based location specific minor irrigation programme for each area. The proposed census of works and preparation of detailed shajra sheets will form the basis for micro-planning at the village/Village Level Worker circle level which in turn will be integrated into a comprehensive master plan of each block and district which itself would have to be related to region-wise, watershed/Command area-wise master plans. These will also take into account provision of the district-wise plan being prepared by the irrigation department.

1.3.55. The principal responsibility of the government in the field of private minor irrigation programme relates to borings for exploitation of ground water and

provision of credit. By the end of March 1978, 10.91 lakh borings had been completed, of which nearly one third, i.e., 3.5 lakh borings will have been done by the Boring Organisation of the Minor Irrigation Department. The private agencies for boring generally take in hand such works as can be completed with speed and comparative ease and most of the difficult work is left to the departmental agency. The cost of the services provided by private agencies is much higher than that charged by the department for similar work, and would have been still higher but for the presence of the departmental agency in the field. The department carries out well-boring of small farmers free of cost. Also, in case of failed borings, the department carries but a second boring for the same farmer without charging anything for the failed borings.

1.3.56. There are 7,000 casing sets and 2,280 hand socketed sets in operation in the department at present. In addition to these, there are 39 percussion and 19 other rig machines for deep boring besides 8 blasting units for constructing new blasted wells and revitalizing old wells in the Vindhyan ranges. The support equipment consists of 44 testing units, 12 air compressors for testing and developing cavity borings, 17 tractors and 7 trucks for transportation of machines and equipment. The entire equipment is quite old. The rig machines particularly being of an old vintage are incapable of undertaking deep boring because of their small engines. Most of them are lying idle because their spare parts are not available in the market any more.

1.3.57. The annual figure for completed departmental borings used to vary between 23,000 to 25,000. However, during 1977-78 26,580 boring work completed departmentally. The target of departmental boring for the year 1978-79 has been set at 35,000, which is nearly 150 per cent of the achievement level of the previous years. It is expected that still higher targets may have to be fixed in the year to follow. In order to complete such a large number of borings in a year, it is necessary that additional equipment is made available and the equipment and material management organisation strengthened suitably. It is proposed to equip about

1,300 BMs/ABMs out of existing 1,500 BMs/ABMs with requisite number of casing sets to enable them to undertake cavity borings and also borings in difficult areas of the State. Each BM/ABM will be provided with one to two casing sets depending in the required area.

Programme for 1978-83

1.3.58. Out of the proposed creation of irrigation potential of 17 million hectares in the country during the period 1978-83, a target of 9 million hectares has been kept for minor irrigation. The target for private minor irrigation programme for the State has been kept as 2.577 million hectares net which is about 28 per cent of the country's target. An additional potential creation of 1.522 million hectares is planned to be achieved through State minor irrigation works. The year-wise details of creation of additional irrigation

potential through private MI works during the period 1978-83 are as below :

TABLE XVI—Potential

Year	Additional Potential (Lakh Hect.)	
	Gross	Net
1	2	3
1978-79	5.96	4.31
1979-80	6.48	4.72
1980-81	7.03	5.15
1981-82	7.60	5.59
1982-83	8.15	6.00
Total	35.22	25.77

1.3.59. The various private minor irrigation works through which the above potential proposed to be achieved are indicated below :

TABLE No. XVIII—Works-wise proposed targets for 1978-83

Item	Unit	Level by end of 1977-78	Targets proposed for five year 1978-83	
			Additional	Total
1	2	3	4	5
Masonry Wells	Lakh No.	10.65	0.70	11.35
Persian Wheel	Do.	4.55	0.34	4.89
Borings	Do.	10.91	6.00	16.91
Pump set	Do.	3.26	1.50	4.76
Private. Tube-wells.. .. .	Do.	6.23	5.00	11.23
Bundhies	Lakh Hect.	4.67	2.20	6.87
Guls, Hauzes and Hydrums	Do.	0.28	0.10	0.38

1.3.60. The Minor Irrigation Department of the State Government is in overall charge of the co-ordination and implementation of the private minor irrigation works programme. In order to improve the efficiency of such works, the department proposes to undertake the following studies :

(i) Design of groundwater structure to improve the existing pattern, practices and procedures adopted for constructing private minor irrigation works, application of analytical, mathematical and statistical methods in design practice.

(ii) Standardization of various construction and maintenance practices.

(iii) Standardization of material used for constructing the tube-well structure.

(iv) Systems improvement studies to determine efficiency of MI works and suggest measures for improvement.

1.3.61. The department also proposes to increase its departmental boring capacity not only by acquiring additional rigs but also by increasing the efficiency of the equipment and organization already available.

Outlays and Expenditure

1.3.62. An outlay of Rs.9.36 crores was provided for private MI works during the Fifth Plan against which an expenditure of Rs.9.48 crores was incurred during the first four years. The estimated cost of MI works proposed for the Five Year Plan 1978-83 works out to Rs.740.00 crores. Out of this Rs.30.80 crores is proposed to be financed by the State. This includes a provision of

Rs.3.25 crores for loans, Rs.10.00 crores for subsidy and Rs.17.55 crores on staff and equipment. The total cost of the work proposed during the Plan period comes to about Rs.740.00 crores. It is envisaged that Rs.400.00 crores would be provided by the Land Development Bank and other Commercial Banks as loan and about Rs.280.00 crores would be invested by the cultivators from their own resources. The following table indicates the contribution by various agencies:

TABLE XIX—Contribution by various agencies

Serial no.	Agency	Amount
1	2	3
		(Rs in crore)
1	State Contribution	
	(1) G.M.F. Loan	3.25
	(2) Subsidies	10.00
	(3) Staff, tools etc. ..	17.55
		30.80
2	Purchase of debentures on loans to be made available by L.D.B.	30.00
3	Loaning form L.D.B. and Commercial banks.	400.00
4	Cultivators private Contribution	279.20
		740.00

Annual Plan 1979-80

1.3.63. An irrigation potential of 66.05 lakh hectares had been created up to the end of March, 1978. Taking into account the anticipated achievement of 4.81 lakh hectares net (5.96 lakh hectares gross irrigation potential, it is assumed that an irrigation potential of 70.36 lakh hectares would be created through construction of private minor irrigation works to the end of March, 1979. A target of 6.48 lakh hectares for creation of irrigation potential has been proposed for the year 1979-80 through construction of 15,000 Masonry wells, 1,20,000 borings, 7,000 Persian wheels, 30,000 pumping sets, 90,000 private tube-wells, 42,000 hectares Bundhis and 1,900 hectares Guls, Hauzes and hydrams.

1.3.64. Against an expenditure of Rs.421.09 lakh during 1977-78 an outlay of Rs.684.00 lakhs has been provided for the year 1978-79. Out of this, it is expected that expenditure of about Rs.629.14 lakh would be incurred. An outlay of Rs.735.85 lakh is proposed for 1979-80, which includes a sum of Rs.50.00 lakhs provided for construction and maintenance of hydrams in hills. The item-wise break-up of outlays proposed for 1979-80 is as under :

TABLE XX—Outlays for 1979-80

Serial no.	Items	(Rs. in crores)
1	2	3
1	G.M.F.	65.00
2	Subsidy	194.00
3	Staff	215.00
4	Tools	158.00
5	Contingencies	38.25
6	Boring Godown	5.50
7	Training	10.00
8	Construction and maintenance of Hydrams in hills.	50.00
	Total ..	735.85

1.3.65. The total cost of private minor irrigation works proposed for the year 1979-80 works out to about Rs.138.00 crores. A support of institutional finance of Rs.80.00 crores is expected to be made available to the cultivators in this programme. It is estimated that about 43 lakh skilled and 275 lakh unskilled mandays would go into the completion of private MI works proposed during 1979-80. It is worth mentioning that this programme is mainly being implemented among small and marginal farmers of the State. A provision of subsidy of Rs.194.00 lakh has also been made during the year 1979-80 which is admissible at the rate of 25 per cent and 33 1/3 per cent to small and marginal cultivators respectively. Out of this provision of subsidy, 20 per cent amount has been quantified to Scheduled Castes and Scheduled Tribes.

Major Head of Development—1.1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.02. Minor Irrigation

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed		
				Total (Co. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	
A—Ground Water Survey						
1	Investigation and development of ground Water resources.	160.04	38.00	260.00	10.00	
2	Strengthening of Ground Water investigation Organization	4.00	2.00	100.00	10.00	
Total A—Ground Water Surveys ..		164.04	40.00	360.00	20.00	
B—Private Minor Irrigation						
<i>Rural Development Department—</i>						
1—Constructions and Deepening of Wells, Tanks, Private Tube-wells, Guls and Hauze etc.						
	Loan	399.79	261.71 ^d	1465.00	100.00	
	Subsidy					
2	Other Minor Irrigation Works Boring .. Godowns.	2.40	0.72	959.00	959.00	
3	Machinery and Equipments Tools ..	62.69	18.29	558.00	558.00	
4—Other Expenditure						
	Staff ..	483.41	140.37	823.00	51.00	
	Contingency ..					
	Training ..					
Construction and Maintenance of hydrums in Hills						
Total. B-Private Minor Irrigation ..		948.29	421.09	3805.00	1668.00	
State Minor Irrigation						
1	State Tube-wells	7849.00	2649.00	20000.00	20000.00	
2	Minor Lift Irrigation Schemes	554.00	135.00	500.00	500.00	
3	Surface Flow Schemes	1029.00	257.00	2600.00	2600.00	
4	Survey and Investigation of Surface Water Schemes.					
5	Machinery and Equipment	6.00		200.00	200.00	
6	Share Capital Contribution of Tube-well Corporation			2000.00	2000.00	
C—Total State Minor Irrigation ..		9438.00	3041.00	25300.00	25300.00	
Total, for 1.02. Minor Irrigation ..		10550.33	3502.09	29465.00	26988.00	

IND EXPENDITURE

(Rupees in lakhs)

1978-79		1979-81			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
35.00	35.00	40.00	..	5.00	..	50.00	60.00	75.00
15.00	5.25	20.00	..	5.00	..	21.00	22.00	22.00
50.00	40.25	60.00	..	10.00	..	71.00	82.00	97.00
240.00	240.00	241.00	..	16.00	46.00	269.00	322.00	393.00
86.00	86.00	124.00	..	124.00	124.00	179.00	243.00	327.00
164.00	164.00	85.00	..	85.00	..	95.00	101.00	113.00
249.00	249.00	100.00	..	5.00	5.00	132.00	159.00	183.00
739.00	739.00	550.00	..	230.00	175.00	675.00	825.00	1016.00
2630.00	2630.00	3870.00	..	3870.00	80.00	4500.00	4500.00	4500.00
220.00	220.00	100.00	..	100.00	..	80.00	50.00	50.00
470.00	470.00	500.00	..	500.00	300.00	520.00	545.00	665.00
..
..	..	50.00	..	50.00	..	50.00	50.00	50.00
..	..	400.00	..	400.00	..	500.00	500.00	600.00
3320.00	3320.00	4920.00	..	4920.00	380.00	5650.00	5645.00	5765.00
4109.00	4099.25	5530.00	..	5160.00	555.00	6396.00	6552.00	6878.00

Minor Irrigation Programme—Achievements and Targets

ANNEXURE V

AGR-24

(000' hect)

Serial no.	Benefits				Surface Water Schemes	Ground Water Schemes	Total
1	2				3	4	5
1 Gross area under Minor Irrigation after deducting depreciation by end of :							
(i) 1973-74 (Actuals)—							
(a) Potential	468	6415	6,883
State MI.	468	1,512	1,980
Private MI.	4,903	4,903
(b) Utilisation.	192	5,542	5,734
State MI.	192	639	831
Private MI.	4,903	4,903
(ii) 1977-78 (Actuals)—							
(a) Potential.	550	8,435	8,985
State MI.	550	1,830	2,380
Private MI.	6,605	6,605
(b) Utilisation.	6,605	7,905
State MI.	N.A.	N.A.	1,300
Private MI.	6,605	6,605
(iii) 1982-83							
(a) Potential	625	12,459	13,084
State MI.	625	3,277	3,902
Private MI.	9,182	9,182
(b) Utilisation	%	500	10,882	11,382
State MI.	500	1,700	2,200
Private MI.	9,182	9,182

2. Physical Programme

(Nos.)

Benefits	Up to 1973-74	Up to 1977-78	Up to 1982-83
1	2	3	4
(a) Surface water schemes—			
(i) Flow schemes	..	..	..
	N.A.	N.A.	N.A.
(ii) Lift schemes	..	..	..
	179	218	226
(b) Ground water schemes—			
(i) Dug wells	..	..	..
	10,060,87	10,65,510	11,35,510
(ii) Improvement of dugwells by boring and deepening	..	..	..
	N.A.	N.A.	N.A.
(iii) Tube-wells—			
(a) State	..	..	..
	12,447	14,754	22,754
(b) Private	..	..	..
	3,53,325	6,22,596	11,22,596
(c) Tube—well Corporation	..	..	..
	..	..	6,000
(iv) Pump sets	..	..	..
	1,95,563	32,59,84	47,59,84

ANNEXURE—V
AGR-24—(Concl'd.)

Benefits	Up to 1973-74	Up to 1977-78	Up to 1982—83
1	2	3	4
2—Physical programmes—(Concl'd.)			
(v) Electrical pump sets/Pvt. Tube-wells ..	2,16,446	2,78,620	5,78,620
(vi) Diesel pumpsets/Pvt. Tube-wells ..	3,22,342	6,69,960	19,960
(vii) Persian wheels	4,22,057	4,55,761	4,89,561
(viii) Borings—	7,24,239	10,90,965	16,90,965

3. Outlays and expenditure:

(Rupees in lakhs)

Schemes	Fifth Plan (1974-78)			Five Year Plan (1978—83)		
	State	Institutional	Private	State	Institutional	Private
1	2	3	4	5	6	7
1 Surface Water Scheme—						
(i) Flow Scheme ..	1029	..	..	2,600	..	..
(ii) Lift Scheme ..	554	..	..	500	..	..
2 Ground Water Scheme—						
Private. MI.	948	13,749	29,985	3,805	40,000	27,750
State MI.	7855	..	..	22,200	..	..
3 Investigation of M. I. Scheme	164	..	..	360	..	..
Total ..	10,550	13,749	29,985	29,465	40,000	27,750

Agriculture and Rural Development
Headwise/Sub-headwise breakup of financial outlays

(Rupees in lakhs)

Serial no.	Head of Development/Programmes	Fifth Plan approved outlay	Approved Outlay 1978-79	Proposed Outlay 1978—83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
VI—Minor Irrigation :						
(1)	Sources and investigations of ground water resources.	220.00	50.00	360.00	20.00	..
(2)	Loan and subsidy to private irrigation works for small farmers etc.	245.00	240.00	1465.00	100.00	..
(3)	Equipment for ground water schemes	..	..	..	..	..
(4)	State (Deep) Tubewells	12,668.00	2,630.00	20,000.00	20,000.00	..
(5)	Surveys and investigation of surface water schemes	..	..	..	..	..
(6)	Surface flow schemes	..	..	..	..	..
(7)	State lift irrigation schemes	1,435.00	470.00	2,600.00	2,600.00	..
(8)	Loan and subsidy to co-operative lift irrigation schemes.	..	220.00	500.00	500.00	..
(9)	Share capital contribution and subsidy towards water rates of Tubewells/Lift Irrigation Corporations.	..	..	2,000.00	2,000.00	..
(10)	Establishment	..	249.00	823.00	51.00	..
(11)	Any other expenditure	2,616.00	250.00	1717.00	1717.00	..
Total		17,184.00	4,109.00	29,465.00	26,988.00	..

(4) SOIL AND WATER CONSERVATION

An ecological balance exists between natural vegetation and human habitation which, if upset by unplanned and indiscriminate use of land, leads to the depletion of rich top soil, layer by layer, through a continuous process of erosion. To start with, this erosion is mild and the top layer of fine silt gets gradually reduced in depth through "sheet erosion". However, if this process continues unchecked, the rate of erosion progressively increases in intensity culminating in the formation of deep gullies and ravines of the type seen on the banks of Chambal and Yamuna rivers. If no protective measure is initiated around the periphery of eroded land, the surrounding table land also becomes affected in due course of time. Judicious soil and water management as well as conservation is, therefore, one of the critical factors for a healthy, prosperous and stable agricultural economy.

1.4.2. Uttar Pradesh, according to rough estimates, has about 52 lakh hectares of land under different erosion conditions viz., mild, moderate, moderately severe and very severe. No detailed survey in this regard has been undertaken so far either by the Soil Conservation Organization or by any other agency in U. P. The eroded land includes an area of about 14.3 lakh hectares of ravine land which is not fit for any productive use. In addition to the above, there are about 12 lakh hectares of saline or alkaline land in the State, which have developed these characteristics due to water logging and rise in the ground water level.

1.4.3. To deal with the problem of soil erosion, different programmes like contour bunding, construction of sodded water disposal structures, and practice

of land-levelling and water management techniques in mildly eroded areas; contour bunding, construction of check dams and kuchha-pucca surplus structures and levelling in moderate eroded areas; broad based contour bunding, plantation of orchards and afforestation, construction of check dams, water harvesting submerged bundhies and pucca surplus structures, in severe eroded areas and construction of bench terraces, surplus structures, check dams, risers, planting of orchards and afforestation are adopted in very severely eroded areas particularly in the hilly terrains. Under the programme of reclamation of saline and alkaline soils, the use of gypsum and pyrites, is taken up according to results of soil analysis results.

(a) Programme of Agriculture Department

1.4.4. Programme in the Fifth and earlier Plans—At the beginning of the Fifth Plan, 130 sub-divisional soil conservation units were implementing soil and water conservation programme. Later on when "Command Area Development Work" was taken up on priority basis with the objective of accelerating the pace of utilization of irrigation potential of Gandak, Sarda Sahayak and Ramganga Commands, 62 Soil Conservation Units, 8 Divisional Units and 5 Soil and Land Use Survey Units were transferred and deployed to undertake "On-Farm Development" work in the above 3 Command areas. In addition to this, 15 Soil Conservation Units were diverted to implement Soil and Water Conservation Schemes under the "Drought Prone Areas" Programme. Thus 53 Soil Conservation Units (including 15 units of the Hill Region) are engaged at present in Soil and Water Conservation. These units have

an annual capability of treating 57,500 hectares. During the Fifth Plan (1974-78) an area of 2.80 lakh hectares was treated

against a target of 2.77 lakh hectares. The measure-wise treated area during 1974-78 is as under :

TABLE—I—Treatment of Agricultural land

Measures	Area treated in Hectares.	Per cent to total treated area
1	2	3
1. Levelling	2,15,250	76.79
2. Contour bunding	28,523	10.17
3. Check bunds	14,122	5.08
7. Afforestation	880	0.31
5. Levelling with stone risers	5,503	1.96
6. Construction of risers	1,332	0.47
7. Orchardng	2,060	0.73
8. Pasture development	1,126	0.40
9. Bundhies	1,564	0.55
10. Others	9,928	3.54
Total	2,80,288	100

1.4.5. From the above it would be seen that out of the total area treated, about 77 per cent was subjected to levelling and another 10 per cent to contour bunding. Similarly 0.31 per cent was treated through afforestation, 0.4 per cent through pasture development and 0.70 per cent through orcharding. This indicates that so far an integrated approach in carrying out soil conservation measures has not been operationalised. The National Commission on Agriculture, 1976, in its report stated that :—

“Very few States take up soil survey and land capability interpretation as a pre-requisite to soil and moisture conservation measures. Delineation of agro-climatic zones in most States has been done either on the basis of rainfall or topography or soil. Cropping pattern or land use has rarely been taken into consideration. The States have generally laid great stress on bunding as being the main item of soil conservation work. In regard to benefits from soil conservation mea-

asures, the majority of the States have reported increased yields of crops and raised water table in the wells. This assessment of benefits has not been based on statistically laid out experiment and hence is questionable. Land levelling and shaping work has mostly been done in the command areas of the irrigation projects but very little work on land shaping in dry areas has been taken up.”

1.4.6. In view of the above, serious doubts have been expressed in various quarters as to the efficacy and utility of the soil conservation works carried out so far. There is a wide spread feeling that in order to implement this programme on sound lines, serious thinking based on a critical re-appraisal of past experience must precede the reorientation of the existing concepts and operational procedures. These doubts about the efficacy of the work done so far stem mainly from the following aspects of the present execution process :

(i) Up to the end of 1977-78 a total area of about 22 lakh hectares of

agricultural land has been treated with soil conservation measures. Maintenance of the soil conservation work has, however, been generally neglected so that it is difficult to say as to what portion of this treated area is being maintained effectively.

(ii) Soil conservation programme envisaged the survey of land, determination of its fertility and use capability, planning and execution of various mud and masonry works along certain contours; prescription of alternative uses of various portions of protected land for growing tree crops, grasses, and certain field crops and measures to be taken for the repair and maintenance of protective works. In actual practice, somehow, the programme has tended to remain limited to mere construction of mud and masonry structures and neither the use aspect of the protected land nor the question of obtaining higher yields from the same have been kept in view.

(iii) Another important aspect of this programme that deserves consideration relates to the question of attracting institutional finance for the execution of various conservation measures. So far, the programme has generally failed in carrying conviction with financial institutions, which according to the strategy of the Fifth Plan, were expected to play a significant role in furthering this programme. This is largely because of non-availability of adequate and reliable data regarding incremental production arising from soil conservation measures.

(iv) The subsidy for soil conservation works should be justified by the data about accrual of incremental benefits as a result of soil conservation measures.

(v) There is a great need for the preparation of composite soil and water conservation projects in well defined water sheds/micro catchments. In such projects, in addition to soil conservation measures, other aspects like crop husbandry, animal husbandry, minor irrigation, forestry, etc. should also be integrated.

(vi) In order to derive maximum benefit from the completed works on well-defined water sheds/micro catchments, the question of repair and maintenance of soil conservation structures need to be examined in greater depth.

(vii) Based on a quantitative and qualitative appraisal of work already done in D. P. A. P. Areas, Soil and Water Conservation Programme should be taken up on a large scale with clearly articulated objectives for increasing productivity in dry-farming areas.

1.4.7. The State is fully aware of the need for reorienting the programme on the above lines and steps in these directions are under active consideration. To start with, a series of diagnostic field studies are being proposed to be taken up in the near future. On the basis of these studies suitable modifications will be introduced in the programme content proposed under this sector, during annual reviews in keeping with the spirit and philosophy of the rolling Plan concept.

1.4.8. *Strategy of soil and water conservation during the Five-Year Plan (1978-83)*—The Soil and Water Conservation Programme presented here for consideration in connection with the 1978-83 Five-Year Plan envisages reclaiming/developing land resources with the sole objective of ensuring increased agricultural production on a sustained basis and generating employment potential for the unemployed/semi-employed rural masses. In order to assess the magnitude of the problem and estimate the requirement of resources to reorient efforts in this direction, scientific appraisal of land resources is of prime importance. Due to the demand for infra-structural development to support the process of economic growth, good agricultural land has often to be diverted for other purposes. This unfortunate but in exorable process in a State with an adverse land-man ratio makes it necessary that the reclamation of marginal, ravinous and alkaline lands, for agricultural production should be taken up, whenever feasible, to meet the increasing requirements of the growing population for food, fruit, fodder, fibre and fuel.

1.4.9. *Strategy for the 1978-83 Plan*—In view of the above, the principal strategy of the programme will be :

(a) To arrange rapid identification of problem areas on water shed basis by rapid soil surveys based on technologies for satellite imagery and aerial photograph and its interpretation in conjunction with traditional techniques for the same.

(b) To create an awareness of the needs of this programme amongst masses through audio-visual-aids and extension education.

(c) To ensure better planning and implementation on watershed basis and preparation of detailed projects estimating the benefits as well as the requirement of various resources.

(d) To implement the programme under close supervision of trained and experienced personnel at minimum cost and with maximum public participation.

(e) To adopt suitable post-reclamation programme of crop production.

(f) To implement appropriate technology of water management in (a) rainfed, (b) irrigated, (c) ravinous, (d) water logged and (e) Usar areas.

1.4.10. *Programmes proposed during the Five-Year Plan (1978-83)*—A brief description of important schemes is given in the subsequent paragraphs—

1.4.11. *Scheme of soil and water conservation in Plains*—Forty-five Sub-divisional units functioning in the year 1977-78 treated an area of 0.41 lakh hectares with an expenditure of Rs.304.78 lakhs. Twenty additional sub-divisional units alongwith strengthening at supervisory levels are proposed to be added during 1979-81. By the end of 1982-83, it is envisaged that an area of 2.30 lakh hectares would be treated with the proposed outlay of Rs.2827.00 lakhs.

1.4.12. *Scheme of Soil and Water Conservation in Hill Areas*—There were 15 sub-divisional units operating under this scheme during 1977-78 and an area of 0.039 lakh hectares was treated with appropriate soil and water conservation measures with an expenditure of Rs.67.529 lakhs. During 1979-81, ten additional

sub-divisional units alongwith requisite supervisory personnel, would be established. By the end of 1982-83 an area of 0.285 lakh hectares shall be treated, with the proposed outlay of Rs.832.00 lakhs.

1.4.13. *Usar reclamation*—Three Usar farms, Rahimabad, Katiyar (Lucknow), Dhakauni (Hardoi) were established in late fifties. These farms which are being run in the non-plan development section are inadequately equipped for achieving a reasonable level of productivity. In order to obtain optimal production from these, adequate irrigation facilities, soil amendment and other inputs for intensive cultivation are necessary. In 1977-78 a scheme was approved to improve these 3 usar farms. During the Fifth Plan, a sum of Rs.23.68 lakhs has been spent. A provision of Rs.100.00 lakhs has been proposed for further improvement of these farms during the 1978-83 plan period.

1.4.14. As pointed out in preceding paragraphs, about 12 lakh hectares of usar land which can be harnessed for production, are available in the State. The Government of India have sanctioned a scheme for "Reclamation of Alkaline land in U.P." in 1976-77, with a provision of 50 per cent subsidy to the farmers owning less than 3 hectares and 25 per cent subsidy to other farmers against the cost of soil amendments. The State Government have also provided 25 per cent subsidy on the cost of soil amendments to all the farmers. The requirements of soil amendment is determined on the basis of pH value. This programme was started initially in 5 districts in 1976-77 and now it has been extended to 33 districts of the State. During the Fifth Plan, 3942 hectares of alkaline land was treated with 9000 M.T. soil amendment with an expenditure of Rs.51.140 lakhs. During 1978-83 Plan, 1.90 lakh hectares of alkaline land is likely to be treated and for this, an outlay of Rs.250 lakhs is proposed as State share to provide 25 per cent subsidy against the cost of soil amendments.

1.4.15. *Land Reclamation and Development Corporation*—Land reclamation/development in a big State like Uttar Pradesh requires huge investment. This cannot be accommodated within the budgetary constraints. Hence insitutional finance has to be arranged to undertake this

gigantic work. There is an area of about 12.3 lakhs hectares under ravines besides 12 lakh hectares of *usar* land, which can be reclaimed only at considerable cost for productive purposes. In order to deal with this task, a Land Reclamation Development Corporation Ltd. has been established with a share capital of Rs.100.00 lakhs to finance the reclamation programme. During the 1978-83 Plan, a provision of Rs.200 lakhs has been proposed in the State sector for carrying out the reclamation programme.

1.4.16. *Soil Survey*—A correct and expeditious assessment of problem areas is of prime significance for organising a successful land reclamation programme. It is estimated that about 52 lakh hectares of land are affected with erosion, representing 17.4 per cent of the total area. The traditional method of soil and land use survey entails a long period and huge investment. Satellite imagery technology is therefore, proposed to be utilised for identifying problem areas correctly and expeditiously. A sum of Rs.3.60 lakhs has already been spent for procuring equipment and a provision of Rs.30 lakhs has been made for this in the 1978-83 Plan. A Centrally sponsored soil and land use survey scheme has been introduced in the

State. Ten soil survey units have been created during the Fifth Plan with an expenditure of Rs.7.00 lakhs as State share. Each unit shall survey an area of 30,000 to 40,000 hectares annually. During the current Five-Year Plan, a total provision of Rs.432.00 lakhs has been proposed, of which Rs.216.00 lakhs shall be shared by State Government.

1.4.17. *Generation of Employment*—The proposed strengthening of the organisation would provide employment to 4,576 technical personnel. Besides this, employment potential will be generated to provide gainful employment to unemployed and under-employed small farmers and farm labourers. According to the norms laid down in the report of National Commission on Agriculture 1976, the total employment likely to be generated would be in the order of 8.05 lakh man years during the plan period 1978-83.

1.4.18. *Financial and Physical targets*—On the basis of experience gained and results obtained in the field of soil and water conservation in the State, a tentative estimation of physical and financial targets for the 1978-83 Five-Year Plan is given below alongwith data regarding estimated achievements during the Fifth Five-Year Plan :

TABLE II—*Financial and physical targets*

Serial no.	Item	Level of Achievement ('000 hectare)	Total Fifth plan outlay	Actual Expenditure (1974-78)	Plan Outlay 1978-79	(Rupees in lakhs)	
						Totals (5+6)	Plan Outlay for 1978-83
1	2	3	4	5	6	7	8
1 <i>Soil Conservation Extension</i>							
(a) <i>Soil and Water Conservation in Plains—</i>							
	(i) Continuing ..	42.00	1615.00	1216.16	316.00	1532.16	2300.58
	(ii) Expansion ..	..	..	..	..	..	526.42
		42.00	1615.00	1216.16	316.00	1532.16	2827.00
(b) <i>Soil and Water Conservation in Hill areas.—</i>							
	(i) Continuing ..	4.50	515.00	300.18	115.00	415.18	588.25
	(ii) Expansion ..	..	..	..	..	..	243.75
		4.50	515.00	300.18	115.00	415.18	832.00

TABLE II—(Concl'd.)

(Rs. in lakhs)

Serial no.	Item	Level of Achievement ('000 hectare)	Total Fifth plan Outlay	Actual Expenditure (1974—78)	Plan outlay 1978-79	Total (5+6)	Plan outlay for 1978—83
1	2	3	4	5	6	7	8
2	<i>Usar Reclamation</i>						
	(i) State	4.00	153.80	53.84	55.00	108.84	350.00
	(ii) Central .. ..	..	..	13.12	81.89	95.01	750.00
3	Bhumi Sudhar Nigam .. ..	..	5.00	100.00	6.00	106.00	500.00 (Including Rs. 300 lakhs for ravine).
4	<i>Soil Survey</i>						
	(a) Aerial photo interpretation.	50.00	..	Included in 1 (a) above.			
	(b) Survey through satellite imagery.	..	..	3.60	5.00	8.60	30.00
	(c) Soil and land Use survey—						
	(i) State .. ..	..	45.60	7.00	10.00	17.00	216.00
	(ii) Central .. ..	..	..	..	15.00	15.00	216.00
5	D.P.A.P.	10.00	..	206.20	288.59	494.79	1220.00 (50:50 Union and State Share)
6	Upgrading of Soil Conservation Training Centres in Central plateau and Hill areas.	..	..	..	..	..	25.00
7	Establishment of Monitoring and Evaluation Cell.	..	..	..	..	..	10.00
8	Establishment of Ravine Research Station at Pukhrayan (Kanpur)	..	..	..	..	..	50.00
9	Establishment of two soil Conservation Training Centres in Plain.	..	..	..	..	..	100.00
10	Scheme of Farm Management and Agriculture Training Programme.	..	..	..	..	..	10.00
11	Establishment of Usar Reclamation Research Institute, Rahimabad (Lucknow).	..	..	..	..	..	50.00
	Total						
	{ State .. ..	..	2335.00	1680.78	507.00	2187.78	4700.00
	{ Central .. ..	..	..	291.32	385.48	604.80	2486.00
	GRAND TOTAL .. ..	..	2335.00	1900.10	892.48	1792.58	7186.00

NOTE—The general training programme will be financed through Non-Plan Sector.

1.4.19. Though a plan provision of Rs.47.00 crores has been indicated for soil and water conservation/reclamation programme for the Five-Year Plan (1978-83) from State exchequer, the treatment and reclamation of eroded and depleted land shall entail an estimated cost of Rs.124.07 crores. This would be apportioned and financed through State exchequer, peoples

participation and loan from financial institutions.

1.4.20. A statement showing physical targets, benefits expected to accrue in terms of production, manpower generation and financing pattern is shown in Table below :

TABLE III—Physical Targets Employment Generation and Financing Pattern of Soil and Water Conservation Programme during 1978-83

Serial no.	Name of the Scheme	Physical target in '000 hectares	Additional production in '000 tonnes	Estimated cost of work (Rs. in lakhs)	Financing pattern		
					State	A.R.D.C.	Peoples Participation
1	2	3	4	5	6	7	8
1	Scheme of Soil and Water Conservation in plain area of Uttar Pradesh.	230.00	28.42	3450.00	690.00	1035.00	1725.00
2	Scheme of Soil and Water Conservation in Hill areas.	28.50	17.61	712.50	356.25	..	356.25
3	Centrally Sponsored Scheme for reclamation of Alkaline lands in Uttar Pradesh.	190.00	117.80	7600.00	380.00	1520.00	5700.00
4	Ravine Reclamation	21.50	3.98	645.00	322.50	322.50	..
Total ..		470.00	167.81	12407.50	1748.75	2877.50	7781.25

1.4.21. (a) *Annual Plan 1979-80*—Treatment of 48,250 hectares of eroded land with appropriate soil and water conservation measures, reclamation of 35,000 *usar* land by applying soil amendments, followed by suitable agronomical measures, rehabilitation of 3,700 hectares of ravines for agricultural purposes are the salient features of the plan proposed for 1979-80.

1.4.22. In order to study and grade natural resources and ascertain land-use capabilities of various types of land, the Soil and Land Use Survey Organisation is to be strengthened by establishing 14 additional soil survey units. The Remote Sensing Satellite Imagery and Aerial Photo Interpretation technologies will also be

utilized to speed up the pace of survey. An area of 6.80 lakh hectares is proposed for soil survey by conventional techniques. Besides this, interpretation of 2.00 lakh hectares of area through Aerial Phototechnology and 60,000 sq. kms. of area through Remote Sensing Satellite Technology is also proposed during the year.

1.4.23. The establishment of Land Reclamation and Development Corporation Ltd. was sanctioned at the end of 1977-78. This corporation is being organised and is expected to play a significant role in *usar* and ravine reclamation work. In order to reorient the soil and water conservation work in the field, a series of problem-oriented diagnostic studies is pro-

posed to be initiated during the year. A provision of Rs.920.10 lakhs has been proposed for this programme during 1979-80.

(b) Programme of Forest Department—

1.4.24. During the Fifth Five-Year Plan, the following five soil conservation schemes were being implemented by the Forest Department :

Plains

(i) Ravine Reclamation/Afforestation Schemes.

Hills

(ii) River Valley Project in the catchment of Alakhnanda.

(iii) River Valley Project in the catchment of Kosi.

(iv) Soil Conservation in the Himalayan Region.

(v) Soil Conservation in Panarghati.

1.4.25. The total ravine area under the control of Forest Department is 1.21 lakh hectares. With a view to checking the formation of gullies and ravines and also to stabilise, conserve and enrich the soil, a beginning was made by the department to treat ravines under a plan scheme during Third Five-Year Plan from the year 1964-65. Up to the end of the Fourth Plan, 46,196 hectares of ravinous area was treated and afforested under the Scheme of Ravine Reclamation/Afforestation of ravines under the State Plan. Some afforestation work was done under Non-Plan budget as well, prior to the initiation of this Scheme. The total area treated at the end of the Fourth Five-Year Plan was 73,000 hectares, which left a balance of 48,000 hectares for similar treatment in hands of the Forest Department. The scheme was continued during the Fifth Five-Year Plan and a target of treating and afforestating 25,000 hectares of ravines was fixed (15,000 hectares under State

Plan and 10,000 hectares under D. P. A. P. in the districts of Jalaun, Hamirpur and Banda. The outlay under State Plan was Rs.440.00 lakhs against which Rs.83.75 lakhs were spent during the four years of the Fifth Plan period. Physical achievement in relation to the above targets has been 8966 hectares. For the 1978-83 Plan, an outlay of Rs.170.00 lakhs is proposed in order to treat an area of 11500 hectares.

1.4.26. The Four soil conservation schemes which are in operation in the hill region, are now proposed to be merged with the scheme of development of Civil and Soyam Forests. This is mainly because the activities under these schemes as well as those connected with the development of Civil and Soyam Forests are more or less the same. Moreover, the existing schemes mentioned earlier as well as the development of Civil and Soyam Forests will be carried out on the community lands only. In this connection, it may be mentioned that soil and water conservation measures on private lands are being carried out through the soil conservation wing of the Agriculture Department. There is a move to integrate all the soil and water conservation activities in the hills and ensure planning for this on catchment and sub-catchment basis, by handing over the responsibility of Soil Conservation even on private lands in the hills to the Forest Department. No final decision in this behalf has, however, been taken.

1.4.27. At present five Forest Divisions are working on Soil Conservation and afforestation works on the community lands in the hills. According to the working capacity norms, the following work is expected from each division :

- | | |
|--------------------------|-----------------|
| (i) Afforestation | 1,000 hectares. |
| (ii) Pasture Development | 1,000 hectares. |

- (iii) Survey and demarcation 2,000 hectares.
- (iv) Construction of structures for torrent control (minor engineering works) Rs.2 lakhs.

1.4.28. Thus, from 1979-80 onwards, the existing five divisions will be treating 10,000 hectares alongwith torrent control works of the value of Rs.10 lakhs annually. In order to intensify the programme one centrally sponsored scheme *viz.*, River Valley Project in the catchment of Ramganga and a new scheme for integration of Water and Soil Conservation (started from the current financial year) are also being implemented.

1.4.29. Under both these centrally sponsored schemes, 6 Soil Conservation Divisions are working which shall be treating 12,000 hectares of community land alongwith soil conservation works of the value of Rs.12 lakhs annually, according to the norms indicated above.

1.4.30. *Financial Outlay*—The total outlay proposed for Forest Department Schemes during 1978-83 is Rs.16.62 crores. The outlay for the year 1979-80 would be Rs.3.00 crores only. For agriculture department schemes an outlay of Rs.47.00 crores has been proposed for the period 1978-83 including Rs.9.20 crores for 1979-80.

Major Head of Development : 1 AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.03 Soil and Water Conservation

Scheme-wise

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(a) Agriculture Department :						
	Direction and Administration	36.17	9.74	100.00	..	..
I—Soil Survey and Testing—						
(A) CONTINUING SCHEMES—						
	1. State Share of Centrally Sponsored Scheme of Soil and Land Use Survey.	7.06	7.06	78.00	..	..
	2. Scheme of Remote Sensing Soil Survey through Satellite imagery.	3.60	3.60	30.00	..	..
	Total (A)	10.66	10.66	108.00	..	..
(B) NEW SCHEMES—						
	3. Expansion of Centrally Sponsored Soil and Land Use Survey Scheme.	..	..	138.00	..	..
	Total, I (A and B)	10.66	10.66	246.00	..	..
II—Research, Education and Training—						
(A) CONTINUING SCHEMES						
(B) NEW SCHEMES—						
	1 Upgrading of Soil Conservation Training Centre in plains and Hill Zones.	..	..	25.00	7.74	..
	2 Establishment of Monitoring and Evaluation Cell.	..	..	10.00	..	..
	3 Establishment of Ravine Research Station at Pukhrayan (Kanpur).	..	..	50.00	11.50	..
	4 Establishment of two Soil Conservation Training Centres in plains.	..	..	100.00	50.30	..
	5 Scheme of Farm Management and Agriculture Training Programme.	..	..	10.00	..	..
	6 Establishment of USAR Reclamation on Research Institute at Rahimabad (Lucknow).	..	..	50.00	8.00	..
	Total II .. ..	..	..	245.00	77.54	..

Outlays and Expenditure

(Rupees in lakhs)

1978-79			1979-80			1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
10.75	11.06	21.00	..	..	..	22.00	22.75	23.50
10.00	11.55	15.25	..	..	..	16.25	17.25	19.25
5.00	4.60	5.50	..	..	..	6.00	6.50	7.00
15.00	16.15	20.75	..	..	..	22.25	23.75	26.25
..	..	31.00	..	..	..	33.00	36.00	38.00
15.00	16.15	51.75	..	..	..	55.25	59.75	64.25
..	..	12.00	..	6.50	6.00	3.00	4.75	5.25
..	..	3.00	..	..	..	2.25	2.35	2.40
..	..	30.00	..	11.50	..	6.25	6.50	7.25
..	..	50.00	..	26.80	..	13.50	17.50	19.00
..	..	2.21	..	..	..	2.42	2.63	2.74
..	..	21.00	..	8.00	..	8.50	9.50	11.00
..	..	118.21	..	52.80	6.00	35.92	43.23	47.64

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-Major Head of Development—1.03 Soil and Water Conservation—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	4	6	7
III—Soil Conservation Schemes—						
(A) CONTINUING SCHEMES—						
1	Scheme of Soil and Water Conservation in Plain areas.	1218.08	303.51	2300.58	..	..
2	Scheme of Soil and Water Conservation in Hill areas.	299.94	67.53	588.25	..	..
3	Scheme of Reclamation of USAR and Eroded land by setting up of demonstration Soil Conservation Projects.	23.69	17.85	100.00	3.38	..
4	State share of Reclamation of Alkaline land in U.P.	30.00	30.00	250.00	..	..
Total (A)		1571.71	418.89	3238.83	3.38	..
(B) NEW SCHEMES—						
1	Soil and Water Conservation in plains	..	..	526.42	..	..
2	Soil and Water Conservation in Hill areas	..	..	243.75	..	..
Total (B)		..	..	770.17	..	..
Total III, (A & B)		1571.71	418.89	4009.00	3.38	..
IV—Other Schemes—						
(A) CONTINUING SCHEMES						
1	Establishment of land reclamation and development Corporation.	100.00	100.00	200.00	200.00	..
2	State share for scheme of Soil and Water Conservation in various water sheds in U. P. through World Bank Assistance.	..	..	..	..	..
Total, 'A'		100.00	100.00	200.00	200.00	..
Total :						
(A) Continuing Schemes		1682.37	529.55	3546.83	203.38	..
(B) New Schemes		..	..	1153.17	77.54	..
Total, Agriculture Department		1682.37	529.55	4700.00	280.92	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
316.00	322.85	412.00	..	..	..	462.00	512.50	598.08
125.00	92.60	116.00	..	..	116.00	117.50	119.00	120.75
25.00	25.00	18.00	..	..	..	18.50	19.00	19.50
30.00	30.00	45.00	..	..	..	52.00	58.00	65.00
486.00	470.45	591.00	..	..	116.00	650.00	708.50	803.33
..	..	85.30	..	..	..	132.42	153.56	155.14
..	..	39.84	..	..	39.84	61.31	70.89	71.71
..	..	125.14	..	..	39.84	193.73	224.45	226.85
486.00	470.45	716.14	..	..	155.84	843.73	932.95	1030.18
5.00 } 1.00 }	5.00	34.00	..	34.00	..	45.00	55.00	60.00
6.00	5.00	34.00	..	34.00	..	45.00	55.00	60.00
507.00	491.60	645.75	..	34.00	116.00	717.25	787.25	889.58
..	..	274.35	..	52.80	45.84	262.65	303.68	312.49
507.00	491.60	920.10	..	86.80	161.84	979.90	1090.93	1202.07

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.03. Soil and Water Conservation (Concl'd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure.	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
<i>(b) Forest Department—</i>						
	Direction and Administration*	1.55	0.50	5.00	..	..
1	Ravine Reclamation/Afforestation of ravines	83.75	25.04	170.00	..	..
2	River Valley Project in the catchment of Alaknanda.	39.07	13.57	} Merged in scheme for Soil and Water conservation in Civil and Soyam forest.		
3	River Valley Project in the catchment of Kosi	16.44	5.55			
4	Water and soil Conservation work in Pauar Ghati.	6.24	4.24			
5	Water and Soil Conservation work at Jajur, Dewa land Satsillingin Pithoragarh District	3.07	0.07			
6	Water and Soil Conservation in Himalayan Region.	44.01	26.09			
7	Soil Conservation in Civil and Soyam forests including Forest Farming Scheme implemented by HADA.			..	1000.00	..
8	Employment generation scheme in Hills ..	..	..	..	492.00	..
	Total—Forest Department	192.58	74.56	1662.00	..	..
	Total for 1.03 Soil and Water Conservation ..	1874.95	604.11	6362.00	280.92	..

*Not included in totals.

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
0.55	0.55	0.70	..	..	..	1.00	1.25	1.50
26.00	26.00	30.00	..	..	..	35.00	37.00	42.00
17.00	17.00	} Merged in scheme for Soil and Water Conservation in civil and Soyam Forest. (Item 7)	}	}	}			
8.00	8.00							
5.00	5.00							
..	..							
30.00	30.00							
106.00	106.00	190.00	..	..	190.00	200.00	215.00	229.00
..	..	80.00	..	..	80.00	104.00	154.00	154.00
192.00	192.00	300.00	..	..	270.00	339.00	406.00	425.00
699.00	683.60	1220.10	..	86.80	431.84	1318.90	1496.93	1627.07

Agriculture and Rural Development
Head-wise/sub-head-wise breakup^a of financial outlays

(Rupees in lakhs)

Serial no.	Head of development Programme	Fifth Plan outlay	Approved outlay 1978-79	Proposed outlay 1978—83			
				Total	Capital	Foreign Exchange	
1	2	3	4	5	6	7	
VII—Soil and Water Conservation							
(1)	Direction and Administration*	..	101.25	11.30	105.00	..	..
(2)	Soil Survey and Testing ..	..	45.60	..	246.00	..	..
(3)	Reserach Education and Training ..	..	..	..	245.00	77.54	..
(4)	Soil Conservation Schemes ..	..	2724.40	693.00	5871.00	203.38	..
(5)	Other Expenditure ..	..	5.00	6.00	..	..	..
Total		..	2775.00	699.00	6362.00	280.92	..

*Not included in totals.

Agriculture and Rural Development : Employment Generation

Serial no.	Head of Development/ Programme	Likely Employment Generation (in Man Year)					
		Scientists	Technicians	Adminis- trative	Skilled	Unskilled	Total
1	2	3	4	5	6	7	8
VII—Soil and Water Conservation							
(1)	Direction and Administration ..	6	4	6	8	..	24
(2)	Soil Survey and Testing ..	32	487	69	254	63	905
(3)	Research Education and Training	22	31	33	35	..	121
(4)	Soil Conservation Scheme ..	62	1048	346	350	1720	3526
(5)	Other Expenditure ..	..	..	..	..	..	..
Total, VII ..		122	1570	454	647	1783	4576

(5) AREA DEVELOPMENT AND INTEGRATED RURAL DEVELOPMENT

With the introduction of intensive and integrated rural development programme from the year 1978-79, main emphasis is now on securing full employment through productive programmes. The family is now being considered as the basic unit for planning and programmes have to be designed to bring the members of this unit above the poverty line. The target group of beneficiaries is the small and marginal farmers and landless agricultural labourers. The programmes have to be so devised that in the first instance, the Scheduled Caste/Scheduled Tribe population is covered by the programmes up to their percentage in the total population.

1.5.2. The IRD strategy is based on the formulation and implementation of a block plan which, while aiming to achieve full employment through productive programmes in a definite time frame, also includes the requirements of infra-structure as well as social services and other facilities, specially the items included in the Minimum Needs Programme.

1.5.3. Block Plan formulation and implementation will necessitate major structural changes in the functions, powers and operational procedures of the Panchayati Raj Institutions as well as the administrative and financial system at the State Level. This issue which has a large number of implications, is under consideration of the State Government. What is imperative is that the Government of India should allow more flexibility to State Government in the implementation of various Area Development Programmes started during the Fifth Plan period. The State Government have to be given complete flexibility to take up, within broad parameters of Area-specific objectives either

the existing or new schemes, introduce modifications and innovations in them, on the basis of locally felt needs and requirements. The present CADA/SFDA/DPAP/IRD pattern is decided by Government of India and while there are provisions for its modification and the inclusion of new schemes, in actual practice, it is almost impossible to introduce these in time. In fact the manner in which IRD is being circumscribed by prescribing a long list of approved schemes, creates an apprehension that unless this trend is reversed by major reorientation, the whole programme will acquire the character of a subsidy-oriented projects like the SFDA and the thrust towards integrated, location specific block planning based on public participation will be lost. In due course, IRD will acquire the character of an individual beneficiary-oriented subsidy programme. This would indeed be a most unfortunate development for a State like U. P. which is already committed to the concept of Integrated local planning to be woven into the multi-level framework of district, Regional and State Plans. To obviate the danger of the re-introduction of a top-down approach through approved schematic patterns, it is essential that IRD funds should be made available for the preparation and implementation of Integrated Block Plans for full employment, encompassing measures for resource development, extension of infra-structure and of course, specific schemes for individual beneficiaries.

1.5.4. There is as yet no positive indication that SFDA/DPAP will come to an end in March, 1979. If they do, as they should, then IRD will be the only programme in operation. This would greatly counter-act the present fragmentation of planning process. By merging Area pro-

grammes like CADA/DPAP/SFDA etc. under the general and comprehensive framework of IRD and making allocations in one lumpsum on this basis, the special characteristic of the various Area Development Projects will be reinforced still further since priorities which emerge from bottom-up planning will still reflect the peculiar problems and potential of each area and will thus be not different from the existing Area Development Programmes, the programmes will acquire greater effectiveness since under IRD, individual schemes will be reinforced by suitable infra-structural support. The proposed alternative of subsuming all the old Area Development programmes into Integrated Block/District level plans, as stated earlier, would be possible only if confidence is reposed in the State Governments and they are allowed the flexibility and the latitude to formulate and implement schemes on the basis of local initiative and needs, of course, in conformity with the broad policy parameters.

1.5.5. The IRD Programme has been introduced with the intent that under it integrated planning and implementation of all programmes at the grass roots will be undertaken at the block level. The underlying but unstated assumption is that planning at the State level or even at lower levels, if it is hedged with multifarious schematic patterns imposed from above, cannot take care of the problems of unemployment, poverty or co-ordinated economic development. This necessarily implies that resource development, employment planning, infra-structure development and the minimum level of social services must form integral parts of one unique package for every block and inter-se priorities must be determined in the light of local conditions. The latest instructions of Government of India,

however, covers only employment planning with emphasis on benefiting selected individuals and taking them above poverty line. All the basic changes envisaged under block level planning have been deferred pending policy decisions on the reports of the Dantwala committee, the Ashok Mehta and the Shivaraman Committees.

1.5.6. The whole matter has been examined in great detail and it is felt that this change in emphasis has resulted in an individual beneficiary approach as in the case of SFDA, with all its inherent weaknesses. It is, therefore, necessary that an early decision be taken on the role of Block level Planning so that it can be taken up as medium for securing integrated and intensive rural development for full employment by 1980-81 in atleast 1000 of the IRD blocks throughout the country. The necessary administrative/financial restructuring involving disaggregation of sectoral outlays would inevitably follow this decision. Without this the existing top-to-bottom pattern of development will remain and IRD will not meet even partly, the expectations raised by the propagation of this concept.

1.5.7. The programmes indicated in this chapter for the various Area Development Schemes are, therefore, tentative as their future shape will be radically transformed once integrated Block Level Planning is taken up in right earnest. In fact all area development plans will be subsumed in the Block Plans and the physical and financial outlays and targets would change accordingly.

1.5.8. This State was allotted 331 blocks in the first instance under IRD. All Blocks have been selected and Government of India has released 50 per cent of the funds for this year. The existing SFDA/DPAP agencies have been made responsible for the schemes prescribed for

the respective districts. New agencies have been set up in the districts which did not have such agencies for implementing IRD schemes. A State Level Supervisory, Monitoring and sanctioning Committee has been constituted and 143 block operational plans have been approved. For the remaining blocks also, operational plans on the pattern laid down for the current year by the Central Agriculture Ministry are ready. Implementation of all the block plans has been started from August 1978, with the idea of taking up at least 300 families in each block which are below the poverty line and bring them above the poverty line through mobilisation of resources to enable them to participate in productive programmes. 53 additional blocks have also been allotted this year and the list has been sent to Government of India for approval and sanction of funds. The basic criterion for selection of these blocks has been preponderance of Scheduled Caste/Tribe population. In fact, in 76 per cent of the blocks selected, the population of these disadvantaged groups exceeds 20 per cent.

1.5.9. The programme for 1979-80 in the IRD blocks will depend on the decision taken by Government of India on the scope and methodology of Block Level Planning and the time schedule for its introduction. In case an early decision gets taken, the necessary action would be initiated by the State Government for disaggregation of Schemes and outlays with State, district and Block Sectors and measures for administrative and financial restructuring will also be taken. Household survey, constitution of planning teams at the district level, training of staff etc. have to be arranged; otherwise it will not be possible to produce any worth while block plan which will incorporate the basic thrust for rural development proposed at the national policy-making level.

1.5.10. It must be reiterated that the State Government have to be given full flexibility to implement this scheme and the authority to introduce new schemes and modify existing ones in view of local needs and requirements. An early decision on this is vital also because in its absence the programme of cottage and household rural industries will continue to be pursued outside the I.R.D. framework and the employment opportunities possible for non-farm families will not be utilised within the time frame indicated by Government of India.

1.5.11. Before passing on to the description of outlay for I.R.D. and other "Area Development" programmes it would be relevant to mention that the position in Uttar Pradesh has been complicated to a great extent by the decisions of the U.P. Government in 1977-78 to take a scheme for encouraging Local Level Planning on the basis of Block Plans and Local studies of potentials not pressed into service because of their not being in line with the State Plan schemes. The "Antayodaya Scheme" started under its auspices is in fact an early version of the individual family oriented I.R.D. programme put forward by the Government of India for 1978-79.

1.5.12. The issues raised in the foregoing paragraph were raised and discussed in the Steering Group of the State Planning Commission, which after considerable deliberation concluded that the objectives of Integrated Area Development will not be fulfilled unless the multifarious programmes including all the Central and State Schemes for "Area Development" "Local Level Planning" and "Antoyodaya" are integrated into one single programme. It has, therefore, been decided that anticipating the decision of the Central Government on the reports of various committees and the issue of operational

Committees and the issue of operational guidelines, the State Government may go ahead with the integration of the planning process as well as organizational restructuring.

1.5.13. While action on the above lines is proceeding, for facilitating the examination of the State Plan within the existing frame work, outlays and the contents of "Local Level Planning and Antodaya Programme, started by State Government on its own initiative as also for various "Area Development Programmes" initiated by the Central Government are discussed in the following paragraphs.

(1) Local Level Planning and 'Antodaya' Programme

1.5.14. *Review and Introduction*—Although the principle of "Planning from below" had been agreed long back, but in practice the plans have been framed mostly at the State or Central level. This naturally resulted in the lack of enthusiasm at the local level for the execution of various Plan Schemes. Even after 30 years of planning, a number of local potentials and problems still remain untouched. There is no denying the fact that the benefits of development have not percolated to an appreciable extent to the down-trodden who are still living below the poverty line. In view of these lessons learnt from the earlier plans and to fully exploit the local resources, the State Government has taken the revolutionary decision of providing un-committed funds for framing and executing plans at the district level with the active involvement of people's representatives and local officers. The State Government allotted a sum of Rs.14.70 crores during 1977-78 to the various districts for this purpose. During 1978-79, the allocation is proposed to be raised to Rs.25.00 crores. District Administration has been given freedom to frame schemes for development of natural resources or produc-

tion and to sanction and execute them, either through developmental agencies or cooperative or private entrepreneurs. Voluntary agencies to identify and formulate projects and also prepare integrated Block Plan, have been mobilised through the good offices of the Development Systems Corporation of Uttar Pradesh.

1.5.15. *Goals and Objectives*—In the concept of "planning from below", democratic institutions at the local level are not to be treated merely forums for legitimising the plans already finalised through bureaucratic processes and handed down from above. The intention really is to provide formations at the district and block levels with resources and equip them with the expertise to develop plans based on local potentials and priorities incorporating suitable scheme for socio-economic development whose implementation would be more effective because the beneficiaries and the local community would be involved in their formulation, direction and supervision. The ultimate goals of course, is that institutions at various levels should exercise decision-making authority in respect of divisible functions impinging directly on their lives and that they should, besides getting support from the State Government, also raise sizeable resources by themselves. Local planning scheme has been started with this objective in view.

1.5.16. The main thrust of programme, as incorporated in the 1978-83 Plan, is on the execution of schemes which would yield quick results, involve small investments, create avenues for employment promote development/conservation of natural resources and result directly or indirectly in the production of goods for the consumption of the common men. Generally these schemes would pertain to Agriculture, Soil Conservation, Minor Irrigation, Drainage, Animal Husbandry,

Dairy Development, Rural and Cottage Industries, Fisheries development etc. It is expected that formulation of the scheme at the local level would pinpoint attention on the special problems of the area and consequently enlist the co-operation of the people to solve them. In the long run, as the programme gains momentum, it will bring about a change in the general process of planning, provide solutions of the problem of regional imbalance and help in the optimal utilisation of local resources.

1.5.17. With the enlarged outlay now proposed for the 1978-83 Plan, generally the following activities would be taken up through this programme:

(1) 'Antyodaya' programme involving assistance to the identified poorest families to raise their level of income on a stable basis, and other productive programmes already specified above.

(2) Schemes for the provision of additive items of essential infra-structure including growth centres etc., not otherwise funded by the State Government but considered essential in the context of local conditions for economic development according to integrated block level planning.

(3) Programmes for creation of productive assets initiated primarily to tackle the problem of unemployment.

1.5.18. On the activity listed at item 3 above, expenditure will be incurred only with the express permission of the State Government on the certification of the head of the development setup at the district level to the effect that the schemes for the activities listed at 1 and 2 above plus the other schemes would not generate adequate employment to improve the level of income of the people below the poverty line.

1.5.19. In view of multiplicity of schemes for which funds under local planning can be utilised, the understanding that targets or prescriptions will not be imposed from above and activities would be taken up on the basis of potentials or problems identified locally, it is neither possible nor desirable to fix physical target before hand in term of specification. However, in view of the priority accorded to upliftment of "Antyodaya" families, it has been decided to help at least five of the poorest families in each village of Uttar Pradesh with financial assistance for schemes to raise them above poverty level on a stable basis.

1.5.20. 'Antyodaya family' has been defined as one whose total income is not more than Rs.2,000 per annum and which does not own irrigated land exceeding 0.40 hectare and unirrigated land exceeding 1.00 hectare. It will be possible under this scheme to identify such 'Antyodaya Families' and prepare schemes for their betterment, which was not possible otherwise. One of the major decisions taken under the scheme for 'Antyodaya families' is that these families may be given assistance up to Rs.5,000 with subsidy up to 50 per cent, without insisting on the formalities of sureties or hypothecation of assets normally required by the financial institutions. The government is aware that this would involve taking a risk but the view taken is that such calculated risk taking is a pre-requisite for helping the poor and exploited, though to the extent possible, it should be minimised by careful formulation of viable schemes, nomination of beneficiaries in open Gram Sabha meetings, distribution of assistance in kind, provision of training and infra-structural support and follow up for monitoring and trouble shooting.

1.5.21. Under the programme for Planning at the Local Level, supplement-

tary schemes can also be framed with the approval of local authorities in respect of department whose allocation of Plan outlay for particular area and activity is inadequate as compared to the assessment of local needs. In other words the funds provided at the district level for this programme can be of invaluable help in filling crucial plan gaps and executing schemes with limited financial implications at the local level, without waiting for Government sanction.

1.5.22. A programme of the kind spelt out in the foregoing paragraphs, covering 56 districts and nearly 1.2 lakh villages requires a large allocation of funds. Even on the basis of an average loan of Rs.2,000 to each "Antyodaya" family the total requirement for five families per village (about six lakh families) would be Rs. 120.00 crores. It is however, impossible to assume that after covering five "Antyodaya" families per village, it would be possible to deny similar benefits to other families in similar financial straits. Families which fulfil the criteria laid for classification in this category are numerically much more than five per village to be tackled in the first round.

1.5.23. The programme of Local Level Planning and 'Antyodaya' is expected to give a new dimensions to the concept of planning from below and lead to new dimensions being added to the whole process of development planning. Above all, it is likely to result over a period of time in generating activities and creating an awareness of local needs at present absent in planning at the State headquarters. One of the very important by-products of this programme would be the generation of pressure on the local officials concerned with overall or sectoral planning to think for themselves, innovate and develop the capabilities for project formulation. In

the context of the tremendous scope for attracting institutional finance, the development of these capabilities in local administration would be a major step towards the mobilization of non-budgetary resources. It would be pertinent to mention here that while initiating the programme of Local Level Planning, it has been envisaged that many of the schemes involving the disbursement of loans, would have a demonstrative affect in convincing the financing institutions about the viability of certain schemes which, it is alleged, are being denied credit on account of the excessive caution and conservatism of the credit managers.

1.5.24. As the sanction of the various schemes under this programme would be accorded at the local level, the incidence of delays and red-tapism would be considerably reduced. Under the rules formulated, only the projects exceeding Rs.5.00 lakhs are to be sent to the State headquarters for appraisal. Even in the case of these projects, the actual sanction shall be given by the prescribed district and divisional authorities. For schemes costing up to Rs.5.00 lakhs no reference to any authority even for appraisal will be required; sanctions would be accorded by the district level committees constituted for the purpose.

1.5.25. There is no denying that the actual disbursement of funds placed at the disposal of the districts in 1977-78 has not been very substantial. This situation is changing very fast with the inclusion of the "Antoyodaya" Scheme within its framework. In any case, the State Government does not see any reason for going back on the programme merely because of its slow take-up. In the history of planned development in India, there are many programmes such as D.P.A.P., C.A.D.A., S.F.D.A., Integrated Planning for Tribal Areas, the R.I.Ps. and Subsidization of

capital for industrial development in identified districts and now the I.R.D. which took two to three years to gather momentum because the concepts underlying these were radically different from the approaches prevalent before their introduction.

1.5.26. As compared to all the above-mentioned schemes, the Local Level Planning programme has a much more revolutionary character whose significance and the capability to handle it would be realised over a period of time. As a matter of fact, if the Intensive Area Development Scheme (I.R.D.) as it has been launched in 1978-79, is carefully analysed, it would be discovered that it is no more than a modified and attenuated version of U. P.'s 'Antoyodaya Scheme' with apparently built-in constraints for its success partly because it does not do away with the restrictive procedures of securities and also partly because it fails to recognise that individual-oriented programmes are destined to failure if these are not supplemented with the provision for creating supporting infra-structural services.

1.5.27. It is therefore earnestly hoped by the State Government that instead of continuing I.R.D. as a subsidy oriented scheme hedged in by perspective patterns imposed from above, this programme which has the inherent potential for bringing about a radical change in the planning process by decentralising decision-making to block and district levels and providing the catalytic force for the fusion of the fragmented sectoral-type of planning, would be enlarged in scope and substantially reoriented broadly on the lines originally indicated by the Planning Commission. Once this happens, the State Government's "Local Level Planning and "Antoyodaya" Programme would be integrated with Integrated Rural Develop-

ment and the resources provided for the same would be utilised for buttressing the planning and development process at the block and district level. For the present, an outlay of Rs.400 crores has been provided for "Local Level Planning Programme" for the Five-Year Plan for 1978-83 with an outlays of Rs.25 crores for 1978-79 and Rs.60 crores for 1979-80. This programme would, as of now, continue to be implemented through the Rural Development Department.

(ii) *Integrated Rural Development*

1.5.28. A total of 331 Blocks have been selected under this programme during 1978-79. The Government of India allocations are Rs.5.0 lakhs per block per year, except in the case of DPAP Blocks. The State Government's share is one lakh per block per year. The outlay for 1978-83 is Rs.88.65 crores. The State share for DPAP comes to Rs.2.33 crores. Additional block numbering 53 have been allotted this year and about 50 blocks are likely to be allotted in subsequent years. The allocation for these blocks will be Rs.2 lakhs each in the first year and Rs.5 lakhs in each subsequent year. The total outlay will come to 30.66 crores during 1978-83. Thus the total outlay for IRD comes to Rs.119.31 crores for 1978-83 including the State's share of Rs.2.33 crores.

1.5.29. *Special component Plan*—Twenty per cent of the total outlay for IRD is being earmarked for SC/ST beneficiaries which comes to Rs.25.36 crores.

1.5.30. Under the Command Area Programme, earmarking is of the order of Rs.3.6 crores. Under SFDA it would be Rs.10 crores and under DPAP also, it will be 20 per cent of the divisible schemes.

(iii) *Command Area Development*

1.5.31. The Command Area Development programme aims at increasing agriculture production and increasing

rural development through optimum use of land and water. Efficient water conveyance and utilization of irrigation potential through on-farm development is the core of the programme. This programme was introduced in 3 major irrigation projects in U. P. viz., Ram Ganga, Sharda Sahayak and Gandak, during the Fourth Five-Year Plan.

1.5.32. The total gross command area of the three projects is 47.2 lakh hectares, culturable command area 32.64 lakh hectares and irrigation potential created up to June, 1978 is 17 lakh hectares. It is proposed to extend the irrigation potential to 28.30 lakh hectares by 1982-83. Command-wise basic data is given in the Table below:

TABLE I—Basic Information

Serial no.	Item	Unit	Ramganga	Sharda Sahayak	Gandak	Total
1	2	3	4	5	6	7
1	Culturable Command Area ..	(Lakh ha.) ..	8.21	20.00	4.43	32.64
2	Irrigation benefits ..	Ditto ..	5.75	19.23	3.32	28.30
3	Irrigation as per cent of CCA ..	% ..	70	96	75	..
4	Irrigation potential created up to end of Fifth Plan	(Lakh ha.) ..	5.43	6.80	2.64	14.87
5	Potential utilised up to end of Fifth Plan	(Lakh ha.) ..	4.10	1.75	1.94	7.79
6	Irrigation potential to be created up to the end of Sixth Plan	(Ditto) ..	5.75	19.23	3.32	28.30
7	Districts included in the CAD Projects	(No.) ..	12	14	2	27
8	Number of blocks included in CAD Projects	(No.) ..	144	160	33	337
9	Irrigation benefits included in the CAD Projects	(Lakh ha.) ..	5.42	19.23	3.32	27.97
10	CCA included in the CAD Project	(Ditto) ..	7.74	20.00	4.53	32.17

1.5.33. The objectives set forth during the Fifth Plan are proposed to be continued during the 1978-83 Plan. Broadly, the specific objectives of Command Area Development Agency are all aimed of increasing agricultural productivity and programmes through Onfarm Development, osrabandi, supply of in-puts, strengthening of extension service, adoption and introduction of suitable cropping pattern, conjunctive use of surface and ground water, provision of drainage, modernization of irrigation system, esta-

ishment of growth centres and development of necessary infra-structure.

1.5.34. *Review of progress during Fifth Plan*—Though the programme was initiated during the Fourth Plan an effective start could be made only from 1976-77 with the commencement of On-farm Development works. So far 2.09 lakh hectares have been covered under on-farm development and another 1.50 lakh hectares are targeted for coverage during 1978-79.

1.5.35. Soil surveys have been conducted in 11.30 hectares and topographical survey in 5.19 lakh hectares up to 1977-78. A target for 8 lakh hectares and 2.10 lakh hectares respectively has been fixed for 1978-79. Under the OFD works 9786 kms. channels were lined and 13,200 water control structures were constructed up to 1977-78. A target for the construction of 7400 kms. field channels, 1975 kms for lining of channels and construction of 1,650 water control structures has been fixed for 1978-79.

1.5.36. For the conjunctive use of ground water 3.60 lakh masonry wells were constructed, 63,000 pump sets and 2.65 lakh tube-wells were installed under private minor irrigation works up to 1977-78.

1.5.37. *Programme for 1978-83. Plan*—Command Area Development Programme being new, considerable time was spent in clarifying ideas and concepts, developing organisation. The OFD works could commence only from 1976-77. This work is being done by soil conservation units whose number has been augmented. The capacity from 1979-80 would be three lakh hectares per year which will help to achieve the 1978-83 Plan OFD target of 15 lakh hectares through the construction of 75,000 kms. of irrigation channels and 15,000 water control structures. Approximately 20 per cent of the field channels will be lined.

1.5.38. Drainage is also a critical components of OFD which has not been taken up substantially as the main and the intermediate drains have yet to be constructed by the Irrigation Department, 57,610 kms. of field drains are proposed for the 1978-83 Plan. Provision has also been made for construction of intermediate drains.

1.5.39. Realignment of field boundaries and construction of field access roads could not be taken up as most of the command areas have already been covered by consolidation. It is proposed to take up these areas again for realignment of field boundaries on topographical considerations and roughly half of the total CCA will be covered during the 1978-83 Plan. Mobile land clinics have been proposed in each command project to identify and diagnose the malady in low production pockets and raise their level of production.

1.5.40. Osrabandi is essential for equitable distribution of water particularly as the irrigation intensity during rain is low in all the commands. Roughly 32,000 outlets out of 82,000 will be covered during the 1978-83 Plan.

1.5.41. The development of conjunctive ground water use is essential as the irrigation intensity is such that it cannot provide full water for better crops. It is proposed to cover 13.44 lakh hectares during the 1978-83 Plan. Detailed master plans for each command are being prepared.

1.5.42. Crop planning is being introduced in selected districts from *rabi* 1978. Fertility and land use maps prepared by soil survey units will be used, a suitable crop rotation suggested for each cultivator, demand for credit and inputs assessed and arranged for. This work will be done by the soil conservation staff and the 5 V. L. Ws. and 1 ADO (Ag.) provided additionally to each command area block. Necessary infra-structure will be provided wherever needed either through CADA Funds or through normal plan. This will be possible because the administrators of the Command Areas have been given necessary authority and responsibility for the implementation of all development plans in the Command Area blocks. Provision is being

made in the 1978—83 plan for maintenance and repair of OFD works by creating additional soil conservation units. As a result of these works, food production during the current Five-Year Plan is expected to increase by about 15 lakh tonnes and with extension by about 33 lakh tonnes.

1.5.43. The employment generation through these programme would be 15 lakh man-years for ordinary cropping and an additional 6 lakh man-years for high yielding variety if taken on the whole area. The man power used for construction of OFD works would be 3.75 lakh man-years. Up to 1977-78, 50,000 many-years employment was created in construction of OFD works and 80,000 man-years because of irrigation.

1.5.44. Institutional finance has been availed of to a very nominal degree so far because of certain legal and procedural problems. These have now been resolved and it is expected that about Rs.3.38 crores would be availed of during 1978-79 and a total of Rs.41 crores during the 1978—83 Plan. The cost of OFD on 15 lakh hectares would come to about Rs.75 crores and more than half would be covered by loans. The balance amount would be loan from Government of India.

1.5.45. The Government of India has

so far stressed the importance of taking up OFD works on utmost priority. However, during the 1978—83 Plan, the command areas will take up other activities as indicated above. The administrative set up has been strengthened, powers of heads of various departments given to administrators, control over the field staff of the community development organization has been made over and it is expected that the commands would play a central and co-ordinating role in the development of these areas.

1.5.46. The total financial requirement for the 1978—83 Plan has been worked out as Rs.150 crores. The central share has been kept as Rs.105 crores and the State share Rs.45 crores. Rs.41.23 crores, in addition, would be required from institutional sources to supplement the cost of on-farm development. The pattern of central assistance has been kept the same as during the Fifth Five-Year Plan with certain additional requests like 50 per cent share in osrabandi, 100 per cent in realignment of field boundaries, 50 per cent in mobile land clinics, 75 per cent in the introduction of T. V. pattern of agricultural extension and improved cropping pattern, 50 per cent in establishment of rural growth centres and 50 per cent for construction of intermediate drainage.

1.5.47. Detailed physical progress and proposed programme for 1978-83 Plan are given in the following table :

TABLE II—Physical Targets/Benefits

Serial no.	Items	Units	Levels of achievement/Benefits as on 31-1-1978				Targets/Benefits by end of 1982-83				
			Ramganga	Sharda Sahayak	Gandak	Total	Ramganga	Sharda Sahayak	Gandak	Total	
1	2	3	4	5	6	7	8	9	10	11	
1	Soil survey	000, Hect	409	428	293	1,130	1,600	2,160	800	4,560	
2	<i>O.F.D Works—</i>										
	(i) Topographical survey ..	000, Hect	262	172	85	519	594	1,196	359	2,149	
	(ii) Planning and Designing ..	000, Hect	262	147	49	458	594	1,196	394	2,684	
	(iii) Execution of O.F.D. Works ..	000, Hect	99	61	49	209	396	805	298	1,499	
	(iv) Construction of Channels ..	Kms.	4056	3,410	2,716	9,786	19,800	40,260	14,900	74,960	
	(v) Lining of Channels ..	Kms	363	144	190	697	4,950	8,050	3,825	16,826	
	(vi) Construction of drains ..	Kms.	..	65	845	910	9,900	40,260	7,450	57,610	
	(vii) Construction of water control structures ..	Nos.	5,338	4,782	3,106	13,226	39,600	80,500	29,800	150,100	
	(viii) Land Levelling and shaping ..	Hect.	8,217	..	218	8,435	9,900	8,050	3,725	21,675	
	(ix) Construction of field Access Roads ..	Kms.	163	..	1,487	1,650	315	975	266	1,556	
3	Realignment of field boundaries ..	000 Hect Kms.	..	..	..	..	8,400	17,400	6,600	32,400
4	Osrabandi in outlet Commands ..	Nos.	..	..	..	..	260	580	220	1,060
5	Training of Staff ..	Nos.	..	..	..	..	960	1,440	480	2,880
6	Establishment of rural growth centres ..	Nos.	1	..	..	1	72	80	20	172
7	<i>Minor irrigation works :</i>										
	(i) Masonary wells ..	000 No.	146	188	34	368	12	11	1	24	

(ii) Rahat	..	..	'000 No.	..	95	45	..	140	5	2	..	7
(iii) Pumping wells	..	..	'000 No.	..	31	20	12	63	19	11	7	37
(iv) Private Tube-wells	..	..	'000 No.	..	140	112	13	265	106	112	11	229
(v) Boring wells	..	..	'000 No.	..	N.A.	N.A.	N.A.	N.A.	114	17	16	147
(vi) Irrigation potential	..	..	Lakh, Hect.	..	15	12	2	29	6	6	1	13
8 Construction of Roads	..	..	Kms.	..	..	..	..	..	..	..	..	..
9 Construction of Markets	..	..	No.	..	..	..	..	..	..	..	..	..
10 Maintenance of O.F.D. Works	..	..	'000 Hect.	..	..	..	..	..	260	580	220	1060
11 Mobile land clinic	..	..	'000 Hect.	..	..	..	..	..	50	50	50	150
12 Construction of Intermediate drains.	..	..	Kms.	..	..	..	..	..	To be determined after survey			
13 Agriculture Extension service (T.V. Pattern) Nos.	..	..	..	..	..	..	..	..	35	45	20	100
14 Preparation of A.R.D.C. Schemes	..	..	'000, Hect.	..	91	188	30	309	396	805	298	1499

1.5.48. *Integrated Rural Development Programme in DPAP*—A total of 193 Blocks were allotted in the command areas under this programme by Government of India. These blocks have been selected and 50 per cent of the funds for this year released by Government of India. The Block plans have been prepared under the over-all guidance of the administrators who have also been made responsible for the supervision and monitoring of their implementation. SFD agencies have been entrusted with the implementation of these plans with respect to CAD blocks in that district. New agencies have been created in all those districts which did not have SFDA for implementing the Block Plans in CAD block. The total allocation made for this year is 965 lakhs and the same amount is likely to be sanctioned for 1979-80 and subsequent years. Government of India guidelines regarding coverage of at least 300 families in each block this year are being followed and efforts are being made to bring them above the poverty line through productive programmes.

1.5.49. With the introduction of Block level Planning, it would appear that the entire command area and I. R. D. allocations would be summed in the Block Plans. The disaggregation of sectoral outlay at district and block levels would necessitate restructuring of the existing set-up and action on this would be taken as soon as Government of India evolves the necessary guidelines and finalises decisions in the Datwala Committee, Ashok Mehta Committee and the Shivaraman Committee.

1.5.50. *Special Component Plan*—The outlay of Rs.965 lakhs is likely to be

made available every year during the Plan period for I. R. D. block in command areas. 20 per cent of this outlay i.e. Rs.193.00 lakhs per year will be earmarked for SC/ST beneficiaries with the stipulation that the block outlay will earmark the existing percentage of SC/ST in the block population for SC/ST beneficiaries. Accordingly the earmarked outlay will be Rs.193.00 lakhs during 1979-80 and Rs.965.00 lakhs during 1978-83.

(IV) *Scheme for Small and Marginal Farmers.*

1.5.51. The main objective of the SFDA/MFAL scheme was to carry the benefits of agricultural development of the numerically large but economically weaker sections of the rural community through animal husbandry and other Land-based programmes. It also aimed at increasing the flow of institutional finance to small and marginal farmers and agricultural labourers so that they could undertake programmes for which they do not have the resources of their own. The provision of subsidies acts as incentive to financing institutions who find it worth their while to provide resources for various schemes whose financial viability becomes much more assured when element of subsidy is excluded from the calculation of returns against capital investments in different activities for increasing productivity on diversifying occupational patterns to reduce the incidence of unemployment and under employment. The two schemes of SFDA and MFAL were merged during the Fifth Plan and SFDA was in operation in 26 districts covering 191 blocks.

1.5.52. Physical targets and achievements are given in Table below :

TABLE III—Selected Target and Achievement under SFDA

Programme	Unit	Fifth Plan Target 1974-79	Achievement 1974-78	Achievement 1977-78	Target 1978-83	Target 1978-79	Target for 1979-80
1	2	3	4	5	6	7	8
A—Physical							
<i>1—Agriculture</i>							
1. HYV Introduced first time	Hect.	1,046,302	774,370	2,71,494	11,95,873	1,95,873	2,15,460
2. Demonstration	No.	52157	42.627	16002	71.599	14.226	15.649
3. Fruit Cultivation	Hect.	12.972	6.297	2.585	16.639	2370	2,607

TABLE—III—(Concl'd.)

Programme	Unit	Fifth Plan Target 1974-79	Achieve- ment 1974-78	Achieve- ment 1977-78	Target 1978-83	Target 1978-79	Target 1979-80
1	2	3	4	5	6	7	8
4. Custom Service ..	Hrs.	446677	51785	31703	531271	39926	43,919
5. Land Improvement/ Shaping.	Hect.	48528	4964	3,494	58519	5138	5652
6. Distribution of Agriculture Implements.	No.	2,44,220	1,20,952	74,5,79	340,979	72,337	19,571
7. Distribution of Bullock..	No.	31,969	26,692	14,379	50,146	14,980	16,478
8. Distribution of Storage- bins.	No.	70 231	39,998	20,288	95,164	17,910	19,701
9. Distribution of Dunlop Carts.	No.	12,596	8,563	5,977	22,158	8,302	9,132
Employment Generation	Man-year	4,37,832	3116256	1099952	5017548	804044	884448
<i>II—Minor Irrigation</i>							
<i>A.—INDIVIDUAL WORKS</i>							
1. Dug wells ..	No.	13,017	5,707	923	15,150	771	848
2. Tube-wells ..	No.	23,975	10609	5,769	32176	5,806	6387
3. Pump sets ..	No.	25,439	12,402	4,891	38,288	10,305	11,336
4. Boring and Rahat ..	No.	15448	4,052	1743	20,565	3,572	3,929
5. Irrigation Channel ..	Km.	50	3159	1335	121	66	73
<i>B—Community Work.</i>							
1. Dug wells ..	No.	4870	14	..	5,359	..	..
2. Tube-wells ..	No.	1,150	15	12	1,531	166	182
3. Pump sets ..	No.	21	1	1	58	35	38
4. Irrigation Channel ..	Km.	702	12	5	808	36	40
5. Hauz ..	No.	170	28	9	245	58	64
Employment Generation	Man-years(C)	3913908	1731084	821784	5679800	1121748	123392
	(I)	32616	44426	6848	46331	9348	10282
<i>III—Animal Husbandry</i>							
1. Distribution of Milch Cattle.	No.	57,460	55,341	23856	92870	29642	32606
2. Distribution of Sheep/ Goat.	No.	5,738	7,031	3,252	13,452	7,140	7,854
3. Distribution of Pigs ..	No.	3847	1,584	974	7743	3,511	3,882
4. Distribution of Poultry Birds.	No.	19,916	57,334	25,261	58958	37,050	40,755
Employment Generation	Man-year	1197999	1170233	507803	201845	654045	719445
<i>IV—Total Employment</i> ..	..	84120279	49643733	19725163	109508639	19911965	21903145

(C) Man-years required for constructing an irrigation system.

(I) Man-years required for operating and maintaining an Irrigation system.

1.5.53. The above table reveals that during the Fifth Plan, up to March, 1978 there has been considerable progress under high yielding variety programme (74.01 per cent), Demonstrations (81.73 per cent), Distribution of bullocks (83.49) and distribution of dunlop carts (68.14 per cent) Horticulture, custom service and soil conservation programme have, however not made substantial progress mainly due to lack of required infra-structure. Under minor irrigation works, targets achieved under dug wells, tube-wells, Pump sets and boring/ rahat are 43.84 per cent, 44.25 per cent, 48.63 per cent and 26.23 per cent respectively. Most of the minor irrigation subsidy has gone to small farmers but marginal farmers could not be covered to a significant extent. A new strategy for marginal farmers has been proposed under which only boring would be done for marginal farmers and they will be provided pump sets on hire.

1.5.54. Achievements under the animal husbandry programmes have been very significant. Distribution of milch cattle, Sheep/Goat and Poultry was 96.28 per cent, 122.53 per cent and 287.88 per cent respectively, in comparison to the targets. Only the distribution of pigs fell considerably below expectations, the achievements being only 41.17 per cent of the target.

1.5.55. The animal husbandry programme has not given optimum benefit because of its wide dispersal. Clearcut directions have now been issued to distribute animals only in compact areas where urban consumption centres are within reach, health cover and natural or A. I. service facilities are available and fodder programmes have also been worked out in detail. Action is being taken to create necessary infra-structure under the State Plan wherever required so that optimal benefits can be obtained from investments.

1.5.56. Against 11.80 lakhs identified beneficiaries belonging to priority target groups, 8.29 lakhs (70.25 per cent) have been benefited. The *per capita* subsidy, however, comes to only Rs.240. This amount is obviously insufficient for raising the income level of beneficiaries to any significant extent. The reason for this has been that emphasis has been laid mostly on achievement of quantitative, particularly financial targets. With the

new emphasis under IRD on bringing target families above the poverty lines through productive programme, the thrust will now be on the selection of proper programmes for identified families so as to improve their standard of living up to a clearly laid down norm.

1.5.57. Marginal farmers and landless labourers have generally not benefited from S. F. D. As mainly because the rigid procedures and norms of institutional finance precluded them from the various scheme for assistance. It is not proposed to involve this section in special programmes like animal husbandry which will be linked with fodder. It is estimated that a total investment of Rs.5,000 will take a family above the poverty line. This includes subsidy to the extent of Rs.1,600. Accordingly, with an investment of Rs.1,600 on subsidy, every block can provide full employment to about 300 families every year from a subsidy allocation of Rs.5 lakhs.

1.5.58. The qualitative analysis, in respect of generation of employment from the scheme as shown in Table I, reveals that the total employment generated so far comes to 4,96,436.33 man-years. It is estimated that 1,99,119.65 man-years of employment would be generated during 1978-79, the corresponding figures up to the end of 1982-83 being 10,95,086.39 man-years.

1.5.59. As far as the increase in income level of the target group of beneficiaries is concerned, no impact study so far has been done. However, there is enough qualitative information available to show that wherever assured irrigation has been provided at least the mono-cropped area got converted into double cropped area and further the adoption of high yielding varieties programme also added substantially to the beneficiaries level of income. The Chandra Shekhar Azad University of Agriculture and Technology has conducted a brief study of SFDA Pratapgarh covering the period between 1970-71 and 1975-76. This study shows that there has been a positive and significant change in levels of investment, productivity, farm income and employment of small farmers with the assistance extended by the SFDA. For example high yielding variety paddy and high yielding variety wheat showed an increase of 32.42 per cent and 21.23 per

cent in the productivity/hectare. The household surveys to be taken up under the IRD programme would provide reliable information about so as to ascertain the impact of the programme and change in the income level of the target beneficiaries of the S. F. D. A.

1.5.60. *Projection for 1978-83*—Keeping in view the physical and financial projection for the (1978-83) Five-Year Plan, this scheme is likely to benefit about 15.3 lakhs small/marginal farmers and landless agricultural labourers. The State Government have been contemplating the construction of community tube-wells within the SFDA project area all over the State through the U. P. State Tube-well Corporation with a view to giving impetus to the community tube-wells programme. On an experimental basis it has already taken up 100 community tube-wells for the Agency in Gonda, involving an outlay of Rs.1.54 lakhs each, with 50 per cent subsidy. These community tube-wells will create an additional irrigation potential of 10,000 hectares generating employment of the order of 13,000 man-years within the project area of the agency. It is anticipated that this scheme of community tube-wells would lead to a significant increase in the income level and general living standard of beneficiaries.

1.5.61. *Financial outlay*—The total outlay in the State sector proposed for 1978-83 Plan is Rs.5.00 crores.

1.5.62. *Annual Plan 1979-80*—The targets for the various programmes proposed to be undertaken in 1979-80 are given in Table I. These programmes are likely to generate an additional employment of 2.19 lakhs man-years. The outlay in the State Sector proposed for the year 1979-80 is Rs.0.95 crore. Besides, the Government of India is releasing Rs.5.00 lakhs per year per block for the 115 blocks selected under Integrated Rural Development Programme. The Additional outlay on this account comes to Rs.5.75 crores. Twenty per cent of the total outlays under SFDA/IRD will be earmarked for Scheduled Castes and Scheduled Tribes beneficiaries.

(V) Drought Prone Area Programme

1.5.63. The D. P. A. P. programme aims at eliminating or reducing considerably, the incidence of drought and scarcity

in vulnerable areas and to help small and marginal farmers and agricultural labourers in raising their income level. The underlying strategy envisages improvement of the area's economy through infrastructural and on-farm development activities for optimising the utilization of land, water, human and live-stock resources. Though DPAP is essentially an area development programme, individual beneficiary approach has also been grafted on it for good measure.

1.5.64. The programme which was first introduced in Mirzapur in 1970-71 as a Rural Works Programme and extended in 1971-72 to selected areas in Varanasi, Allahabad, Jalaun, Hamirpur and Banda districts now, covers 40 blocks in these districts. Though the programme was initiated in 1971-72, much headway under it could not be made during the Fifth Plan due to lack of financial resources and administrative constraints. The programme is financed on 50 : 50 basis by the State Government and the Government of India. The total Fifth Plan outlay for the DPAP projects was Rs.27 crores out of which an expenditure of Rs.18.88 crores was incurred during 1974-78. An outlay of Rs.12.18 crores has been approved for the year 1978-79, out of which the State Government has provided 50 per cent (Rs.6.09 crores) in the State Plan.

1.5.65. For effective implementation of the programme, DPAP Agencies have been created and Project Directors have been appointed in the districts. The DPAP agencies have been given adequate financial and administrative powers for speedy implementation of the schemes. These Agencies have no staff of their own for execution of approved programmes. Funds are advanced to concerned departments of the State Government who are accountable to the agencies and the State Government for implementation. Plan achievements are monitored by the agencies every month. A committee at the State Level which meets every quarter supervises the progress and ensure co-ordination between various departments.

1.5.66. *Review of Programmes*—The progress of various programmes and the proposed targets for 1978-83 Plan and 1979-80 are given in the following table :

TABLE IV—Targets and Achievements under DPAP

Serial no.	Items	Unit	Fifth Plan Target (1974—79)	1974—78 Achievement	1977-78 Achievement	1978—83 Proposed target	197 79		1979-80 Proposed target
							Target	Anticipated achievement	
1	2	3	4	5	6	7	8	9	10
1 State Irrigation :									
	(i) Creation of Irrigation potential	.. Hect.	63,677	31,937	7,643	70,000	23,581	23,581	25,000
	(ii) Tube wells bored	.. No.	124	118	39	125	29	29	35
2 Private Minor Irrigation :									
	(i) Masonary well	.. No.	389	221	129	3,00	140	140	165
	(ii) Pump sets	.. No.	621	488	254	600	185	185	220
	(iii) Private tube-wells	.. No.	128	48	16	75	26	26	20
	(iv) Blasted wells	.. No.	215	29	29	100	152	152	50
3 Ground Water Survey:									
	Preparation of block wise ground water reports.	.. No.	40	24	14	38	17	17	10
4 Soil Conservation :									
	Total soil conservation works.	.. Hect.	38,852	31,290	13,307	75,000	18,691	18,691	20,000
5 Agriculture :									
	(i) Demonstration	.. No.	14,935	10,426	3,393	15,000	5,219	5,219	5,000
	(ii) Distribution of improved agriculture implements.	.. No.	24,020	9,868	7,848	20,000	9,230	9,230	9,000
	(iii) Distribution of plant protection equipment	No.	4,435	358	292	5,000	2,139	2,139	1,800

(iv) Distribution of storage bins	..	No.	6,052	3,007	1,646	6,000	2,524	2,524	3,000
(v) Distribution of chemical fertiliser	..	MT. Ton	1,805	10,114	10,114	5,000	1,024	1,024	1,250
(vi) Community Nursery of paddy	..	Hect.	378	103	103	100	235	235	25
(vii) Training of farmers	..	No.	7,700	4,427	3,087	15,000	3,460	3,460	4,000
6 <i>Animal Husbandry :</i>									
(i) Distribution of exotic bulls	..	No.	336	324	37	180	34	34	40
(ii) Distribution of milk cattle	..	No.	8,732	3,930	2,683	24,000	5,196	5,196	6,000
(iii) Fodder development	..	Hect.	2,703	1,536	500	4,500	1,217	1,217	1,100
(iv) Establishment of new veterinary hospital.		No.	10	9	1	15	5	5	4
(v) Establishment of new artificial insemination centre.		No.	5	6	..	12	3	3	3
(vi) Establishment of new stockmen centre.		No.	16	10	4	30	15	15	8
(vii) Establishment of new semen collection centre.		No.	16	2	1	1	..	..	..
(viii) Establishment of sheep units		No.	388	164	53	300	135	135	150
(ix) Establishment of poultry units		No.	495	207	110	500	174	174	125
(x) Establishment of piggery units	..	No.	160	46	37	100	77	77	75
7 <i>Afforestation :</i>									
(i) Ravine reclamation		Hect.	7,340	5,525	1,315	8,000	1,745	1,745	2,000
(ii) Plantation of miscellaneous species		Hect.	8,590	10,060	2,510	11,000	1,950	1,950	2,000
(iii) Plantation at roadside avenues		Row. Km.	3,745	3,059	1,247	4,000	860	860	1,000
(iv) Canal plantation	..	.. Km.	180	120	60	300	137	137	75
(v) Social Forestry	..	.. Hect.	85	90	90	200	145	145	50
(vi) Creation of wind broken chain	..	.. Chain	20,000	14,000	8,000	7,000	7,000	7,000	2,000
(vii) Soil conservation	..	.. Hect.	3,000	2,460	1,185	3,000	565	565	800

TABLE IV—(Concl.d.)

Serial no.	Items	Unit	Fifth Plan Target (1974—79)	1974—78 Achievement	1977-78 Achievement	1978—83 Proposed target	1978-79		1979-80 Proposed target
							Target	Anticipated achievement	
1	2	3	4	5	6	7	8	9	10
	(viii) Bunding and gully plugging structure	Hect	520	1,300	1,150	1,500	223	223	200
	(ix) Pasture development and creation of fuel and fodder reserve.	„	2,487	712	150	2,000	1,080	1,080	1,000
8	<i>Horticulture :</i>								
	(i) Area under orchards.	.. „	257	91	65	600	160	160	150
	(ii) Backyard plantation	.. No. Thous.	155	98	81	200	80	80	100
	(iii) Demonstration (vegetable cultivation)	No.	487	271	168	600	160	160	150
	(iv) Area under (vegetable cultivation)	.. Hect	302	160	160	500	171	141	150
	(v) Training of farmers.	.. No.	300	354	354	1,100	230	230	180
9	<i>Fisheries :</i>								
	(i) Area under fish culture.	.. Hect.	760	456	282	{ 1,000	405	405	400
	(ii) Distribution of fingerlings.	.. No. in lakhs	[43.0	16.2	11.9	80	24.75	24.75	25
	(iii) Organisation fishermen's labour cooperative societies.	.. No.	6	4	2	4	2	2	2
	(iv) Organisation fish seed collection units	.. No.	3	3	1	4	2	2	2
	(v) Training of fisherman and private pisciculturists	.. No.	400	246	193	600	175	175	175
10	<i>Cooperative :</i>								
	(i) Organisation of farmers service coop.	.. No.	7	7	1	2	..	..	2

(ii) Construction of rural godowns	.. No.	57	6	2	90	18	18	25
11 <i>Dairy Development :</i>								
(i) Establishment of chilling centres pasturisation plants.	No.	6	..	..	8	6	6	..
(ii) Establishment of milk co-operative Societies.	No.	300	164	114	300	110	110	100
12 <i>Mandi :</i>								
(i) Development of mandies	.. No.	9	5	..	12	4	4	..

1.5.67. *Medium and Minor Irrigation*—At the beginning of the Fifth Plan, about 16 per cent of the cropped area was irrigated in the drought prone region. It was proposed to raise it to 25 per cent by the end of Fifth Plan by creating an additional irrigation potential for 63,670 hectares through medium irrigation works. By the end of March, 1978, the actual potential development was 31.94 thousand hectares which is likely to go up to 51,940 hectares by the end of March, 1979. A target for 70,000 hectares of additional irrigation potential has been proposed for 1978–83.

1.5.68. During the Fifth Plan period, up to March, 1978, an irrigation potential of 2,200 hectares was created through private minor irrigation works. A target for 1,250 hectares of additional irrigation potential through these works has been fixed for 1978-79. On this basis 3,700 hectares would be irrigated by private Minor Irrigation works during the Fifth Plan (including 1978-79).

1.5.69. *Soil and Water Conservation*—A target of 38,350 hectares, for soil and water conservation was fixed for the Fifth Plan against which the achievement up to the end of 1977-78 was 31,290 hectares. A target of 18,690 hectares has been fixed for 1978-79. 75,000 hectares of soil conservation work has been proposed for the 1978–83 Plan which will be carried out entirely on catchment command or mini-watershed basis. There will be integration of soil and water conservation measures with pasture and fodder development and linkages between this programme and the adoption of appropriate agricultural practices and subsidiary occupations will also be established.

1.5.70. In view of the importance of agriculture demonstrations for propagating of dry land farming practices suitable for drought affected areas, particular attention is being given to this programme.

1.5.71. *Afforestation and Pasture Development*—A special programme of afforestation and pasture development was taken up in D. P. A. P. areas. During the Fifth Plan period 1974–78 plantation has been completed on 15,585 hectares. A target of 4,830 hectares has been fixed for 1978-79. Forest department has deve-

loped 1,712 hectares of pasture and grazing land during 1974–78. A target of 1,080 hectares for new pasture area has been fixed for 1978-79. For the current Five-Year Plan (1978–83) a target of 26,000 hectares of afforestation of 1,500 hectares of pasture development has been proposed.

1.5.72. *Animal Husbandry*—To supplement the income of small/marginal farmers and agricultural labourers by providing subsidy employment, Animal Husbandry and Dairy Development Programmes were introduced in the Drought Prone Areas. Exotic bulls were distributed to improve the animal breed. Achievement under milch cattle distribution programme up to 1978 was 45 per cent of the target fixed for the Fifth Plan period. The programme mainly benefits marginal farmers and landless labourers. To help the lowest strata of cultivators and landless labourers, sheep, poultry and piggery units were also subsidised. A target for distributing 4,696 milch cattle and setting up 135 sheep units, 174 poultry units and 77 piggery units has been fixed for 1978-79. During the 1978–83 Plan period, 180 bulls and 24,000 milch animals are to be distributed and 300 sheep, 500 poultry and 100 piggery units are to be subsidised. Milk production programme is also being linked with chilling and marketing. It is proposed to set up a milk chilling plant in every DPAP district, with milk collection, centres and subsidiary milk co-operative societies to ensure proper economic return to the beneficiaries.

1.5.73. Other programmes of horticulture, fisheries development, construction of rural godowns and the development of mandies were also taken up under D. P. A. P. Detailed physical achievement and target for 1978-79 and 1978–83 are given in Table IV.

1.5.74. As to difficulties and short comings, it may be mentioned that smooth implementation of various programmes is at times hampered by the lack of inter-departmental coordination. It has not been possible so far to give the requisite importance to proper crop planning and optimal utilization of irrigation potential. A suitable on-farm development programme would be undertaken during the 1978–83 Plan period. Now that most of

the D. P. A. P. blocks are being included under I. R. D. Area development concept is being introduced as the basis for planning programmes for resource development, extension of infra-structure and the choice and implementation of schemes for the benefit of individual beneficiaries.

1.5.75. *Programme for 1978-83*—At present D. P. A. P. covers 40 blocks of 6 districts. For 1978-83, it is proposed to exclude Allahabad and Varanasi from the operation of this programme as these districts have Command Area and S. F. D. A. blocks in addition to DPAP. These districts are proposed to be replaced by Jhansi and Lalitpur. Even in the remaining four districts, since sufficient work has already been done in the blocks covered so far, it is proposed to exclude these blocks from the future operation of the Programme. The process of development here will now be consolidated under the normal plan scheme supplemented by I. R. D. In the place of these blocks which are now proposed to be excluded from the purview of DPAP, it is proposed to include the block hitherto uncovered blocks of Mirzapur, Hamirpur, Jalaun and Banda. This will create a semblance of balanced development in the area. The proposed coverage under D. P. A. P. would then be :

TABLE V—Coverage under DPAP

Name of district	Total No. of blocks in the districts	Block proposed to be covered under D.P.A.P.	No.
1	2	3	
Mirzapur	20	5	
Jalaun	9	6	
Hamirpur	11	6	
Banda	13	7	
Jhansi	8	8	
Lalitpur	6	6	
Total ..	67	38	

1.5.76. Apart from the approved sectoral schemes for D. P. A. P. it is proposed to include the promotion of cottage and small-scale industries in the programme.

1.5.77. An outlay of Rs.40 crores including the approved outlay of Rs.12.18 crores for 1978-79, for the entire programme is proposed for 1978-83. Under

the present arrangement 50 per cent of this outlay i.e. Rs.20 crores shall be borne by Government of India. Tentative physical targets have been worked out on the basis of outlays. Firm targets will, however, be worked out by the Agencies themselves.

1.5.78. The latest instructions from Government of India indicate that an allocation of Rs.1080 lakhs has been proposed for D. P. A. P. for 1979-80. The State share will be Rs.540 lakhs. The physical and financial break-up is indicated on the basis of an outlay of 20 crores (State sector) for 1978-83. Since the Integrated Rural Development Programme has been introduced by Government of India with emphasis on implementation through Block Level Planning, it is assumed that from 1979-80 all allocations will form a part of the total funds made available at district/block level. Accordingly, the outlay for 1978-83 is not being changed. For now it may be rectified at the time of annual and mid-term plan discussions in 1979-80.

1.5.79. *Integrated Rural Development in D.P.A.P. areas*—Twenty three blocks have been selected from the 40 D. P. A. P. blocks this year as per Government of India guidelines. 50 per cent of the funds for this year (5 lakhs per year per block) have been released. According to earlier instructions of Government of India, Rs.5 lakhs were to be provided to each block every year, of which the State share was to be Rs.1 lakh per block per year. Accordingly an outlay of Rs.115 lakhs was proposed within the D. P. A. P. outlay of Rs.20 crores (State share) for the period 1978-83. Latest instruction of Government of India indicate that for 1979-80 a total allocation of Rs.262.50 lakhs is proposed for these 23 blocks and the State share would come to Rs.52.50 lakhs. Accordingly, the outlay for the State share for 1978-83 comes to Rs.233 lakhs (Rs.23 lakhs in 1978-79, Rs.52.50 lakhs per year for the remaining four years i.e. 1979-83). Government of India's share will work out to Rs.932 lakhs for 1978-83.

1.5.80. The outlay required for the State's share for 1979-80 is Rs.52.50 lakhs. It is proposed for the time being to propose this outlay for 1979-80 within the

overall D. P. A. P. outlay of Rs.20 crores for 1978-83. Necessary changes would be made in 1979-80 when it becomes clear as to how block level planning is proposed to be introduced and disaggregation of sectoral outlay is done for the district and block levels.

1.5.81. During 1978-79 it is proposed to identify 300 families in each block and take them above the poverty line. The programme for 1979-80 will cover such families also but the actual programme content and physical targets will depend on the features and topology of Block level planning introduced. The existing D. P. A. P. agencies have been made responsible for the implementation of the I. R. D. Programme. The changes necessary on account of Block Level planning and the proposed disaggregation of sectoral outlay would result in the D. P. A. P., becoming a component of the overall Block Plans. Necessary modification will be made as soon as Government of India finalizes its policy. At the moment the programme would merely be an individual beneficiary oriented one with specific emphasis on employment planning and to a lesser extent on resource development.

1.5.82. An outlay of Rs.2210 lakhs has been fixed for D. P. A. P. for the Five-Year Plan for 1978-83 out of which Rs.592.50 lakhs shall be the outlay for 1979-80. Subsidies are available to the individuals under private minor irrigation, agriculture, animal husbandry, fisheries and horticulture programmes. Twenty per cent of the subsidy portion under these programmes will be earmarked for scheduled castes/scheduled tribes.

1.5.83. Besides an outlay of Rs.1165 lakhs is likely to be available for IRD blocks in D. P. A. P. for the 1978-83 Plan period. Twenty per cent of a percentage of outlays equivalent to the percentage population of scheduled castes/scheduled tribes in a block, whichever is higher, shall be earmarked for scheduled castes/scheduled tribes. The total earmarked outlay will be Rs.23.3 lakhs for 1978-83 with the stipulation that block outlays will earmark funds for SC/ST on the basis of their percentage in the block population.

(vi) Integrated Area Development Project

1.5.84. The approach of rural development in an integrated manner and the necessity of local planning has been accepted in principle by the Central and State Governments. As the Planning process is still somewhat technical job, the Planning Research and Action Division has prepared three Integrated Area Development Projects—one each in eastern, central and western regions of State. The work on fourth project is in progress, while the initial work of planning has been done by P. R. A. D., the actual execution has been left over to a development agency, a registered body of officials and non-officials—with powers to modify plan according to the local conditions and evolve and initiate new programmes. The summary details of the Integrated Area Development Projects can be given below :—

1.8.85. (a) *Integrated Area Development Agency Ghazipur-Ballia*—The eastern districts of Ghazipur/Ballia have been categorised as economically the most backward districts of the State, with a high density of population mostly dependent on agriculture. Absence of any worthwhile profitable cottage industries coupled with a sizeable population of landless labourers and marginal farmers with uneconomic holdings has given rise to condition of poverty in the area. Besides, these districts suffer from the vicissitudes of frequent floods and droughts which in turn further aggravate the condition of the poverty stricken population of the area. All these factors within the framework of an adverse institutional framework have given rise to social tensions and the disruption of social harmony. In order to find a solution of the above problems an "Integrated Area Development Project" was launched in December 1976, covering five development blocks of Ghazipur district and one, from Ballia district which has since been converted into a Registered Agency known as "Integrated Area Development Agency Ghazipur/Ballia" on January 11, 1977.

1.5.86. The Project, as stated above, consists of 6 development blocks covering a geographical area of 1,32,700 hectares and a population of 5,93,877, including 95,000 Harijans and other persons belonging to backward communities. Of the

total cultivated area in the project area about 60 per cent is irrigated but on 23 per cent is being sown more than once. Out of 94,000 holdings, 52,652 (56 per cent) are up to 0.5 hectare only. Only 47 persons per lakh of population are employed in registered factories against the State average of 418.

1.5.87. The Integrated Area Development Project incorporates schemes and programmes meant for ameliorating the conditions of landless agriculture labourers and cultivators having holdings up to half hectare only. These programmes which have been prepared on the principle of micro level planning taking into account the hierarchy of growth centres, are meant to provide direct economic benefit to the target group beneficiaries and have a built in mechanism for generating employment opportunities.

1.5.88. Apart from the socio-economic objective of ameliorating the conditions of the population steeped in abject poverty, the Integrated Area Development Agency Ghazipur/Ballia, is repeated not only to function as an instrument for programme development through action-research projects involving varying techniques and inputs but also to innovate organizational mechanism which would facilitate the process of decision making as demanded by local problems, potential and priorities. Of all the Agencies (C.A.D.As, D.P.A.Ps, S.F.D.As etc.) organised and set up in the State for various activities, this Agency is by far the most important from the experimental viewpoint since it provides a degree of flexibility in decision making not matched in other projects. Already this flexibility has paid dividends in the sense that this Agency has successfully introduced and adopted many innovations in different field programmes which could not be introduced elsewhere.

1.5.89. A High Level Committee at the State level has been set up to review the progress of various programmes, and their process of implementation and decision making under flexibilities granted to this Agency. This committee releases funds for various programmes to the Agency from time to time on the basis of periodic and objective evaluation of the performance of on-going field programmes

and also approved procedural and other changes in relation to various schemes for the next six months.

1.5.90. *Programmes*—The present programmes of the Agency can be divided into the following four broad categories :

(i) *Programmes of direct economic benefits*—These programmes include rearing of milch animals, sheep, goats and pigs, poultry-keeping and pisciculture, raising of short duration fruit trees, cultivation of vegetables and spices, installation of minor irrigation works and cottage/artisan industries.

(ii) *Programmes of Social Consumption*—These programmes include drinking water facilities for the economically and socially backward people of the area.

(iii) *Programmes of Social Services*—These include—

(a) setting up of female hospitals/dispensaries ;

(b) training of *Dais* ; and

(c) housing schemes for economically backward people.

(iv) *Infra-structure* — This includes the construction of metalled roads and drains.

1.5.91. *Physical Achievements*—Till March 31, 1978, 1,100 milch animals, 154 sheep and 31 pigs were supplied to the beneficiaries on loan-subsidy basis. Pisciculture programme was taken up over a water area of 53 hectare and 7 poultry units were set up during the period. In the sector of cottage industries, 5 shoe-making units, 8 potters units, and one blanket weaving training-cum-production centre were set up. During the period under review, 15 trainees were imparted training in cane-bamboo work and 168 ladies were trained in tailoring and knitting work, alongwith 144 *dais*. Ninety-seven houses and 30 drinking water wells were constructed for economically backward people. The total expenditure incurred during the period amounts to Rs.16.24.300 and job opportunities equivalent to 1,613 man-years were created.

1.5.92. An outlay of Rs.225 lakhs has been proposed for the entire Five-Year Plan period 1978-83 for this project. For the year 1979-80 an outlay of Rs.45 lakhs has been proposed.

1.5.93. (b) *Pilot Area Development Project Mahewa, Ajitwal district Etawah*—The Pilot Development Project Mahewa/Ajitwal has done pioneer work in the community development programme and many of the innovations developed there were later on extended as part of the regular programme in the State. The achievements made in the field of agricultural implements, improved agricultural technology, soil conservation work and biogas technique are worth the name. The project is working as field laboratory of P.R.A.D. The Pilot Development Project area has two institutions of higher learning which were financed entirely by voluntary contributions. The local institutions will actively be involved in the development process of the area. The new feature in this project is that 40 villages constituting the entire area of six Nyaya Panchayats — two in each of the 3 blocks of the P.D.P., has prepared a detailed village and Nayaya Panchayat Plans. Revival of Yuvak Mangal Dals, revitalisation of Gaon Panchayats and all round economic development programme will be pursued particularly intensively in these villages with a view to bring about full employment and a minimum income level within five years. The total outlay of the project for 1978-83 is of Rs.77.00 lakhs. The year-wise breakup as as under :

<i>(Rs. in lakhs)</i>	
1979-80	20.00
1980-81	19.00
1981-82	19.00
1982-83	19.00
Total	77.00

The above does not include likely expenditure of Rs.23.00 lakhs in 1978-79.

1.5.94. The project will give full and part time employment to 11,947 persons and will create work for 13.80 lakh man-days.

1.5.95. (c) *Integrated Area Development Project Meerut and Muzaffarnagar* There are wide regional variations in respect of climate topography, agricultural production and socio-economic and cultural conditions in the State. It is,

therefore, essential that useful development experiences are obtained through pilot experimentation on regional basis, so that the experiences obtained may be used in other parts of the same region. It is with this view that an Integrated Area Development Project consisting of 3 blocks (Baraut, Binoli, Chhaprauli) of Meerut Districts and 3 contiguous blocks (Budhana, Kandhala, Shahpur) of Muzaffarnagar Districts have been prepared. As in other two project the work on the project will be executed by a registered development agency under the chairmanship of Commissioner, Meerut Division. The Agency will be represented by officials and non-officials of the area. As the area is agriculturally developed one and there is large stock of improved milch cattle, the main thrust in the project will be on establishing of traditional, cottage, small and large industries and construction of approach roads. In Agricultural side attempts will be made to divert agriculture from cane growing to vegetable and spices growing and raise the crop intensity to 250 per cent.

1.5.96. In³Animal Husbandry, educated but unemployed village youths will be drawn to start mini-dairies of their own and necessary facilities for training in Veterinary and Dairy Science, financial accommodation for establishment of dairies and marketing of milk will be provided to them. It is further proposed to strengthen and/or start 2089 traditional industries and 67 small/large industries giving employment to 10,830 persons. The construction of link roads to connect the villages with the pucca roads will be one of the main activity of the project and it is proposed to construct 300 km. link roads (50 km. in each block) during the next Plan period. The total outlay of the project for 5 years from 1978-79 to 1982-83 is of Rs.923.23 lakhs in which the State will contribute Rs.410.00 lakhs. The year-wise break-up of State contribution is as under

				<i>(Rs. in lakhs)</i>
1979-80	..	..	..	110.00
1980-81	..	..	..	110.00
1981-82	..	..	..	100.00
1982-83	..	..	..	90.00
Total	..	..	..	410.00

1.5.97. (d) *Integrated Area Development project, Aligarh*—The fourth project in the series of Area Development Projects in different division of the State, has been under preparation for 3 blocks of Aligarh district in Agra Division. The objectives of the project are :

(a) to devise a development strategy to accelerate the process of growth and development in a backward region;

(b) to build up a plan on the basis of local needs and priorities, resources and inputs;

(c) to avoid duplication by integrating more rationally the departmental and other facilities in developing optimally the infrastructure necessary for opening out the area for better commercial and trade channels, demand and supply services transport etc.;

(d) to involve and strengthen the local institutions both statutory and

voluntary for promoting the participation of local communities, and individuals ;

(e) to promote more intensive and and extensive employment opportunities by offering projects to artisans, landless labour and small farmers which are bankable and therefore, qualify for financial loans and subsidies.

1.5.98. Three blocks—Iglas, Gonda and Khair, are to be covered by this Pilot Project for which the estimated cost in the State Government sector is likely to be Rs.125 lakhs over a period of 5 years besides, the inputs from C. D. Mandi Directorate, IADP, Hydel and P. W. D. and the loans from scheduled banks and the Government of India scheme of assistance to the blocks under the Area Development Project Scheme. During 1978-79, the first year, the initial surveys, preparation of projects and other preliminaries will be completed.

Outlays and Expenditure

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.04 Command Area Development

(Rupees in lakhs)

Serial no.	Name of Scheme	1977-78		Five-Year Plan 1978-83 Proposed outlay			1978-79		1979-80			1980-81	1981-82	1982-83		
		Plan Actual (1974-78) Expenditure	Actual Expenditure	Total (Col.8+10+14+15+16)	Capital	Foreign Exchange	Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<i>Area Development Department</i>																
1	Integrated Area Development in Hills	172.87	81.72	1217.65	..	..	100.00	100.00	175.00	..	..	175.00	300.00	315.00	327.65
2	Command Area Development:—															
	(a) Sharda Sahayak	..	199.51	102.62	2140.50	203.00	203.00	290.00	500.00	547.50	600.00
	(b) Ram Ganga	..	255.18	107.97	1488.25	215.00	215.00	250.00	307.00	342.00	374.25
	(c) Gandak	..	147.86	60.20	856.25	112.00	112.00	138.00	185.00	200.00	221.25
	(d) Hqr. and Project Cell	15.00	3.00	3.00	4.00	5.00
	Total (2)	..	602.55	270.79	4500.00	530.00	530.00	681.00	995.00	1093.50	1200.50
3	Planning Research and Action Division:—															
	(a) Integrated Area Development Project Ghazipur.	33.43	13.04	225.00	..	..	50.00	50.00	45.00	..	..	..	45.00	45.00	40.00
	(b) Piolet Development Project Etawah.	..	..	77.00	..	..	..	23.00	20.00	..	..	..	19.00	19.00	19.00
	(c) Integrated Area Development Project Meerut/Muzaffarnagar.	..	..	410.00	..	..	..	40.00	110.00	..	..	..	110.00	100.00	90.00
	(d) Integrated Area Development Project Aligarh.	..	..	125.00	..	..	..	..	35.00	..	..	..	30.00	30.00	30.00
	Total (3)	..	33.43	13.04	837.00	50.00	113.00	210.00	204.00	194.00	179.00
4	Planning at Local Level	..	1500.00	1500.00	40000.00	10000.00	..	849.00	2500.00	6000.00	..	1500.00	520.00	9000.00	11825.50	12325.50
5	Small Farmers Development Agencies	..	134.07	69.80	500.00	100.00	100.00	95.00	7.50	98.00	102.00	105.00

6. P. Thought Frome Area Programme

Rural Development Department

1	Soil Conservation	..	121.40	50.65	314.34	..	..	93.44	93.44	100.00	..	..
2	Agriculture	..	22.96	9.11	109.08	..	..	32.41	32.41	30.00	..	..
3	Irrigation	..	497.90	152.34	874.59	..	..	274.59	274.59	..	..	..
4	Minor Irrigation	..	13.09	6.94	60.42	..	..	17.94	17.94	20.00	..	..
5	Animal Husbandry	..	59.77	21.39	164.50	..	..	48.72	48.72	30.00	..	..
6	Dairy Development	—	4.27	4.27	68.60	..	..	39.80	39.80	..	..	..
7	Godhan Vikas Nigam	..	0.15	0.15	10.82	..	..	6.50	6.50	2.00	..	..
8	Forestry	..	169.35	59.03	191.59	..	..	56.80	56.80	50.00	..	..
9	Ground Water Servey	..	3.90	2.36	22.34	..	..	6.70	6.70	4.00	..	..
10	Land Capability and Soil Survey.	..	..	..	..	..	..	..	..	..	..	..
11	Co-operative	..	21.70	12.84	27.89	..	..	8.31	8.31	10.00	..	..
12	Horticulture	..	8.94	3.72	9.83	..	..	2.92	2.92	4.00	..	..
13	Fisheries	..	2.72	1.56	9.22	..	..	2.34	2.34	3.00	..	..
14	Project Administration	..	9.50	5.29	20.68	..	..	6.54	6.54	6.00	..	..
15	Development of Mandies	..	7.50	..	20.11	..	..	6.00	6.00	..	..	..
16	Project Cell etc.	..	0.91	0.52	20.83	..	..	5.83	5.83	6.00	..	..
17	Industries (Cottage and small)	..	..	..	75.00	..	..	..	..	50.00	..	..
18	Uncommitted	..	..	..	0.16	..	..	0.16	0.16	..	..	..
19	Integrated Rural Development in D.P.A.P.	..	..	..	210.00	..	..	..	23.00	52.50	..	..
	Total (6)	..	944.06	330.17	2210.00	..	..	609.00	632.00	592.50	..	..
	Total for 1.04. Command Area Development.		3386.98	2265.52	49264.65	10000.00	..	2238.00	3975.00	7753.50	1500.00	702.50	
											10999.50	13833.50	14440.15

350.00 251.00 250.00

Rural Development

Achievement and selected physical targets and programmes

Total number of blocks covered under special programmes	1977-78		1982-83	
	No. of Blocks	No. of Beneficiaries (Lakhs)	No. of Blocks	No. of Beneficiaries (Lakhs)
1	2	3	4	5
(1) S.F.D.A.				
(a) Central }				
(b) State }	191	3.61	191	15.31
(2) D.P.A.P.				
(a) Central }				
(b) State }	40	3.20	38	5.00
(3) C.A.D.				
(a) Central }				
(b) State }	141	1.00	141	7.50
2. Proposed coverage of beneficiaries (lakhs)				
		Total	Scheduled castes	Scheduled tribes
1		2	3	4
(1) S.F.D.A.				
(i) Small Farmers		2.15	0.43	..
(ii) Marginal Farmers		8.57	1.71	..
(iii) Agricultural Labours		4.59	0.92	..
(iv) Artisans .. .. .		..	..	..
(2) D.P.A.P.				
(i) Small farmers		3.00	0.60	..
(ii) Marginal farmers		1.25	0.25	..
(iii) Agricultural labourers		0.50	0.10	..
(iv) Artisans		0.25	0.05	..
(3) C.A.D.				
(i) Small farmers		4.50	1.00	..
(ii) Marginal Farmers		1.50	0.30	..
(iii) Agricultural labourers		1.00	0.25	..
(iv) Artisans		0.50	0.20	..

AGRICULTURE AND RURAL DEVELOPMENT

APPENDIX X
AGR-32*Headwise/sub-headwise break-up of the financial outlays*

Sl. no.	Head of Development/programme	Fifth plan outlay approved	Approved outlay 1978-79	Proposed outlay 1978-83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
<i>XV—Rural Development</i>						
1	Integrated Rural Development —	..	..	..	..	..
	(a) S.F.D.A. ..	..	219.00	100.00	500.00	..
	(b) D.P.A.P. ..	..	1342.00	609.00	2210.00	..
	(c) C.A.D. ' ..	..	2000.00	530.00	4500.00	..
	(d) Others (Planning at local level)	..	..	849.00	40000.00	10000.00
2	Area Development programme of states	..	..	..	..	..
	Hills ..	..	374.00	100.00	1217.65	..
	Plains ..	..	92.00	50.00	837.00	..
	Total, XV ..	..	4027.00	2238.00	49264.65	10000.00

Agricultural and Rural Development : Employment Generation

Sl. no.	Head of Development/programme	Likely employment generation (in man years)					Total
		Scientist	Technical	Administrative	Skilled	Unskilled	
1	2	3	4	5	6	7	8
XV	<i>Rural Development</i>						
	(1) Intergrated Rural Development—						
	(a) S.F.D.A.	..	..	..	N.A.	..	..
	(b) D.P.A.P.	..	15	350	60	30	72000
	(c) C.A.D.	.	530	11260	2095	900	22605
	(d) Others	..	..	..	..	..	..

STATEMENT-I

AGR-39

COMMAND AREA DEVELOPMENT PROGRAMME (CADP)
Outlays in State Sector

(Lakh Rupees)

Sl. No.	Name of Irrigation project	Actual Expenditure				Approved outlay 1978-79	Likely requirement 1979-83 (4 years)	Total 1978-83 (5 years)	Remarks
		1974-75	1975-76	1976-77	1977-78				
1	2	3	4	5	6	7	8	9	10
A—On going									
1	Ramganga	9.835	40.650	96.725	107.974	215.000	1273.250	1488.250	
2	Sharda Sahayak	11.590	23.080	62.215	102.620	203.000	1937.500	2140.500	
3	Gandak ..	12.970	22.880	51.815	60.200	112.000	744.250	856.250	
4	Project cell at H.Q ..	..	..	..	..	..	15.000	15.000	
Total		34.395	86.610	210.755	270.794	530.000	3970.000	4500.000	

STATEMENT—II
AGR—40

Programme of works in the State Sector showing expenditure/outlays for various activities of CADP

(Rupees in lakhs)

Serial no.	Item of Works	Expenditure during 1974—77 (3 years)				Expenditure during 1977-78				Total Expenditure 1974—78			
		Ramganga Sahayak	Sharda Sahayak	Gandak	Total	Ramganga Sahayak	Sharda Sahayak	Gandak	Total	Ramganga Sahayak	Sharda Sahayak	Gandak	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Establishment of CAD Authorities at project level and State level.	10.170	11.475	6.600	28.245	4.785	4.120	4.035	12.940	14.955	15.595	10.635	41.185
2	Survey, Planning, Design and Supervision of OFD works.	43.370	25.910	23.035	92.315	45.958	45.990	20.595	112.543	89.328	71.900	43.630	204.858
3	Strengthening of field staff (VLW's etc.)	12.170	6.000	5.650	23.820	30.731	26.010	13.570	70.311	42.901	32.010	19.320	94.131
	Total Establishment	65.710	43.385	35.285	144.380	81.474	76.120	38.200	195.794	147.184	119.505	73.485	340.174
4	Construction field Channels and related structures.	..	..	..	..	..	..	..	..	..	..	..	..
5	Other O.F. D Works.	..	..	..	..	..	..	..	..	..	..	..	..
6	Special Loan fund for ineligible farmers.	20.000	20.000	15.000	55.000	..	..	..	..	20.000	20.000	15.000	55.000
7	Crop Compensation	..	..	..	..	..	..	..	..	..	..	..	..
8	Equity capital support to Authority.	33.500	33.500	33.000	1000.000	16.500	16.500	12.000	45.000	50.000	50.000	45.000	145.000
9	Debenture Support/Injection of share capital to primary LDB's to reduce overdues position	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENTS II

AGR—40 (contd.)

(Rs. in lakhs)

Serial no.	Item of Works	Approved Outlay 1978-79				Likely requirement during 1979—83(4 years)				Total for 1978—83			
		Ramganga Sahayak	Sharda Sahayak	Gandak	Total	Ramganaga Sahayak	Sharda Sahayak	Gandak	Total	Ramganga Sahayak	Sharda Sahayak	Gandak	Total
1	2	15	16	17	18	19	20	21	22	23	24	25	26
1	Establishment of CAD Authorities at project level and State level.	7.000	7.000	5.000	19.000	35.000	35.000	21.000	91.000 15.000	42.000	42.000	26.000	110.000 15.000
2	Survey, Planning, Design and Supervision of OFD works.	64.000	88.000	38.000	190.000	275.000	575.000	210.000	1060.000	369.000	663.000	248.000	1250.000
3	Strengthening of field staff(VLWs' etc.)	30.000	49.000	16.000	95.000	180.000	200.000	75.000	455.000	210.000	249.000	91.000	550.000
	Total—Establishment	101.000	144.000	59.000	304.000	490.000	810.000	306.000	1606.000 +15.000	591.000	954.000	365.000	1910.000 +15.000
4	Construction field channels and related structures.	..	..	..	..	..	..	..	..	..	..	..	..
5	Other O.F.D. Works	..	..	..	..	..	..	..	..	..	..	..	..
6	Special Loan fund for ineligible farmers.	14.000	12.000	20.000	46.000	66.000	133.000	55.000	245.000	30.000	145.000	75.000	300.000
7	Crop Compensation	..	..	..	..	..	..	..	..	..	..	..	..
8	Equity capital support to Authority.	50.000	25.000	15.000	90.000	160.000	170.000	80.000	410.000	210.000	195.000	95.000	500.000
9	Debenture Support/Injection of share capital to primary LDB's to reduce overdues position.	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT—II
AGR—40 (contd.)

(Rupees in lakhs)

Seiral. no.	Item of Works	Expenditure during 1974—77 (3 years).				Expenditure during 1977-78				Total Expendditure 1974—78			
		Ramganga	Sharda Sahayak	Gandak	Total	Ramgamga	Sharda Sahayak	Gandak	Total	Ramganga	Sharda Sayahak	Gandak	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
10	Loan for the purchase of equipment to Agro-Industries corporation for OFD works.	..	..	..	..	..	..	..	..	..	..	..	..
11	Consolidation of holdings/Realignment of field boundaries.	..	..	..	..	..	..	..	..	..	..	..	..
12	Construction of roads in command Area.	..	..	..	..	..	..	..	..	..	..	..	..
13	Construction of markets in command Area.	..	..	..	..	..	..	..	..	..	..	..	..
14	Demonstration farms etc.	..	..	..	..	..	..	..	..	..	..	..	..
15	Infra-structure ..	28.000	..	4.380	32.380	10.000	10.000	10.000	30.000	38.000	10.000	14.080	62.380
16	Osrabandi ..	..	..	..	..	..	..	..	..	..	..	..	..
17	Realignment of field boundaries	..	..	..	..	..	..	..	..	..	..	..	..
18	Rural Growth Centres	..	..	..	..	..	..	..	..	..	..	..	..
19	Maintenance of O.F.D Works.	..	..	..	..	..	..	..	..	..	..	..	..
20	Mahila Land Clinic	..	..	..	..	..	..	..	..	..	..	..	..
21	Intermediate drains ..	..	..	..	..	..	..	..	..	..	..	..	..
22	Agriculture Extension service (T.V. Pattern)	..	..	..	..	..	..	..	..	..	..	..	..
	Total ..	147.210	96 885	87.665	331.760	107.974	102.620	60.200	270.794	255.184	199.505	147.865	602.554

Serial no.	Item of Work	Approved Outlay 1978-79				Likely requirement during 1979-83 (4 years)				Total for		1978-83	
		Ramganga	Sharda Sahayak	Gandak	Total	Ramganga	Sharda Sahayak	Gandak	Total	Ramganga	Sharda Sahayak	Gandak	Total
1	2	15	16	17	18	19	20	21	22	23	24	25	26
10	Loan for the purchase of equipment to Agro-Industries corporation for OFD works.	..	..	..	..	..	..	..	..	..	..	..	..
11	Consolidation of holdings/Realignment of field boundaries.	..	..	..	..	..	..	..	..	..	..	..	..
12	Construction of roads in command Area.	..	..	..	..	..	..	..	..	..	..	..	..
13	Construction of markets in command Area.	..	..	..	..	..	..	..	..	..	..	..	..
14	Demonstration farms etc.	..	..	..	..	..	..	..	..	..	..	..	..
15	Infrastructure ..	50.000	22.000	18.000	90.000	165.000	185.000	85.000	435.000	215.000	207.000	103.000	525.000
16	Osra bandi ..	..	..	..	..	50.000	110.000	40.000	200.00	50.000	110.000	40.000	200.000
17	Realignment of field boundaries	..	..	..	..	..	..	..	..	..	..	..	..
18	Rural Growth Centres	..	..	..	..	110.000	110.000	30.000	250.000	110.000	110.000	30.000	250.000
19	Maintenance of O.F.D. Works.	..	..	..	..	70.000	155.000	40.000	265.000	70.000	155.000	40.000	265.000
20	Mobile land Clinic ..	..	..	..	..	6.500	7.000	6.500	20.000	6.500	7.000	6.500	20.000
21	Intermediate drains ..	..	..	..	..	150.000	250.000	100.000	500.000	150.000	250.000	100.000	500.000
22	Agriculture Extension service (T.V. pattern).	..	..	..	..	5.750	7.500	1.750	15.000	5.750	7.500	1.750	15.000
	Total ..	215.000	203.00	112.000	530.00	1273.250	1937.500	744.250	3955.000 *+ 15.000	1488.250	2140.500	856.250	4485.000 +15.000*

*NOTE—For Project Cell at Hqr.

Achievements and Targets for works in the State

Serial no.	Items of works	Unit of works	Achievement up to 1977-78			
			Ramganga	Sharda Sahayak	Gandak	Total
1		3	4	5	6	7
1	Soil surveys	000Ha.	409.3	428.0	293.0	1130.3
2	On-Farm-Development—					
	(i) Topographical/Contour Surveys. ..	000Ha.	262.7	171.7	85.4	519.8
	(ii) Planning and Designing ..	do	262.7	146.3	49.1	458.1
	(iii) Execution of OFD works ..	000Ha,	99.1	61.0	49.1	209.2
	(iv) Construction of field channels ..	km.	4056	3014	2716	9786
	(v) Lining of field channels ..	km.	363.1	144.3	190.0	697.4
	(vi) Construction of field drains. ..	km.	9.0	65.3	845.0	919.3
	(vii) Drainage/Water Control structures. ..	Nos.	5338	1782	8106	15226
	(viii) Land Levelling/shaping ..	Ha	8217	..	218	8435
	(ix) Construction of field access roads. ..	km..	163	..	1487	1650
3	Realignment of field boundaries. ..	000Ha.	..	..	..	..
4	Osrabandi in outlet commands. ..	Nos.	..	..	..	..
5	Training of staff	Nos.	..	..	..	..
6	Establishment of Rural growth Centres. ..	Nos.	1	..	..	1
7	<i>Minor Irrigation Works</i>					
	(i) Masonary wells	000,Nos.	146	188	34	368
	(ii) Rahat	000,Nos.	95	45	..	140
	(iii) Pumping sets	000,Nos.	31	20	12	63
	(iv) Boring wells	000,Nos.	..	..	..	..
	(v) Private T. wells	000,Nos.	140	112	13	265
	(vi) Irrigation Potential	Lakh Ha.	14.86	12.33	1.87	29.06
8	Construction. of Roads	km.	..	..	..	..
9	Constn. of Markets	Nos.	..	..	..	..
9A	Preparation of ARDC schemes. ..	000,Ha.	91.6	187.9	29.8	309.3
10	Maintenance of O. F. D. works					
11	Mobile clinic	000,Ha.	..	..	..	..
12	Intermediate drains.	000,Ha.	..	..	..	..
13	Agriculture Extension Service (T.V. Pattern)..	No. of Blocks.	..	..	..	..

Sector for various Activities of CADP

Target for 1978-79			Target for 1979—83 (4 years)				Targets for 1978—83				
Ramganga	Sharda Sahayak	Gandak	Total	Ram-ganga	Sharda Sahayak	Gandak	Total	Ram-ganga	Sharda Sahayak	Gandak	Total
8	9	10	11	12	13	14	15	16	17	18	19
320	320	160	800	1,280	1,840	640	3,760	1,600	2,160	800	4,560
81	93	36	210	513	1,103	322	1,938	594	1,196	358	2,148
81	93	36	210	513	1,103	358	1,974	594	1,196	394	2,184
54	70	24	148	342	735	274	1,351	396	805	298	1,499
2,700	3,500	1,200	7,400	17,100	36,760	13,700	67,560	19,800	40,260	14,900	74,960
675	700	400	1,775	4,275	7,350	3,425	15,050	4,950	8,050	3,825	16,825
? 1,350	3,500	600	5,450	? 8,550	36,760	6,850	52,160	9,900	40,260	7,450	57,610
5,400	7,000	2,400	14,800	34,200	73,500	27,400	1,35,100	39,600	80,500	29,800	1,49,900
1,350	700	300	2,350	3,550	7,350	3,425	14,325	9,900	8,050	3,725	21,675
1,350	..	300	1,650	3,550	..	3,220	6,770	315	975	266	1,556
..	..	..	..	315	975	266	1,556	8,400	17,400	6,600	32,400
..	..	..	..	8,400	17,400	6,600	32,400	260	580	220	1,060
..	..	..	..	260	580	220	1,060	960	1,440	480	2,880
..	..	..	..	72	80	20	172	72	80	20	172
..
2.5	2.2	0.2	4.9	9.9	9.0	0.9	19.8	12.4	11.2	1.1	24.7
1.0	0.3	..	1.3	4.1	1.2	..	5.3	5.1	1.5	..	6.6
3.8	2.1	1.4	7.3	15.2	8.7	5.4	29.3	19.0	10.8	6.8	36.6
22.8	24.7	3.1	50.6	91.1	99.2	12.5	202.8	113.9	123.9	15.6	253.4
18.6	20.5	2.1	41.2	88.0	91.0	8.9	187.9	106.6	? 111.5	11.0	229.1
1.13	1.16	0.16	2.45	5.21	5.09	0.69	10.99	6.34	6.25	0.85	13.44
..
..
54	70	24	148	342	735	274	1351	396	805	298	1499
..	..	..	..	260	580	220	1060	260	580	220	1060
..	..	..	..	50	50	50	150.	50	50	50	150.
..	..	..	..	Will be determined after survey							
..	..	..	..	35	45	20	100.	35	45	20	100

CAD Programme During 1978—83
Progress and Target of Creation and utilization of Irrigation Potential on CAD Projects

(Thousand Ha. cumulative)

Serial no.	Name of Irrigation Project	District	Unit Irrigation Potential Hact.	Creation of potential to end of				Utilization to end of			
				1976-77	1977-78 (anticipated)	1978-79	1982-83 (anticipated)	1976-77	1977-78 (anticipated)	1978-79 (anticipated)	1982-83 (anticipated)
1	2	3	4	5	6	7	8	9	10	11	12
1	Ramganga	10	'000	439.97	543.48	575.48	75.48	330.41	410.00	447.00	575.48
2	Sharda Sahayak	14	'000	322.00	680.00	1291.00	1923.00	146.00	175.00	650.00	1223.00
3	Gandak	2	'000	283.87	264.00	290.00	332.00	180.00	194.00	200.00	332.00
Total ..		26	000	1045.84	1487.48	2156.48	2830.48	656.41	779.00	1297.00	2130.48

Command Area Development—Programme outlays

(Rs. in lakhs)

Serial no.	Source of Finance	Actual Expenditure during				Approved during 1978-79	Likely requirement during 1979-83 (4 years)	Total requirement 1978-83 (5 years)				
		1974-75	1975-76	1976-77	1977-78							
1	2	3	4	5	6	7	8	9				
1	State	..	..	..	..	34.395	86.610	210.755	270.794	530.000	3970.000	4500.000
2	Centre											
	(a) Grants	..	..	..	..	9.825	20.210	129.325	254.701	509.000	5491.000	6000.000
	(b) Loans	..	..	..	..	13.790	26.200	194.920	350.189	700.000	3300.000	4000.000
	(c) S.L.A.	..	..	..	..	..	..	..	..	92.000	500.000	592.000
	(d) Equity capital support to CADA	..	..	..	..	22.500	47.500	30.000	45.000	90.000	410.000	500.000
	Total (2)	..	..	..	..	46.115	93.910	354.245	649.890	1391.000	9701.000	11092.000
	Total (1+2)	..	..	..	..	80.510	180.520	565.000	920.684	221.000	3671.000	15592.00
3	Institutional	..	..	..	..	..	..	..	0.410	338.000	3735.000	4123.000
	Grand Total 1+2+3	..	..	..	..	80.510	180.520	565.000	921.094	2259.000	17406.000	19715.000

STATEMENT VI
AGR—45
(Rupees in lakhs)

Serial no.	Item of works	Actual Expenditure				Total	Require- ment during 1978-79	Likely require- ment during 1979-83 (4 Years)
		1974-75	1975-76	1976-77	1977-78			
1	2	3	4	5	6	7	8	9
<i>I—Grants—</i>								
1	Establishment of CAD Authority both at State and Project Level.	8.075	8.560	11.610	12.940	41.185	19.00	91.00 +15.00
2	Survey, Planning, Design and Supervision of OFD works.	1.750	11.650	78.915*	112.544	204.859	190.00	1060.00
3	Subsidy to small and Marginal Farmers	..	..	..	129.217	168.017	300.00	2635.00
4	Crop Compensation	..	..	..	..	..	..	675.00
5	Consolidation/ Realignment of Land Holdings.	..	..	..	..	..	..	..
6	Mobile Land Clinics ¹	..	..	..	..	..	..	20.00
7	Osrabandi	..	..	..	..	..	..	200.00
8	Intermediate/main drains	..	..	..	..	..	..	500.00
9	Agricultural Extension Service (T.V. Pattern)	..	..	..	..	..	..	45.00
10	Rural Growth Centres	..	..	..	..	..	..	250.00
Total I ..		9.825	20.210	90.525	254.701	414.061	509.00	5491.00
<i>II—Loans—</i>								
1	Loan for construction of field channels	13.790	26.200	194.920	350.189	585.099	700.00	3300.00
2	Loan to Agro-Industries Corporation etc. for the purchase of equipment for OFD works.	..	..	..	..	..	..	..
3	Debenture support to primary LDB etc./ Induction of share Capital in LDB's etc.	..	..	..	..	..	..	..
Total II ..		13.790	26.200	194.920	350.189	585.099	700.00	3300.00
III—Special Loan fund for ineligible farmers.		..	..	..	..	..	92.000	500.00
IV—Equity Capital Support to CADA etc.		22.500	47.500	30.000	45.000	145.000	90.000	410.00
Grand Total (I+II+III+IV) ..		46.115	93.910	315.445	649.890	1144.160	1391.00	9701.00

(6) ANIMAL HUSBANDRY

The primary objective of the Animal Husbandry development activities is to augment production of animal based products like milk, meat, eggs, and wool for meeting the demand of growing population. In order to achieve higher production of these products either the number of animals can be increased or the productivity per animal be increased or even both. Since the first alternative would mean additional pressure on the already scarce resources of cultivable land, it is proposed to lay emphasis on increase in productivity per animal. The basic function of the Department of Animal Husbandry is to achieve the primary social goal to provide improved breeding facilities, ensure adequate health cover and feeds and fodder production. The Animal Husbandry institutions and other related infrastructure should be made to subserve these basic functions.

1.6.2. Agriculture production activity and animal husbandry pursuits are significantly complementary to each other. Unlike the pattern of distribution of cultivable land, a large majority of small and marginal farmers as well as landless labourers are engaged in the rearing of milch animals, sheep, goats, pigs, poultry, etc. Not only that, due to some traditional socio-cultural factors the rearing of sheep, goats, pigs, and poultry is confined, for the most part, to the socially backward segment of rural population. According to a survey carried out in I.C.D.P., Lucknow in 1971-72, out of every 100 milch animals about 40 were owned by the small farmers, another 34 by marginal farmers and 6 by landless labourers. Therefore, developmental efforts in this sphere of agricultural eco-

nomy would be ideally suited for moving towards the fulfilment of the important national objectives of removal of poverty and generation of full employment on a time bound frame. Thus animal husbandry pursuits will play an important role in improving the socio-economic status of small and marginal farmers, landless labourers and other members of the weaker sections of the community like scheduled castes and scheduled tribes.

Trend in livestock population

1.6.3. An assessment of live stock population shows that as per cattle census conducted in 1972 there were 492 lakh livestock which was 15 per cent of the total livestock population of the country. It is estimated that by 1979 the population would increase to 506 lakhs i.e. an increase of 2.7 per cent. It is further anticipated that by 1982-83 the end of 1978-83 Five Year Plan, the number would go up to 523.13 lakhs, an increase of 5.3 per cent over 1966.

1.6.4. The percentage distribution of livestock amongst different categories of livestock has not changed significantly over the years and same trend is expected in this Plan. Percentage of drought animals in total livestock has always been greater than that of animals in milk.

The percentage of breedable population has varied between 13 to 14 per cent.

1.6.5. Different regions of the State have more or less the same pattern of decrease or increase in population except of course in Western tract where buffaloes have out numbered cows in a period of about 10 Years but percentage of breedable buffaloes has almost been the same. The actual (1972) and projected figures

of livestock population is shown in the Table below.

TABLE—I—Actual and Projected Live stock Population in U.P.

(No. in lakhs)

Species of Live-stock	Livestock Population					
	Total			Breederable		
	1972	1979 Projected	1982-83	1972	1979 Projected	1982-83
1	2	3	4	5	6	7
1. Cattle	262.2 (53)	263.1 (52)	270.17 (52)	67.0 (14)	67.0 (13)	67.0 (13)
2. Buffaloes	125.9 (26)	137.6 (27)	146.35 (28)	65.4 (13)	71.2 (14)	75.0 (15)
3. Sheep	19.6 (4)	19.6 (4)	19.60 (4)	11.7 (2)	11.7 (2)	11.7 (2)
4. Goats	66.1 (13)	66.1 (13)	66.10 (12.5)	33.9 (7)	33.9 (7)	33.9
5. Pigs	13.0 (3)	14.0 (3)	15.40 (3)	4.0 (1)	..	..
6. Others	5.2 (1)	5.4 (1)	5.51 (0.5)	..	..	..
Total Livestock	492.0 (100)	506 (100)	523.13 (100)	..	..	..
Poultry	39.2	40.60	..	17.7 (45)	18.8 (46)	..

N.B.—Figures in brackets denote percentages.

1.6.6. According to available live-stock and Human population the pressure on land per Sq. Kilometer is of about 200 animals and 480 human beings (total 680). The pressure on cropped area from livestock comes to about 2.93 livestock units per hectare. (cropped area 238.09 lakh hectares in 1977-78 and Adult Live-stock units 404.77).

1.6.7. Further out of the cropped area only about 7.51 lakh hectares is under fodder crops at present which is about 3.4 per cent of the cropped area. The number of Livestock units per hectare of cropped area devoted to fodder comes to about

53.90 units. Thus, there is acute competition between human population and live-stock for land under cultivation. Normally with intensive cultivation not more than 10 adult livestock units can be maintained on one hectare of agricultural land when it is used for fodder production alone. Hence the most serious constraint of the effective livestock development activities is the acute shortage of fodder. The situation with respect to foodgrains will be no better.

1.6.8. *Investment during various Five-Year Plans*—It has been a constant endeavour of the State to give priority to

Note—	Units
Adult Cattle, horse, ponies, mules ..	1.10
Adult Buffalo	1.30
Cattle Buffalo :	
Young stock and donkey	0.75
sheep and goats	0.15

the Animal Husbandry during the various Five-Year Plans, which would be evident from the details of Plan investments, given below:

TABLE II—Total Plan Investment
(Rupees in lakhs)

Plan Period	Expenditure
1	2
First Plan	98.44
Second Plan	219.78
Third Plan	464.07
Adhoc Plan (1966-69)	272.32
Fourth Plan	560.16
Fifth Plan (1974-1978)	517.67

1.6.9. *Review of Progress up to Fifth Plan*—The various programmes had the ultimate objective of raising productivity per livestock so as to increase the production of various livestock products like milk, eggs, meat and wool. To assess the

TABLE III—Production and Productivity of Livestock Products

Item	Eggs Production	Milk Production		Wool Production
	(nos.)	Cow (Kg.)	Buff	(Kg.) (in lakh)
1	2	3	4	5
1. Average per animal or bird :				
(a) in 1967-68	105.0	1.25	2.66	0.670 (69-70)
(b) in 1971-72	108.7	1.37	2.76	0.700 (73-74)
(Lakh No.) (Lakh M.T.) (Lakh Kg.)				
2. Total Production Milk, Eggs and Wool :				
(a) in 1967-68	1914	10.88 M.T.	14.59 M.T.	16.80 Kg.
(b) in 1971-72	1922	14.54 M.T.	34.54 M.T.	12.0 (—)*

*Due to reduction in number of sheep.

1.6.10. The production per animal/birds has increased marginally as also there has been increase in total production except

achievements, periodical surveys have been undertaken before the Fourth Plan and since Fifth Plan regular, annual region-wise surveys are being done. Though the result of surveys conducted in recent years are under completion and are being analysed but the results of surveys conducted earlier are available. The inferences drawn from the same are as follows :

(1) The mix livestock species has changed. There is constant increase of improved animals. In cattle and buffaloes the percentage of improved animals in 1968-69 was 13.35 and the same increased to 17.92 in 1972-73.

(2) The percentage of improved poultry birds was 16.74 in 1968-69 which rose to 21.18 in 1972-73.

(3) The percentage of improved sheep has doubled between 1969-70 and 1973-74. The percentage of improved sheep was 7.77 in 1969-70 which has gone up to 14.60 in 1973-74. These surveys also revealed some measures of improvement in productivity, as would be evident from the figure presented below:

for wool where due to substantial decline in the population of sheep the wool production has gone down.

1.6.11. To bring about further improvement in productivity and production, steps were taken to provide improved breeding facilities, better health coverage, facilities for increased production of feeds fodder during Fifth Plan.

1.6.12. *Cattle Development*—For increased milk production the technique of artificial insemination was further extended. At the beginning of Fifth Plan there were only 27 semen collection centres, 732 A. I. centres and 1556 A.I. sub-centres. Their number increased to 31,752 and 1861 by end of 1977-78. The number of inseminations increased from 11.00 lakhs in 1973-74 to 13.37 lakhs by end of 1977-78. The inseminations also increased from 1502 per A.I. centre to 1700 in 1977-78.

1.6.13. To extend the use of cow bull semen over a larger population and to minimize the wastage the technique of Frozen Semen was adopted and three centres started functioning and the fourth centre is in the process of establishment. The number of calves produced have been about 25 per cent to 30 per cent of the insemination done in the previous years.

1.6.14. Intensive cattle development projects were started in districts where dairy plants are functioning. There were 7 such projects to which 2 more were added in Fifth Plan i.e. in Allahabad and Faizabad districts. Each project covers about one lakh breedable population for which intensive inputs of breeding, disease control and fodder production are provided. As a result it has been estimated through surveys that milk yield in cows has increased from 11.40 per cent to 20.95 per cent and from 5.29 per cent to 18.20 per cent in buffaloes within a period of about five years of the start of these projects.

1.6.15. *Feeds and Fodder*—On the basis of requirement of green fodder for different livestock species as recommended by the Government of India, the annual requirement of green fodder and area required to cultivate it would be as under:

- (1) Total requirement of green Fodder. 692.66 Lakhs M.T
- (2) Present Production .. 206.77 Lakhs M.T.
- (3) Shortage .. 70 30%

(4) Area required to cultivate additional fodder. @24.7 tonnes per hectare.	19.67 lakh Hectare viz 11.8% of the cultivated area.
(5) Area at present under fodder cultivation	7.05 lakh hectares viz 3.40% of the cultivated area.
(6) Total area required for fodder production.	19.67 7.05
	26.72 Lakh hectares.

1.6.16. As against total availability of 206.77 lakhs metric tonnes of green fodder the requirement is 692.66 lakh metric tonnes i.e. a shortfall of about 70.30 per cent which would require 19.67 lakh hectares of additional land under fodder (assuming an average production of 24.7 M. T. per hectare).

1.6.17. Due to keen competition of human beings and livestock on land, the progress of fodder production has been very limited. The National Commission on Agriculture recommended that 20 per cent of the total cropped area should be under fodder crops. As against this, the above calculations show that the minimum requirement of green fodder could be met if 15 per cent of the net cultivated area is diverted for this purpose. As at present in the Western region of the State about 14.70 per cent (maximum about 18 per cent in Meerut district) and minimum in Bundelkhand 0.27 per cent is devoted for fodder cultivation, in Eastern region the corresponding percentage is about 0.78.

1.6.18. To increase the production, fodder seed was distributed at subsidised rates in Hills and Bundelkhand in the early years of the Fifth Plan but this concession was later withdrawn.

1.6.19. However, in spite of lack of any incentives the programme has made some headway. The quantity of seed distributed in different years was as below:

TABLE IV—Quantity of Seed distributed

Year	Quantity
1	2
	Quintals
1975-76	6167.16
1976-77	6545.54
1977-78	8617.15

1.6.20. Of this quantity about 6,000 quintals was produced in the State Live-stock farms and the balance quantity was purchased. There is an urgent need to develop these farms to produce larger quantities of seed. More incentives need to be given to farmers especially of Bundelkhand and Eastern region to encourage them to take to fodder cultivation.

1.6.21. *Poultry*—At the beginning of the Fifth Plan there were 56 poultry farm five chick rearing centres and 16 eggs production centres. One new farm was added in Chamoli district which has started functioning. The number of layers at farms are about 24,400.

1.6.22. As a result of various developmental programmes the ratio of improved birds to the indigenous birds has improved. The ratio of improved birds in 1966 was about 19 per cent. It is expected to reach 31 per cent by 1978-79. The egg production which was 216.4 million eggs in 1973-74 is likely to be 228.7 million by end of 1977-78. It is expected to be 231.1 millions by end of 1978-79 giving a growth rate of 6.7 per cent.

1.6.23. Most of the farms have white leghorn strain of birds. The strain has given egg production of 192.20 eggs in 1975-76 under a 'Random laying test' conducted by the Government of India which is encouraging and comparable to any Commercial strain with certain advantages but even that the general trend is towards having purely commercial strains in urban areas. So this lacunae needs to be removed through better approach to the farmers. Efforts to evolve better strains have been made under the All India Co-ordinated Research Project being implemented at Veterinary College, Mathura. It is expected that new strains would be released shortly for use in this Plan.

1.6.24. There has been an increase in distribution of poultry birds from poultry farms. As against 6.62 lakh chicks/birds made available in 1974-75 the distribution in 1975-76 had been 7.30 lakhs, in 1976-77, 6.92 lakhs and in 1977-78, 4.93 lakhs. The drop in the last year was due to production of higher age group for S.F.D.A. programme by commercial hatcheries who were hitherto producing only day old chicks.

1.6.25. The supply for State Farms was far outnumbered by commercial hatcheries. This is not an encouraging development for the breeders in rural areas.

1.6.26. To boost up production in and around the big cities Intensive Poultry Development Projects were started. There were 8 such projects in the beginning of Fifth Plan. One more project for Almora was added. Each project has an objective to encourage people to have their poultry units with ultimate target to have 30,000 layers per project. The objective has been achieved more in all projects except Almora. The technical know how, training, Veterinary aid, and supply of chicks are made under these projects but supply of balanced poultry feed at reasonable rate has been the major constraint.

1.6.27. *Sheep*—Two Intensive projects were started one in Hills and the other in the Eastern belt of Allahabad, Mirzapur and Varanasi which sustains woollen carpet industry in the area. To meet the requirement of these intensive projects 19 sheep farms were utilised for the supply of rams of good breed.

1.6.28. Apart from sheep farms there were 217 sheep and wool extension centres each having a herd of 50 improved ram services of which were made available to the breeders in breeding seasons and there after these rams were taken back. As a result of these inputs the production of wool per sheep had increased by 4.48 per cent though the total production has decreased due to decrease in sheep population. There was also a shortage of rams.

1.6.29. With the inputs made available in the Fifth Plan the breeding coverage was provided for about 40.59 per cent of breedable sheep.

1.6.30. *Animal Health*—The National Commission on Agriculture has recommended one Veterinary Hospital for every 25,000 animals. At the beginning of Fifth Plan there was one hospital for every 46,000 animals. Through the addition of about 43 hospitals this has now been reduced to 42,000. Besides this, 148 new stockmen centres were established. The provision of veterinary medicines has almost been doubled.

1.6.31. *Physical Inputs*—As a result of implementation of various programmes the position of level of physical inputs at

the end of Fourth, Fifth and the likely level by 1982-83 is shown below :

TABLE—V—Level of Physical Inputs

Serial no.	Items	Unit	At the end of IV Plan	Achievements at the end of 1977-78	Target for 1978—83 Plan	Level at the end of 1982-83
1	2	3	4	5	6	7
1	Veterinary Hospitals	No.	1,108	1,151	142	1,293
2	Stockman Centres	No.	2,073	2221	100	2321
3	Frozen Semen stations	No.	1	2	..	2
4	Artificial Insemination:—					
	(a) Performed with exotic bull semen ..	In lakh	11.000	24.87	6.57	31.44
	(b) Cross Breed Calves born [.. ..	No.	0.117	0.687	1.320	2.007
5	Sheep Breeding Farms	No.	20	19	1	20
6	Sheep and Wool Extention Centres ..	No.	200	214	12	226
	(a) Goat Breeding Farms	No.	5	4	3	7
7	Intensive Sheep Development Project ..	No.	1	2	4	6
8	Intensive Egg and Poultry Production-cum-Marketing Centre	No.	8	9	9	18
9	Pig Breeding Unit Farm	No.	2	2	..	2
10	Fooder Seed Production Farms	No.	..	..	2	2
11	Location of Bucks at Veterianry Hospitals ..	No.	499	599	60	659
12	Location of Boars at Veterinary Hospitals	No.	44	64	106	170
13	Location of Bucks at SWEES	No.	..	..	16	16
14	I C D Projects	No.	6	..	1	7
15	Poultry Breeding Farms	No.	56	58	3	61

1.6.32. *Level of Production and growth rate*—The Government of India in its guidelines for formulation of 1978—83 Five-Year Plan have suggested growth rates of various animal products. These recommended rates of growth would require substantial increase in the level

of investment. The growth rates which are anticipated to be achieved with the proposed outlay of Rs. 20 crores is indicated below. The effect of increased population has not been accounted for in arriving at these estimates.

TABLE VI—Growth Rates

Item	Growth rate (Percentage)			
	Over all Fifth Plan (1974—78)	Fifth Plan Achievement	Suggested growth rate by the Government of India for 1978—83 Plan	Anticipated growth rate for 1978—83 Plan
1	2	3	4	5
1. Milk ..	12.28	2.34	29.00	17.46
2. Eggs ..	6.79	1.32	26.00	18.31
3. Wool ..	11.59	2.21	22.00	17.36
4. Meat ..	4.15	0.61	N.A.	3.76

1.6.33. On the basis of above mentioned anticipated growth rates the estimated level of production of various live-

stock products by the end of 1982-83 is likely to be as follows :

TABLE VII—Level of Production of various Livestock Products

Items	Unit	Level of Production		
		Base level by the end of 1977-78	Anticipated production at the end of 1978-79	Anticipated Production at the end of Five Year Plan from 1978-79 to 1982-83
1	2	3	4	5
1. Milk ..	(Lakh Tonnes)	53.26	55.09	63.56
2. Eggs ..	(Lakhs)	2311.00	2553.85	2683.04
3. Wool ..	(Lakh kgs.)	13.67	13.88	16.60
4. Meat ..	(Lakh kgs.)	790.23	796.63	819.98

1.6.34. However, the anticipated level of production of Livestock products falls short of requirements as would be evident from the recommended *per capita* intake of animal proteins is as below:

(a) Milk (kg. day/head) 0.210

(b) Eggs (number/day/head of non-vegetarian population). 1

(c) Meat (kg. per day/head of non-vegetarian population) 0.060

1.6.35. On the basis of these consumption norms, the requirement of various animal products for the State of Uttar Pradesh during 1978-79 and 1983-84 is shown in the table below:

TABLE VIII—Requirement of various animal products during 1978-79 and 1983-84

Serial no.	Products	Unit	Requirement during	
			1978-79	1983-84
1	2	3	4	5
1	Milk	'000 Tonnes	7,600 (37.96%)	8200 (48.85%)
2	Eggs	Lakh nos.	2,17,450 (9142%)	2,33,600 (9824%)
3	Meat	'000 Kgs.	1,35,800 (1538%)	1,40,160 (1659%)

NOTES—(1) Percentages within brackets indicate the level of anticipated production to the total requirement.

(2) Sixty per cent of total population has been assumed to be non-vegetarian.

1.6.36. *Level of Service and Facilities*—As a result of various inputs provided under different programmes during various plans the level of services which

have become available by end of 1977-78 and projected levels for 1978-79 and 1982-83 are shown below :

TABLE IX—*Level of Services available and projected*

Items	Base level at end of 1977-78	Level Likely to be achieved at end of 1978-79	level Likely to be achieved at end of 1982-83
1	2	3	4
<i>I. Animal Health :</i>			
(a) Livestock Population per Veterinary Hospital (in '000)	42.744	41.990	38.000
(b) Livestock Population per Stockman Centre (in '000)	21.960	21.960	21.800
<i>II. Breeding Facilities :</i>			
(a) Cows (% of Coverage of breedable population).	47.75	49.93	54.55
(b) Buffaloes.	40.62	42.03	49.69
(c) Sheep.	43.59	47.06	53.64
(d) Goat.	11.48	13.49	25.00
(e) Pigs.	9.52	9.98	16.78

1.6.37. *Strategy and Approach of 1978-83 Plan*—The main objectives in the 1978-83 Five-Year Plan would be in consonance with the directives and policies laid down at the national level viz. to improve the status of economically backward and weaker sections of society, to generate employment opportunities, to remove regional imbalances and to increase production of livestock products-like milk, eggs and wool etc.

1.6.38. To achieve these objectives the strategy and approach would be to take up cross breeding on a large scale in order to produce large number of cross-bred cattle for increased milk-production and for better returns to cattle owners; to replace the less productive livestock with improved breeds by providing increased breeding facilities and adequate health cover; to increase the wool and mutton production by bringing a change in the genetic qualities of the existing sheep by massive cross-breeding facilities with exotic breeds well known for their wool quality and quantity and to bring about a

substantial increase in the production of feeds and fodder particularly green fodder. Programmes for sheep, goat, pig, poultry production as well as rearing of cross-bred heifers by economically weaker sections including tribals would also be taken up.

1.6.39. The programmes to be taken up during 1978-83 Plan to fulfill the above objectives would be as follows:

1.6.40. *Cattle Development*—The Animal Husbandry Department would take care of the breeding facilities in 26 districts of the State. In addition to this, of the remaining 30 districts 21 districts which are proposed to be covered under programme "Operation Flood II" inputs would be provided out of the above programme in close co-ordination with the Dairy Department. Similarly, in another 9 districts the intensive breeding services would be provided at the door of the farmers out of the funds allocated to Dairy Department in close liaison with Animal Husbandry Department. Therefore, no additional inputs are being pro-

posed under the Animal Husbandry sector for these 30 districts in order to avoid any duplication in inputs and to ensure smooth and efficient operation of various projects and programmes in both the sectors associated with cattle development and milk production.

1.6.41. The basic programme of the department would be to produce cross-breed cattle by extending A. I. facilities. The stress would be to gradually replace the use of liquid Semen by the deep frozen semen which would remove the present difficulty of preservation of semen over a longer period and the constraint of availability of exotic and cross-bred bulls. To achieve this objective 330 additional frozen semen centres would be established and new A. I. Centres for use of frozen semen are also proposed to be established in various regions particularly in the potential pockets where there are facilities of green fodder as well as marketing of milk.

1.6.42. The existing policy of up-grading buffaloes with Murrah breed with liquid semen would continue as a part of the breeding programmes by the department. Areas where A. I. is not feasible like Hill Region, natural breeding facilities would be provided on an extensive basis to cover rural areas in deep interior.

1.6.43. The cross-bred cattle (heifers) owned by the economically weaker sections of society would be given subsidy for feeding of concentrates as is done in S. F. D. A. Districts. The programme would be extended as far as possible, on similar lines, to other districts not covered by S. F. D. A. programme.

1.6.44. To meet the requirements of exotic bulls two Exotic Cattle Breeding Farms which are under the process of establishment in Fifth Plan would be completed. The Bhadawari Buffalo, well-known for its very high fat content in milk, would be developed in its native place of Etawah district for which a new Buffalo Breeding Farm would be established during 1978-83 Plan. The Livestock Farms would be suitably strengthened by providing additional irrigation facilities, machinery, equipments buildings, staff and breeding animals.

1.6.45. *Feeds and Fodder*—The objective is to induce farmers to adopt fodder crops in their cropping scheme and to make them self-sufficient in green fodder. To make available foundation seed of improved varieties, two Seed Multiplication and Production Farms are also proposed to be established. The improved variety of fodder seed after its multiplication at the State Livestock Farms would be distributed to farmers for further multiplication. To give incentives to farmers for marketing their surplus seed a revolving fund would be created at the regional level for the purchases of locally available fodder seed.

1.6.46. Grazing ground for sheep in particular and other livestock in general is gradually shrinking because of afforestation, restriction in new forests and extension of area under cultivation. This is an acute problem in the Hills. This shortage of fodder in Hills is proposed to be overcome by large scale plantation of fodder trees by Forest Department under Triple Forestry Programme.

1.6.47. *Poultry*—The broad objectives would be to make available birds of improved strains with high laying averages to farmers. Approach would be to re-organise the 3 State Poultry Farms as Zonal Poultry Farms where scientific poultry breeding and multiplication work would be taken up to evolve and produce chicks and birds of better quality by introduction of new strains from the All India Co-ordinated programme, Veterinary College, Mathura. Similarly, selected poultry Farms would be upgraded to meet the local requirement of chicks and to avoid difficulty of transit losses of chicks and make them useful to meet future requirements of various special programmes like S. F. D. A. /D. P. A. P. /other Area Development Programmes. Thus the strength of layers at State Poultry Farms would be increased from 24,400 to 40,400 layers and nearly 20 lakhs chicks would be produced at the end of 1982-83.

1.6.48. The intensive programme of poultry development in Fifth Plan was taken up in and around big cities and towns where markets were readily available. In the 1978-83 Plan the approach would be to develop poultry in densely poultry populated districts /areas of State

on compact area approach and efforts would be made to take the programme to rural masses with Backward poultry units of 50–100 layers.

1.6.49. Necessary facilities of training, supply of chicks, health cover and marketing would be provided, as far as possible at the door of farmers. It is proposed to establish marketing and poultry service centres in selected areas on pilot basis.

1.6.50. *Animal Health*—The Veterinary Aid and animal health cover is proposed to be provided at the farmers door through Project "Operation Flood II" in 21 districts and through the Dairy Department in 9 districts. Therefore, out of 56 districts of the State in these 30 districts normal existing facilities of veterinary aid and disease control would be continued and no new inputs are proposed. For the remaining 26 districts strengthening of existing facilities is proposed.

1.6.51. The National Commission on Agriculture has recommended one Veterinary Hospital for every 25,000 Cattle whereas at present there is one hospital for every 40-42 thousand cattle. The broad strategy in the 1978–83 Plan would be to extend the facilities of Veterinary aid by increasing the number of Veterinary Institutions like Veterinary Hospitals Stockman centres etc. to increase the coverage. With additional inputs proposed during the 1978–83 Plan livestock coverage per Veterinary Hospital in different regions of the State would be approximately 32,000 to 39,000 (average 38,000) as compared to 40.42 thousands at present.

1.6.52. Except in case of sheep not much has been done to control the parasitic infestation of other livestock, particularly cattle and more so in Hills. Therefore, parasitic control programme would be expanded and intensified to cover other livestock species particularly cattle. Each district is proposed to be provided with a disease surveillance and control unit manned by experienced veterinarians to cater to the parasitic disease control programme.

1.6.53. To strengthen the implementation of the programme of disease control, it is also proposed to train a number of persons as "Vaccinators". Such vaccinators will be attached to each Veterinary

Hospital according to volume of work and would be allocated specified areas where programme of vaccination against the major contagious diseases would be taken up round the year. The existing infrastructure in the State is too meagre and inadequate to execute this ambitious programme of disease control at all levels particularly in rural areas where the demand of vaccination and disease control is always there and this is more acute during floods and other natural calamities. These vaccinators can also be utilized for other services. This would also create additional job opportunities for educated unemployed in the rural areas.

1.6.54. The disease control programme would require adequate support of different kinds of vaccines for which the present Biological Products Section is proposed to be further strengthened.

1.6.55. *Sheep*—It is proposed to extend the coverage of cross-breeding with exotic breeds to 100 per cent of the breedable sheep population in Hills and upgrade sheep in plains with the best strain of Rajasthani breeds during 1978–83 Plan. The large size exotic sheep-breeding farm in Varanasi is likely to be completed during 1978–83 Plan and cross-bred and exotic rams would become available from this farm in good number for undertaking the cross-breeding of sheep in the plains and particularly so in the Eastern and Bundelkhand districts. Intensive inputs in 11 selected districts of plains which have not been covered so far under intensive sheep development programme would be made available on a compact area approach basis. The capacity of existing Sheep Farms is also proposed to be increased by providing more facilities of housing, land development, water, electricity etc. and the cross-bred sheep maintained at the State Farms would be gradually replaced with pure exotic breeds. This would broaden the base for production of exotic rams for extensive crossbreeding work. The shortage of exotic rams after taking into consideration the availability in the State would be made good through imports.

1.6.56. Disease investigation services for sheep diseases is very limited at present and efforts will be made to strengthen the health coverage of sheep population.

1.6.57. Migratory sheep constitute a substantial number of the total sheep population and have their own problems of management ; breeding and health cover during migration. Nothing has so far been done in this direction. In order to look after the health cover and to provide the breeding facilities to migratory sheep flocks it is proposed to establish mobile squads in plains as well as in hills with adequate provision of staff, equipment and medicines etc.

1.6.58. The extension of pastures, fodder crops and grasses suitable for different altitudes of hills requires proper research. The little work done so far has been confined to the Research Laboratories and a stage has now come to take up field trials at different altitudes and under agro-climatic conditions. It is proposed to take up this work at Zonal Research Substation at Central Sheep and Wool Research Station, Rishikesh, district Dehra Dun. The Indian Grassland Institute, Jhansi has also been requested to explore possibilities of setting up a substation in the Hills. The Forest Department has also been requested to take up more research work at their level as they have available expertise about fodder trees and grasses and pasture development with them. The production of "Pashmina" has not been tried so far in this State which would be worth a trial in U. P. Hills. A Pilot Project has been proposed to take up "Pashmina" Goat breeding in Hills.

1.6.59. Pig—Pig Development is a good base for improving the lot of economically weaker sections of the society and can also be a part of mixed farming, but the availability of quality pigs is very limited. The Piggery programmes are also likely to become one of the major programmes of "Antodya" programme. Therefore, the State needs to have a sound base of pig breeding to meet the requirement of improved pigs and piglets. It is, therefore, proposed to extend and strengthen the two pig breeding Farms at Aligarh and Arazilines, Varanasi and to extend such units to other Farms, if possible and if the demand increases.

1.6.60. Little work has been done in piggery in Hills but there is good demand and scope for pigs in Tarai and Bhabbar

belt. A Piggery Unit is, therefore, proposed to be established in Tarai Region on a Pilot Basis.

Miscellaneous

1.6.61. Various animal husbandry development programmes lack proper publicity due to which motivation and awareness of people toward livestock enterprises is far from the desired level. It is proposed to remove these difficulties in the 1978—83 plan by extension of the publicity wing of the department both in the Plains and Hills.

1.1.62. Carcass Utilisation is an important programme more so in the interest of public health and socio-economic gains. Besides this, it also recovers a good part of the waste material. Except for the three Urban Carcass Utilisation Centres working in the State, the programme of taking up this work through Flayers Co-operative Societies has not been successful. Most of the societies have suffered due to lack of resources and inputs as well as due to apathy of the members. The carcass utilisation centres are in bad shape and need to be remodelled and modernised. The co-operative societies would require to be revived of new societies would be organised for this work.

1.6.63. Mule as a pack animal is popular in the Hills. It is proposed to expand the Horse and Mule Breeding Centre at Rishikesh, district Dehra Dun to produce more stallions for breeding.

1.6.64. The Livestock Marketing Cell of the Department is very meagre. Since programmes of Eggs and Wool Marketing through Co-operative is envisaged in the 1978—83 Plan proper strengthening of this Cell would be required to take-up effectively the programmes envisaged.

1.6.65. *Requirement of Area Development Programmes*—Area Development Programmes like Small Farmers Development Agency, Drought Prone Area Programme and Command Area Development Programme have their own targets for animal husbandry activities. Except for C. A. D., the other two programmes have common and identical schemes i.e. purchase of milch cattle, establishment of poultry units, rearing of sheep and pigs by farmers with financial assistance from agencies and banks. Both of these programmes depend on the basic infrastructure of the Department to provide health cover, breeding

facilities etc. Though no projections for the 1978-83 Plan have become available from these agencies but a provision has been kept in the Plan to meet their demands. As regards C. A. D., the programmes are yet to be identified and would be taken care of on finalization of the same.

1.6.66. *Employment Generation*—As a result of implementation of proposal for the 1978-83 Five-Year Plan, direct em-

ployment for 9,027 persons would be generated.

1.6.67. The National Commission on Agriculture has indicated norms to estimate employment potential of various livestock enterprises. According to the norms fixed by N. C. A. the estimated labour force projected for 1978-83 Plan would be as follows :

TABLE X—*Projected employment potential in Animal Husbandry sector during 1978-83 Five-Year Plan*

Serial no.	Category of Live-stock	1978-79		1982-83	
		Live-stock Population	Employment (man years)	Live-stock population	Employment (man years)
1	2	3	4	5	6
1	Cattle	267.12	26.60	270.12	29.19
2	Buffaloes	138.57	12.40	146.35	13.69
3	Sheep	19.56	0.67	19.56	0.72
4	Goat	65.62	0.98	65.62	1.09
5	Pigs ¹	14.48	0.40	15.40	0.45
6	Equines and Camels	2.85	2.85	2.83	2.88
Total, Live stock.		508.20	43.90	519.98	48.02
Poultry... .. .		40.75	0.41	41.70	0.28
Total Livestock and poultry.		548.95	44.31	561.63	48.30

1.6.68. It would be observed that the labour force that would be engaged in animal husbandry pursuits in 1978-79 will be about 44.31 lakhs man-years whereas by

the end of 1982-83 it would increase to 48.30 lakhs man-year. Thus the additional employment generation will be in the order of 4 lakh man-years.

TABLE XI—*Anticipated employment generation in rearing of milch cattle alongwith young stock*

Category	1978-79		1982-88	
	Population (in lakh)	Man-years (in lakh)	Population (in lakh)	Man-years (in lakh)
1	2	3	4	5
<i>Adult</i>				
Improved	40.95	8.19	54.37	10.87
Cross bred	0.13	0.04	2.21	0.74
N.D.	168.26	16.83	155.80	15.58
Total	209.34	..	212.38	..
<i>Young stock</i>				
Improved	11.30	0.38	39.24	1.31
Cross bred	0.03	0.00	5.61	0.37
N.D.	46.46	1.16	12.94	0.32
Total .. .. .	..	26.60	..	29.19

Additional employment generation will be about 2.59 lakhs man years.

NOTES—(1) Cattle population in 1978-79 and 1982-83 was linearly projected on the basis of increase/decrease in cattle population in 1972 over 1966, keeping the number constant where there was a decrease.

(2) Number of improved and cross breed animals was worked out on the basis of following breeding norms.

TABLE XII—Breeding Norms

Items	For A. I.		For N. S.	
	Cows	Buffaloes	Cows	Buffaloes
1	2	3	4	5
1. Insemination services per bull	1,000	1,000	100	100
2 Number conceived	400 (40%)	300 (30%)	60 (60%)	60 (60%)
3 Involuntary losses	40 (10%)	90 (30%)	6 (10%)	18 (60%)
4 Total calves born	360	210	54	42
5 Female calves	180	105	27	21
6 Voluntary losses	20 (10%)	15 (15%)	3 (10%)	2 (10%)
7 Mature heifers	160	90	24	19

(3) Breed composition as observed in the Annual Survey conducted during the year 1974-75 was used for the distribution of the estimated population for 1978-79 and 1982-83.

(4) Man-years have been calculated as per norms laid down by the National Commission on Agriculture which are reproduced below :

Cattle	Number of animals for full time employment of a person		
	Improved	Cross-breed	Non-descript
Adult	5	3	10
Young stock	30	15	40

1.6.69. *Proposed 1978-83 Plan outlay*—An outlay of Rs.20 crores, including Rs.6.25 crores for Hills, has been allocated for the 1978-83 Five-Year Plan, which is nearly three times the outlay of the Fifth Plan (1974-75 to 1978-79) of Rs.7.63 crores (including Rs.2.72 crores for hills).

The outlay of Rs.20.47 crores is inclusive of Rs.2.72 crores outlay for 1978-79. Thus Rs.17.28 crores would be virtually available for the next 4 years of the 1978-83 Plan.

1.6.70. The projects, which were initiated during Fifth Plan period, but due to various reasons could not be completed, would be given priority during 1978-83 Plan, so that their impact is fully reflected on production. The programmes, which have been approved and have been implemented in Fifth Plan and on account of their being great utility, are proposed to

be continued with additional inputs during the 1978-83 Plan. Thus the two categories of programmes would require a part of the outlay, and the balance would be utilized to initiate new projects/programmes. The approximate break-up of outlay for the aforesaid three categories of programmes would be as under :—

TABLE XIII—Category-wise outlays (Lakh rupees)

Category	Proposed Outlay (1978-83)
1	2
1. Projects initiated in Fifth Plan and to be completed in 1978-83 Plan	421.93
2. On going projects/programmes of Fifth Plan to be continued with additional inputs.	277.93
3. New projects/Programmes ..	1347.60
Total ..	2047.46

1.6.71. *Group-wise Allocation for 1978-83 Five-Year Plan*—Keeping the above in view, the programmes already being implemented, strategy laid down for the 1978-83 Plan, and future objectives, discussed here inafter, the proposed group-wise allocation of outlay within the sector is as follows :—

TABLE XIV—*Group-wise outlay*

Group	Allocation (Rs. in lakhs)	
	Fifth Plan 1978-83	Five Year Plan
1	2	3
(1) Veterinary Services Animal Health Education and Training	194.09	504.62
(2) Veterinary Research	0.46	5.00
(3) Investigation and Statistics	5.71	17.25
(4) Cattle Development	256.97	609.59
(5) Poultry Development	73.25	207.29
(6) Sheep and Wool Development	109.98	302.94
(7) Piggery Development	1.41	89.00
(8) Other Livestock Development	31.39	189.77
(9) Feeds and Fodder Development	85.56	119.94
(10) I. C. A. R.	4.18	2.06
Total	763.00	2047.46

1.6.72. *Region-wise Outlay*—The following table would show regional allocations :—

TABLE XV—*Region-wise Outlay*

Region	(Lakh Rupees)	
	Fifth Plan allocation	1978-83 Five-year allocation
1	2	3
1 Hill	271.16	631.15
2 Eastern	202.56	437.40
3 Western	96.02	385.50
4 Central	100.51	452.04
5 Bundelkhand	39.16	120.47
Sub-Total	709.41	2026.56
Indivisible	53.59	20.90
Grand Total	763.00	2047.46

1.6.73. From the above table it would be seen that though apparently allocations for Bundelkhand appear very low but since it comprises of only 5 districts out of 56 of the State. Besides comparative increase in outlay for Bundelkhand is the highest viz., about $5\frac{1}{2}$ times as compared to other regions. Advantage of higher allocations for Bundelkhand would be taken for intensifying programme of sheep development and cattle development for which there is ample scope.

1.6.74. Inputs in Western Region has been of low order during Fifth Plan due to the fact that major part of resources in the Fourth Plan period have been provided in that region and it was considered justifiable to provide more inputs in other backward regions. But the fact remains that this region has the best potential for livestock development of all species except sheep. Quite a substantial number of institutions are in western region which has maximum number of A. I. Centre, I. C. D. Ps., I. P. D. Ps. 1978-83 plan some investment is necessary to improve the infra-structure existing in that region so that it may be possible to support development activities in other regions.

1.6.75. *Annual Plan 1979-80*—The proposed outlay for 1979-80 annual plan is Rs.3.95 crores. The programme-wise break-up of this proposed outlay is given below :—

TABLE XVI—*Outlay for 1979-80*
(Rupees in lakhs)

Serial no.	Programme	Proposed outlay
1	2	3
(1)	Veterinary Services animal Health and Education	46.43
(2)	Investigation and Statistics	3.29
(3)	Cattle Development	157.88

1	2	3
(4)	Poultry Development	21.91
(5)	Sheep and Wool Development	56.16
(6)	Piggery Development	10.95
(7)	Other Live-stock Development	41.06
(8)	Fodder Development	22.22
(9)	Assistance to I.C.A.R	0.45
	Total	360.35

1.6.76. *Physical Targets for 1979-80*—The proposed main targets for 1979-80 are given below :—

TABLE XVII—*Physical Targets for Annual Plan 1979-80*

Serial no.	Item	Target (Number)
1	2	3
(1)	New Veterinary hospitals	35
(2)	Provincialization of Veterinary Hospitals.	8
(3)	Provision of medicines for A.B.C. Class Veterinary hospitals.	1128
(4)	Provision of medicine for Zila Parishad Veterinary hospitals.	138
(5)	Polyclinic	1
(6)	Additional Functionaries	50
(7)	Checkpost	5
(8)	Vigilence Unit	5
(9)	Honorary Vaccinators	17500
(10)	Establishment of laboratories	2
(11)	Poultry Breeding Farms	3
(12)	Intensive Egg and Poultry Production-cum-Marketing Centres.	3
(13)	Sheep Development in hills	115 (Exotic Sheep).

SCHEME WISE OUTLAYS

*Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES**Sub-major Head of Development—1.05—Animal Husbandry*

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure.	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				(Total Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
<i>Direction and Administration</i>						
I—Veterinary Services Animal Health and Education		0.02	..	26.21	—	—
A—CONTINUING SCHEME						
1	Establishment of New Veterinary Hospitals and stockmen centres	23.77	14.21	28.72	..	..
2	Provision of additional facilities to the existing institutions.	2.15	..	1.30	0.60	..
3	Provincialization of Veterinary Hospitals run by local bodies.	6.73	3.73	3.33	..	..
4	Provision of additional medicines and equipment to Veterinary Hospitals.	33.21	9.46	6.00	..	..
5	Provision of Dressers at 'A' Class Veterinary Dispensaries.	12.87	6.12	5.78	..	..
6	Vigilance units and checkposts ..	26.68	10.13	10.50	..	..
7	Scheme for control of lung Worm disease in Sheep.	0.33	0.05	0.10	..	..
8	Measures for effective treatment and control of Cattle disease.	3.52	3.50	4.33	4.33	..
9	Scheme for Foot and Mouth Disease (State Share).	10.07	6.17	6.94	..	..
10	Scheme for Improvement and expansion of Biological Product Section (State Share).	5.18	3.40	7.81	0.50	..
11	Provision of vaccine for flood effected areas ..	3.00	..	..	..	..
12	Construction of Veterinary Hospitals and buildings for stockmen centres in Etawah.	1.46	1.46	1.49	1.49	..
13.	Electrification of Veterinary Hospitals ..	0.38	0.38	..	..	..
14	Rinderpest Surveillance and containment programme (State Share).	0.02	0.08	0.47	..	..
15	Scheme for mass Drenching of Sheep ..	4.34	1.23	1.25	..	..
16	Training in Sheep and goat husbandry at Pashulok (Dehra Dun).	3.54	0.47	2.48	2.00	..
Total 'A' ..		137.25	60.39	80.50	8.92	..

AND EXPENDITURE

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
28.72	20.27	..	..	..	..	..	..	..
1.30	0.70	..	..	..	..	..	..	..
3.33	5.50	..	..	..	..	..	..	..
6.00	47.21*	..	..	..	..	..	..	..
5.78	6.63	..	..	..	..	..	..	..
10.50	10.65	..	..	..	..	..	..	..
0.10	0.10	..	..	..	..	..	..	..
4.33	4.33	..	..	..	..	..	..	..
1.60	4.27	1.33	..	..	0.10	1.34	1.33	1.34
7.13	6.29	0.68	..	0.68	..	..	..	..
..
1.49	1.49	..	..	..	..	..	..	..
..
0.09	0.09	0.09	..	..	..	0.09	0.10	0.10
1.25	1.25	..	..	..	..	..	..	..
2.48	2.63	..	..	..	..	..	..	..
74.10	111.41	2.10	..	0.68	0.10	1.43	1.43	1.44

Rs.39.75 lakhs sanctioned last year through Governor's Contingency Fund adjusted during 1978-79.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan	1977-78	Five Year Plan 1978-83		
		(1974-78) Actual Expendi- ture	Actual Expendi- ture	Total (Col. 8+ 10+14+ 15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
17	Establishment of new Preliminary Hospitals and stockmen centres in the State.					
	(a) Establishment of New Veterinary Hospitals.	..	..	63.00	..	..
	(b) Establishment of New Veterinary Stockmen centre	..	..	8.69	..	..
18	Additional facilities to existing veterinary Hospitals and stockmen centres					
	(a) Additional Medicine and equipment to existing 'A' 'B' 'C' Class Veterinary Hospitals.	..	..	47.84	..	..
	(b) Provision of Additional medicines to Veterinary Hospitals run by local Bodies.	..	..	2.94	..	..
19	Provincialization of Veterinary Hospitals run by Local Bodies.	..	..	7.24	..	..
20	Provision of Honorary vaccinator at 10-12 Gram Sabhas in the State.	..	..	64.50	..	..
21	Establishment of Survey teams at selected Districts in the State, for the control of parasitic infestation and disease control programme.	..	..	57.26	..	..
22	Establishment of New Disease control laboratory at Headquarters, Lucknow and expansion and improvement of circle laboratory in the State.	..	..	50.34	10.00	..
23	Provision of Additional functioneries at Veterinary Hospitals.	..	..	22.53	..	..
24	Scheme for establishment of Regional Polyclinics in the State.	..	..	58.75	9.00	..
25	Construction of Building for veterinary Institutions.	..	..	8.80	8.80	..
26	Scheme for Expansion and Reorganisation of Biological Product Section.	..	..	16.03	5.02	2.20
27	Inservice Training in A.I. Technique Feeds and Fodder.	..	..	4.97	..	..
28	Training in Sheep Husbandry at Pashulok (DehraDun).	..	..	5.16	1.50	..
29	Strengthening of existing Poultry	..	..	6.07	2.00	..
30	Training Centre at Chak Ganjarja, Lucknow	..	..	..	..	..
	Total B	..	..	424.12	36.32	2.20
	Total (1)	137.25	60.39	504.62	45.24	2.20

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	3.96	..	..	1.53	11.06	19.69	23.29
..	..	1.14	..	..	..	2.17	2.77	2.61
..	..	11.96	..	..	1.44	11.96	11.96	11.96
..	..	0.74	..	..	..	0.73	0.73	0.74
..	..	0.65	..	..	0.32	1.55	2.20	2.84
..	5.16	23.22	36.12
..	10.19	19.11	27.96
..	..	10.65	..	0.10	0.75	10.13	16.90	12.66
..	..	0.57	..	..	0.09	3.93	7.32	10.71
..	..	9.09	..	0.08	..	16.16	17.46	16.04
..	..	2.20	..	2.20	0.74	2.20	2.20	2.20
..	..	0.52	..	0.25	..	4.50	8.01	3.00
..	..	1.64	..	..	..	1.00	1.09	1.24
..	..	0.69	..	0.23	0.69	2.20	1.10	1.17
..	..	0.52	..	0.30	..	3.26	1.13	1.16
..
..	..	44.33	..	3.16	5.56	86.20	134.89	158.70
74.10	111.41	46.43	..	3.84	5.66	87.63	136.32	160.14

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(II) Veterinary Research						
A—CONTINUING SCHEME						
31	Strengthening of the Headquarters of the Livestock Station, U.P., Mathura and its Research Station.	5.67	5.39	5.00	..	..
32	New State Research Scheme ..	0.15	..	..	..	..
Total, (II) ..		5.82	5.39	5.00	..	..
(III) Investigation and Statistics						
A—CONTINUING SCHEME						
33	Strengthening of Annual Survey Scheme so as to get Division-wise estimates of each type of livestock products viz., milk, eggs, meat, wools, skins etc.	1.84	2.20	12.87	..	..
Total A ..		1.84	2.20	12.87	..	..
B—NEW SCHEMES						
34	Estimates of Structure and indices of the cost Production of Livestock Products.	..	..	4.38	..	..
Total B ..		..	..	4.38	..	..
Total, (III) ..		1.84	2.20	17.25	..	..
(IV) Cattle Development:						
A—Continuing Scheme.						
35	Establishment of Deep Frozen Semen Centre at Chak-Ganjaria, Lucknow.	6.51	0.69	6.60	..	2.78
36	Additional requirement and expansion of existing Livestock Farm.	11.78	1.43	9.18	9.18	..
37	Establishment of Intensive Cattle Development project under Milk-shed area.	17.49	10.95	21.78	..	..
38	Provision of additional supervisory staff at the Headquarter.					
39	Gaushala Development	0.90	0.42	0.36	..	..
40	Purchase of stud bulls.	10.33	1.68	2.00	..	..
41	Provision of Additional facilities and Expansion of A.I. Programme.	5.99	1.52	3.58	..	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
5.00	5.00	..	..	..	..	..	..	..
..
5.00	5.00	..	..	..	..	..	..	..
1.77	2.04	2.33	..	..	0.27	2.68	2.92	3.22
1.77	2.04	2.33	..	..	0.27	2.63	2.92	3.22
..	..	0.96	..	..	..	1.10	1.14	1.18
..	..	0.96	..	..	..	1.10	1.14	1.18
1.77	2.04	3.29	..	..	0.27	3.73	4.06	4.40
6.60	0.83	..	..	..	..	..	..	..
9.18	9.18	..	..	..	..	..	..	..
21.78	20.42	..	..	..	..	..	..	..
0.36	0.36	..	..	..	..	..	..	..
2.00	2.00	..	..	..	..	..	..	..
3.58	3.36	..	..	..	..	..	..	..

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandary—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
42	Re-organisation and expansion of A.I. Programme under Indo-German Project Almora.	2.42	0.66	0.65	..	..
43	Establishment of Brown Swiss Cattle Breeding Research Station with Deep Frozen lab. under Indo-German Project Almora.	6.53	1.09	5.52	..	..
44	Establishment of Natural Cattle Breeding Centres.	5.14	1.54	1.53	..	..
45	Provision for Gandak, Ram Ganga and Sharda Sahayak Projects.	0.79	0.21	0.30	..	..
46	Assistance to Small/Marginal Farmers and Agricultural labourers for rearing of cross-bred heifers. (Hills).	0.70	..	6.86	..	..
47	Establishment of Exotic Cattle Breeding Farm (Hills).	12.03	0.39	45.34	10.15	8.20
48	Intensive Cross-breeding programme around Agricultural Institutions.	2.30	0.85	0.90	..	..
49	Prayag Chitrakut Godhan Vikas Nigam, Karvi, Banda.	44.00	..	..	..	..
50	Provision of Deep Frozen Semen facilities at Existing Semen Collection Station Muzzafer-nagar.	0.14	0.14	..	..	..
51	Establishment of Deep Frozen Station Dehra Dun.	10.76	11.06	51.79	7.50	21.34
52	Scheme for Cattle Development in Pithoragarh and Nani Tal District, through Deep Frozen Semen.	3.38	..	8.05	1.30	..
53	Establishment of Semen Collection Station at Fatehpur and Etawah District under A.I. Programme.	..	..	18.90	6.30	..
54	Establishment of Bhadawari Buffalo Breeding Station in Etawah.	..	..	22.58	6.09	..
55	Establishment of Bhadawari Buffalo Farm in Etawah.	..	..	..	..	..
56	Provision of Additional infrastructure under S.F.D.A.	4.82	..	4.47	..	..
57	Assistance to Small/Marginal Farmers and Agricultural Labourers, for rearing of cross-bred heifers (State Share).	10.19	21.24	50.00	..	..
58	Dairy Development programme in hill districts.	..	..	2.00	..	..
Total A		156.20	53.87	262.39	40.52	32.32

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
0.65	0.65	..	..	..	..	..	..	..
1.07	1.07	1.02	..	..	1.02	1.09	1.14	1.20
1.53	1.61	..	..	..	..	..	..	..
0.30	0.28	..	..	..	..	..	..	..
1.28	1.28	1.38	..	..	1.38	1.40	1.40	1.40
5.30	13.65	14.72	..	1.52	14.72	8.50	8.24	8.58
0.90	0.86	..	..	..	..	..	..	..
..
..	0.59	..	..	..	..	..	..	..
14.13	9.10	32.41	..	1.13	32.41	2.83	1.21	1.21
2.55	5.58	1.30	..	0.20	1.30	1.35	1.40	1.45
6.49	6.49	4.30	..	0.94	..	4.67	1.89	1.55
0.26	0.26	8.64	..	0.91	..	8.48	1.47	1.68
2.05	2.05							
4.47	9.30	..	..	..	..	..	..	..
10.38	21.38	9.30	..	..	..	9.65	9.90	10.77
2.00	..	..	..	..	..	..	..	..
96.86	110.30	73.07	..	4.70	50.83	37.97	26.65	27.84

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—New Schemes						
59	Strengthening of Deep Frozen Semen Station Chak-Ganjaria Lucknow and expansion in different districts of State.	..	..	41.63	5.80	22.18
60	<i>Scheme for expansion of breeding facilities around agricultural institutions :</i>					
	(a) Establishment of Semen Collection Station.	..	..	25.10	10.20	..
	(b) Establishment of hundred A. I. Sub-Centres.	..	..	4.25	..	..
61	Strengthening of A.I. Institutions in the State	..	..	78.90	..	..
62	Provision of Supervisory staff at Directorate Level for cattle development.	..	..	4.67	..	..
63	Scheme for rearing of bull calves at State Livestock Farm for breeding.	..	..	17.76	1.25	..
64	Establishment of natural Cattle Breeding Centres in hill districts.	..	..	26.28	..	..
65	Strengthening of buffalo breeding facilities in the State.	..	..	14.35	5.00	..
66	Scheme for additional facilities to existing intensive Cattle Development project.	..	..	16.26	7.85	..
67	Scheme for strengthening and expansion of Deep Frozen Semen facilities in hill districts.	..	..	41.96	6.00	6.00
68	Additional facilities to Goshalas	..	..	4.64	..	..
69	Assistance to small/Marginal Farmers and Agricultural labourers for rearing of cross-bred heifer (Plain).	..	..	11.58	..	..
70	Additional requirement and expansion of existing Livestock Farm.	..	..	32.82	12.79	..
71	Purchase of stud bulls.	..	..	27.00	..	..
	Total-B	..	..	347.20	48.89	28.18
	TOTAL, (IV) ..	156.20	53.87	609.59	89.41	60.59

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
..	..	12.50	6.40	0.87	..	13.68	7.47	7.98
..	..	2.87	..	1.53	..	5.30	7.94	8.99
..	..	0.87	..	..	..	1.00	1.13	1.25
..	..	16.53	..	..	..	20.93	25.32	16.12
..	..	1.27	..	..	..	1.10	1.13	1.17
..	..	4.37	..	0.19	..	4.45	4.47	4.47
..	..	3.60	..	..	3.60	6.44	8.24	8.00
..	..	4.55	..	0.75	..	5.60	2.10	2.10
..	..	2.40	..	1.17	1.63	8.36	3.12	2.38
..	..	8.84	3.00	0.90	8.84	23.23	4.84	5.05
..	..	1.16	..	..	0.06	1.16	1.16	1.16
..	..	0.55	..	..	..	1.50	3.26	6.27
..	..	18.35	..	1.92	1.46	8.45	3.07	2.95
..	..	6.95	..	..	0.95	6.95	6.95	6.15
..	..	84.81	9.40	7.33	16.54	108.15	80.20	74.04
96.86	110.30	157.88	9.40	12.03	67.37	146.12	106.85	101.88

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(V) Poultry Development						
A—CONTINUING SCHEME						
72	Expansion of existing Poultry Farms and Establishment of new Chick Rearing Centres.	2.94	0.754	2.54	1.08	..
73	Establishment of Intensive Poultry Development Project.	2.71	0.901	1.53	..	..
74	Applied Nutrition Poultry Production Programme in collaboration with UNICEF.	9.03	2.979	3.00	..	..
75	Subsidy on transportation of Poultry Feed in hill districts.	7.21	2.735	3.00	..	..
76	International Labour Organisation Poultry Farming Project, Phulpur (Allahabad).	2.96	1.000	1.00	..	..
77	Expansion of Existing Poultry Farms and Establishment of new Farms in Hills.	5.84	1.336	1.83	..	..
78	Construction of Poultry Farm Building at Gopeshwar Chamoli).	1.30	..	1.00	1.00	..
79	Establishment of Duck Breeding Farm in Hills.	..	..	1.90	0.50	..
80	Establishment of Turkey Breeding Farm in Hills.	..	..	2.56	0.50	..
Total (A) ..		31.99	9.70	18.36	3.08	..
B—NEW SCHEME						
81	Scheme for establishment of 3 Zonal Farms and expansion of existing Farms.	..	..	74.00	40.65	..
82	Scheme for Poultry Production and Development Programme in the State.	..	..	58.09	13.54	..
83	Scheme for Strengthening and expansion of existing nutrition laboratories (Chak Ganjaria, Lucknow and Pashulok).	..	..	4.39	1.76	..
84	Scheme for establishment of new Poultry Farms and expansion of existing Poultry Farms in the Hills.	..	..	23.95	12.40	..
85	Scheme for Poultry Development for tribal areas in the State.	..	..	4.50	..	..
86	Scheme for Applied Nutrition Poultry Production Programme in collaboration with UNICEF.	..	..	16.00	..	..
87	Scheme for Subsidy on Transportation of Poultry Feed in hill district.	..	..	8.00	..	..
Total B ..		..	..	188.93	68.35	..
Total V		31.99	9.70	207.29	71.43	..

(Rupees in lakhs)

1978-79		1979-83			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
2.54	2.44	..	..	..	..	..	..	..
1.53	0.99	..	..	..	..	..	..	..
3.00	3.00	..	..	..	..	..	..	..
3.00	3.00	..	..	..	..	..	..	..
1.00	1.00	..	..	..	..	..	..	..
1.83	1.83	..	..	..	..	..	..	..
1.00	1.00	..	..	..	..	..	..	..
1.90	..	..	..	..	..	..	..	..
2.56	..	..	..	..	..	..	..	..
18.36	13.26	..	..	..	..	..	..	..
..	..	4.10	..	3.15	..	17.75	25.58	26.57
..	..	7.00	..	2.03	2.16	18.30	18.58	14.21
..	..	0.76	..	0.26	0.32	1.81	1.16	0.66
..	..	3.67	..	1.86	3.67	8.64	6.73	4.91
..	..	0.38	..	..	1.25	0.75	1.50	1.87
..	..	4.00	..	..	0.40	4.00	4.00	4.00
..	..	2.00	..	..	2.00	2.00	2.00	2.00
..	..	21.91	..	7.30	8.80	53.25	59.55	54.22
18.36	13.26	21.91	..	7.30	8.80	53.25	59.55	54.22

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(VI) Sheep and Wool Development—						
A—CONTINUING SCHEME—						
88	Improvement and Expansion of existing sheep institutions and Establishment of new Sheep and Wool Extension Centres.	8.14	0.15	5.89	4.59	..
89	Scheme for purchase and distribution of Rams.	3.82	2.90	2.90	..	..
90	Scheme for financing sheep rearing through institutional financing agency.	..	..	0.01	..	..
91	Location of bucks at new Veterinary Hospitals at the rate of 2 bucks per hospital and 4 bucks instead of 25 bucks at 25 existing Veterinary Hospitals.	0.76	0.45	0.64	..	..
92	Scheme for purchase of bucks for distribution on contribution basis.	5.58	1.82	2.10	..	..
93	Establishment of Sheep Development in Hills	40.95	13.17	25.24	10.23	..
94	Rehabilitation of Villagers of Large Sheep Breeding Farm, Bhainsora (Varanasi) outside the limit of the Farms.	3.42	..	..	..	..
95	Provision of water facilities through Pump canal at Large Sheep Breeding Farm, Bhainsora (Varanasi).	12.20	8.57	..	..	..
96	Scheme for Sheep and Goat Rearing through A.N.P.	..	..	0.30	..	..
Total—A ..		79.87	27.06	37.08	14.82	..
B—NEW SCHEME—						
97	Scheme for Sheep and Wool Development in the Hills.	..	..	90.63	24.30	20.00
98	Ad-hoc facilities for Improvement of Central Sheep and Wool Research Farm Pashulok Rishikesh (Dehradun).	..	..	50.00	20.43	..
99	Establishment of Intensive Sheep Development Project in Plains.	..	..	32.55	..	..
100	Improvement and Expansion of existing Sheep institutions and Establishment of new Sheep and Wool Extension Centres.	..	..	10.84	6.50	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
5.89	6.20	..	..	..	..	..	..	..
2.90	2.90	..	..	..	..	..	..	..
0.01	..	..	..	..	..	..	..	..
0.64	0.64	..	..	..	..	..	..	..
2.10	2.10	..	..	..	..	..	..	..
25.24	26.05	..	..	..	..	..	..	..
..
..
0.30	..	..	..	..	..	..	..	..
37.08	37.89	..	..	..	..	..	..	..
..	..	25.63	12.00	3.60	25.63	37.65	15.23	12.12
..	..	10.31	..	3.00	10.31	17.59	15.50	6.60
..	..	2.29	..	..	..	7.92	10.89	11.45
..	..	1.41	..	1.00	..	4.50	3.50	1.43

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05 Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay			
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange	
1	2	3	4	5	6	7	
101	Scheme for establishment of Disease Control Units for sheep and goat of plain areas	..	..	7.23	2.00	..
102	Establishment of Pashmina Goat Research Units at Munshiari, Pithoragarh district on pilot basis.	..	..	6.04	2.50	..
103	Improvement and expansion of Angora Goat, Goat Breeding Farm, Gwaldom (Chamoli).	..	..	9.00	2.00	..
104	Scheme for location of Bucks at Sheep and Wool Extension Centres.	..	..	1.69	..	..
105	Establishment of Barbari Goat Breeding Farm in Agra and Sitapur district.	..	..	9.07	5.00	..
106	Improvement and expansion of Barbari Goat Breeding Farm, Laxmipur (Deoria).	..	..	4.45	2.00	..
107	Scheme for strengthening for Sheep and Goat Development Wool Marketing and intelligence organisation in the State.	..	..	9.65	4.00	..
108	Scheme for Mass Drenching of Sheep	..	..	10.03	..	..
109	Scheme for purchase and distribution of Rams	..	..	13.60	..	..
110	Location of bucks at New Veterinary Hospital at the rate of 2 bucks per hospital and 4 bucks instead of 2 bucks at 25 existing veterinary hospitals.	..	..	2.46	0.88	..
111	Scheme for purchase of bucks for distribution on contribution basis.	..	..	11.60	..	..
Total—(B)		..	..	265.86	69.61	20.00
Total—(vi)		..	79.87	27.06	302.94	84.43	20.00
(VII) Piggery Development							
(A) CONTINUING SCHEMES							
112	Location of Boars at Veterinary Hospitals	0.90	0.48	0.50	0.24	..	
113	Establishment of Pigg Breeding Farm in Tarai area of Naini Tal district.	..	..	2.25	..	..
114	Expansion and strengthening of pigg Breeding Station at Central Dairy Farm, Aligarh.	..	..	58.34	17.11	16.30
Total, (A)		0.90	0.48	61.09	17.35	16.30	

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Outlay	Anticipated Expenditure	Total	Foreign Exchange content of Total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..	..	1.11	..	0.30	..	1.33	2.17	2.62
..	..	1.11	..	0.30	1.11	1.78	1.55	1.60
..	..	3.00	..	0.30	3.00	1.00	1.00	1.00
..	..	0.13	..	..	..	0.33	0.52	0.71
..	..	0.50	..	0.50	..	3.50	3.25	1.84
..	..	0.75	..	0.30	..	2.40	0.92	0.38
..	..	0.84	..	0.30	..	3.74	3.52	1.55
..	..	2.50	..	..	0.87	2.51	2.51	2.51
..	..	3.40	..	..	..	3.40	3.40	3.40
..	..	0.43	..	0.13	..	0.55	0.68	0.80
..	..	2.75	..	..	0.20	2.95	2.95	2.95
..	..	56.16	12.00	9.73	41.12	91.15	67.59	50.96
37.08	37.89	56.16	12.00	9.73	41.12	91.15	67.59	50.96
0.50	0.50	..	..	..	..	..	..	..
2.25
5.00	..	7.86	4.00	2.57	..	14.85	16.16	14.47
7.75	0.50	7.86	4.00	2.57	..	14.85	16.16	14.47

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure.	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed		1978-83 outlay
				Total (Col. 8+10+14+15+16)	Capital		Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEME						
115	Location of Boars at Veterinary Hospital	..	..	8.54	5.64	..
116	Purchase and distribution of Boars ..	..	..	3.60	..	..
117	Improvement and expansion of pig Breeding Unit Arziline	..	..	5.30	2.50	..
118	Scheme for intensification of Piggery Programme in selected three districts.	..	..	5.23	..	..
119	Rehabilitation of Pig Unit Bin (Pithoragarh) in Tarai area of Nainital.	..	..	5.24	2.00	..
	Total, (B) ..	..	..	27.91	10.14	..
	Total, (vii) ..	0.90	0.48	89.00	27.49	16.30
(VIII) Other Livestock Development						
A—CONTINUED SCHEME						
120	Construction of Buildings (spill-over works of the IVth Plan).	22.39	..	3.36	3.36	..
121	Control of menace of stray and wild cattle	1.57	0.40	2.10	—	—
122	Intensive publicity of Animal Husbandry programmes in the State.	0.72	..	1.44	..	—
123	Modernisation of Carcass Utilizations Centre (Dehradun).	0.50	..	5.62	5.62	..
124	Provision of staff for Pauri Vikas Agency	2.25	0.81	0.81	..	..
125	Additional facilities such as Dry Rendering Plant at Bakshi-Ka-Talab, Lucknow.	1.46	..	..	..	..
126	Strengthening of Accounts Organisation of Animal Husbandry Department.	0.27	0.11	2.99	..	..
127	Establishment of a planning cell in Animal Husbandry Department.	..	..	0.25	0.25	..
128	Construction of D. L. O's residence Building at Gopeshwar (Chamoli).	0.60	..	..	..	..
129	Provision for the newly created District Division in the State.	1.05	0.96	0.80	—	..
130	Strengthening of Library at the Directorate	0.19	0.19	4.77	2.50	..
	Total, (A)— ..	31.00	2.47	22.14	11.73	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved Outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hill Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
..	..	0.94	..	0.85	..	1.62	2.69	3.29
..	..	0.90	..	..	..	0.90	0.90	0.90
..	..	0.24	..	0.37	..	3.22	1.17	0.67
..	..	0.51	..	..	..	1.51	1.61	1.60
..	..	0.50	..	0.30	0.50	1.53	1.86	1.35
..	..	3.09	..	1.52	0.50	8.78	8.23	7.81
7.75	0.50	10.95	4.00	4.09	0.50	23.63	24.39	22.28
3.36	5.08	..	..	..	..	..	..	..
0.50	0.48	0.40	..	..	..	0.40	0.40	0.40
1.44	..	..	..	..	..	..	..	..
0.50	..	1.50	..	1.50	1.50	1.50	1.50	0.62
0.81	0.80	..	..	..	..	..	..	..
..
2.99	2.55	..	..	..	..	..	..	..
0.25	..	..	..	..	..	..	..	..
..
0.80	0.70	..	..	..	..	..	..	..
..	1.42	1.00	..	0.50	..	1.63	0.87	1.27
10.65	11.03	2.90	..	2.00	1.50	3.53	2.77	2.29

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.05—Animal Husbandry (Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
B—NEW SCHEMES						
131	Construction of Building (Spill over works of V Plan)	..	..	45.26	45.26	..
132	Additional facilities for re-inforcement of stray and wild cattle catching programme.	..	..	6.40	..	..
133	Co-ordinated rural education programme through publicity media.	..	..	16.56	..	..
134	Additional facilities at Model Training-cum-production Centre, B. K. T., Lucknow.	..	..	1.50	..	..
135	Expansion and Additional facilities to Audit and Accounts Organisation of Animal Husbandry Department.	..	..	14.06	..	..
136	Establishment of a planning cell in Animal Husbandry Department.	..	..	2.60	1.50	..
137	Improvement and Expansion of existing Hide Flaying Curring and Carcass Utilisation Centre, Jhansi.	..	..	2.00	2.00	..
138	Improvement of 5 existing Hide Flaying Co-operative Societies.	..	..	1.25	..	..
139	Expansion of Livestock Marketing Cell at the Directorate of Animal Husbandry.	..	..	7.94	..	..
140	Creation of Hill Development cell at the Directorate.	..	..	12.13	..	..
141	Creation of a Project formulation and monitoring cell at the Directorate of Animal Husbandry.	..	..	14.18	..	..
142	Expansion of Horse and Donkey Breeding Unit established at Pashulok, Rishikesh, Dehradun.	..	..	1.91	1.07	..
143	Scheme for strengthening of Gosadans	..	..	3.00	..	..
144	Lump-sum provision for Hill Area Development Agency.	..	..	12.00	..	..
145	Scheme for the Establishment of Regional Libraries.	..	..	4.88	..	..
146	Strengthening of administration of Animal Husbandry Directorate.	..	..	21.96	16.00	..
Total, (B)		..	..	167.63	65.83	..
Total, (VIII)—		1.00	2.47	189.77	73.95	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved Outlay	Anticipated Expenditure	Total	Foreign Exchange content Total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
..	..	13.34	..	13.34	6.59	13.86	11.56	6.50
..	..	1.60	..	..	..	1.80	2.10	0.90
..	..	3.89	..	..	0.86	4.84	.80	4.03
..	..	1.50	..	..	..	..	..	..
..	..	0.93	..	..	0.31	2.75	4.51	5.87
..	..	0.50	..	0.50	..	1.35	0.75	..
..	..	0.50	..	0.50	..	0.50	1.00	..
..	..	0.50	..	..	..	0.25	0.25	0.25
..	..	0.73	..	..	..	1.73	2.43	3.05
..	..	3.47	..	..	3.47	2.85	2.92	2.89
..	..	2.00	..	..	..	4.43	3.83	3.92
..	..	0.50	..	0.20	0.50	0.80	0.40	0.21
..	..	0.75	..	..	..	0.75	0.75	0.75
..	..	5.00	..	..	5.00	1.00	2.00	4.00
..	2.48	1.20	1.20
..	..	2.95	..	..	..	6.51	6.60	5.90
..	..	38.16	..	14.54	16.73	45.90	44.10	39.47
10.65	11.03	41.06	..	16.54	18.23	49.43	46.87	41.76

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES**Sub-major Head of Development—1.05—Animal Husbandry—(Concl.d.)**

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(IX) Fodder Development—						
A—CONTINUING SCHEME—						
147	Intensification of Fodder Development in the State.	63.22	19.62	15.42	..	
148	Establishment of seed multiplication Farms	..	..	9.40	..	
	Total—A	.. 63.22	19.62	24.82	..	
B—NEW SCHEME—						
149	Intensification of Fodders Development in the State.	..	..	91.39	..	
150	Fodder Crop Competitions	..	..	3.73	..	
	Total—B	.. ..	..	95.12	..	
	Total—(IX)	63.22	19.62	119.94	..	
(X) Assistance to I. C. A. R. Scheme—						
A—CONTINUING SCHEME—						
151	Lump-sum provision to meet State Share on I. C. A. R. Schemes.	3.87	0.21	2.06	..	
	Total, (X)	.. 3.87	0.21	2.06	..	
	Total-(A Continuing Scheme)	.. 511.96	181.39	526.31	92.81	48
	Total B—NEW SCHEMES	.. ..	..	1521.15	299.14	50
	Total for 1.05—Animal Husbandry	511.96	181.39	2047.46	391.9	99

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
15.42	20.70	..	..	..	..	..	..	..
5.00	..	1.10	..	..	..	1.10	1.10	1.10
20.42	20.70	1.10	..	..	..	1.10	1.10	1.10
..	..	20.19	..	..	2.00	22.67	23.67	24.86
..	..	0.93	..	..	0.07	0.93	0.93	0.94
..	..	21.12	..	..	2.07	23.60	24.60	25.80
20.42	20.70	22.22	..	..	2.07	24.70	25.70	26.90
0.01	0.23	0.45	..	..	..	0.53	0.53	0.54
0.01	0.23	0.45	..	..	..	0.53	0.53	0.54
272.00	312.36	89.80	4.00	9.95	52.70	62.04	51.56	50.91
..	..	270.55	21.40	43.58	91.32	418.13	420.30	412.17
272.00	312.36	360.35	25.40	53.53	144.02	480.17	471.86	463.08

ANIMAL HUSBANDRY AND DAIRYING PROGRAMME
Targets of production and selected Physical Programme

Serial no.	Item	Unit	Actual Achievement		Targets 1982-83
			1973-74	1977-78	
1	2	3	4	5	6
I.—Livestock Production—Animal Husbandry—					
	(a) Milk	'000 tonnes	4,855	5,326	6,356
	(b) Eggs	in Lakhs	21.64	23.11	26.83
	(c) Wool	Lakhs kg.	12.44	13.67	16.60
II—Physical Programmes (Cumulative) Animal Husbandry—					
1	1. C. D Projects	No.	6	7	7
2	Frozen Semen Station	No.	1	2	2
3	Artificial Inseminations —				
	(a) Performed with in exotic bull semen ..	in lakh	11.00	24.87	31.44
	(b) Cross Bred Calves born	In lakh	0.117	0.687	2.007
4	Sheep Breeding farms	No.	20	19	20
5	Sheep and wool extension centres ..	No.	200	214	226
	(a) Goat Breeding Farms	No.	5	4	7
6	Intensive Sheep Development Project ..	No.	1	2	6
7	Poultry Breeding Farms	No.	56	58	61
8	Intensive Egg and Poultry Production-cum-Marketing Centre.	No.	8	9	18
9	Pig Breeding Unit/Farm	No.	2	2	2
10	Piggery Development Blocks	No.	36	36	36
11	Fodder Seed Production Farms	No.	..	..	2
12	Veterinary Hospitals	No.	1,108	1,151	1,293
13	Stockmen Centres	No.	2,073	2,221	2,321
14	Veterinary Dispensaries				

NOTE—No survey was conducted by the Department during financial years 1973-74 and 1977-78 to estimate the production of milk, eggs and wool in the State. Hence, the anticipated production of these items during the years have been shown.

AGRICULTURE AND RURAL DEVELOPMENT
Head-wise/sub-head-wise breakup of the financial outlays.

(Rupees in lakhs)

Serial no.	Head of Development/Programme	Fifth Plan Approved outlay	Approved outlay 1978-79	Proposed outlay 1978-83			1979-80 Proposed outlay
				Total	Capital	Foreign Exchange	
1	2	3	4	5	6	7	8
	Direction and Administration and Extension	0.02	..	26.21	..	..	..
1	Veterinary Service Animal Health and Education	194.09	74.10	504.62	45.24	2.20	46.43
2	Veterinary Research	0.46	5.00	5.00	..	..	..
3	Investigation and Statistics	5.71	1.77	17.25	..	..	3.29
4	Cattle Development	256.97	96.86	609.59	89.41	60.50	157.88
5	Poultry Development	73.25	18.36	207.29	71.43	..	21.91
6	Sheep and Wool Development	102.18	36.44	256.77	72.05	20.00	47.00
7	Piggery Development	1.41	7.75	89.00	27.49	16.30	10.95
8	Goat Development	7.80	0.64	46.17	12.78	..	9.16
9	Other Livestock Development	31.39	10.65	189.77	73.95	..	41.06
10	Fodder and Feed Development	85.56	20.42	120.00	..	..	22.22
11	Assistance I.C.A.R. Schemes	4.18	0.01	2.00	..	..	0.45
	Total	763.00	272.00	2047.46	391.95	99.00	360.35

EMPLOYMENT GENERATION

Serial no	Head of Development/Programme	Likely employment		Generation (in Man years)				
		Scientists	Technical	Admini- strative	Skilled	Unskilled	Total	
1	2	3	4	5	6	7	8	
VIII—Animal Husbandry—								
1	Veterinary Service and Animal Health	..	640	51	5391	666	6748	
2	Veterinary Research	..	..	..	..	..	..
3	Veterinary Education and Training	..	4	4	..	8	16	
4	Investigation and Statistics	..	16	1	5	3	25	
5	Cattle Development	..	54	33	26	237	350	
6	Poultry Development	..	60	2	18	135	215	
7	Sheep and Wool Development	..	55	75	140	234	504	
8	Piggery Development	..	6	6	7	65	84	
9	Goat Development	..	7	8	5	56	76	
10	Other Live Stock Development	..	48	272	35	166	521	
11	Fodder and Food Development	..	52	..	..	..	52
		Total	..	942	452	5627	1570	8591

(7) DAIRYING AND MILK SUPPLY

The State has a predominantly agricultural economy in which cattle rearing for milk and drought power play a very important role. A survey conducted in the Intensive Cattle Development Project, Lucknow, during 1971-72, revealed that among house-holds having milch animals, out of every hundred breedable cattle, 39.08 per cent were owned by small farmers, 34.08 per cent by marginal farmers and 6.1 per cent by landless labourers. Thus, it is evident that dairying is an important means of augmenting the earnings of the poorer sections of society in the rural areas of the State.

1.7.2. The Dairy Development Programme has been organised in a three-tier set up of co-operative institutions in this State. The primary milk producers' co-operative societies organised at the village level provide operations for self-employment in the rural areas. In addition each co-operative society employs at least one paid Secretary for the maintenance of accounts, one person for testing the quality of milk collected, one person as a dairy attendant and another one for carrying milk from the collection centre of the society to the collection centre at the main milk route. These primary co-operative societies are affiliated to the district level Milk Unions which maintain dairy plants for chilling, pasteurisation, bottling and marketing of milk. Involving in the process, employment of a number of technical, skilled and unskilled personnel. The District Milk Unions have further been affiliated to the State level apex body, the Pradeshik Co-operative Dairy Federation, which provides technical expertise and guidance to these dairies, co-ordinate their developmental activities, markets their produce under one brand name, runs the balancing units, operates a milk grid and provides economies of scale to reduce the overhead costs and standardise the working of the affiliated units.

Progress Review

Progress of Dairy Development through Co-operatives

(a) Financial

1.7.3. The expenditure on dairying programmes during the various Five-Year

plans and annual Plans has been as below :

TABLE-1 *Expenditure*
(Rupees in lakhs)

Serial no.	Plan	Expenditure
1	2	3
1	First Five-Year Plan (1951—56) ..	19.00
2	Second Five-Year Plan (1956—61) ..	21.00
3	Third Five-Year Plan (1961—66) ..	385.00
4	Three Annual Plans (1966—69) ..	162.00
5	Fourth Five-Year Plan (1969—74) ..	509.00
6	Fifth Five-Year Plan (1974—78) ..	436.00
Total ..		1532.00

An outlay of Rs. 152.00 lakhs has been provided for the year 1978-79 which includes Rs. 10.00 lakhs for the Hill areas.

(b) Physical

1.7.4. Six Co-operative Milk Unions had already been established in the State prior to the start of the First Five-Year Plan at Lucknow (1939), Allahabad (1941), Varanasi (1947), Kanpur (1949), Haldwani (1949) and Meerut (1950). These Milk Unions were collecting milk from rural areas and distributing the same in the towns after treating the same by indigenous methods. The only exception was Kanpur Dairy which had pasteurisation facilities for 10,000 litres per day. During 1949-50, financial assistance was given to Lucknow, Allahabad and Varanasi dairies for the establishment of pasteurisation plant, each with an installed capacity of 10,000 litres a day. Thus during the First Five-Year Plan period, the State had a processing capacity of 40,000 litres of milk per day. By addition, between 1950-51 and 1968-69, of processing plant at Haldwani (Lalkuan), the setting up of the Government Dairy at Agra, organisation of co-operative dairies at Dehra Dun, Bareilly, Mathura, Gorakhpur and a Milk Products Factory at Daltapur (Moradabad) and augmenting the capacity of Lucknow Dairy to 40,000 litres of milk per day the total processing capacity increased from 40,000 litres to 2.40 lakh litres of milk per day.

1.7.5. During the year 1972-73 it was decided to set up ten new plants, each of 4,000 litres per day capacity at Azamgarh.

Jaunpur, Pratapgarh, Rae Bareli, Sitapur, Unnao, Shahjahanpur, Farrukhabad, Bijnor and Jalaun on the basis of 70 per cent loan from the National Co-operative Development Corporation. None of the plants could, however, be commissioned during Fourth Five Year Plan period. As a result of escalation in costs, the cost of these 10 plants rose from the original estimate of Rs. 81 lakhs to Rs. 105.75 lakhs. Eight of these units had been commissioned by 1977-78 and the remaining two at Jalaun and Farrukhabad are expected to be commissioned shortly. The above mentioned eight dairies already in operation have added to the processing capacity to the extent of 32,000 litres of milk per day, raising the total installed capacity to 2.72 lakh litres. With the commissioning of the two remaining plants at Farrukhabad and Jalaun, an additional capacity of 8,000 litres of milk per day will be created.

1.7.6. Besides the above ten dairies, two new dairies at Allahabad and Faizabad, each with a capacity of 20,000 litres of milk per day, were also expected to be commissioned by the end of 1977-78. Two balancing dairies, each with a capacity of one lakh litres of milk per day, are coming up at Meerut and Varanasi respectively under the Operation Flood Programme. Two Rural Dairy Centres, each with a capacity of 2,000 litres of milk per day, have been commissioned at Pithoragarh and Kotdwar and a plant with the handling capacity of 5,000 litres of milk per day at Almora was also commissioned during the year 1976. Thus, by the close of the year 1977-78, the State was expected to have a processing facility of 5.24 lakh litres of milk per day under the Co-operative Sector. Things, however, did not turn out as expected. The Allahabad, Faizabad and Varanasi dairies could not be commissioned according to the schedule.

1.7.7. In addition to the government and co-operative dairies, there are four big private sector plants at Aligarh (Glaxo), Etah (Hindustan Lever), Muzaffarnagar (Indodan Milk Products) and Saharanpur (Foremost Dairies) with an aggregate handling capacity of 3.30 lakh litres of milk per day. This brings the total processing capacity in the State in all the Sectors up to the order of 8.54 lakh litres of milk per day at the end of 1977-78.

1.7.8. Two conclusions emerge clearly from the above resume. One that there has been considerable increase in the processing capacity over the different plan periods and two, that dairying projects have been constantly plugged by time and cost over runs. To these one could add the unfortunate fact that the maximum capacity utilization in the Co-operative Sector was 42 per cent during the year 1976. Prior to it, capacity utilization remained below 30 per cent. It is the view of the department that weak co-operative structure at the village level has been responsible for this state of affairs.

Year-wise position of the installed capacity and actual handling in public sector is shown in the following table :

TABLE II—Year-wise installed capacity and actual handling

Year	Installed capacity in '000 litres/day	Actual handling during the year (Litres)	Actual handling per day (Litres)	Per cent of utilization of capacity
1	2	3	4	5
1973-74	257	2,90,31,841	79,541	31
1974-75	257	2,51,94,698	69,025	27
1975-76	257	2,69,21,878	74,293	29
1976-77	259	4,00,70,447	1,09,828	42
1977-78	296	3,65,02,900	1,00,008	34

1.7.9. By the end of 1978-79 Faizabad, Varanasi, Allahabad, Jalaun and Farrukhabad plants are likely to come up Feeder-cum-balancing dairy, Meerut has recently been commissioned.

1.7.10. The State Government has so far sanctioned long-term loans to the tune of Rs.7.24 crores as fixed and working capital for milk unions.

1.7.11. An outlay of Rs.152 lakhs has been approved by the Government for the year 1978-79. This includes a capital outlay of Rs.28 lakhs.

1.7.12. With the establishment of dairy plants, there has been a simultaneous growth of milk societies also. Their number increased from 2,800 societies at the end of the Fourth Five-Year Plan to 4,358 till end of March, 1977. At present their total number is about 4,800. It is expected that normally a viable society

should procure at least 200 litres of milk per day. On this basis, the primary societies should be supplying about 8.72 lakh litres of milk per day to the dairy plants. Actual performance, however, is nowhere near this figure since only 33 per cent of the total societies are procuring milk and the remaining 67 per cent are defunct. Even amongst the active societies, hardly 5 per cent would satisfy the established standard of viability.

Aid to Dairy Co-operatives

1.7.13. A close study of the working of the existing co-operative milk societies has revealed that they suffer from the following weaknesses :

- (i) a substantial percentage of the members, particularly the office bearers of societies, are non-milk producers ;
- (ii) effective audit for ensuring financial discipline is lacking ;
- (iii) an integrated approach has not been adopted to the development activities of societies ; and
- (iv) pricing policy do not ensure a remunerative price to producers.

1.7.14. To sum up, the present position of utilization of potentials and capacities already created is far from satisfactory. The main reasons for the failure of the dairy sector are as under :

- (a) Weak co-operative structure at the village level due to which milk in adequate quantities could not be collected.
- (b) The organization of the societies has been faulty as it was not based on commercial considerations.
- (c) The Bye-laws of the milk societies were not producer-oriented.
- (d) The dairy schemes were not linked up with extension activity in the villages.
- (e) The pattern of Government assistance was defective as it led to over capitalisation and the societies were burdened with large loan liabilities from their infancy.
- (f) Co-operative dairy sector had to face unhealthy competition from private milk traders.

(g) Scattered distribution of milch cattle is the catchment area of processing units did not facilitate organised collection of milk.

(h) Constant time and cost overruns in setting up of new dairy plants resulted in a serious erosion of the credibility of the programme which indirectly affected the synchronised operation of supportive animal husbandry schemes.

(i) Poor management of dairy plants resulting in heavy accumulated losses.

1.7.15. The U. P. Milk Act was passed in 1976 to give a boost to the dairy sector. This Act created a State Milk Board and the office of the Milk Commissioner. Desired result could, however, not be achieved from it because the provisions of the Milk Act were not enforced. Moreover, the office of the Milk Commissioner was also not provided with necessary staff to undertake various activities. Lately, the situation has started dimproving since the State Milk Board is trying to provide remunerative milk price to the producers in selected reserved areas and efforts are also being made to enforce the provisions of the Milk Act.

1.7.16. A nationwide programme for dairy development, commonly known as Operation Flood II has been launched in 1978-79. Under this programme, 21 districts of the State have been ear-marked and grouped in two clusters. It is envisaged in this that the whole gamut of activities covered by dairy development will be looked after by the cluster Federations to be set up under the technical guidance and supervision of National Dairy Development Board. When the processing plants in these 21 districts are transferred to the new organisational set up of Operation Flood II, the Department of Dairy Development will be left with plant capacity of only 0.75 lakh litres per day. Commissioning of Jalaun, Farrukhabad and Faizabad plants by the end of 1978-79 will raise the plant capacity in non-Operation Flood II (O. F. II) area to 1.02 lakh litres per day. Thus, past investments will not be of much help in raising growth rate in the area not covered by O. F. II, the 1978-83 Plan period.

1978-83 Plan : Long Term Goals and Specific Objectives

1.7.17. The long term goal of the Dairy Development Plans is to provide organised markets to all surplus marketable milk in order to meet the total liquid milk and milk product requirements of the consumers of the State.

1.7.18. At present Dairy Plants are being run only in 26 districts of the State. Most of these districts with the plants will be transferred to the Operation Flood II Project.

1.7.19. The remaining 14 plants with installed capacity of 1.03 lakh litres will remain with the department. The urban population of these districts will be about 33 lakhs by the end of 1982-83. At the rate of 210 grams, daily *per capita* consumption of milk, the demand for milk in Non-Operation Flood urban area will be about 6.90 lakh litres per day. Due to limited resources it will not be possible to cater to the needs of the whole non-Operation Flood Area. Even in the areas where the schemes will be run only 15 per cent of the total requirement will be met by the co-operative sector. The rest will have to be met by the private traders.

1.7.20. The activities of the Dairy Development Department may be subdivided into broad two spheres : (a) Extension activity : and (b) Production activity. Extension activity will include organization of societies, provision of input services etc. Production activity includes procurement of milk and its processing and marketing. During the 1978-83 Plan period, it is proposed to organize/reorganize 2,550 societies. Installed capacity of the plants will be increased from 1.03 lakh litres to 1.63 lakhs litres. In close co-operation with Animal Husbandry Department, sufficient marketable surplus milk will be produced along the milk routes of co-operative dairies to meet the plant requirement.

1.7.21. With a view to achieving the broad objectives laid down for the 1978-83 Plan particular emphasis will be placed on the following :

(1) Concentrated organization of viable Milk Producers' Co-operative Societies at village level for the collection of milk in selected areas.

(2) Organization and strengthening of district level Milk Unions for maintenance of Dairy Plants for chilling, pasteurization, standardization, bottling and marketing of milk.

(3) Strengthening of the apex co-operative body viz. Pradeshik Co-operative Dairy Federation for co-ordinating and standardising the working of the district level Milk Unions.

(4) Provision of dairy inputs to producers viz. animal health cover, artificial insemination, balanced cattle feed, fodder seeds etc.

(5) Formation of a milk grid for ensuring adequate supply of milk to balancing plants and economising the working of smaller units lacking local marketing facilities.

(6) Creating increased employment potential both in the rural as well as in urban areas.

(7) Introduction of new methods and technologies for bringing about efficiency and economy in the working of the Dairy Co-operatives and the plants.

1.7.22. In order to achieve the above objectives and to remove the present shortcomings the following strategy is proposed to be adopted :

(a) *Concentration of Dairying Activities in well defined areas*

1.7.23. It is well recognised that dairying in India is a land based, location specific activity which ought to be undertaken in well defined areas where, because of proximity of urban centres for consumption and favourable agro-climatic conditions it would have reasonable chances of success. It is essential in this context, to take into consideration the comparative economies of other uses of land proposed to be earmarked for cattle rearing. Once this issue has been settled, it is appropriate that an integrated project should be prepared which should spell out the quantitative objectives for the selected area in relation to milk production and the details of the organisational structure, the retention and infra-structural support required, the financial implications in terms of fixed and working capital and the health cover and measure for genetic upgrading necessary for the success of the project. A possible impli-

cations of this approach would be that in some areas, despite the willingness of farmers to organise themselves into co-operatives and taken to dairy farming, the programme would not be taken up while in others, special measures would be taken, if necessary, to persuade them to take to it. Another aspect of this approach would be to determine the threshold level for the success of a dairying project in advance and to work towards arriving at this level as rapidly as possible.

(b) Strengthening of co-operative structure

1.7.24. The Co-operative Structure in the State has remained weak because of defective bye-laws and absence of extension activity. The bye-laws have been amended on the pattern of N. D. D .B., bye-laws and made producer oriented. Extension activity is being given top priority. Spear Head Teams and Procurement and Input Wings will be organised for this purpose.

(c) Organisation of viable societies on the Anand Pattern

1.7.25. Thus, far emphasis had been laid on the organisation of more and more societies ignoring the relevant commercial consideration and their inherent viability. As a result, out of 4,800 societies, hardly 3 per cent are viable. The strategy in the 1978-83 Plan would be to organise Anand Pattern Societies with average handling of 100 to 150 litres milk per day.

(d) Effective Supervision of the Societies

1.7.26. Supervision of the societies will be ensured by the engagement and careful deployment of properly trained and motivated field staff. Steps are also being taken to introduce Concurrent Audit System to ensure proper working of societies.

(e) Proper orientation of the managers

1.7.27. The official and non-officials managing the affairs of societies will be trained so that they could run various plants efficiently.

(f) Intensive Cattle Breeding

1.7.28. Intensive cattle breeding programme is being undertaken along the milk routes in close co-operation with

Animal Husbandry Department. This will facilitate link up of the produce with the marketing.

(g) Improving the efficiency of the existing plants

1.7.29. In addition to the above mentioned measures to ensure full utilisation of plant capacity and reduce overhead expenditure, the condition and organisation of equipment itself is being studied to improve their operational efficiency.

(h) Milk Grid

1.7.30. State Milk Grid System will be enforced to balance the flush season and lean season requirements of the plants.

1.7.31. The present strategy differs from that of the Fifth Plan in many ways— Firstly, it is extension oriented. Secondly, it aims not merely of the fulfilment of some quantitative modes but at organising producer oriented viable societies. Thirdly, deliberate efforts will be made to keep the capital cost of plants at a level low enough to ensure viability. Fourthly, an integrated approach is being adopted to synchronise dairy schemes with animal husbandry services. Fifthly, the new approach is village oriented. About 60 per cent of the Plan outlay is for villages only.

*Main programmes for 1978-83 Plan—
Aid to Dairy Co-operatives*

1.7.32. It is proposed to organise 1,550 societies during the 1978-83 Plan period, of which 200 will be in Hills. Old societies outside the ambit of operation Flood II area will be revived. These may add up to 1,000 societies. Sufficient inputs will be given to the societies in the shape of managerial subsidy to meet the cost of establishment, arrangements for testing of fat content and equipment for artificial inseminations. For the hill areas, provisions are being made to provide subsidy on the transport of milk from the societies in remote interior to the collection centres. This will naturally encourage societies to produce and transport more milk and to withstand the competition from local *Dudhias*.

Milk Production enhancement programmes

1.7.33. Training aspect has been neglected in the past. Therefore, Rs.4.00 lakhs is proposed for the training of the

officials/non-officials of the societies to keep them abreast with the up-to-date advances in dairy technology.

1.7.34. *Demonstrations and Exhibitions*—It is felt that dissemination of latest knowledge through audio-visual aids exhibitions and demonstrations is essential for the progressive improvement of performance. As such for Five-Year Plan of 1978–83, a sum of Rs.5.00 lakh is proposed for this purpose.

1.7.35. *Spearhead team and P and I wings*—To make the Plan extension oriented so as to win the confidence of the producers, it is proposed that 15 such teams and wings will be organised. Rs.192.61 lakhs is proposed for the same. A central Spear Head Team is also proposed. Provision of Rs.86.76 lakhs has been made for it.

Dairy Training

1.7.36. In order to meet the shortage of technically qualified persons, dairy training programme is a must. Provision of Rs.9 lakhs has been made for the same.

Milk Supply Scheme

1.7.37. In the area not covered by Operation Flood II, the plant capacity if 1.03 lakh litres would be raised to the level of 1.63 lakh litres by establishing a feeder-cum-balancing dairy at Etawah (0.50 lakh) and a pasteurisation plant at Sultanpur (0.10 lakh). A sum of Rs.129.93 has been proposed for this purpose. A sum of Rs.90.00 lakhs has also been proposed for the revitalisation and consolidation of existing milk unions in the non-Operation-Flood areas. A sum of Rs.129.50 lakhs has been proposed for the Operation Flood II districts for providing land, concurrent audit and transport for the district staff.

Other Schemes

1.7.38. The department is committed to various other schemes like State Milk Board, Freedom from Hunger Campaign, Long Distance Haulage, Central Market-

ing Cell, etc. Provision of Rs.219.42 lakh has been made for the same.

New Schemes

1.7.39. On the lines of the Anand Pattern, provision has been made for concurrent Audit of Milk Unions and the availability of animal husbandry inputs for breedings, feeding and veterinary services to the producer members of the co-operative milk societies in Non-Operation Flood districts. Rs.460.40 lakh is proposed for the same.

Impact of the Strategy

1.7.40. The strategy of the Plan for 1978–83 will make a significant impact on the programmes for the removal of poverty. Organised markets are also proposed to be provided to the producers. More than 26 crores of Rupees will flow into the rural areas during the Plan period in the shape of milk price payment. Over 6 lakh persons will be provided with employment as a result of which considerable additional income will be generated mainly in the rural area. The plan will specially benefit the weaker sections of society as milk production activity is undertaken largely by them. Generally it will benefit the producer and consumer section of the society.

1.7.41. Regional imbalance will be reduced considerably. Comperatively more developed areas will be transferred to Operation Flood Scheme. Concentration of the departmental schemes will hereafter be in less developed and Hill areas. About 59 per cent of the outlay is marked for direct investment in rural areas. This will increase *per capita* income of the villagers, specially those living below the poverty line. With increase in income, there will be improvement in the quality of life in rural areas.

Physical targets and yearwise phasing

1.7.42. Yearwise phasing of physical targets for programmes in areas not covered by operation flood is as follows :

TABLE III—year wise physical Targets

Particulars	Unit	1978-79	1979-80	1980-81	1981-82	1982-83
1	2	3	4	5	6	7
<i>I. Plants</i>						
(a) Number	..	12	12	12	13	13
(b) Capacity	.. (in lakh litres)	0.99	0.99	0.99	1.09	1.09
(c) Utilisation	.. ..	0.22	0.35	0.45	0.60	0.80

TABLE III—(Concl'd.)

Particulars	Unit	1978-79	1979-80	1980-81	1981-82	1982-83
1	2	3	4	5	6	7
<i>II Milk Product Factories</i>						
(a) Number	..	..	..	..	1	1
(b) Capacity	.. (in lakhs litres)	..	..	..	0.50	0.50
(c) Utilisation	.. „	..	..	..	0.10	0.20
<i>III. Rural Dairy Centres</i>						
(a) Number	..	2	2	2	2	2
(b) Capacity	.. (in lakh litres)	0.040	0.040	0.040	0.040	0.040
(c) Utilisation	.. „	0.003	0.005	0.010	0.020	0.030
<i>IV. Milk Societies (Revitalised) New and Old</i>						
(a) Number	..	2,266	2,621	2,976	33,31	3,689*
		(*) (1000 revitalised, 1,550 new, 1,139 old).				
<i>V. Milk Union</i>						
(a) Number	..	20	21	21	21	21

TABLE IV—Employment of Man Power

(Figures in man years)

Item	Total 1978—83 Plan
1	2
<i>I. Rural Employment</i>	
1. Part time employment for laying out Demonstration	.. .. 100
2. Managerial subsidy to societies—	
(a) Secretaries	
(b) Tester (@ 3 each for 2,550 societies.)	.. .. 7,650
(c) Carrier	
3. Beneficiaries-Self Employment	.. .. 6.25.000
<i>II. Urban Employment</i>	
1. Urban Milk Supply Schemes	
(a) Milk sellers, vendors and agents etc.	.. .. 2,287
(b) Kanpur Milk Board	.. .. 500
<i>III. Skilled/Technical Employment</i>	
(a) Spear Head Team	.. .. 40
(b) P and I Wing	.. .. 290
(c) Expansion, consolidation of dairy plants.	.. .. 190
(d) New Dairies	.. .. 300
(e) Long Distance Haulage.	.. .. 9
(f) Central Marketing Cell.	.. .. 150
(g) Dairy Development Staff at Headquarters and Regions.	.. .. 582
(h) State Milk Board.	.. .. 35

Total Employment at the end of 1978—83 Five Year Plan

(Man year)

(1) Rural employment

(a) Direct Employment	7,650
(b) Additional employment for Beneficiaries.	6,25,000

(2) Urban Employment

(a) Urban Employment	2,787
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(3) Skilled/Technical Employment

.. .. .	1,596
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Complementaries and Linkage

1.7.43. Operation Flood Scheme will cover 21 districts of the State. In these districts the department will undertake only regulatory activities. Expenditure will be in the shape of salary of the staff, office expenditure, vehicle and P. O. L. Development activity will be the responsibility of the Operation Flood Organisation.

1.7.44. In collaboration with the Animal Husbandry Department a scheme has been prepared for providing breeding, feeding and veterinary services to the producer members of the co-operative milk societies in the non-Operation Flood districts. Rs.451.15 lakhs has been provided for the same. This will be spent under the direction and control of the Milk Commissioner. The institutional, organisational and technological imperatives have been discussed above. Priority has been given to strengthening the existing system. Bye-laws of societies have been amended and made producer oriented. Training of the staff has been introduced. Concurrent Audit system has also been enforced. Supervision has been organised. A project formulation, monitoring and evaluation cell has been proposed for the department in the 1978—83 Plan.

1.7.45. To sum up, the present position of the dairies is not happy. The strategy of the 1978—83 Plan has been prepared with a view to removing the causes of failure in the past. Operation Flood programme will also give a boost to activities relating to extensional production milk in the State.

1.7.46. The requirements of the investments/expenditure during the plan

for 1978—83 are as under :—

Continuing Schemes

	(Rs. in lakhs)
1. Aid to dairy co-operatives	446.80
2. Dairy Training	9.00
3. Rural Dairy Extension	0.26
4. Milk supply schemes	349.43
5. Other schemes	234.11
Total	1039.60
6. New Schemes —	
(a) Concurrent Audit of Milk Unions except Operation Flood II areas	9.25
(b) Mobile Team for Animal Husbandry	451.15
Total	460.40
Grand Total	1500.00

1.7.47. A total amount of Rs.322.033 lakhs is proposed to be transferred to the non-plan budget.

1.7.48. Total outlay proposed for fixed capital, working capital current expenditure in Five-Year Plan 1978—83 is Rs.4.75 crores out of total outlays of Rs.15.00 crores. Total investment will be mobilised from the State sector only.

1.7.49. Year-wise Plan outlay proposed for the Plan period 1978—83 as follows:—

TABLE V—Outlays 78—83

Year	Rs. in lakhs
1	2
1978-79	152.00
1979-80	223.37
1980-81	335.85
1981-82	388.71
1982-83	400.07
Total :	1500.00

Annual Plan 1979-80

1. 7. 50. The proposed Plan for 1979-80 is of Rs.223.37 lakhs. An outlay of R.16.16 lakhs is kept for the Hills.

1. 7. 51. Much more emphasis will be laid during the Annual Plan for 1979-80 on the strengthening of the Co-operative structure. Since it is an established fact that only Anand Pattern is suitable for Dairy Development, efforts have been made while chalking out various programmes to ensure that maximum facilities would be given to members of Primary Societies on the Anand Pattern.

1.7.52. Under the Milk enhancement programme, sufficient inputs have been proposed for the Primary Co-operative Milk Societies and provisions have been made for Fat Testing subsidy, Managerial subsidy, share participation in societies and veterinary aid to the members on their door steps.

1.7.53. For educating the producer beneficiaries, provisions have been made for training of Non-Officials/Officials and the laying out of a number of demonstrations at Centre level. P & I Wing and Spear Head Teams have also been proposed on the basis of Anand Pattern to develop Milk societies multifariously for increasing the production of milk on scientific lines.

1.7.54. Improved methods of breeding, feeding and management will increase milk production from milch animals. For the first time, all these aspects have been provided in the Annual Plan for 1979-80. Animal Husbandry Department will look-after the milch animals of the societies in respect of veterinary services and their breeding and feeding.

1.7.55. It was a dire necessity to have direct and day-to-day auditing of the accounts of the societies so that immediate rectification may be made on the spot. Annual Plan 1979-80 would take care of this aspect.

1. 7. 56. Incorporating the activities of various milk unions in respect of marketing, a provision has been made for a central marketing cell under the control of the P. C. D. F. Besides this, the transportation of the surplus milk from one place to another through milk tankers has been provided. A sum of Rs.8.00 lakh has also been proposed for establishment of Mil Tone Plant at Kanpur.

1. 7. 57. For the first time village oriented annual plan is being proposed. Maximum help is being provided to the societies for helping the member producers indirectly.

1. 7. 58. State Milk Grid system will be enforced to balance the flush season and lean season requirement of the plants.

1. 7. 59. At the end of 1979-80 it is expected that 14 milk plants will be functioning, having a daily installed capacity of 1.03 lakh litres in the non-operation flood areas. No new plant is being proposed as strengthening of the co-operative societies and milk Unions is the main objective of this annual plan. At the end of 1979-80 the total number of societies not covered by Operation Flood will be 2,621.

1. 7. 60. The outlay proposed for 1979-80 under various schemes will also generate additional employment of about 7,000 employees at various levels. Approximately 3.00 lakhs urban and rural beneficiaries will be served through the plan proposed for 1979-80.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.06—Dairying and Milk Supply—(Contd.)

Serial no.	Name of the Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978-83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
	<i>DIRECTION AND ADMINISTRATION—</i>	6.37	..	159.65	..	
	A—CONTINUING SCHEMES					
	I—Dairy Development—					
1	Aid to Dairy Co-operatives	28.00	2.99	446.80	12.75	
	<i>Milk Production enhancement Programme—</i>					
2	Rural Dairy Extension					
	(a) Spill over	26.83	8.42	..	..
	(b) New	14.11	2.68	0.26	0.10	
	Total (a+b) ..	40.94	11.10	0.26	0.10	
	II—Education and Training					
3	Dairy Training	6.17	1.48	9.00	..	
	III—Urban Milk Supply Scheme—					
4	(a) Spill over	14.43	7.83	3.48	..	
	(b) New	52.68	13.60	126.45	87.79	
	Total (a+b) ..	67.11	21.43	129.93	87.79	
5	Rural Dairy Centres—					
	(a) Spill over	10.11	..	..	..
	(b) New .. .. .	..	..	..	..
	Total (a+b) ..	10.11	..	..	..
6	Revitalisation, Consolidation and expansion of existing Milk Unions.	86.62	27.40	90.00	72.00	
7	Faizabad Milk Project	33.58	22.08	..	..
8	Varanasi Milk Scheme— (Under Operation Flood)—					
	(a) Spill over	76.70	..	4.00	..	
	(b) New (Operation Flood II) ..	..	..	125.50	..	
	Total (a+b) ..	76.70	..	129.50	..	

EXPENDITURE

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated.
8	9	10	11	12	13	14	15	16
27.39	27.39	21.80	..	..	3.61	31.76	37.42	41.27
57.32	57.32	88.01	..	3.25	8.92	99.77	100.16	101.54
..
0.26	0.26	..	..	..	..	..	..	..
0.26	0.26	..	..	..	..	..	..	..
5.00	5.00	1.00	..	..	..	1.00	1.00	1.00
3.48	3.48	..	..	..	..	..	..	..
..	..	5.00	..	4.50	..	55.00	39.59	26.86
3.48	3.48	5.00	..	4.50	..	55.00	39.59	26.86
..
..
..
22.28	22.28	19.25	..	15.40	0.68	19.25	19.25	9.97
..
4.00	4.00	..	..	..	..	..	..	..
..	..	31.25	..	28.12	..	31.25	31.50	31.50
4.00	4.00	31.25	..	28.12	..	31.25	31.50	31.50

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.06—Dairying and Milk Supply—(concl.d.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed out lay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(IV) Other Schemes						
9	Dairy Survey	4.43	1.14	..	..	..
10	Establishment of State Milk Board ..	5.00	..	19.53	..	..
11	Purchase of equity share in corporation to be set up in Lucknow Kanpur Milk complex with assistance of IDA.	0.22	..	..	..	..
12	Long Distance haulage	17.90	17.90	35.00	..	..
13	Freedom from hunger campaign	16.78	4.04	6.25	5.00	..
14	Ram Ganga Command Area Project ..	1.18	0.11	2.50	..	..
15	Milk Colony at Kanpur-Lucknow	..	..	..	..	..
16	Grant in aid to Kanpur Milk Board for subsidised milk against UNICEF assistance	..	..	11.94	..	..
17	Marketing cell in P. C. D. F. .. .. .	..	..	10.00	..	..
18	Development of Tribal Areas	..	..	12.00	..	..
19	Establishment of Milk Booth and Bar ..	..	..	..	..	..
20	Dairy Development Staff at Head quarters/ Region/District	3.74	3.14	128.89	..	..
21	Production Loan	10.00	..	..	..	..
22	Milk Tone project Kanpur	..	..	8.00	..	..
Total 'A' Continuing Schemes		408.48	112.81	1039.60	177.64	..
B—NEW SCHEMES						
23	Concurrent audit of Milk Unions except Operati n Flood Area.	..	..	9.25	..	..
24	Mobile Team for Animal Husbandry ..	..	..	451.15	..	..
Total 'B' New Schemes .. .. .		..	..	460.40	..	..
Total for 1.06, Dairying and Milk Supply		408.48	112.81	1500.00	177.64	..

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expendi- ture	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..
2.52	2.52	5.00	..	..	..	5.01	4.00	3.00
..
17.50	17.50	4.29	..	..	..	3.57	6.07	3.57
6.25	6.25	..	..	..	..	..	..	..
2.50	2.50	..	..	..	..	..	..	..
..
1.00	1.00	1.00	..	..	..	3.30	3.30	3.34
2.00	2.00	2.00	..	..	..	2.00	2.00	2.00
2.00	2.00	2.30	..	..	2.30	2.40	2.50	2.80
..
24.89	24.89	13.55	..	..	3.51	24.76	30.42	35.27
..
1.00	1.00	2.00	..	..	..	2.00	2.00	1.00
152.00	152.00	174.65	..	51.27	15.41	249.31	241.79	221.85
..	..	1.25	..	..	0.10	2.00	3.00	3.00
..	..	47.47	..	..	0.65	84.54	143.92	175.22
..	..	48.72	..	..	0.75	86.54	146.92	178.22
152.00	152.00	223.37	..	51.27	16.16	335.85	388.71	400.07

TARGET OF PRODUCTION AND SELECTED
Dairying and Milk

Serial no.	Item	Unit	Achievement		
			Actual	1977-78	
			1973-74	O.F.	Non O.F.
1	2	3	4	5	6*
Dairying					
15	Fluid Milk Plants (including composit and Feeder balancing milk plants) in operation—				
	(a) No.	No.	10	10	9
	(b) Capacity	Lakhs	1.400	1.460	0.610
	(c) Quantity handled	Litres	0.470	0.660	0.120
16	Milk Product Factory (including creameries) in operation—				
	(a) No.	No.	1	1	..
	(b) Capacity	Lakhs Litres	0.600	0.750	..
	(c) Quantity handled	Lakh Litres	0.283	0.450	..
17	Dairy Co-operative Plants	No.	30	15	20
18	Rural Dairy Producers Co-operative Societies	No.	2866	2668	2139
19	Rural Dairy Centres—				
	(a) No.	No.	8	7	2
	(b) Capacity	Lakh Litres	0.130	0.110	0.040
	(c) Utilization	Lakh Litres	0.001	0.006	0.004

NOTE—Target has been fixed only for Non O.F. area for 1978-79.

PHYSICAL PROGRAMME
Supply Schemes

ANNEXURE—VI
AGR—26

1978—83		Target				
Target O.F.	Non O.F.	Target 1978-79	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13
11	13	12	12	12	13	13
3.460	1.090	0.990	0.990	0.990	1.090	1.090
..	0.600	0.220	0.350	0.450	0.600	0.800
1	1	..	..	..	1	1
0.750	0.500	..	..	..	0.500	0.500
..	0.200	0.020	0.030	0.040	0.100	0.200
15	21	21	21	21	21	21
2139	3689	2266	2621	2976	3331	3689
7	2	2	2	2	2	2
0.110	0.040	0.040	0.040	0.040	0.040	0.040
..	0.030	0.003	0.005	0.010	0.020	0.030

AGRICULTURE AND RURAL DEVELOPMENT
Head wise-Sub headwise break-up of the financial outlays

AGR—31

(Rupees in lakhs)

Head of Development Programmes		Fifth Plan Outlay 1974—79	outlay 1978—79	Proposed outlays 1978—83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
Dairy Development						
	Direction and Administration	10.96	24.89	128.89	..	..
1.	Dairy Development					
	(a) Corporation .. ..	..	..	..	..	..
	(b) Co-operatives	164.07	57.58	447.06	12.85	..
2.	Training and Education	9.00	5.00	9.00	..	..
3.	Milk Supply Scheme	404.65	29.76	349.43	159.79	..
4.	Others	135.28	59.66	694.51	5.00	..
	Total ..	713.00	152.00	1500.00	177.64	..

EMPLOYMENT GENERATION

1.06 Dairying and Milk Supply Schemes

Serial no.	Head of Development	Likely Employment Generation (in man years)					
		Scientists	Technical	Adminis- trative	Skilled	Unskilled	Total
1	2	3	4	5	6	7	8
IX Dairy Development							
	Direction and Administration ..	..	185	30	345	22	582
1	Dairy Development						
	(a) Corporation ..	..	35	5	450	34	524
	(b) Co-operative ..	..	3689	..	3689	1,88339	1,95,717
2	Training and Education ..	..	..	..	..	..	..
3	Milk Supply Scheme ..	..	30	10	10	30	80
4	Others ..	..	190	33	395	3261	3879
	Total ..	..	3944	48	4544	191664	200200

(8) FISHERIES

The main thrust of development since 1960 in the Fisheries Sector has been on the development of fisheries in the reservoirs and production of seed for fish culture in rural areas. The area under departmental waters including reservoirs increased from 1.02 lakh hectares in 1965-66 to 1.39 lakh hectares by 1973-74. During this period, the average annual fish production increased from 630 tonnes to 1400 tonnes and the average annual production of fingerlings also increased from 1.66 crores to 1.89 crores. Average annual income from the departmental waters increased from Rs.6.7 lakhs during the Third Plan period to Rs.30.3 lakhs by the end of the Fourth Plan period. The main problems encountered in fisheries development work are discussed in the subsequent paragraphs.

1. 8. 2. The shortfalls in the past have been mainly due to the shortage of fish seed. In the past decade, there has been reduction in seed availability from the riverine sources. Whereas in 1967, 16.5 crores spawn was produced from the rivers, by the year 1976 it came down to 4.9 crores. To make up for this reduction from the riverine sources, greater emphasis has been laid on the production of spawn from induced breeding. As a result, the level of production has increased from 1.69 crores to 4.2 crores during the last 4 years. Induced breeding is still hazardous because it gets effected by adverse weather conditions and rainfall specially during the month of July. It is proposed to construct a balancing capacity in the form of glass jars or circular hatcheries to ensure proper upkeep of weather on induced breeding programme.

1. 8. 3. Exploitation of reservoirs is still being carried out through the contractors. They take out fish according to the fluctuations of price and demand in the Calcutta market. Apart from this, the quantum of fishing depends on a number of natural factors such as variations in water level, flood intensity, winter rains, presence of aquatic weeds etc. Variations occur in the intensity of natural breeding in reservoirs depending on the water level and rainfall pattern in the first fortnight of July. Due to the shortage of seed, requisite quantities could not be stocked; achievements ranging between 70 to 89 per cent of the target. There are no All-India scientific norms for the stocking of the reservoirs. Even the National Commission on Agriculture has not been able to recommend any norm for stocking the reservoirs. The general pattern followed in the country as well as in this State is that larger the area of the reservoir the lesser is the stocking. At present the stocking target is of the order of 1.9 crores and density of fingerlings stocked varies from 25 to 1000 per hectare according to the area of the reservoir. It is proposed to marginally increase the stocking rate during the 1978-83 Plan. The estimates of fingerlings required worked out earlier at the level of 3 crores annually may be increased to 5 crores per annum. Similarly, the production levels have also varied between 9-12 Kgs. per hectare during different years. In the exploitation and developments of reservoirs variations have been mainly due to fluctuations in water level, weather conditions and the efforts put in by the contractors. To give greater flexibility in the management of the reservoirs, it is pro-

posed to take up this work under a Fisheries Corporation. It is also proposed to increase the production from 9 Kgs./ha. to 15 Kgs./ha. and also increase stocking from 1.9 to 3.00 crores fingerlings.

1.8.4. At present, the total area of the fish farms available with the department is 250 hectares out of which the area under water is only 131 hectares. Of this only 70 per cent is suitable for rearing purposes. The rest of the water area needs improvement, deepening and raising of bundhs to make it flood-proof. It is proposed to ensure full utilization of seed farms during the 1978-83 Plan.

Programmes implemented during Fifth Plan

1.8.5. During the Fifth Plan period nine schemes had been sanctioned pertaining mainly to fish production. During this period one reservoir was taken over. For the reasons stated earlier, there has not been much improvement in the overall production of fish from the reservoirs due to failures on the part of the fish contractors. The total fingerlings production increased from 1.67 crores to 3.01 crores during the first 4 years of the Fifth Plan. Intensive fish culture scheme for Gram Samaj waters was taken up in 3 districts of Ballia, Basti and Unnao where detailed survey was done and the area under fish culture was increased from 100 to 200 hectares in each district. The fish Farmers' Development Agency was started in two districts of Jaunpur and Budaun with the objective of developing village tanks with financial assistance from institutional sources, this in turn will lead to increase in fish production and generation of employment opportunities for weaker sections of the rural community.

1.8.6. The main thrust of the Fifth Plan has been on aquaculture in rural

areas and in this connection the Government approved the leasing out of Gram Samaj tanks straightway for a period up to 10 years so that leasee would take adequate interest in their development and make investments to increase fish production. The average production of fish from the reservoirs varied between 9 to 12 kgs. per hectare, against the national average of 5 kgs. per hectare.

Total water potential

1.8.7. The total water area of the State has been computed to be 11.65 lakh hectares based on the information collected from the Block and other agencies during the Second Plan period. However, these figures which were adopted during the Third, Fourth and Fifth Plans without questioning the authenticity do not seem to be correct. It seems desirable that the actual water resources in the State should be surveyed with a view to obtaining reliable statistics for sound programme planning. Water areas can be divided into flowing waters and confined water. Flowing water include rivers and canals. So far as the length of the rivers is concerned, computation from the maps gives the figure of 10,100 kms, including 2,800 kms. in the hilly region but excluding small streams. Based on the information collected by the department in the year 1967-68, about 7,000 kms. of rivers length is auctioned by the Revenue Department, Forest Department and the Gram Samajes. The rest of the flowing water area is under free fishing. No information is available about the species composition and actual fish production from the rivers.

Confined Waters

1.8.8. The total area of confined waters was computed to be around 4.45 lakh hectares. This includes 1.5 lakh hectares of large and medium reservoirs of Irrigation Department. This

area appears to be correct as it has been made available by the Irrigation Department. The remaining 2.95 lakh hectares consists of small waters in the rural areas. This area needs to be re-assessed. The department had undertaken the survey of village tanks during the Third Plan period (1961–66) when data for 234 blocks in 24 districts of the State was gathered, giving a total area of 21,000 hectares. The actual water area in all the 48 districts of the plains and the 8 hill districts will be definitely much more. Since 1966, conditions in the rural area have changed considerably giving rise to the need for re-assessing the actual water area. So far as the larger waters are concerned, which form part of the flood plains of flowing waters, the area was computed earlier to be 1.33 lakh hectares. However, during the Fourth Plan period information was collected about large water sheets above 20 hectares in area. In 38 districts, the total water area was worked out to be 32,180 hectares. These waters are owned by the Gram Samajes and in some cases by private individuals. Fishery in such waters can be taken as capture fishery because no cultural practices are involved. These areas receive fish seed during the floods from the main rivers. It needs to be re-emphasised here that scientific assessment of the water area available in the State is necessary for taking up meaningful exercise in planning.

1.8.9. The projects which are likely to fructify in the early part of the 1978–83 Plan are three fish farms which will give an additional capacity of seed production of the order of 15 lakhs.

Steps proposed to improve the utilization of present potential areas

1.8.10. The present level of utilization of the available potential is mainly due to the shortage of fish seed. To bring all

the available water resources i.e., reservoirs and Gram Samaj tanks under fish culture the total requirement of fish seed will be about 15 crores. To produce and rear this much fish seed it would require much more than the available rearing space. It is proposed to take up construction of new fish farms under the World Bank Programme. Ten crores fingerlings will be required for rural ponds at the rate of 5,000 fingerlings/hectare and another 5 crores would be needed for stocking reservoirs.

1.8.11. With the developmental activities envisaged in the 1978–83 Five-Year Plan, it is now necessary to strengthen the field level staff. There is urgent need for reliable statistics of total water potential of the State for which detailed surveys are necessary. For this purpose, the Statistical wing of the department needs to be strengthened. This wing will undertake the work of surveys and project formulation, and also perform monitoring and plan appraisal functions at short intervals.

Goals and objectives of the 1978–83 Plan

1.8.12. Fisheries Development has a direct bearing on the fishermen and other weaker sections of society. Besides, it also provides protein rich food in the urban and rural areas by utilising village ponds and other water areas which are not otherwise used for agricultural purposes. Inland fisheries sector is highly labour-intensive requiring very little capital. Therefore, during the 1978–83 Plan, the main thrust of the department will be on aquaculture in rural areas and also for the production of adequate quantity of fish seed for stocking all the suitable water area in the State. During the last decade or so, there has been considerable improvement in the technology of fish culture. It is necessary to take these technological innovations to the fish farmers through a sound net work of extension machinery.

1.8.13. Some of the schemes of the department which can be made economically viable such as reservoir fishery, will be transferred to the corporate sector for efficient development and management.

1.8.14. The financial requirements during the Five-Year Plan (1978-83) for the departmental schemes would be Rs.6.20 crores. In addition, Rs.1.0 crore would be required as share capital for fisheries corporation. It is proposed to mobilise Rs.10.00 crores from the institutional sources for deepening and improvement of village tanks.

Projected impact of the new strategy for 1978-83, Plan

1.8.15. About 20,000 families who will take up fish culture during the Plan period will be able to improve their financial condition and rise above the poverty line. Indirect employment would be created in connection with the improvement and deepening of tanks, supply of inputs, feed fertilizer, ice, etc. and other activities for 50,000 persons. The main beneficiaries in the fisheries programmes will be weaker sections of the society, i.e. the fishermen and landless persons. In addition to the above about 500 educated/skilled persons will be employed by the Department.

Expected level of increase in income from aquaculture to fish culturists

1.8.16. The present level of fish production is computed to be about 600 kgs. per hectare from which income at the rate of Rs.5 per kg. will be about Rs.3,000 per hectare. Out of this the fish-culturist would have to pay lease rent for the pond, bear the cost of fingerlings and transport and also meet fishing charges. As at present no expenditure is incurred on feed and fertilizers and other inputs and thus his net income during the year is about

Rs.2400 per year i.e. Rs.200 per month per hectare. With the adoption of new aquaculture techniques involving the use of feed and fertilizers, to be propagated by the department through training, demonstration and extension activities envisaged in the 1978-83 Plan, the level of production is expected to increase to 1,500 kgs. per hectare per year and at the selling price of Rs.6 per kg. the gross income will go up to Rs.9,000 while the expenditure on inputs etc., will be no more than Rs.3,000. Thus the fish culturists will earn a net income of about Rs.6000 per year i.e., Rs.500 per month per hectare.

Financial outlays

1.8.17. The total outlay for 1978-83 Plan period from different sources will be as follows :

		(Rupees in crores)
(a) State Plan—		
(i) Capital expenditure on constructions of farms and improvement of tanks.	2.37	
(ii) Subsidy to private pisci culturists	1.70	
(iii) Contingencies	1.99	
(iv) Strengthening of organisational structure.	1.14	
	Total ..	7.20
(b) Institutional Finance		10.00

1.8.18. Subsidy on improvement of ponds and for inputs is proposed to be given to all the fish culturists irrespective of their economic status on the pattern laid down in the Fish Farmers' Development Agencies approved by the Government of India.

Physical Targets

Targets of significant programmes

1.8.19. Level of physical achievements at the end of 1978-83 Plan will be as per details given below :

- | | |
|--------------------------------------|---------------|
| (i) Fish production from all sources | 40,000 tonnes |
| (ii) Fingerlings production | 13 crores |

Manpower and material requirement

1.8.20. To carry out the above programmes, the Department will require 500 educated and skilled persons, 14,000 tonnes of Nitrogenous and Phosphatic fertilizers will be required for fertilising the fish ponds and 1.6 lakh tonnes of oil cake and rice bran would be needed for feeding of fish.

1.8.21. The priorities for fisheries development during 1978-83 will be ; production of fish seed ; intensive aquaculture in village tanks, better stocking and management of reservoirs ; storage and marketing of produce ; and extension, demonstration and training of fish farmers. With the adoption of latest technological advancements in fish culture, it will be possible to achieve very high rate of production per unit area of land as compared to the other agricultural pursuits. This will consequently lead to higher absorption of labour force on unit area basis since most of the operations related to fish culture are labour intensive, requiring nominal capital investment. It is due to these peculiarities that this profession is ideally suited for marginal farmers, landless labourers and other weaker sections of the rural community. If piscicultural activities are pursued on sound lines, a household below the poverty line would be able to earn a decent livelihood even from a small village pond. With gradually increasing production of fish in the rural

areas, the local inhabitants will be able to consume valuable protein rich protective food in fresh condition. This in turn will bring about a significant improvement in the nutritional status of the rural population.

Year-wise phasing of the investment

1.8.22. The year-wise phasing of the requirement of funds will be Rs.38.00 lakhs in 1978-79, Rs.119.35 lakhs in 1979-80, Rs.180.70 lakhs in 1980-81, Rs.188.70 lakhs in 1981-82 and Rs.193.25 lakhs in 1982-83.

1.8.23. In the 1978-83 Five Year Plan, 8 new schemes are proposed to be launched. During the year 1979-80, all the new schemes proposed for the current Five Year Plan will be initiated and for which an outlay of Rs. 1.19 crores has been proposed of which Rs.0.08 lakhs is for hill sector.

Aquaculture in rural areas

1.8.24. During the 1978-83 Plan period, it is proposed to bring about 20,000 hectares of water area under intensive fish culture in rural areas. Training, extension, demonstrations and other facilities, viz. loan from commercial banks and subsidy of 25 per cent for the improvement of tanks and inputs etc. will be made available to the fish farmers. An amount of Rs.47.76 lakhs has been ear-marked for this scheme for the year 1979-80.

Construction of fish farms

1.8.25. During the current Five-Year Plan period, the total requirement of fingerlings will be of the order of 13 crores. In addition to the improvement and expansion of old departmental fish farms, village nurseries, it is proposed to construct five big fish farms of 25 hectares each in different parts of the State. One of these fish farms will be constructed during the year 1979-80.

Setting-up of Fisheries Corporation for Development of Reservoir Fisheries

1.8.26. It is proposed to hand-over Reservoir Fisheries to a commercial organisation by setting up a Fisheries Corporation. The Corporation will be provided Rs.1.00 crore as working capital. The first instalment of Rs.25.00 lakhs out of this will be released during the year 1979-80.

Reorganisation and strengthening of the Fisheries Development Work

1.8.27. A sum of Rs.26.00 lakhs has been provided for the 1978-83 Plan period of which Rs.4.05 lakhs is proposed for the year 1979-80.

Development of fisheries in hill region

1.8.28. For rearing and propagation of Trout, Mirror Carp and Mahaseer in the hill region, hatcheries and fish farms will be provided. A sum of Rs.8.00 lakhs will be provided for the year 1979-80 for this purpose.

1.8.29. During the year 1979-80 direct employment for 500 persons will be created and 8,000 persons will get indirect employment through deepening of tanks and construction of fish farms. There is only one scheme of Fish Farmers' Development Agencies under the Central Sector for which a provision of Rs.19.25 lakhs is proposed for the year 1979-80.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Outlays

Sub-major Head of Development—1.07—Fisheries—(Contd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure.	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed Outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
	Direction and Administration	0.52	0.37	27.14	..	..
	A—CONTINUING SCHEMES :					
	I. Extension					
1	Applied Nutrition Programme in Collaboration with UNICEF	10.68	4.93	4.40	..	..
2	Intensive Fish culture in small waters and Establishment of Extension Units	8.63	3.31	6.01	..	..
	Total (I)	19.31	8.24	10.41	..	..
	II. Extension					
3	Construction of Composite fish seed farms	4.77	1.46	6.19	6.19	..
4	Construction of tube-well at Kathautatal, Lucknow.			0.35	0.35	..
	Total (II)	4.77	1.46	6.54	6.54	..
	III. Research					
5	Provision for ICAR Schemes :					
	(A) All-India Co-ordinated Research Project on Ecology of Fresh Water Fisheries in Rihand Reservoir (Mirzapur)	0.45	0.12	0.11	..	..
	(B) ICAR Co-ordinated Research Project for Studies on Composite Culture of Indian Exotic Fishes.	0.58	0.20	0.36	..	..
6	Setting up of Units for analysing water and soil available in private sector.	2.29	1.19	0.15	..	..
	Total (III)	3.32	1.51	0.62	..	..
	IV. Education and Training					
7	Education and Training	0.71	0.24	0.24	..	..
8	Fisheries Training in Private Sector ..	..	..	4.25	..	..
	Total (IV) ..	0.71	0.24	4.49	..	..
	V. Inland Fisheries					
9	Development of Reservoir Fisheries ..	2.36	0.74	1.47	..	..
10	Provision for additional boats for boosting up fish production from reservoirs.	0.95	0.04	0.05	..	..
11	Eradication of aquatic weeds from Keetham Reservoir.	3.08	0.83	..	..	..
12	Purchase of Motor boats ..	..	..	1.75	..	..
13	Scheme of survey work for adopting fisheries	..	..	1.89	..	..
	Total (V) ..	6.39	1.61	5.16	..	..

and expenditure

(Rupees in lakhs)

	1978-79		1979-80			1980-81	1981-82	1982-83	
	Approved Outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
	8	9	10	11	12	13	14	15	16
	1.14	1.14	4.05	..	..	..	7.81	7.00	7.14
	4.40	4.40	..	..	..	..	..	..	..
	6.01	6.01	..	..	..	..	..	..	..
	10.41	10.41	..	..	..	..	..	..	..
	6.19	6.19	..	..	..	..	..	..	..
	0.35	0.35	..	..	..	..	..	..	..
	6.54	6.54	..	..	..	..	..	..	..
	0.11	0.11	..	..	..	..	..	..	..
	0.36	0.36	..	..	..	..	..	..	..
	0.15	0.15	..	..	..	..	..	..	..
	0.62	0.62	..	..	..	..	..	..	..
	0.24	0.24	..	..	..	..	..	..	..
	4.25	4.25	..	..	..	..	..	..	..
	4.49	4.49	..	..	..	..	..	..	..
	1.47	1.47	..	..	..	..	..	..	..
	0.05	0.05	..	..	..	..	..	..	..

	1.75	1.75	..	..	..	..	..	..	..
	1.89	1.89	..	..	..	..	..	..	..
	5.16	5.16	..	..	..	..	..	..	..

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.07—Fisheries—(Concl'd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed Outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(VI) Others						
14	Socio economic uplift of Fishermen Community	0.24	..	..	..	..
15	Provision for Spillover Works ..	3.83	1.63	0.69	0.69	..
16	Development of hill fisheries and fisheries development for tourist attraction.	9.55	5.21	5.00	3.81	..
17	Establishment of Fisheries Extension Units	0.13	0.13	1.78	..	..
18	Strengthening and Organisation of Fisheries Directorate.	0.31	0.16	0.14	..	..
19	Improvement of Small Waters ..	..	..	0.94	..	..
20	Establishment of Fisheries Corporation ..	..	..	1.00	..	..
21	Provision of staff at Headquarter for Central Sector's Schemes	..	..	0.23	..	..
22	Establishment of Planning and Statistical cell	0.21	0.21	1.00	..	..
Total (VI)		14.27	7.34	10.78	..	..
Total Continuing Schemes ..		48.77	20.40	38.00	11.79	..
B—NEW SCHEMES :						
23	Fish Culture in Rural Areas ..	..	..	266.00	..	..
24	Constructions of New Fish Farms and improvement of old farms and nurseries	..	..	189.38	130.00	..
25	Provision for ICAR Schemes	..	..	2.94	..	..
26	Training of Inservice personnel	..	..	2.00	1.00	..
27	Setting up of Fisheries Corporation for intensive development of Reservoir	..	..	100.00	..	..
28	Reorganisation and strengthening of Fisheries Department.	..	..	26.00	1.00	..
29	Improvement of Departmental Waters	..	..	50.68	25.00	..
30	Development of Cold Water Fishes in Hill Region.	..	..	45.00	30.00	..
Total : B. New Schemes ..		..	..	682.00	187.00	..
Total for 1.07—Fisheries ..		48.77	20.40	720.00	198.79	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved Outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
..
0.69	0.69	..	..	..	..	..	..	..
5.00	5.00	..	..	..	..	..	..	..
1.78	1.78	..	..	..	..	..	..	..
0.14	0.14	..	..	..	..	..	..	..
0.94	0.94	..	..	..	..	..	..	..
1.00	1.00	..	..	..	..	..	..	..
0.23	0.23	..	..	..	..	..	..	..
1.00	1.00	..	..	..	..	..	..	..
10.78	10.78	..	..	..	..	..	..	..
38.00	38.00	..	..	..	..	..	..	..
..	..	47.76	..	..	..	72.02	73.04	73.18
..	..	26.80	..	10.30	..	48.35	57.63	56.60
..	..	0.68	..	..	..	0.75	0.75	0.76
..	..	0.40	..	0.20	..	1.06	0.27	0.27
..	..	25.00	..	..	..	25.00	25.00	25.00
..	..	4.05	..	0.20	..	7.81	7.00	7.14
..	..	6.66	..	3.00	..	14.24	14.36	15.42
..	..	8.00	..	4.25	8.00	11.47	10.65	14.88
..	..	119.35	..	17.95	8.00	180.70	188.70	193.25
38.00	38.00	119.35	..	17.95	8.00	180.70	188.70	193.25

FISHERIES
Targets of production and selected Physical Programmes

Serial no.	Item	Unit	Actual Achievements		Targets 1982-83
			1973-74	1977-78	
1	2	3	4	5	6
I—Production					
1	Fish Production				
	(a) Inland	.. .. 000' Tons	24.25	29.30	40.00
	(b) Marines	.. .. "	..	..	..
	(c) Total	.. ..	24.25	29.30	40.00
II—Physical Programmes (Cumulative)					
2	Mechanised boats	.. .. Nos.	..	..	..
3	Trawlers	.. .. "	..	..	..
4	Refregiration	.. .. "	..	..	..
	(a) Cold Storages				
	(i) Capacity	.. .. Tonnes	..	..	..
	(b) Ice Plants	.. .. Nos.	..	..	..
	(i) Capacity	.. .. Tonnes	..	..	..
	(c) Freezing Plants	.. .. Nos.	..	..	..
	(i) Capacity	.. .. Tonnes	..	..	..
5	Fish Seed				
	(a) Produced	.. ..		
	(i) Fry	.. .. Million	89.65	97.10	650.00
	(ii) Fingerlings	.. .. "	21.90	30.10	130.00
	(b) Distributed	.. ..		
	(i) Fry	.. .. "	..	..	..
	(ii) Fingerlings	.. .. "	5.68	12.16	100.00
6	Fish Seed Farms	.. .. Nos.	108	109	116
	(a) Water area	.. .. Hects.	250	265	375
7	Brakish water fish farming area	.. .. "	..	..	..

AGRICULTURE AND RURAL DEVELOPMENT
Head-wise/sub-head-wise breakup of financial outlays

(Rupees in lakhs)

Serial no.	Head of Development Programme	Fifth Plan approved Outlay	Approved Outlay 1978-79	Proposed Outlay 1978—83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
X—Fisheries						
	Direction and Administration	2.50	1.14	27.14	1.00	..
1.	Inland Fisheries	8.80	5.16	105.16	..	..
2.	Research, Education and Training	5.50	5.11	10.05	1.00	..
3.	Marine Fisheries .. ..	..	..	..	..	..
4.	Marketing and Storage .. ..	..	..	..	..	..
5.	Other (Extension, administration, fish farms and another)	58.70	27.73	604.79	197.79	..
	Total	73.00	38.00	720.00	198.79	..

Agriculture and Rural Development—Employment Generation

Serial no.	Head of Development Programme	Likely Employment Generation (in Man Years)					Total
		Scientists	Technical	Adminis- trative	Skilled	Unskilled	
1	2	3	4	5	6	7	8
X—Fisheries							
1	Direction and Administration ..	1	1	2	32	2	38
2	Inland Fisheries .. ..	..	39	16	92	48	195
3	Research/Education and Training	..	..	..	..	..	..
4	Marine Fisheries .. ..	..	..	..	..	..	..
5	Marketing and Storage ..	..	..	..	..	..	..
6	Others .. ..	..	65	2	11	44	122
Total ..		1	105	20	135	94	355

(9) FORESTS

The key role of Forest in the socio-economic life of the country is too well-known to need any lengthy elaboration. Therefore, while discussing the strategy for Forest Development, it appears more appropriate to dwell on the effects of a rapidly increasing population on the policies regarding maintenance and expansion of area under vegetative cover and to explore the manner in which the basic function of forests in relation to the stability of ecological environment, the moderation of climatic fluctuations and the conservation of both soil and water resources might be combined with man's growing needs for forest resources which cover a tremendous range of products used directly and indirectly in a variety of ways. As a starting point, it seems desirable to state the present situation by emphasising that unless Forests can be made to yield returns comparable to the opportunity cost of land covered by these in terms of other uses, their survival even on the present scale will be in constant jeopardy. Secondly, it would be unrealistic to assume that policies regarding forests can be formulated and implemented in the context of a unique framework, divorced from the overall and integrated Plan for land use in general and thirdly, that it is

difficult to expect either the present generation to forego benefits for the coming generations or the people living within and around the forest areas not to look upon themselves as the legitimately first claimants of the direct and indirect returns from these resources. Other societies, even before our own, have been confronted by these challenges and it is indeed fortunate that many of these, through considerable research and innovation, have come up with technological solutions which, coupled with suitable managerial skills, have ensured that large masses of humanity should be able to co-exist and even benefit from a progressive increase in the area under forests.

1.9.2. The total forest cover in this State is estimated to be 51,300 sq. kms. which is 17.42 per cent of total geographical area of the State as against the norm of 33.33 per cent recommended in the National Forest Policy. The forests of U. P. are mostly confined to the hills, the narrow belt of Tarai below Himalayan and Vindhyan ranges. The other parts of the State are virtually devoid of any forest cover. The area under forests in different States and their proportion to respective geographical area is shown below :

TABLE I—Area under Forests for different States and their proportion to geographical area
(Year) 1973-74

Serial no.	Name of the State	Geographical area	Total Forest Area	Percentage of Forest Area with respect to geographical area
1	2	3	4	5
1	Andhra Pradesh	27,682	6,480	23.41
2	Assam	7,852	2,855	36.36
3	Bihar	17,388	2,932	16.68
4	Gujarat	19,598	1,697	8.66
5	Haryana	4,422	152	9.66
6	Himachal Pradesh	5,567	2,167	38.93
7	Jammu and Kashmir	22,27	2,072	9.32

TABLE I (Concl'd)

Serial no.	Name of the State	Geographical area	Total Forest Area	Percentage of Forest Area with respect to geographical area
1	2	3	4	5
8	Karnataka	19,177	3,608	18.82
9	Kerala	3,887	1,127	28.99
10	Madhya Pradesh	44,284	16,835	38.01
11	Maharashtra	30,776	6,613	21.49
12	Manipur	2,236	602	26.92
13	Meghalaya	2,249	699	31.08
14	Nagaland	1,653	288	17.42
15	Orissa	15,578	6,793	43.61
16	Punjab	5,036	213	4.23
17	Rajasthan	34,221	3,589	10.49
18	Sikkim	730	265	36.30
19	Tamil Nadu	13,007	2,234	17.17
20	Tripura	1,048	605	57.73
21	Uttar Pradesh	29,441	5,013	17.03
22	West Bengal	8,785	1,183	13.47
<i>Union Territories</i>				
1	Andman and Nicobar Islands (1973-74)	829	746	89.99
2	Arunachal Pradesh	8,359	5,154	61.67
3	Dadar and Nagar Haveli	49	20	40.32
4	Delhi	149	4	2.68
5	Goa-Daman Diu	381	131	34.38
6	Mizoram	2,109	887	42.06
7	Others	63	..	..
ALL INDIA		3,28,779	74,964	22.80

1.9.3. The forest area in 12 States, including U. P. and one Union territory is much less than the All-India average of 22.8 per cent.

1.9.4. The above situation calls obviously for the preservation and to the

extent possible, the extension of forest wealth in the State. Despite this, it seems practical to assume that due to high density of population and the requirement of land for other purposes, there is a little scope for increasing the area under forests.

To meet the productive needs there seems to be no alternative but to convert low value forests into high value ones and to reforest the denuded forest areas with appropriate industrial and economic species.

1.9.5. For meeting the growing needs of our developing society, the most promising action seems to be in the direction of intensifying work on schemes of Farm Forestry and Extension Forestry, covered under the general programme of Social

Forestry, which includes raising plantation with a short gestation period on the open area alongside roads and canal banks as also on vacant Railway land and common land of villages. Reforestation of degraded forests areas also seems to be a direction well worth pursuing. Out of the total Forest area of 51.30 lakh hectares, 41 lakh hectares is under the direct control of the Forest Department. The break-up of the total forest area is given below :

TABLE II—The break-up of Total Forest Area

Item	(in Sq. Kms.)		
	8 Hill districts	Plains	Total
1	2	3	4
1 Under the control of the Forest Department :			
(a) Reserved	23,731	10,479	34,210
(b) Protected	9	98	107
(c) Unclassed	11	6,516	6,527
2 Civil and Soyam Forests	7,284	..	7,284
3 Panchayat Forests	2,961	..	2,961
4 Cantonment and private Forests	211	..	211
Total	34,207	17,093	51,300

1.9.6. An ambitious Social Forestry project is being planned to be initiated during 1978—83 Plan. Under this project, an additional area to the tune of 45,000 hectares is contemplated to be added mainly through the plantation on community and private lands to the existing 3,300 hectares covered under the Social Forestry programmes at the end of 1977—78.

Main trends of development from 1960 onwards

1.9.7. 1,53,133 hectares of plantations of fast growing species have been raised by the Forest Department from which about 4 lakh M. Tonnes pulpwood after attaining an age of 8 years for Paper and Pulp Industry will be available annually for 24 years. 1,58,853 hectares of plantations of species having economic and industrial importance have been raised which on maturity after attaining an age of about 50 to 60 years will yield about 15 lakh

cubic metres of timber per year for 20 years. 11,009 hectares of plantations have been raised under fuelwood species which on maturity will yield about 30 thousand metric tonnes of fuelwood per year for 10 years. Construction of 4,719 kms. of roads, other infra-structural development and improvements in management practices has resulted in the increase of production of timber from 0.18 cubic metre/hectare in 1960 to 0.37 cubic metre/hectare in 1978. 91,000 hectares of land (including ravines) was treated under Soil Conservation programme.

1.9.8. About 9 crore plants of various quick growing and economically valuable species have been distributed by the Department through the Block Development Organisation to various agencies and private individuals for planting on their private land under a separate programme of Extensive Tree Plantation started from 1976-77.

1.9.9. Following table shows the development over various plan periods. qualitative and quantitative review of

TABLE III—Qualitative and quantitative development of forest activities

Item	Unit	Third Plan period	Three Annual Plan period	Fourth Plan period (1969—74)	Fifth Plan period 1974—79 (Anticipated)
1	2	3	4	5	6
Average Annual Revenue (at 1960-61 prices) ..	Lakh Rs.	836.92	893.32	1056.00	1200.00
Average Annual Expenditure (at 1960-61 prices) ..	Lakh Rs.	372.37	342.14	397.56	492.00
Average Annual Net savings (at 1960-61 prices) ..	Lakh Rs.	465.55	556.18	658.40	708.00
Average Annual Net savings/ha.* (at 1960-61 price)	Rs.	2042.00	2225.00	2688.00	2866.00
Average Annual production of sawn Timber ..	Lakh cu ms.	6.22	9.00	9.50	9.00**
Average Annual production of Fuel ..	Lakh cu ms.	20.10	21.52	23.50	22.00**
Average Annual production of Resin ..	Lakh Qtls.	1.74	2.50	2.87	2.50**
Average Annual production of Tendu patta ..	Lakh Qtls.	0.85	0.86	1.24	1.62

*Note—Area of forests under exploitation only has been considered for working out annual net savings per hectare.

**Note—The decrease is due to restriction of working in Hill Forests.

Strategy and objectives during the Five-Year Plan 1978—83.

1.9.10. During previous plans while some attention was given to social Forestry, emphasis was laid mainly on the plantation of species of economic importance and other fast growing species to meet the increasing demand of raw material for wood based industries. On the other hand, in the Five-Year Plan for 1978—83 the main thrust will be on social forestry without, of course, neglecting productive forestry.

1.9.11. In more specific terms, the Forestry plan would attempt during the current Five-Year Plan period to :

(a) increase area under forests in this State, which is only 17.4 per cent as against the norm of 33.33 per cent, so as to mitigate the havoc of floods, preserve environment and fulfil to the extent possible, its productive, protective and social functions;

(b) plan and develop multiple use of land under the control of Forest Department as also of plantations on waste lands, panchayat lands, along road sides, canal banks and railway lines to meet the day to day requirement of the local people for timber, fuelwood and fodder and also for rural and cottage industries;

(c) provide employment or alleviate under-employment in the rural areas to the extent of about 7 crore mandays or about 2.5 lakh man-years over a span of five years;

(d) take up special programmes fuelwood and fodder and also for resources;

(e) develop forestry as a support to rural economy and to initiate development through cottage, small, medium and large scale industries in backward regions, where forests happen to be the most important local natural resources;

(f) increase the productivity of forests and to make optimum use of land under tree crops in order to meet the growing demands of industrial wood and also small timber and fuelwood, fodder etc. in the rural areas;

(g) link-up forest resources with forest based industries on the basis of physiography, industrial and economic catchment concepts for which institutional changes may be brought about;

(h) develop resources for wild life and environmental conservation; and

(i) strengthen research, training and extension base as input for carrying out the different activities mentioned above.

1.9.12. With a view to achieving

the above objectives in a substantial manner an outlay of Rs.53.30 crores has been proposed for the Forestry sector for the 1978-83 Plan.

1.9.13. The anticipated expenditure during the Fifth Five-Year Plan (1974-78) would be of the order of Rs.15.55 crores under the State Plan. The outlay proposed for 1978-83 Plan is over and above the normal non-Plan expenditure on Forestry programmes in the State. The proposed plan expenditure seeks to initiate service of measures which will increase the area under various kinds of forest plantations from 5,75,215 hectares to 7,42,865 hectares resulting ultimately in additional availability of valuable forest produce from areas under the control of Forest Department. The projected additional availability is shown below :

TABLE IV—Projections for Additional Forest Produce

Serial no.	Produce	Unit	Present level (1978)	Future level projections	
				1985	2000 AD
1	2	3	4	5	6
1	Industrial Wood	Lakhs cu.m.	(1) 9.00	(2) 14.05	(3) 14.50
2	Fuel Wood	Lakh cu.ms.	22.00	23.00	26.00
3	Fodder (Green and dry both)	Lakh Metric tonnes	(4) 470.0	(6) 660.00	(5) 840.00

NOTES—(1) Average annual production recorded by U. P. Forest Department.

(2) Adding anticipated production of 5 lakh cums. of pulpwood and 1 lakh cubic metres of fuel wood from F. G. S. Plantation raised assuming mean annual increment of 5 cums./annum for 8 years rotation.

(3) Adding anticipated production of 0.5 lakh M³ of timber and 3 lakh M³ of fuel wood from plantation raised under Special Forestry till 2000 AD@ 10.00 ha./annum. Out of which it has been assumed that 80% will be fuel wood, 10% timber and 10% others. Mean Annual increment has been assumed to be 3 cum/annum for an average rotation of 15 years.

(4-5) All-India Figures of NCA (1976) for fodder availability reduced by geographical area for U.P including areas outside control of Forest Department, U. P. and that from all other sources.

(6) Simple average of figures under (4) and (5).

1.9.14.. Projected demand to various forest produce are also given below :

TABLE V—Projection for demand of various forest Produce

Serial no.	Produce	Unit	Present	Future Projections	
				1985	2000 AD
1	2	3	4	5	6
1	Industrial wood	Lakh cu.ms.	22.00 (1)	44.00 (2)	77.00 (3)
2	Fuel wood (4)	..	300.00 (5)	330.00 (6)	360.00 (7)
3	Fodder (Green and dry both) (8)	Lakh Mt.	1100.00 (9)	1300.00 (10)	1500.00 (11)

NOTES—(1) Reduced from All-India figures for 1970 of NCA (1976) on the basis of population and further reducing it by 0.85 since 70 per cent population of U. P. is below poverty line as against 60 per cent for total country.

(2 and 3) Reduced from All-India figures of NCA (1976) for 1985 and 2000. A. D. respectively on the basis of human population.

(4) This is only for commercial fuelwood. Actual demand of total fuel wood will be still greater.

(5, 6 and 7) Reduced from All-India figures for 1980, 1985 and 2000 A.D. respectively (NCA, 1976) on the basis of human population.

(8) Sum of fodder requirement of green and dry fodder for U. P. reduced from NCA (1976) figures on the basis of livestock population.

(9 and 11) Figures as for 1973 and 2000 A.D. from NCA (1976) after reducing it on the basis of the livestock population for U. P.

(10) Simple average of 1973 and 2000 A. D. figures.

GENERAL NOTE—The demand projections of NCA (1976) takes into account all the latest change in the technology of processing and harvesting wood in India.

1.9.15. The anticipated gap between demand and supply of industrial wood which is at present 13 lakh M³ will rise to 30 lakh M³ by 1985 and by 62.5 lakh M³ by 2000 A.D. Except eucalyptus plantations for pulpwood which are felled at 8 years rotation, the plantations of industrial woods have a rotation of 40-50 years in the plains and 70-80 years in the hills. Since the plantations have been raised on a substantial scale only from the Third Five-Year Plan, it will not be possible to meet the increased demand of industrial

wood from these plantations till the year 2000 A. D. Even in the later years, it will be possible only to meet a small part of the rising demand for industrial woods from the plantations in areas under control of the forest department, since the area suitable for conversion to plantations is limited and there is no scope of increasing the area under the forests. Besides, there are limitations in increasing area under plantations and change in the pattern of species in the reserve forests as there is increasing concern for maintenance of

ecology and environment, which is likely to be adversely affected if large areas of existing forests are clear felled and converted to new plantations. Apparently, Uttar Pradesh is now faced with a stalemate which would inevitably develop into a crisis situation unless some radical solutions based on some revolutionary technological and management concepts can be discovered. In the meanwhile, the course of action with the maximum pay-off in the short run seems to be in the direction of increasing production by planting intensively in areas outside the control of Forest Department under the social forestry programme. That is why the programme has been proposed as the main plank of the new strategy in the Five-Year Plan for 1978-83.

Main Programmes and Activities

1.9.16. *Production Forestry*—Under production forestry, two schemes *viz.* (A) Raising of Plantations of Economic and Industrial Importance to meet the increasing demand of raw material for wood based industries like Matchwood, Plywood, Fibre board, Packing cases Katha etc.; and (B) Plantation of Fast Growing Species for meeting the demand of raw material for pulp and paper industries from pulpable species like eucalyptus, paper mulberry and bamboo are being implemented. Up to 1977-78, 1,58,853 hectares has been planted under the first scheme and another 1,53,133 hectares covered under the second scheme. During the 1978-83 Plan, it is proposed to raise plantations over additional areas of 46,000 hectares and 35,000 hectares respectively, under these schemes. Poplar plantations are also being raised under the second scheme, the timber of which will be used mainly for matchwood industries though some quantities would also be available for paper and pulp industries. Regeneration

of old Eucalyptus plantations by coppicing started during Fifth Five-Year Plan and will be speeded up during the current Five-Year Plan (1978-83).

Social Forestry

(i) *Hills* :

1.9.17. *Hills*—A new scheme for the development of Civil and Soyam forests which cover 7,300 sq. kms. was started from 1974-75 but it could not make much headway due to paucity of funds. Keeping in view the extent of problem of denuded forests, it is proposed to increase the physical targets of afforestation and pasture development from 27,000 hectares during Fifth Five-Year Plan to 55,000 hectares during the 1978-83 Plan. Consequently, an increased outlay is needed during the current Five Year Plan. In addition to above, an Integrated Soil and Water Conservation Scheme has also been started in the Himalayan Region from 1978-79 as a Centrally Sponsored scheme. Under this scheme, it is proposed to cover an area of 36,000 hectares during 1978-83. Provision of raising seedlings for distribution to farmers and others has also been made.

(ii) *Plains* :

1.9.18. *Plains*—The physical targets under the scheme of Mixed Plantation, Reforestation of Degraded Forests, Plantation of Road sides and Plantation of Fuelwood species are proposed to be increased from 10,000 hectares and 10,000 row km. for the Fifth Five-Year Plan to 41,000 hectares and 35,000 row km. respectively during 1978-83 Five-Year Plan. The targets are inclusive of the targets of Centrally sponsored scheme on Social Forestry. The outlay under Social Forestry will have to be further increased when a Social Forestry Project, prepared for the districts having

less than 10 per cent of the total area under forests, is implemented with World Bank assistance.

1.9.19. *Farm Forestry*—This programme is included under the scheme of Social Forestry both for hills as well as plains. Seedlings will be raised under the Centrally Sponsored scheme of integrated soil and water conservation in the Hills and Social Forestry scheme for the plains, and distributed to farmers and other individuals and Institutions. It is proposed to raise 30 lakh seedlings for distributions in the 8 hill districts under the scheme of Integrated Soil and Water Conservation (Centrally Sponsored) and another 30 lakhs in the 8 eastern districts under the Centrally Sponsored scheme of Social Forestry for the plains. In addition to the above, 130 lakh seedlings are to be raised annually for distributions in the remaining districts on no-profit no-loss basis at the rate of 25 paise per seedling. Under the above two Centrally Sponsored schemes in the hills and plains, however, all the sixty lakh seedlings would be supplied free of cost, since the Government of India meets the cost of raising seedlings at the rate of 25 paise per seedling. In order to keep a proper account of the seedlings as also to avoid wastage of plants, instead of supplying the above said sixty lakhs seedling free of cost, it is now proposed to charge a nominal price of five paise per seedling in the 8 hill districts and the 8 eastern districts of plains.

1.9.20. *Programmes for the Development of Tribal Population*—During the Five-Year Plan for 1978–83, an outlay of Rupees 200 lakhs has been proposed for forest plantation, construction of forest roads etc., in the tribal blocks which will have direct linkage with the economic development of the tribal popula-

tion. Apart from making a provision in the Plan, the Forest Department has already started the collection of tendu leaves being used for preparation of 'Bidis' under 'State Trading'. The tribal population get fairly reasonable wages from the Forest Department under this programme and they are thus saved from the exploitation through the contractors. Another scheme for exploitation of minor forest produce concerned with the collection of 'Chironji' is proposed to be implemented through the tribal population. At present the collection of Chironji is being done by contractors through the tribals who are unable to obtain reasonable rates.

1.9.21. *Development of Pasture land and Raising of Fodder trees*—This programme is proposed under the development of Civil and Soyam forests scheme and the Centrally Sponsored scheme of Integrated Soil and Water Conservation for the hills. During the 1978–83 plan an area of 48,000 hectares will be covered by way of pasture development under both these schemes in the hills. For the plains, fodder trees are being planted under the Social Forestry and Farm Forestry Schemes through distribution of seedlings.

1.9.22. *Fuelwood Plantation*—This scheme aims at raising of fuel plantations on the forest land belonging to the forest department in plains region, to meet the growing demand of fire wood and small timber. The scheme is being implemented in the areas which are practically devoid of forests.

1.9.23. In view of the importance of this scheme from the social point of view the work under this scheme has to be accelerated so that large areas which were vested in the Forest Department in the year 1952 and which are vacant or partly vacant, could be brought under plantations at the earliest. About 50,000

hectares of such areas are still available for raising fuelwood plantations. This programme is proposed to be taken under Social Forestry Scheme during the 1978—83 Plan. The programme will be accelerated in case institutional resources become available for it.

1.9.24. *Management of Roadside Avenues*—There are about 21,000 kms. of National and State Highways and other P. W. D. roads in the plain districts of the State. Out of these, adjacent land over a length of about 15,000 kms. have already been taken over by the Forest Department for plantation and scientific management of trees. The Forest Department had raised 4,347 kms. of roadside avenues by the end of the Fourth Plan. The Fifth Five-Year Plan target for planting was 3,000 kms. (or 6,000 Row km.) but the actual achievement will be much higher. The scheme is proposed to be continued during 1978—83 Plan with an outlay of Rs.220.00 lakhs against an expenditure of Rs.164.41 lakhs during the four year period of 1974—78.

1.9.25. *Development of Civil and Soyam Forests in Kumaon and Garhwal Mandals*—The Civil and Soyam forests in the hills, cover an area of 7,284 square kilometres. The condition of these forests is very poor chiefly because of poor technical and scientific management of these forests. These areas have tremendous potential for improvement through afforestation and development of pastures which would, apart from meeting the requirement of timber, fuel and fodder for the local people, also yield handsome revenues from sale of surplus timber, fuelwood and fodder. A scheme was started in the Fifth Five-Year Plan with an outlay of Rs.2.09 crores to move towards this objective. However the actual achievements during Fifth Five-Year Plan were much less than the proposed targets mainly because only Rs.151.22 lakhs

could be provided. The scheme is proposed to be continued during the year 1978—83 Five-Year Plan with an outlay of Rs.1000.00 lakhs under Soil Conservation Sector. From 1979-80 it is proposed to include under this scheme all the soil conservation schemes of the hill area under State Plan.

1.9.26. *Rehabilitation of Degraded Bamboo Forests in Southern Circle (Outside D. P. A. P. areas)*—The scheme of Rehabilitation of Degraded Forests was started in the Third Five-Year Plan and was continued up to Fifth Five-Year Plan. Much headway could, however, not be made due to non-availability of adequate funds. The scheme is proposed with an outlay of Rs.75.00 lakhs to be continued during 1978—83 plan in the Vin-dhyan Region, where the forests, particularly, those of Bamboo require rehabilitation by way of intensive cultural operations, due to neglect in the past.

1.9.27. *Intensification of Forest Management*—At present the jurisdiction of the administrative units right from forest guard beat to forest circle is very large and has to be reduced to facilitate intensive management, inspection and supervision of forests. Accordingly, a scheme was proposed during the Fifth Five-Year Plan. An outlay of Rs.150.00 lakhs is proposed for the 1978—83 Five-Year Plan.

1.9.28. *Forest Research*—The objective of this scheme is to intensify forest research in both the hill and plain regions and to undertake intensive research on introduction of indigenous as well as exotic species, with special emphasis on the study of poplars, eucalyptus and tropical pines on account of their quick rate of growth and industrial importance. Rs.57.00 lakhs have been proposed for this item in the 1978—83 Five-Year Plan.

1.9.29. *Forest Statistics Cell*—A cell for the collection and processing of Forest Statistics was started during the Fourth Five-Year Plan with a skeleton staff at the headquarters. During the Fifth Five-Year Plan, in spite of the obvious importance of the Scheme much headway could not be made for want of adequate funds. It is keenly felt that the present staff in this cell cannot meet the requirements for the collection of statistics for various stages of Planning and Management of forests. It is, therefore, proposed to strengthen the staff at the headquarters and appoint one Statistical Assistant each in Additional Chief Conservator of Forest's Office and one computer each in Circle offices and a Compiler/Computer each in the divisions.

1.9.30. *Project Formulation*—A scheme for the setting up of a cell for Project Formulation was taken up for implementation during the Fifth Five-Year Plan but the same could be started only in 1977-78 and that too with a very moderate staff of one Forest Economist and two Economic investigators. This staff needs to be increased. Accordingly an outlay of Rs.28.00 lakhs is proposed for the 1978-83 Five Year Plan.

1.9.31. *Labour Amenities*—A large number of labour is employed every season in the forests by the department for carrying out plantations, silvicultural operations, construction and repairs of roads and buildings, control of fellings, and export and a number of other works. A large number is also approved by forest contractors for felling, conversion and other activities. There are at present no satisfactory arrangements for their accommodation, medical attention and education for their children. To attract more labour to the forests for efficient performance in different forestry works, it is essential to provide facilities of simple hut-

ments, medical attention and education. In view of this a scheme is proposed for Five-Year Plan 1978-83 at an outlay of Rs.35.00 lakhs.

1.9.32. *Other Activities*—In addition to the above, all the schemes continuing from Fifth Five-Year Plan i.e., development of communication, fire protection, forest protection, forest research, survey of forest resources, training of staff, preparation of working plans, nature preservation, construction of buildings etc. are proposed to be continued during the next Five-Year Plan 1978-83. However, increased outlays have been proposed for the scheme of forestry research, training of staff, nature preservation, forest protection, communication and buildings as these programmes did not get adequate attention during Fifth Five-Year Plan. New schemes for reclamation of 'Usar' land, plantation along canal banks, recreation forestry, forest publicity, amenities to forest labour and subordinate staff of the forest department and 'Taungya' cultivators of Bahraich and Gorakhpur districts have been proposed for the 1978-83 Plan.

1.9.33. *Amenities to Taungya Cultivators in Bahraich and Gorakhpur districts*—The living conditions of taungya cultivators are far from satisfactory which has its own adverse effects on the standard of taungya crop too.

1.9.34. The education facility to the children of taungya cultivators as also medical and drinking water facilities are not satisfactory. In view of this, scheme to provide the basic minimum facilities to taungya cultivators in Bahraich and Gorakhpur districts is proposed during Five-Year Plan 1978-83 at an outlay of Rs.40.00 lakhs.

1.9.35. *Forest Corporation*—Forest Corporation was established in November, 1974 with Rs.15.00 lakhs as Government loan and Rs.25.00 lakhs cash credit from

State Bank of India and the financial year for Forest Corporation was kept from 1st October to 30th September.

1.9.36. The main aim of the Forest Corporation is to abolish the contractor system in felling and transportation and to minimise wastage by using modern equipment for logging. The other aim of Forest Corporation is also to give reasonable wages to labours and thus to end their exploitation by contractors. In addition the Corporation is expected to establish its own factories based on forest materials. Production of some of the raw materials was to be taken up by Corporation itself where necessary.

1.9.37. In view of the increasing activities of Forest Corporation an outlay of Rs.500.00 lakhs has been proposed for Five-Year Plan 1978-83.

Annual Plan 1979-80

1.3.38. The proposed outlay in the State sector for the year 1979-80 is Rs.8.67 crores.

1.3.39. The schemes implemented during Fifth Five-Year Plan are proposed to be continued during 1979-80 as well with some minor modifications.

1.9.40. In order to meet the social needs of the people from the forests, the only practical step would be social forestry which also include Farm forestry and Extension Forestry. A Social Forestry project with a total outlay of Rs.45.00 crores will be taken up in the year 1979-80. Under this project, 45,000 hectares of area with the World Bank assistance will be afforested during the period of five years out of which 5,000 hectares will be planted during 1979-80 on various lands as under :

	(Hectares)
(i) Degraded Forests (under the control of Forest Department).	1,490
(ii) Along the canals	1,755
(iii) Along the roads	765
(iv) Along the railway lines	440
(v) On village community land	550
Total	5,000

1.9.41. The plantation will be raised in 40 districts selected on priority basis keeping in view the criteria of low *per capita* forests, low *per cattle* forest, lower percentage of forests, lower *per capita* income and higher percentage of rural population, etc.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.0g—Forest

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed Outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
	Direction and Administration	17.80	5.00	40.00	..	..
	Research					
1	Forest Research Work	22.66	7.03	57.00	..	..
	Education and Training					
2	Training of Staff	32.66	12.55	95.00	..	..
	Forest Conservation and Development					
3	Fire Protection	14.07	3.07	35.00	..	..
4	Forest Protection	4.66	2.32	130.00	..	..
5	Rehabilitation of Degraded Forests ..	0.10	..	75.00	..	..
6	Development of Civil and Soyam Forests	151.22	69.60	..	..	..
	Survey and Forest Resources					
7	Forest Resources Survey	13.31	4.35	26.00	..	..
	Plantation Schemes					
8	Plantation of Species of Economic and Industrial Importance.	350.69	98.84	788.00	..	..
9	Plantation of Fast Growing Species ..	447.44	122.08	905.00	..	..
10	Management of Roadside Avenues (Non Social Forestry Project area mainly Southern Bundelkhand circles, leaving Banda and Varanasi districts).	164.41	61.18	220.00	..	..
	Forest Produce					
11	Timber Logging	7.56				Transferred
	Communications and Bridges					
12	Communication Roads, Bridges and Telephone Lines.	154.27	49.42	318.00	..	..
13	Buildings	33.28	13.17	200.00	..	..
	Preservation of Wild Life					
14	Nature Preservation	63.39	22.23	155.00	..	..
	Other Expenditure					
15	Forest Statistics	1.98	0.76	35.00		

AND EXPENDITURE

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved Outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
5.50	5.50	6.50	..	..	..	8.00	9.50	10.50
7.00	7.00	12.00	..	..	6.00	12.00	13.00	13.00
14.00	14.00	18.00	..	..	8.00	20.00	21.00	22.00
5.00	5.00	6.00	..	..	2.50	7.00	8.00	9.00
7.50	7.50	29.25	..	..	3.00	29.25	31.50	32.50
..	..	10.00	..	..	..	20.00	20.00	25.00
Transferred to Soil Conservation Sector.								
4.00	4.00	4.50	..	..	..	5.00	5.50	7.00
100.00	100.00	125.00	..	..	55.00	155.00	183.00	225.00
120.00	120.00	134.00	..	..	90.00	176.00	223.00	252.00
70.00	70.00	25.00	..	..	14.00	32.00	43.00	50.00
to Forest Corporation								
53.00	53.00	60.00	..	..	50.00	65.00	68.00	72.00
20.00	20.00	30.00	..	..	15.00	45.00	50.00	55.00
24.00	24.00	27.00	..	..	13.00	31.50	34.50	38.00
1.00	1.00	7.50	..	..	2.25	8.00	9.00	9.50

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.08—Forest—(concl.d.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total Col. 8+10+14+15+16	Capital	Foreign Exchange
1	2	3	4	5	6	7
16.	Revision of preparation of working plans	18.10	4.59	35.00	..	..
17.	Project Formulation and Evaluation Cell	0.04	0.04	28.00	..	..
18.	Intensification of Forest Management ..	11.99	7.48	150.00	..	..
19.	Development of Okhla Tourist Complex ..	1.95	..	..	..	..
Extension						
20.	Social Forestry Including Fuelwood plantation (State share for World Bank project).	60.92	30.15	1256.00	..	..
NEW SCHEMES						
21.	Forest Recreation .. .. .	..	..	25.00	..	..
22.	Forest Publicity .. .. .	..	..	45.00	..	..
23.	Provision of drinking Water and Electricity to Subordinate Staff of the Department.	..	..	45.00	..	..
24.	Amenities to Taunga cultivator and Forest Labourers.	..	..	75.00	..	..
25.	Forest Corporation .. .. .	..	..	500.00	..	..
26.	Provision of Jeep to ACF/SDO.	..	..	72.00	..	..
27.	Establishment of High Altitude Zoo	..	..	60.00	..	..
Total for 1.08 Forest		..	1554.70	508.86	5330.00	..

(Rupees in lakhs)

1978-79			1979-80		1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
8.00	8.00	6.00	..	..	3.00	7.00	7.00	7.00
0.50	0.50	7.00	..	..	..	7.25	6.50	6.75
15.00	15.00	20.00	..	..	8.00	34.00	37.00	44.00
..
42.00	42.00	214.00	..	..	..	300.00	350.00	350.00
..	..	4.00	..	..	2.00	5.00	7.00	9.00
..	..	7.00	..	..	0.75	10.00	13.00	15.00
..	..	10.00	..	..	1.00	11.00	11.75	12.25
..	..	17.00	..	..	1.00	18.00	19.00	21.00
15.00	15.00	60.50	..	..	60.50	140.00	140.00	144.50
..	..	18.00	..	..	..	18.00	18.00	18.00
..	1.00	15.00	..	..	15.00	17.00	14.00	14.00
506.00	507.00	866.75	..	..	350.00	1173.00	1332.75	1451.50

AGRICULTURE AND RURAL DEVELOPMENT

Head-wise/sub-headwise break-up of the financial outlays

(Rupees in lakhs)

Head of Development Programme	Fifth Plan Outlay	Approved Outlay 1978-79	Proposed outlay 1978-83			Proposed outlay 1979-80		
			Total	Capital	Foreign Exchange	Total	Capital	Foreign Exchange
1	2	3	4	5	6	7	8	9
XI—Forestry								
(1) Direction and Administration	39.45	5.50	40.00	..	..	6.50	..	..
(2) Research Education and Training	67.70	21.00	152.00	..	..	30.00	..	..
(3) Forest Conservation and Development	273.80	12.50	240.00	..	..	45.25	..	..
(4) Forest Resources and Survey	18.80	4.00	26.00	..	..	4.50	..	..
(5) Plantation Schemes								
(a) Departmental	1194.40	290.00	1913.00	..	..	284.00	..	..
(b) Forest Corporation .. .. .	..	..	..	..	..	..	..	..
(c) Others .. .. .	..	..	..	..	..	..	..	..
(6) Forest Development Corporations (Equity Participation)	7.60	15.00	500.00	..	..	60.50	..	..
(7) Forest Communications and Buildings	273.60	73.00	590.00	..	..	108.00	..	..
(8) Preservation of Wild Life	71.00	24.00	215.00	..	..	42.00	..	..
(9) Others	169.10	66.50	1694.00	..	..	292.50	..	..
Total—XI ..	2076.00	506.00	5330.00	..	..	866.75	..	..

AGRICULTURE AND RURAL DEVELOPMENT

Employment generation

(In numbers)

Serial no.	Head of Development/Programme	Likely Employment generation (in man years)					
		Scientists	Technical	Adminis- tration.	Skilled	Unskilled	Total
1	2	3	4	5	6	7	8
XI Forestry							
1.	Direction and Administration ..	..	25	..	100	..	125
2.	Research, Education and Training	..	15	..	50	1,350	1,415
3.	Forest Conservation and Develop- ment.	..	..	..	..	..	..
4.	Forest Resources Survey ..	..	..	..	50	700	750
5.	Plantation Schemes						
	(a) Departmental ..	..	..	..	150	75,000	75,150
	(b) Forest Corporation ..	..	..	..	..	..	..
	(c) Others .. ..	..	..	..	..	..	..
6.	Forest Development Corporation (Equity Participation) ..	..	..	..	..	..	..
7.	Forest Communications and Build- ings.	..	..	..	600	39,400	40,000
8.	Preservation of Wild life ..	..	25	..	565	14,000	14,590
9.	Others .. ..	..	793	..	720	15,000	16,513
	Total XI ..	..	833	..	2,135	1,45,450	1,48,418

(10) INVESTMENT IN AGRICULTURAL FINANCIAL INSTITUTIONS

Co-operatives have been acknowledged as the main source of institutional agricultural finance. By providing easy, adequate and timely finance to the agriculturists, these institutions have contributed significantly in agricultural development and allied programmes. U. P. State Co-operative Land Development Bank Ltd. has so far been providing loans mainly for minor irrigation. Loan facilities have recently been diversified and long-term loans are being provided now for other purposes like dairy development, soil conservation, horticulture, on-farm development and farm mechanisation, etc. also.

1.10.2. The U. P. Land Development Bank has at present 225 branches spread over the State. At the inception of the Fifth Five Year Plan, there were only 209 branches. During the Five Year Plan 1978-83, 80 new branches will be opened bringing the total number to 305.

1.10.3. During the first three years of the Fifth Plan, i.e. in the years 1974-75, 1975-76 and 1976-77 the bank distributed loans amounting to Rs. 30.43 crores, Rs. 23.17 crores and Rs. 39.34 crores respectively against which the following works were completed :

TABLE I—Physical Achievement of Land Development Bank

Purpose	1974-75	1975-76	1976-77
	(Numbrs)	(Numbers)	(Numbers)
1	2	3	4
1. Well	5,543	6,278	9,395
2. Rahat	858	572	1,190
3. Tube-well	24,695	18,876	21,362
4. Pump sets	24,229	20,156	30,929
5. Horticulture	249	312	..
6. Tractors	330	169	1,119@
7. Bundhies .. .. .	..	156	..
8. Others	223	144	1,401
Total	56,127	46,663	65,396

@ Includes other agricultural implements also.

1.10.4. For the year 1977-78, a target for disbursement of Rs. 50.00 crores was fixed out of which Rs. 40.00 crores was for minor irrigation and Rs. 10.00 crores were for other purposes such as farm mechanisation, dairy development, horticulture, on-farm development, etc. The Reserve Bank of India approved lending programme of Rs. 44.00 crores (Rs. 24.00 crores under Special Schemes and Rs. 20.00 crores under Normal Schemes). During the year, loans amounting to Rs. 46.21 crores was distributed and the following works

were completed :

TABLE II—Physical achievement during 1977-78

Purpose	Numbers
1	2
1. Pumpsets	42,045
2. Tubewells	27,448
3. Rahats	942
4. Wells	10,512
5. Tractors	2,208
6. Others	1,819
Total	84,974

1.10.5. Thus, it is evident, that during the four years of the Fifth Five Year Plan a total loan of Rs.139.15 crores was distributed and the following works were completed :

TABLE III—Works Completed during 1974—78

Purpose		Numbers	
1		2	
1.	Pump Sets ..	1,17,359	} 2,45,030
2.	Tubewells ..	92,381	
3.	Rahats ..	3,562	
4.	Wells ..	31,728	
5.	Tractors and other Agricultural implements.	3,826	
6.	Others ..	4,045	
Total ..		2,52,901	

1.10.6. Since inception to March 31, 1978, the following minor irrigation works have been constructed out of the loans disbursed by the Land Development Bank and irrigation potential has been created as detailed below :

TABLE IV—Creation of Irrigation Potential against number of Works

Type of works	Number	Irrigation potential created (Lakh Hecatres)
1	2	3
1. Wells ..	1,94,971	2.36
2. Persian Wheels ..	37,513	0.46
3. Tubewells ..	2,80,749	22.72
4. Pump-sets ..	2,76,748	8.96
Total ..	7,89,981	34.50

1.10.7. As ample ground water is available in the State and there is still tremendous scope for augmenting irrigation potential through minor irrigation projects, with a view to saturating the entire cultivable land with irrigation facilities, an ambitious programme of disbursement of loan of Rs. 380.00 crores for various minor irrigation projects and other diversified purposes has been envisaged for the 1978—83 Plan. To help the small farmers, provision has been made to give loan for only boring also, which could all be used for irrigation with a common mobile pump-set.

1.10.8. With the implementation of this enormous lending programme, 6,92,000 new minor irrigation projects will be completed which will be three times of the achievement of the Fifth Five Year Plan. It will provide irrigation to 32.10 lakh hectares of land. Besides, loans will be advanced for horticulture (in plains as well as hill areas) on 3,240 hectares, 180 dairy development projects, 143 On-Farm Development schemes in the command areas and for purchase of 8,625 tractors under the farm mechanisation scheme.

1.10.9. As stated above great emphasis has been laid on development of irrigation potentials during the 1978—83 Plan. Out of a total loan disbursement of Rs. 380.00 crores, a sum of Rs. 321.00 crores is meant for irrigation projects. To meet this enormous commitment adequate debenture support from the State Plan will be necessary.

1.10.10. During the Fifth Five Year Plan an outlay of Rs. 20.36 crores was envisaged for five years. The allocation of the four years of the Plan, i.e. from 1974-75 to 1977-78 was Rs. 15.86 crores only. Besides this, additional allocations of Rs. 20 lakhs during 1976-77 and of Rs. 66.00 lakhs through Area Development Department during 1977-78 were also received. Thus the total allocation of the four years of the Fifth Plan was Rs. 16.72 crores. The expenditure against this allocation was Rs. 15.18 crores as detailed below :

	(Rs. in crores)
(1) State Government investment in L.D.B. Debentures.	12.93
(2) In L.D.B. shares for augmenting loan eligibility of weak branches.	2.25

Total ..	15.18
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1.10.11. Besides the State Government, the Government of India also participated directly in the debentures of the L. D. B. The total investment made by the Government of India during four years in the Ordinary Debentures of the L. D. B. amounted to Rs. 5.51 crores. In addition, during the year 1976-77 and 1977-78, the Government of India also invested Rs. 91.12 lakhs in the special debentures

of the L. D. B. through the State Government and debenture scrips of the corresponding amount which were originally prepared in favour of the State Government were transferred to Government of India. Now Government of India has given an indication that in addition to ordinary debentures it will also participate in the special debentures programme of the L. D. B. on matching basis with the State Government (i.e. 5 per cent for Minor Irrigation Schemes and 12.50 per cent for non-Minor Irrigation Schemes).

1.10.12. The State Government have proposed support of Rs.25.00 crores for the 1978-83 Plan which will suffice if the assistance of the Central Government to participate in the special debentures of the L.D.B. continues to be available. Assuming this, the year-wise lending programme and debenture support required from the State Government and Government of India will be as given below. This also includes the requirement of the hill areas :

TABLE V—Lending Programme and Requirement of Debenture Support (Rupees in crores)

Year	Lending Programme			State Govt's, Debenture support required			Central Govt's, Debenture support required		
	Normal Scheme	Special Scheme	Total	Under Normal Scheme	Under Special Scheme	Total	Under Normal Scheme	Under Special Scheme	Total
1	2	3	4	5	6	7	8	9	10
1978-79	22.00	48.00	70.00	1.70	2.80	4.50	1.70	2.80	4.50
1979-80	22.00	48.00	70.00	1.80	2.95	4.75	1.80	2.95	4.75
1980-81	19.00	56.00	75.00	1.50	3.45	4.95	1.50	3.45	4.95
1981-82	18.00	62.00	80.00	1.55	3.75	5.30	1.55	3.75	5.30
1982-83	17.00	68.00	85.00	1.42	4.08	5.50	1.42	4.08	5.50
Total	98.00	282.00	380.00	7.97	17.03	25.00	7.97	17.03	25.00

1.10.13. The recovery performance of the Bank during the last five years has been as follows :

Year	Recovery Percentage
1973-74	77.3
1974-75	74.6
1975-76	83.1
1976-77	76.1
1977-78	75.4

1.10.14. The overdues on June 30, 1978, amounted to Rs.1,354.43 lakhs. Out of 225 branches 73 branches have had a recovery of less than 75 per cent. Out of these 34 branches have been brought to the level of 75 per cent recovery on account of State Government's share participation. It will be possible, therefore, to continue unrestricted loaning through them. Out of the remaining 39 branches, restricted loaning according to the norms prescribed by the Reserve Bank of India will be undertaken in 36 branches during the year 1978-79 but in three branches namely Sandila (Hardoi),

Biswan (Sitapur) and Pithoragarh no loaning will be possible as their recovery performance on June 30, was below 40 per cent.

1.10.15. Following measures have been taken to rehabilitate the weak branches :

(1) additional staff for recovery works has been provided in the branches where the recovery percentage was low ;

(2) recovery cells have been established at the headquarters of the Bank as well as at the branch levels to keep day-to-day watch on the progress of recovery;

(3) branch-wise operational Plan, fixing month-wise targets of recovery, has been given to each branch and the progress is very closely watched; and

(4) incentives for good recovery and disincentive for the poor performance have also been introduced.

1.10.16. Very close liaison is being maintained with the Minor Irrigation Department of the State Government. The special schemes of minor irrigation in each district are prepared by the Minor Irrigation Department which are sent to ARDC for their sanction through the State Government. The Minor Irrigation Staff at the Block level helps in the collection of loan applications, submission of appraisal report and final completion report of the project.

1.10.17. Special emphasis is placed on providing loans to small and marginal farmers. Out of the total loans of

Rs.29,786.59 lakhs distributed up to March 31, 1978, Rs.13,084.32 lakhs have been given to small cultivators which comes to about 45 per cent of the total. The total number of beneficiary cultivators is 7,99,156; out of which the number of small farmers is 4,04,345. In other words out of the total cultivators who have been benefited more than 50 per cent are small cultivators.

1.10.18. The programme of opening new branches and loaning are being drawn in consultation with agriculture and minor irrigation departments in view of massive programme proposed for these sectors.

Major Head of Development—1. **AGRICULTURE AND ALLIED SERVICES***Sub-major Head of Development*—1.09 **Investment in Agricultural Financial Institutions.**

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed Outlay		
				Total (Col.8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
Minor Irrigation Department						
1	Minor Irrigation (Investment in Debentures of Land Development Bank)	1133.43	363.99	2169.00	2169.00	.
Agriculture Department						
2	Soil Conservation .. .. .	..	..	50.00	50.00	.
Department of Horticulture						
3	Fruit utilization	13.56	3.87	19.00	19.00	.
4	Dairy Development and On Farm Development.	55.00	20.00	79.00	79.00	.
5	Farm mechanisation <	90.84	23.84	158.00	158.00	.
6	Share participation for augmenting loaning eligibility of weak branches.	225.00	104.30	25.00	25.00	.
Total for sector 1.09—Investment in Agricultural Financial Institutions.		1517.83	516.00	2500.00	2500.00	.

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Exendi- ture	Total	Foreign Exchange content of total outly	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
383.80	383.80	403.80	..	403.80	6.00	428.80	463.80	483.80
10.00	10.00	10.00	..	10.00	..	10.0	10.00	10.00
3.80	3.80	3.80	..	3.80	2.00	3.80	3.80	3.80
15.80	15.80	15.80	..	15.80	..	15.80	15.80	15.80
31.60	31.60	31.60	..	31.60	..	31.60	31.60	31.60
5.00	5.00	5.00	..	5.00	..	5.00	5.00	5.00
450.00	450.00	475.00	..	475.00	8.00	495.00	530.00	550.00

AGRICULTURE AND RURAL DEVELOPMENT
Heads/sub-head-wise break-up of the Financial Outlays

(Rupees in lakhs)

Serial no.	Head of Development/ Programme	Approved/ outlay/ Fifth Plan.	Approved outlay 1978-79	Proposed outlay for 1978-83			Proposed outlay for 1979-80		
				Total	Capital	Foreign Exchange	Total	Capital	Foreign Exchange
1	2	3	4	5	6	7	8	9	10
XII Agriculture Credit:									
	(i) Support to Ordinary Debentures of L.D.B.s.	2036.00	450.00	2500.00	2500.00	..	475.00	475.00	..
	(ii) Support to Special Debentures of L.D.Bs.	..	..	..	..	..	..	..	..
	Total XII ..	2036.00	450.00	2500.00	2500.00	..	475.00	475.00	..

AGRICULTURE AND RURAL DEVELOPMENT

Employment Generation

(In numbers)

Serial no.	Head of Department/ Programme	Likely employment generation in Man years						
		Scientists	Technical	Adminis- tration	Skilled	Unskilled	Total	
1	2	3	4	5	6	7	8	
XII	Agricultural Credit							
	(i) Support to ordinary Debentures of LDBs	}	50	580	60	690
	(ii) Support to special debentures of LDBs							
	Total XII	..	..	50	580	60	690

(11) COMMUNITY DEVELOPMENT AND PANCHAYAT

(1) *Rural Development*

It is a matter of common knowledge that the Community Development blocks owe their origin primarily to the realization of an unexceptionable need of co-ordination between the various rural development programmes and reaching the basic services to the rural people in terms of knowledge and other inputs so that they avail of the same for improving their economic condition and quality of life. Even though the main emphasis of the blocks has remained on the programmes designed to promote production in agriculture and allied sectors, the fact that the man is not only a producer all the time but has other pursuits also, all of which need not be economic in character, has not been lost sight of and to that extent, therefore, the multipurpose character of these blocks has never been completely abandoned. Even though the philosophy of democratic decentralization had been crystallized at that time, the establishment of these blocks can also be regarded as a beginning of the process of democratic decentralization in planning and development. It is, however, unfortunate that this process has remained incomplete and even though there has been no ideological difference on the desirability of this process, the steps taken during this period were incomplete and half hearted. In the absence of these supportive steps and strong institutional back-up, a considerable amount of distortion has been taking place in the whole gamut of rural development programme and there have been efforts to re-establish fragmentation in rural development programme. In this context, therefore, one feels gratified to note that the Draft National Plan has laid renewed emphasis on the concepts of Integrated Rural Development and Democratic Decentralization in Planning and Development. The I. R. D. Scheme has already gone off the ground with financial assistance received from the Central Government and the work of block level planning has been taken-up at a number of places in right earnest. Similarly the report of Ashok Mehta Committee on Panchayati Raj has also been received and the State Government are already in the midst of

examination of the recommendations made in the report. It is felt that while taking a final decision on these questions, an integrated view will have to be taken which may combine the best points of I. R. D. Scheme and the organisational set-up suggested by the Ashok Mehta Committee.

1.11.2. Whatever may be the final outcome of the above exercise the fact remains that in the context of increasing importance of the rural development programme in the next Plan, we will have to ensure that basic infra-structure of Blocks is suitably strengthened and all those gaps which inhibit efficient discharge of functions by the block, are filled as early as possible. These have become all the more necessary in view of the fact that both in the field of planning and implementation, the blocks are being given a new set of complex responsibilities. After all, the blocks are the key instruments of various development programmes, and even though the Development Departments at the State level will be making larger provisions in their own outlays for the enlarged activities, it is the responsibility of the Rural Development Department to provide funds for perfecting these instruments. The staff posted to blocks in rural areas has to have necessarily some basic facilities and, the State Government have been, therefore, constructing buildings for the block offices and its staff. Similarly, in order to ensure mobility of the B. D. O. and his staff, Jeeps were also provided to the blocks. However the present position is that 400 blocks out of 876 blocks of the State do not have buildings, drinking water facilities, electricity etc. 428 blocks either do not have vehicles or their vehicles need replacement. It is proposed to construct these buildings and provide the missing facilities, as also to provide jeeps during the next plan period. Accordingly provisions of 1589.75 lakhs for buildings and 218.28 lakhs for vehicles have been included in the outlay. In addition to making provision for these basic amenities, it is also proposed to provide to blocks a sum of rupees 354.70 lakhs for agriculture exten-

sion, Rs.70.08 lakhs for health and sanitation and Rs.116.06 lakhs for social education. A sum of Rs.37.53 lakhs has been proposed for strengthening the set-up of developmental administration at Regional level also. Apart from these, a sum of Rs.875.00 lakhs is also proposed to be allotted to the blocks for giving grant-in-aid to Gaon Panchayats and other village institution for local development works such as safe drinking water facilities, rural roads, culverts, drains, PRAI latrines, etc. The total outlay of the Plan period, therefore, works out to Rs.3275.00 lakhs.

1.11.3. It may be mentioned here that the above figure does not at all represent the total amount of money which is going to be spent on rural development programme through blocks or otherwise. They have been shown in sectoral plans of the departments concerned, and a complete picture of the nature and volume of the work and funds likely to be handled by the blocks can be available only when one has gone through sectoral plan also.

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1.11.4. An outlay of Rs.809.34 has been kept for this year the items to be taken up with this amount are the same as mentioned above. More than half of this outlay is meant for construction of block buildings etc. and provision of jeeps and more than twenty-five per cent for local development works.

(2) Panchayat Raj

1.11.5. Panchayats were established in Uttar Pradesh in the year 1949. There were no separate plans for Panchayat Raj Sector during the first two Plan periods. During third Five-Year Plan, a provision was made for extending loan facilities to Panchayats for creation of economic assets and the bulk of the loan was utilized by Panchayats for increasing irrigation potential in rural areas. During the Fourth Plan efforts were continued to strengthen the Panchayats. An outlay of only Rs.76.00 lakh was provided for the entire Fifth Plan. Owing to the limited outlay seven schemes were continued with meagre allocation which included four training schemes for Panchayat Sewaks, Panchayat Raj Office bearers, Managers of Panchayat Udyogs and Office bearers of Kshettra Samities and Zila Parishads. Besides these scheme to provide incen-

tive to Panchayat Raj Institutions, share contribution for Panchayati Raj Vitta Nigam and appointment of supervisory and technical persons for Panchayat Udyogs were also included. Three new schemes viz. Incentive to the Pradhans of Gaon Sabhas, construction of Panchayat Bhawan and construction of Roads, Drains, etc. were started in 1978-79. Against an allocation of Rs.76.00 lakhs an amount of Rs.71.34 lakhs was utilized during Fifth Plan.

1.11.6. Gram Sabhas form the base of the three-tier system of Panchayati Raj. Unfortunately these units at the grass root level have remained neglected during the earlier plans. Even after about 30 years of the planning the living condition in the villages continue to remain unhygienic and inhabitable. This is also one of the several factors responsible for the influx of population from villages to the cities. For the all round development of the rural area this trend will have to be reversed and living conditions in the villages made attractive enough to invite people to live there. The only agency in rural area which can provide this infrastructure of basic civic amenities is Gaon Panchayat which has to be properly developed as a rural local body and suitably strengthened. In the Five-Year Plan (1978-83) for the Panchayat Raj sector, an effort has, therefore, been made to strengthen these rural local bodies to enable them to provide basic infrastructure of civic amenities and better living conditions which is the pivotal point for all future development and rural industrialisation. The draft plan mentions the environmental improvement of urban slums as a part of the minimum needs programme but living condition in many villages specially in Harijan bastis are worse than some of the slums. The main thrust of the plan is to provide basic civic amenities in the rural area.

1.11.7. The plan has been limited to the allocation of Rs.26.00 crores only. In framing the Five-Year Plan the following principles have been taken into consideration :

- (1) Such schemes be implemented which would provide incentive to Gaon Sabhas for raising their own resources of income.

(2) Such projects be undertaken which may provide maximum employment to rural artisans and craftsmen and also help in giving new life to the decaying village arts and crafts.

(3) The Gaon Sabha being a rural local body such schemes have been taken which may provide basic civic amenities like roads, drains, street lighting, etc, in the rural areas and improve the quality of life therein.

Schemes proposed for the Plan (1978-83) :

Technical and Managerial assistance to Panchayat Udyogs (Continuing Scheme):

1.11.8. There are 874 Panchayat Udyogs employing 7,415 skilled and unskilled persons. Besides this about 15,000 unskilled labourers have been trained who have started their own Udyog in the rural areas. It is being visualized that ultimately Panchayat Udyogs will be started at all the Nyaya Panchayat Centres. The Panchayat Udyogs, however, have not been provided with any managerial technical assistance except for the appointment of 68 Panchayat Inspectors (Udyog) in the year 1961. The number of Panchayat Udyogs has risen to 892 and their number is likely to rise further. To organise the work of such a large number of Panchayat Udyogs, it is necessary to provide managerial, technical and financial assistance. It is proposed to give managerial subsidy to the Panchayat Udyogs to enable them to appoint qualified managers well-versed in business management. The assistance is not to be given to all the Panchayat Udyogs but only to such Panchayat Udyogs who have already attained at reasonable level of production of say Rs.20-25 thousands but are not able to further reach the stage of take-off for want of managerial and technical assistance. This managerial subsidy is proposed to be given on a tapering basis being Rs.10,000 in first year Rs.8,000 in the second year, Rs.6,000 in the third year, Rs.4,000 in fourth year and Rs.2,000 in fifth year. The total allocation for managerial subsidy is expected to be rupees one crore over a period of five years. It is expected that with this managerial assistance the turn over of Panchayat Udyogs would rise to about Rs.20 crores as

against the present level of production of Rs.2 crores per annum at the end of Five-Year Plan with direct and indirect employment for more than a lakh of persons per annum. Considering the huge task involved it will be necessary to provide adequate staff at the State, Regional and District level with necessary infra-structure for direction and monitoring of the programme. Specialists drawn from different trades like carpentry, handloom, etc. will also have to be provided to improve the quality of goods and reduce cost of production. The question of setting up a Separate Panchayat Udyog Nigam as an apex body of the Panchayat Udyog is also under consideration but even then staff for direction and monitoring etc. will have to be provided by the department. The total outlay for this scheme would be Rs.204.69 lakhs.

Strengthening the Panchayat Raj Institutions — Incentive to Gaon Sabhas for raising their own sources of income (Continuing Scheme) :

1.11.9. The only source of income of Gaon Sabha is the Panchayat tax which comes to an average of only Rs.370 per year. It is, therefore, necessary that these local bodies at the grass root level are suitably strengthened by giving them incentive for raising their sources of income.

1.11.10. During the Fifth Plan to inculcate a spirit of competition among the various Gaon Sabhas, prizes were given to each district at Rs.3,000, Rs.1,000 and Rs.400 for the best three Gaon Sabhas. It has been felt that as the amount of prize is very low and is limited to only 3 Panchayats in each district it has not created a great impact on Gaon Sabhas to raise their income. The scheme is, therefore, proposed to be revised in this Plan by making it more broad based so that the Gaon Sabhas are really benefited by it.

1.11.11. The total allocation to be made under this scheme for being given as incentive to Gaon Sabhas for raising their sources of income is Rs.379.00 lakhs. *Rural environmental sanitation by construction of village pavement and underground drains through people's participation (Continuing Scheme)*

1.11.12. Most of the Gaon Sabhas still do not have *pakka* pavement or drains in Abadi area. It is, therefore, proposed

that the construction of village pavements and laying of underground drains is taken up during this Plan in a big way to improve sanitation which has so far been neglected. It is now proposed to cover about 10 villages in each block during the entire Plan period.

1.11.13. The total expenditure on construction of half kilometre Kharanja with drain in 8,791 villages would be Rs.2066.00 lakhs. Grants-in-aid is proposed to be given to Panchayats on 50 per cent matching contribution basis and thus total matching contribution would be Rs.1033.00 lakhs. The question of routing this amount will be settled in consultation with Rural Development Department, which has also made some provisions for these works. At any rate, duplication will be avoided in these matters and funds for similar purpose will be channelised through a single budget head.

Construction of Panchayat Bhawan/Community Centre (Continuing Scheme):

1.11.14. Out of 72,853 Gaon Sabhas, 8,791 Gaon Sabhas are headquarters of Nyaya Panchayats of which 5,619 do not possess any Panchayat Bhawan. It is necessary that Panchayat Bhawans are constructed at all the Nyaya Panchayat Centres, as focal point for such development. It is proposed to give subsidy for these Bhawans on 50 per cent basis. The total expenditure on 4,015 Panchayat Bhawans (including 15 sanctioned in 1978-79) would be Rs.1003 lakhs. The total allocation proposed is Rs.530.50 lakhs (including Rs.1.71 lakh for 1978-79). Only those places will be selected for construction of these buildings which are recognised as growth centres. Utmost care will, therefore, be taken in the choice of these places.

Street lightning in Village Abadi:

1.11.15. The scheme for provision of street light in Gaon Sabhas shall be limited to only such villages where electric poles and wires have already been installed. The electric line shall be extended to all the main lanes of the village *abadi*. It is estimated that average expenditure per Gaon Sabha would be about Rs.2,000, 50 per cent of this i.e. Rs.1,000 is proposed to be given as grants-

in-aid to Gaon Sabhas for meeting initial expenses. The recurring expenses shall be met by the Gaon Sabha would be a pre-condition to sanction of such subsidy. To provide street light in electrified 10,000 villages, total outlay of Rs.100.00 lakh is proposed.

Training Schemes:

1.11.16. Training programmes have been prepared for different level of workers under the following schemes:

(1) Training of Panchayat Udyog Managers with an outlay of Rs.10.80 lakhs.

(2) Training of Panchayat Sewaks. with an outlay of Rs.3.51 lakhs.

(3) Training of Panchayat Raj office bearers like Pradhans and Sarpanches. A large number of new Pradhans and Sarpanches would be elected after the next general election and it is necessary to give them training. The total outlay of this scheme would be Rs.30.00 lakhs.

(4) Training of office bearers of Zila Parishads and Kshetra Samitis. An outlay of Rs.8.00 lakh is being proposed for the same.

Improvement of Hats, Bazars and Melas :

1.11.17. The income of Gaon Sabhas can be considerably improved by development of the sites of such Hats and Bazars. The development cost shall be met by Gaon Sabhas by taking loan from Institutional Finance. However, to encourage the Gaon Sabhas to take up this programme provision for some grants-in-aid has been made under the Plan. It is proposed to provide grants-in-aid to 100 Gaon Sabhas each year on 50 per cent basis. The average grant for each project is expected to be Rs.5,000. Total grants-in-aid during this Plan will be Rs.21.50 lakhs.

Improvement of rural environmental sanitation installation of P.R.A.I. type latrines:

1.11.18. There are no proper sanitary arrangements in the rural areas. To improve the sanitary conditions it is necessary that P.R.A.I. type latrines are installed in villages. In view of the past experience about poor maintenance of community latrines it is proposed to encourage people to instal their own P. R. A. I. latrines in

individual homes by giving them some incentives. It is proposed to give grants-in-aid of Rs. 100 per latrine to each family on 50 per cent basis. It is expected to instal 100 latrines in each of the 500 villages in the State at a total Plan outlay of Rs.50.00 lakhs. This programme will be taken up in consultation with Medical and Health Department.

Construction of Culverts and laying of Hume Pipes on drains and rural roads constructed through people's participation.

1.11.19. It is proposed to make some provision for the construction of these culverts and laying of Hume Pipes across these roads. An *ad hoc* allocation of Rs.100.00 lakhs is being proposed for the purpose to be given as grants-in-aid to Gaon Sabhas on the same term as being given to Mandi Samities for their roads i.e., with matching grant from Gaon Sabhas. However, the question of channelising of these funds will also be settled in consultation with Rural Development Department as to avoid duplication.

Shares contribution for Panchayati Raj Vitta Nigam

1.11.20. Panchayati Raj Vitta Nigam has an authorised share capital of Rs.70.00 lakhs. It is likely to be increased to Rs.100 lakhs during Plan period for which Government has to purchase 51 per cent shares amounting to Rs.51.00 lakhs. The paid up share capital on April 1, 1978 was Rs.32.00 lakhs. A provision for Rs.19.00 lakhs has accordingly been proposed as the outlay for this Plan.

Salient features of Annual Plan 1979-80

1.11.21. As already stated above the main thrust will be to strengthen Goan Panchayats during the Plan period in order to enable them to provide basic civic amenities and better living conditions in rural areas, to create additional avenues for employment in rural area through a net work of Panchayat Udyogs and to augment their financial resources. An outlay of Rs.405.43 lakhs including Rs.5.07 lakhs for Hills is being proposed for the Annual Plan 1979-80.

1.11.22. It is proposed to execute schemes which may provide incentives to Gaon Sabhas for raising their own resources of income. Another scheme proposed with an outlay of Rs.60.00 lakhs is for

strengthening of Panchayat Udyogs with a view to provide additional employment in rural areas, increase production of consumers goods and augment financial resources of the Panchayats. It is also proposed to allot a sum of Rs.183 lakhs to Panchayats as grant-in-aid for providing basic civic amenities like Village Pavements, Drains, Street lightning, Panchayat Bhawans (Community Centres), P. R. A. I. type latrines etc. Provision of these basic civic amenities is expected to make conditions of rural life better. Other schemes proposed are training schemes for Panchayat Udyog Managers, Panchayat Sewaks, and Panchayati Raj Office bearers etc. All these schemes are expected to provide employment to about 10,000 rural artisans and provide civic amenities in about 2,000 villages. It is also expected that the average *per capita* income of Gaon Sabhas which is at present only Rs.0.36 paisa, the lowest in the country, will double itself during the year.

(3) *Rural Engineering Service*

1.11.23. The Organisation of Rural Engineering Service was created during 1972-73 for executing and providing technical guidance and supervision facilities to various development departments for their works in rural areas. This organisation execute construction of buildings in rural areas costing less than Rs.1.00 lakh and Rs.2.00 lakhs in plains and hill areas respectively of development departments excluding Police Department. This department was also entrusted with the construction of link roads having length up to 8 km. Since its creation, it has rendered immense service by constructing various works of great utility in remote rural areas. It has also provided technical guidance to various agencies employed in departmental works. Thus it is filling a very important gap by providing a technical nucleus for development of rural areas. Some of the important works executed by this service are enumerated below :

- (1) Block Office Buildings, Veterinary Hospitals and Stockmen Centres.
- (2) Development of Housesites for landless labourers and Harijans.
- (3) Primary School Buildings.
- (4) Link Roads of Mandi Parishad and Command Areas.

(5) Execution of Flood Protection Schemes.

(6) Residential and Non-residential Buildings of Revenue, Horticulture, Animal Husbandry and Industries Department.

(7) Stadiums of Sports Department.

(8) Development of Ponds of Fisheries Departments.

1.11.24. The provision for these works is made in the budget of the concerned departments.

The Service has completed works worth about Rs.23.00 crores so far. Out of which works worth Rs.13.54 crores have been done on centage charges and the amount received as such, has added to the resources of the State exchequer. The year-wise performance of the Service has been as follows :

TABLE I—Details of works of the Rural Engineering Service

(Rupees in lakhs)

Year	Amount provided for service in budget	Actual Expenditure	Cost of works constructed	Cost of works done on centage charges	Amount of centage charges
1	2	3	4	5	6
1972-73	29.00	28.75	307.41	298.76	32.86
1973-74	60.00	59.55	552.13	424.90	46.74
1974-75	36.61	86.76	334.34	252.04	27.72
1975-76	88.26	88.95	267.59	63.91	9.59
1976-77	113.91	113.82	377.72	115.88	17.38
1977-78	155.50	157.15	462.86	199.17	29.87
Total	533.28	534.98	2302.05	1354.66	164.16

1.11.25. The physical achievements of the service during the Fifth Five-Year Plan (1974--78) has been detailed in the following table.

TABLE II—The progress of the works undertaken by the Rural Engineering Service during 1974—78

Serial no.	Name of the work	Unit	1974-75		1975-76		1976-77		1977-78		Total 1974-78
			Land available	Works completed	Land available	Works completed	Land available	Works completed	Land available	Works completed	
1	2	3	4	5	6	7	8	9	10	11	12
	Block office Building	No.	166	97	205	138	209	174	249	206	615
2	Veterinary Hospitals.	„	154	97	154	129	135	139	166	149	514
3	Stock-man Centres	„	29	7	30	19	31	24	32	30	80
4	Harijan Residential Quarters.	„	5750	5722	5750	5750	..	..	..	..	11472
5	Development of house sites for landless labourer's.	„	4952	4853	21575	15670	..	..	..	..	20523
6	Link Roads	km.	..	493	..	562	..	578	..	..	1633
7	Primary School, Building.	No.	360	..	295	154	478	294	637	416	864
3	Revenue Buildings	„	36	45	152	137	160	138	..	..	320

1.11.26. As already mentioned above the department is only an executing agency and its work-load depends mainly on the work allotted by different departments or corporations. With added emphasis on Rural Development, the work-load of this Service has increased considerably with the result that organisation now has a work-load of Rs.18.00 crores in the financial year 1978-79. However, due to financial constraints, it is proposed to restrict the construction activities of the various departments up to Rs.12.00 crores per year during the next Five-Year Plan period. With this objective minimum strengthening of the service based on approved yardsticks has been incorporated in the outlay of the next Five-Year Plan. The total outlay for this organisation is Rs.10.00 crores including Rs.1.01 crore for the current financial year 1978-80.

1.11.27. An outlay of Rs.194.50 lakhs has been proposed for the year 1979-80 for Rural Engineering Service.

(4) *Pradeshik Vikas Dal*

1.11.28. Pradeshik Vikas Dal has been working as the spear-head of development activities in the rural areas, since 1952, but, for the first time its activities and programmes were included in the Fifth Five-Year Plan, (1974-79) in 1974. The organisation has a broad-based infra-structure, in rural areas, with whole time officers at block, district and State level supported by unpaid volunteers force which include one Block Commander in every block (878), one Halqa Sardar, in each Nyaya Panchayat Circle (8792) and one Dalpati in each Gram Sabha (72890) with one Toli Nayak and one Toli of volunteers in each Gram Sabha, on the basis of population of 500 people. There is a network of large number of Yuwak Mangal Dals at the Gram Sabha level. The organisation has been working as (1) the spear-head of Manpower mobilization for the construction and repairs of roads, Bandhis, Drains, Tanks and Irrigation Channels, etc. and as (2) nucleus of all Rural Youth Programmes which comprises (a) organization of games, sports and Bhartiya Vyayam, (b) Economic activities for gainful employment of the Rural Youths, on the basis of the principle of 'learning while working and earning while learning'.

1.11.29. With a very meagre expenditure of Rs.19.20 lakh, just to support a programme of voluntary action, earthwork has been done for construction of 6,718 km. of village roads, and 7,003 km. roads have been repaired, against the target of 1,900 km. road by mobilizing voluntary labour or *shramdan*. In addition to the construction of 13,000 km. irrigation channels by voluntary labour, which was taken-up as a campaign in Uttar Pradesh. An estimated cost of earthwork done on these projects is to the tune of 40 crores, against an investment of only Rs.5.55 lakhs on the work or *shramdan* camps organized for the purpose.

1.11.30. Seventeen projects of drainage were also undertaken and about 8175 acres of additional land, has been made available by draining out surplus water, resulting in additional income of Rs.167.00 lakh to the poor cultivator. Besides that 37.72 lakhs trees were planted through the efforts of this voluntary organization and Yuwak Mangal Dals. The income earned by the youth club by kitchen gardening, fisheries small scale cottage industries is estimated to be about Rs.19.00 lakhs during the year 1976-77 and 1977-78.

1.11.31. Games and competitions were organized at the block, district, division and State level, in which about 4.02 lakhs rural youths participated. The programme of physical culture and sports has caught the imagination of the rural youth. One thousand five hundred and thirty young-men have been trained in Swimming and about 4,000, young-men have received training in Bhartiya Vyayam, Asan, Malkhamb, Gymnastic, Parallel Bar, Horizontal-bar, etc. As many as 727 youths have also been imparted specialized training in advance agriculture, mini dairy, poultry, seri-culture, bee-keeping, and other allied programme.

Objective for the new Plan

1.11.32. The programme of voluntary action or *Shramdan* shall be directed towards productive activities.

1.11.33. So far the Yuwak Mangal Dals were a loosely knit body and their programme comprised of games and sports, recreational activities. Kitchen gardening,

poultry, animal husbandry, bee-keeping and other allied economic activities formed the part of their economic programme, which were a partial success, as they did not provide permanent gainful employment to the youths. More emphasis has been laid on need-based, job oriented training and gainful employment on permanent basis.

1.11.34. It is proposed to strengthen the already existing infra-structure of Yuwak Mangal Dals, by getting 8792 Yuwak Mangal Dals, registered, under Registration of Society Act, to make them entitled for loans, subsidies and other assistance from Government and other financial institutions. The youth will be trained in various skills, for which provision has been made in the Plan, according to their needs, in existing institutions.

1.11.35. This net work of Yuwak Mangal Dals will serve as the infra-structures of voluntary agency and supporting service for development programmes, such as, fisheries, mini dairy, poultry, sericulture, bee-keeping and need based small scale cottage industries to be taken up by different department, with financial support from Government and other financial institutions. Provision of two such economic viable pilot projects in each block, during the Plan period has, also been made in the Plan which will result in increased income for about 8,800 youths, as a part of the Integrated Rural Development. The main thrust of the programme will be to generate more employment for the rural youth.

1.11.36. The games and sports competitions and recreational and cultural activities have to be expanded and strengthened to cover the entire rural areas. Vyayamshalas to train youth in Bhartiya Vyayam, Asans, Malkham, Gymnastics, Parallel-bar, Horizontal-bar, Mat-work, Weight Lifting Gadka Pari etc., are to be established, in every block and at every district headquarters.

1.11.37. The details of the various schemes and projects as has been embodied in the Plan are given as under :

Work-Camps

The programme of Shramdan/Training Camps should be continued and expanded to cover every block. The scheme shall be re-named as 'Work Camp' instead of *Shramdan/Training Camp*.

A provision of Rs.500 per block (100 mandays) has been suggested for this purpose. The amount may be spent, for one or more of the following purposes, according to the local needs and conditions :

(i) Calling of volunteers for duty for mobilization of local peoples, labourers and day-to-day supervision and measurement of the work.

(ii) Completing, unfinished earth-work done by *shramdan* on drains and roads etc.

(iii) Alignment and survey of the projects.

(iv) Maintenance of the work done by *shramdan* on drains and tanks etc., which may also include construction and repair of pucca work.

(v) Finishing and dressing of the earth-work done on the projects.

(vi) The number of camps and participants may differ from place to place according to local needs and condition.

(vii) More emphasis has to be laid on cleaning and digging of percolation tank, to increase their storage capacity to achieve (1) more irrigation potential, (2) to replenish under ground water-strate, condition, (3) to improve moisture region in the vicinity. Eight hundred thirty-nine works camps would be organised. in 1979-80.

Culverts and syphons

Construction of culverts and syphons etc., is undertaken by different resources, which include Government grants and funds at the disposal of Zila Parishad, Kshetra Samitis, Mandi Parishad and other local bodies, but it has been experienced that it is not always possible to avail those resources and the possibility of the work done being damaged or washed away is, always there. For such eventualities provision of Rs.21.00 lakhs has been made during the Plan period and Rs.4.50 lakhs for 1978-79.

Strengthening of Voluntary Service Organization

(a) At present, there is one Block Commander in every block, one Halqa Sardar in every Nyaya Panchayat Circle and one Dalpati and 11 volunteers in each Gram Sabha on the population of 500.

It is proposed to give two sets of uniform (costing Rs.70) to all Block Commander and Halqa Sardar and five thousand Dalpatis during the next five years and Rs.4.09 lakhs for 1979-80.

Social Service Work on the occasion of Mela and Exhibition:

A provision of 500 Rupees per district (100 mandays) has been kept for calling volunteer on duty on the occasion of Melas, Exhibition etc. for social service work and other duties.

Assistance and Incentive to youth clubs (promoting and strengthening of Yuwak Mandals):

A provision of Rs.250 per block has been made for providing improved varieties of vegetable seeds, fruit plants as lemon papaya, banana, etc. to popularise the kitchen gardening and plantation programme and to provide volleyball sets and other sports equipment to selected youth clubs.

Organisation of games and sports competitions and rallies at Block, District, Region and State level :

(i) A provision of Rs.500 has been made for organisation of games and sports at the block level, Rs.1,000 for the district level, Rs.4,000 for Divisional level and Rs.20,000 at State level. The sports will be held, twice in a year, in the month of June and November; once for the boys up to the age of 16 years and the other for youths of all ages.

(ii) Co-ordination Committee will be set up at Block, District, Division and State level in which representative of education, and sports department, local educational institutions and different sports bodies will be held at different places by rotations.

(iii) All the meets will be held, at different places by rotations.

Training of youths in swimming:

At present 5 Training Centres are working for training of youths in swimming. The number will be increased to 9 during the next Five-Year Plan according to phased programme. A provision of Rs.1,000 for each centre has been made for payment of honoraria to the Instructor to construct, safety enclosure and for other miscellaneous expenditure.

New Schemes

Youth Seminar and workshop:

1.11.38. A provision of Rs.0.61 lakh

has been made for holding Youth Seminar and Workshop at Division and State levels for preparation and formulation of plans and evaluation of programmes. Provision of 100 youths participant, at divisional level for a period of two days at Rs.5 per head per day and Rs.20 for actual fare has been proposed. An amount of Rs.0.06 lakh has been provided for State level seminar.

Survey:

1.11.39. An amount of Rs.0.05 lakh has been provided for survey to determine the actual needs and new job potentialities in different areas of U. P. for Rural youth. The survey is to be conducted in collaboration with Directorate of evaluation or other similar agencies.

1.11.40. After a preliminary study and survey, a number of trades and job will be identified to give gainful employment to the rural youths and the youths will be trained in those trades, at the existing available institutions, or facilities available in organized or unorganised sector or at the Training-cum-Production Rural Craft Centre, to be established at Sarojaninagar. A provision of Rupees 1.00 lakh per year has been proposed for this purpose.

Pilot project for rural craft and training-cum-production centre at Sarojaninagar :

1.11.41. (i) It is proposed to start a rural craft training-cum-production centre at Sarojaninagar where two big buildings consisting of one hostel along with about 50 acres of land, are available with the department.

(ii) It is proposed to start a dairy-cum-fodder development centre at this place. It is proposed to start the dairy programme with about 50 cattle in the first instance with an investment of about Rs.7.00 lakhs only. The annual gross income will be to the tune of Rs.2.00 lakh per year and it will result in whole time employment to 30 youths. The rural youth will be immensely benefited by the practical training in the latest technology in milk production and processing.

(iii) A poultry farm will also be established with 500 birds which will result in additional employment to about 10 youths in addition to the benefits of training to be given to the rural youths.

(iv) Small-scale industries units will be established in a phased manner accord-

ing to the needs of the programme, for which an amount of Rs.25,000 per year has been proposed for equipment and raw material. The type of industry to be established by the youth clubs will be identified by conducting preliminary survey, and the youths will be imparted job-training for the same trade at the training centre, so that they may stand at their own feet and start self-employment projects of their own.

(v) Carpets and Durries, Fibre Glass, Plastic, Photography, Radio, Transister repairs, repairs of tube-wells and pumping sets, etc. may be started at the first instance.

(vi) A full-fledged rural craft and training-cum-production centre will be established to impart job training in specific trades, so that they may be fully employed on permanent basis. It will be based on the principle 'learning by doing and earning while learning'. In addition to training in different trades, it will create sizeable whole-time employment potential with an expenditure of Rs.25.71 lakhs only.

Pilot project for job oriented economic programme for rural youths:

1.11.42. (i) It is proposed to organise two registered youth clubs, in each Nyaya Panchayat Circle. One of these two youth clubs, will undertake gainful economic project such as fisheries, cottage industries, mini-dairy, poultry etc. with the financial support of existing Government department and other financial institutions, two pilot projects of small-scale cottage industries in each block will be taken up by the department during the Plan period, for which an amount of Rs.5,000 for each project, has been provided in the Plan.

Strengthening and expansion of 'A' category of Vyayamshalas for Bhartiya Vyayam and Gymnastic at district level:

1.11.43. Two 'A' category of Vyayamshalas for training in Bhartiya Vyayam-Asan, Gymnastic, Parallel Bar, Horizontal Bar, Mulkhamb, Pomel Horse and ground work, etc., is proposed to be established in the remaining 36 districts, at 2 Vyayamshala in each district, one for the urban and the other for rural areas. About 2000 youngmen will receive advance training every year in Bhartiya Vyayam and Gymnastic :—

(a) equipment at Rs.10,000 per Vyayamshala (Rs.20,000 for two) in each district has been suggested.

(b) One whole-time Instructor in the scale of Rs.230—385 has been suggested for this purpose.

(c) An expenditure of Rs.100 per month has been suggested for maintenance of Vyayamshalas.

The Vyayamshalas will be autonomous bodies and will be established only at such places where adequate land and a store-room is made available, by the Vyayamshala Committees.

'B' category of Vyayamsala at block level:

1.11.44. The 'B' category of Vyayamshala will be established at one in each block and equipment of Rs.2,500 has been suggested, which include fixed Horizontal Bar, fixed Parallel Bar, Mulkhamb, Mats, weight lifting set, mugdar, shot-put, dumble, chest expander, etc.

One local youth leader will be given advance training to run these Vyayamshalas, who will be paid honoraria at Rs.100 per month. It will be given additional part-time employment to 878 young youths and about 4,400 youths will be trained in Bhartiya Vyayam and Gymnastic every year.

Conclusion :

1.11.45. Outlay of Rs.2.50 crore has been provided for the entire Five-Year Plan. It will generate 4.45 lakhs man-days direct employment under Man Power Mobilization in addition to a sizeable indirect employment and secondary benefits. It will give whole-time job to 126 youngmen and part-time job for 878 youths. It will also provide a strong infra-structure for all-round development of (1) primary sector, i.e. which include agriculture, animal husbandry, fisheries and forestry, (2) secondary sectors which include programme of cottage industries and skill formation and support. (3) tertiary sectors by creating facilities for organized marketing processing and allied activities to absorb increasing number of local people, as has been envisaged in the draft of main approach to Five Year Plan.

Annual Plan 1979-80

1.11.46. An outlay of Rs.61.76 lakhs has been proposed for 1979-80. It would result in creation of 108 whole-time jobs and 1,97,500 man-days works is likely to be generated.

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.10 Community Development—

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure.	1977-78 Actual Expenditure	Five Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
1 Direction and Administration—						
	(i) Panchayat Raj	11.64	5.65	10.00	..	..
	(ii) Rural Engineering Service ..	19.58	8.76	53.50	..	..
<i>I—Panchayat Raj Department—</i>						
(A) CONTINUING SCHEMES—						
1	Technical and Managerial assistance to Panchayat Udyogs.	11.64	5.65	204.69	..	..
2	Strengthening of Panchayat Raj Institutions incentives to Gaon Sabhas for raising their own sources of income.	9.84	2.57	379.00	..	..
3	Training of Panchayat Udyog Managers ..	1.89	0.58	10.80	..	..
4	Training of Panchayat Sewaks	2.07	0.67	3.51	..	..
5	Training of Panchayat Raj office bearers ..	6.65	1.50	30.00	..	..
6	Panchayat Raj Vitta Nigam	29.74	11.75	19.00	19.00	..
7	Lucknow University Training	9.51	6.80	8.00	..	..
	Total, A ..	71.34	29.52	655.00	19.00	..
B—NEW SCHEMES—						
8	Rural Environmental Sanitation— Construction of Village Pavements and under ground drains through Peoples participation	..	..	1143.00	..	..
9	Construction of Panchayat Bhawan/Community Centre.	..	..	530.50	..	..
10	Street Lighting in Village Abadi ..	..	..	100.00	..	..
11	Instalation of PRAI Type Latrine—Improvement of Rural Sanitation.	..	..	50.00	..	..
12	Construction of culverts and laying of hume pipes in drains and rural roads constructed through people's participation.	..	..	100.00	..	..
13	Improvement of hats and bazars ..	..	..	21.50	..	..
	Total, B ..	..	..	1945.00	..	..
	Total Panchayat Raj Department ..	71.34	29.52	2600.00	19.00	..

and expenditure

(Rupees in lakhs)

1978-79		1979-80				1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
0.45	0.45	1.75	..	..	..	2.30	2.50	3.00
8.76	8.76	9.63	..	..	..	10.63	11.66	12.82
9.46	9.46	60.00	..	..	4.14	43.69	46.00	45.54
2.28	2.28	120.00	..	..	0.35	100.00	80.00	76.72
1.16	1.16	2.14	..	..	..	2.50	2.50	2.50
0.76	0.76	0.69	..	..	..	0.69	0.69	0.68
2.38	2.38	10.00	..	..	0.18	10.00	7.62	..
0.50	0.50	3.00	..	..	..	5.00	5.00	5.50
3.75	3.75	1.25	..	..	..	1.00	1.00	1.00
20.29	20.29	197.08	..	..	4.67	162.88	142.81	131.94
3.00	3.00	100.00	..	..	..	300.00	400.00	340.00
1.71	1.71	60.00	..	..	0.40	120.00	170.00	178.79
..	..	15.00	..	..	..	25.00	35.00	25.00
..	..	8.00	..	..	..	12.00	16.00	14.00
..	..	20.00	..	..	..	25.00	30.00	25.00
..	..	5.35	..	..	..	5.37	5.38	5.40
4.71	4.71	208.35	..	..	0.40	487.37	656.38	588.19
25.00	25.00	405.43	..	..	5.07	650.25	799.19	720.13

Major Head of Development—1. AGRICULTURE AND ALLIED SERVICES

Sub-major Head of Development—1.10 Community Development—(Concl'd.)

Serial no.	Name of Scheme	Fifth Plan (1974-78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—8 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	4	6	7
<i>Border Development Department—</i>						
1.	Grants to Zila Parishads	12.33	4.70	80.00	..	..
<i>Rural Development Department—</i>						
A—CONTINUING SCHEMES —						
1	Agriculture Extension	12.46	3.29	354.70	..	..
2	Social Education	12.42	3.00	116.06	..	..
3	Self help scheme	7.41	1.25	3.60	..	..
4	Construction of Block Buildings and Electrification.	40.96	13.82	1589.75	1589.75	..
Total—A		73.25	21.36	2064.11	1589.75	..
B—NEW SCHEMES—						
5	Health and Sanitation .. ..	..	..	70.08	..	..
6	Grant to Block for Development Work .. ..	..	..	875.00	..	..
7	Purchase/Replacement of Jeeps for Blocks .. ..	..	..	218.28	..	..
8	Staff for Deputy Commissioners Office .. ..	..	..	37.53	..	..
Total—B		..	..	1200.89	..	..
9	Training Reserve for Officers	2.34	0.47	10.00	..	..
Total—Rural Development Department		75.59	21.83	3275.00	1589.75	..
1	Rural Engineering Service	446.78	157.15	1000.00	..	..
2	Pradeshik Vikas Dal	19.20	5.92	250.00	19.00	..
<i>Border Development Department</i>						
3	Grants to Blocks and kshetra Samities for petty works.	380.00	152.00	770.00	770.00	..
Total for 1.10. Community Development		1005.24	371.12	7975.00	2397.75	..

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills Estimated	Estimated	Estimated	
8	9	10	11	12	13	14	15	16
2.00	2.00	16.00	..	..	16.00	18.00	20.00	24.00
4.30	4.30	87.60	..	..	7.70	87.60	87.60	87.60
2.50	2.50	28.39	..	..	2.50	28.39	28.39	28.39
3.60	3.60	..	..	..	..	..	..	..
18.60	21.60	392.04	..	392.04	26.60	392.04	392.04	395.03
29.00	32.00	508.03	..	392.04	36.80	508.03	508.03	511.02
..	..	17.52	..	..	1.54	17.52	17.52	17.52
..	..	218.75	..	..	19.00	218.75	218.75	218.75
..	..	54.57	..	..	7.14	54.57	54.57	54.57
..	..	8.97	..	..	1.65	9.26	9.52	9.78
..	..	299.81	..	..	29.33	300.10	300.36	300.62
1.00	4.80	1.50	..	..	..	2.50	2.50	2.50
30.00	36.80	809.34	..	392.04	66.13	810.63	810.89	814.14
101.00	115.00	194.50	..	..	27.80	213.00	234.50	257.00
12.00	12.00	61.76	..	4.50	2.00	56.42	59.44	60.3
154.00	154.00	154.00	..	154.00	154.00	154.00	154.00	154.00
324.00	344.80	1641.03	..	550.54	271.00	1902.30	2078.02	2029.65

Agriculture and Rural Development—Outlays and expenditure

(Rs. in lakhs)

Serial no.	Head of Development/Programme	Fifth Plan outlay	Approved outlay 1978-89	Proposed Outlay 1978—83		
				Total	Capital	Foreign Exchange
1	2	3	4	5	6	7
	XIII—Community Development and Panchayats—					..
	(a) Community Development ..	121.00	30.00	3275.00	1589.75	..
	(b) Panchayat Raj (including grant to Zila Parishads)	76.00	27.00	2680.00	19.00	..
	(c) Rural Engineering Service	464.00	101.00	1000.00	..	..
	(d) Pradeshik Vikas Dal	27.00	12.00	250.00	19.00	..
	(e) Grants to Block, Kshettra Samities for petty works.	..	154.00	770.00	770.00	..
	Total, XIII ..	688.00	324.00	7975.00	2397.75	

Agriculture and Rural Development—(Employment Generation)

AGR-37

Serial no.	Head of Development/Programme	Employment Generation in Man years					
		Scientists	Technical	Administr- ation	Skilled	Unskilled	Total
1	2	3	4	5	6	7	8
XIII—Community Development and Panchayats—							
	(a) Community Development ..	..	..	..	..	..	..
	(b) Panchayati Raj ..	..	1,852	412	51,704	3,56000	4,099,68
	(c) Rural Engineering Service ..	..	1,072	5	2,300	13,700	17,077
	Total, XIII ..	..	2,924	417	54,004	3,69,700	427,045

CHAPTER II

CO-OPERATION

Co-operatives are the most widely distributed and organized system of providing credit to the rural people in this State. The vast network of co-operatives has rendered commendable services by providing short-term, medium-term and long-term loans to farmers of all categories for a variety of productive programmes.

2.2. Apart from giving loans in cash, co-operatives are also providing fertilizers, seeds etc. to farmers through a very large network of sale points in rural areas. The required step up in agricultural production will not materialise unless the requirements of inputs are met adequately. Co-operatives have a major role to play in meeting this requirement and their organization and finances will have to match the role expected of them. Apart from providing credit, some other functions having a close bearing on rural economy also belong to co-operatives. In the fields of marketing and processing of agricultural produce also, they have a responsibility to ensure that the producers get a reasonable return for what they produce and are not exploited by middle men and others who manipulate the market for their own profits. They can discharge this responsibility only by entering into the areas of marketing and processing also in a big way. The rural people are also exploited by traders in the procurement of consumer goods. Co-operatives appear to be the only alternative agency which could step in and ensure the supply of consumer goods to villages at reasonable prices. In fact, all these services of credit, marketing, processing and consumer goods are expected to be interlinked with each other.

2.3. While, on the conceptual plane co-operatives appear to be the logical instrument for preventing exploitation and providing economics of scale through joint action of producers as well as consumers, in practice, their effectiveness is directly proportionate to the confidence inspired by them among the people as well as policy-makers in respect of the managerial competence and financial performance. Vigorous efforts are, therefore,

needed to build up the co-operative infrastructure as a multi-pronged network and to inject into it a reasonable degree of efficiency. It is proposed to make some concrete efforts in these directions during the next four years and hopefully these would start bearing fruit before the end of the 1978—83 plan period. An attempt has been made to study the working of co-operatives and identify the causes for their indifferent performance in certain key areas.

2.4. It is proposed to take remedial measures during the next plan in the light of this analysis. Some of the proposed measures are :

(1) Setting up of a State level co-operative institute of research, management and training and a number of regional training centres with a view to imparting knowledge of relevant skills to officials and non-officials in order to improve their performance and give professional orientation to co-operative cadres. The State Institute will also carry out studies, including pilot projects in order to discover areas of weaknesses as well as new directions of work.

(2) Strengthening the organizational and managerial efficiency of credit and diversification in the services rendered by 8,000 societies and to add newly organized Co-operative Societies at Nyaya Panchayat level so that apart from a substantial step up in distribution of credit, these societies also become an effective agency of providing not only fertilizers and seeds to farmers as is being done hitherto, but also pesticides, weedicides, implements and other custom services which have yet to gain popularity in the rural areas. Reorganized societies will also become centres for the marketing of agricultural produce and providing consumer service in rural areas.

(3) Provision of storage facilities for these societies by constructing rural godowns so that the various

functions which are proposed to be entrusted to them can be performed by them successfully.

(4) Strengthening the systems and organization of inspection, audit, monitoring and evaluation with a view to keeping a close and continuous watch on physical and financial performance of the various co-operative institutions with a view to reducing the incidence of misuse of funds and successive authority.

2.5. It would be worthwhile at this stage to have a glimpse of the past achievements and the present status of Co-operatives in the State.

2.6 *Co-operative Credit and Banking*—All the primary credit societies have been reorganised as a result of which the State now has 7,211 Nyaya Panchayat level socie-

ties, 545 Large-sized Societies, 373 Farmers Service Societies and 72 LAMPS (Large-Area-Multi-purpose Societies). The State has already constituted a cadre authority for the functionaries of primary societies and chief executives of the Central Co-operative Banks. Each society has a full time paid Secretary. The management of the cadre has been decentralised to secure an effective role for Central Co-operative Banks in the various regulatory and developmental matters.

2.7. The membership at the end of 1977-78 was 80.48 lakhs. The targets for 1978-79 is the enrolment of 10.00 lakh additional members.

2.8. The performance of Co-operatives in respect of short and medium-term loaning, recovery and raising of deposits can be seen from the following table :—

TABLE I—Performance of Co-operatives in respect of loaning, recovery and deposits

(Rs. in Crores)

Year	Short-term	Medium term	Deposits	Recovery
1	2	3	4	5
1974-75	71.03	3.77	6.33	46.4%
1975-76	91.35	3.74	7.82	70.0%
1976-77	123.90	11.76	9.30	63.2%
1977-78	137.73	12.36	12.75	66.3%

2.9. The phenomenal increase in credit activity reflected in the above table has been possible through better recovery, procedural simplification in procedures and structural changes at the primary level. A substantial part of short-term loan is being given to farmers in the shape of chemical fertilizers. There is a programme to open a branch of Co-operative Bank in every block and as will be seen from the following table the number of branches has been steadily going up :—

TABLE II—Progress of Co-operative Bank Branches

Year	Number of branches
1	2
At the end of 1974-75	578
At the end of 1975-76	627
At the end of 1976-77	716
At the end of 1977-78	748

2.10. The financial position of Co-operative Banks has further improved through equity participation. The State has drawn maximum funds during the year 1976-77 from the Long Term Operation Fund of the Reserve Bank of India. As will be seen from the following table, the utilization of these funds during the Fifth Five-Year Plan has been 100 per cent.

TABLE III—Utilization of funds during the fifth five-Year Plan

(Rupees in lakhs)

Year	Funds received	Funds utilized
1	2	3
1974-75	66.815	66.815
1975-76	91.320	91.320
1976-77	250.300	250.300
1977-78	340.290	340.290

2.11. The interests of the Weaker Sections have been safe-guarded by introducing an amendment in the co-operative Societies Acts and Rules which would ensure minimum representation to them on the committees of Management.

2.12. *Co-operative Marketing and*

Storage—As will be seen from the following table, steps are being taken to strengthen the existing Co-operative Marketing Societies as well as to expand the volume of their trade. The following figures in terms of wheat purchase, fertilizer marketing, seed distribution would indicate the trend :—

TABLE IV—Performance of Co-operative Marketing Societies

Items	Unit	Performance During		
		1975-76	1976-77	1977-78
1	2	3	4	5
1 Wheat purchase by Provincial Co-operative Federation.	.. (a) Quantity (lakh M. T.)	3.216	9.789	4.976
	(b) Value (Crore Rs.)	37.78	116.50	59.05
2 Fertilizer distribution (in terms of element)	.. (a) Quantity (lakh M. T.)	1.312	1.572	2.307
	(b) Value (lakh Rs.)	4000.48	5593.44	7219.11
3 Seed distribution .. ..	.. (a) Quantity (lakh Qtls.)	7.210	0.570	1.510
	(b) Value (lakh Rs.)	1124.87	117.00	325.33

2.13. The marketing societies have yet to make a dent. So far, they have not been able to persuade cultivators to pledge their produce with them. Construction of permanent storage facilities has also received

a great impetus during the last two years. The progress made in construction of these godowns during the last four years is shown below :

TABLE V—Construction of Godowns

Godown	No. (Completed) at the end of			
	1974-75	1975-76	1976-77	1977-78
1	2	3	4	5
1 Marketing	199	200	200	200
2 Rural	1,420	1,424	1,561	1,746

2.14. *Co-operative Processing*—The processing of agricultural produce in the co-operative sector is being undertaken in order to secure remunerative prices to pro-

ducers. The progress made in establishing Co-operative processing units during the last four years is as shown below:—

TABLE VI—Progress of Co-operative Processing Units Established

Type of processing unit	Unit	Achievement at the end of			
		1974-75	1975-76	1976-77	1977-78
1	2	3	4	5	6
1 Modern Rice Mill	No.	2	2	3	4
2 Rice (paddy) Units	"	17	17	17	17
3 Dal Mill	"	12	13	15	17
4 Jute bailing	"	1	1	1	1
5 Oil units	"	2	2	2	2
6 Cold storage	"	43	43	46	46
7 Others	"	55	60	67	67
Total		132	138	151	154

2.15. These units handled produce worth Rs.10.87 crores during 1977-78.

2.16. *Consumer's Co-operative*—Consumers Co-operative are a safeguard against the exploitation of consumers. Distribution of consumer goods is being organized in rural and urban areas through multi-purpose societies and central consumer stores. The total value of consumer goods, handled, including controlled cloth, in the last four years, has been as follows :

TABLE VII—*Value of Consumer goods handled by Consumer Co-operative*
(Rupees in crores)

Year	Value of Handling
1	2
1974-75	22.21
1975-76	22.38
1976-77	27.16
1977-78	23.00

2.17. *Co-operative Training and Education*—The State Government have already opened one new co-operative training centre. There are now 4 training centres in the State. During the first four years of the Fifth Plan 1,030 workers were trained at these centres. Besides, 262.87 thousand members were also trained during the said period.

Scheme for Weaker Sections

2.18. *Labour Co-operatives*—The impact of labour co-operatives on the income and employment of labourers has not been to the desired extent. By the end of 1977-78, the number of labour co-operative societies was 361. During the Fifth Plan period emphasis was laid upon strengthening and consolidation of the labour co-operatives rather than on their expansion.

2.19. *Rickshaw Puller's Co-operative*—During the Fifth Plan emphasis was laid on strengthening and consolidation of the Rickshaw-Puller's Societies. By the end of 1977-78 the total number of Rickshaw Puller's Societies was 143.

2.20. *Tribal Development Scheme*—The Government of India have recently

chalked out a scheme for the integrated development of the tribal people. In three tribal districts five blocks, two in Dehra Dun, two in Uttar Kashi and one in Tehri-Garhwal have been selected under this scheme and the following co-operative structure has been recommended for the social and economic development of the tribals :—

(1) The Co-operative should be able to provide credit, consumer goods, seeds and other agricultural inputs and facilities for marketing of both agricultural and minor forest produce.

(2) A tribal should not be required to go to many institutions. The primary marketing society should deal with individual tribals and should be able to provide all the important services required by them.

(3) Suitable higher level organisation should be pressed into service to support, supervise and guide the activities of primary societies. The co-operatives should replace the money lenders by undertaking all functions performed by the latter.

2.21. In view of the above recommendations a unilinear co-operative structure, with 42 large-area multi-purpose societies (LAMPS), have been organised in the project area. These LAMPS will cater to the credit requirement of their members for production, consumption, marketing of agricultural produce etc. At the project level, a federation was organised in the year 1974-75. The LAMPS advanced loan worth Rs.98.00 lakhs to its members during the Fifth Plan period. Besides the 42 LAMPS organised in the five blocks of the Garhwal Division mentioned earlier, 24 LAMPS were organised in other district of Uttar Pradesh (hills) and 3 LAMPS each in Pallia (Lakhimpur Kheri) and Gonda projects. Since tribals are generally illiterate, economically backward and live in far flung area the work of newly organised LAMPS is proposed to assume a multi-purpose character so as to meet all the economic needs of the members.

2.22. *Financial Progress*—The revised financial outlay pertaining to Co-operating Department for the Fifth Five Year Plan (1974-79) is Rs.3263.00 lakhs, against which the expenditure up to the

end of 1977-78 was Rs.2556.22 lakhs including expenditure of Rs.125.52 lakhs incurred in the Hill Areas.

2.23. *Approach and strategy of the Five-Year Plan (1978-83)*—Keeping in view the guide lines provided by Government of India and the policies and priorities laid down in Draft National Plan, the main emphasis during the 1978-83 Five-Year Plan, will be on—

(a) Speedy building up of the multipurpose credit system and substantial step-up in credit including consumption credit for the poorer sections of the society ;

(b) provision of godown for each society to enable it to diversify its work ;

(c) building up of higher level and Apex institutions to aid, supervise and guide lower institutions ;

(d) organisation of an integrated programmes of Agro-business, marketing and processing with a view to increasing employment opportunities in rural areas ;

(e) preparing Consumer Co-operatives to play the role of the back-bone of the national public distribution system ;

(f) providing loan at cheaper rate of interest to the weaker sections of the community ; and

(g) building up the co-operative movement as an autonomous and member-oriented network, free from outside interferences and excessive official control.

2.24. With a view to achieving the objectives stated above, the following measures will be taken during the 1978-83 Five-Year Plan :

(1) increasing the viability of primary agricultural societies by providing adequate share capital base and appropriate managerial subsidy on a tapering basis in selected cases ;

(2) conversion of primary societies having a business of more than Rs.4 lakhs into Farmers' Service Societies so that these societies may act as effective instruments of economic service at the Nyaya Panchayat level;

(3) increasing the number of members on roll as well as borrowing members ;

(4) saturating all the blocks with branches of co-operative banks so that villagers do not have to go long distances to meet their credit needs and also to encourage the habit of thrift amongst them ;

(5) strengthening marketing activities in the Co-operative Sector so that the producers are able to utilise the services of marketing societies for getting loans by pledging and hypothecation of their produce ;

(6) reorganizing the existing and setting up new agricultural processing units such as rice mills, dal mills, cotton and spinning mill, oil mills, cold storages etc. and establishment of a new Apex Institution of processing units and Cold Storages.

1978-83 Plan Programmes

2.25. *Co-operative Credit and Banking*—Credit is the most essential input for agricultural production as well as other productive programmes. The present three tier structure of credit co-operatives consists of primary credit societies at the grass root level, District/Central Co-operative Banks at the district level and U. P. Co-operative Bank at the apex level. There is a separate agency for the distribution of long-term loan through the U. P. State Co-operative Land Development Bank, which functions on a unitary pattern through its 223 branches spread all over the State.

Programme at Primary Level

Village Primaries

2.26. *Primary Agricultural Credit Societies (PACS)*—The primary agricultural credit societies form the base for providing service facilities like credit, seeds, fertilizers etc. for the benefit of agriculturists at the village level. At present there are 7,211 Nyaya Panchayat level PACS in the State. In order to run the primary societies effectively, a State level cadre authority has already been established and subsidy is being given for management for a period of three years. This subsidy will terminate in the year 1979-80. Consequently, financial burden in the 1978-83 Plan period on this account

will be Rs.168.08 lakhs including Rs.39.80 lakhs for hills. In 1000 PACs which have business of Rs.3.00 lakhs a year, provision of Managerial subsidy on a tapering basis (100 per cent, 90 per cent, 80 per cent) has been envisaged so that these societies may be enabled to avail of the services of a technical assistant. Accordingly, an outlay of Rs. 145.80 lakhs has been included in the Plan.

2.27. *Farmers' Service Societies (F.S.S.)*—There are at present 373 Farmers' Service Societies in the State which have been organised to cater to all the needs of farmers for production, storage, marketing as well as consumption on an integrated basis. As per, the guidelines of Government of India, in the ensuing Plan period, all the PACs having a business of Rs.4.00 lakh and more would be converted into F.S.S. Their number is expected to go up to 4,000 by the end of the 1978-83 Plan period. The financial outlay proposed for this is Rs.2217.60 lakhs. The staffing pattern of an F. S. S. consists of a Managing Director, an Extension Officer and two Technical Officer. The salary of the Managing Director will be borne by the cadre authority which in turn will be reimbursed for this for a period up to five years. As regards the expenditure to be incurred on the salary of the Extension Officer and two Technical Officers, it is proposed that managerial subsidy may be provided directly by the State Government to the F.S.S. for a period not exceeding five years. Since these societies will have a wide area of operation, it is expected that these will become self-reliant within

a short period by undertaking varied functions, viz. Credit, supply of inputs, marketing of Agricultural produce, distribution of Consumer goods and performing other essential services for the farmers. However, a continuous watch will be kept on the growth of credit, and other business in these societies with a view to come up either with additional sources for increasing their value of business in order to make them viable or in the event of their not being able to catch up and failing to meet their overheads from their own resources in due course, to take suitable corrective measures in time to make reductions in overhead expenses. Since a massive programme is being launched, suitable mechanism will be developed for monitoring the aspect of viability of these F. S. S. from the very beginning.

2.28. *Membership*—The membership in village primaries as on June 30, 1978 was 80.48 lakhs covering 57 per cent of the agricultural families of the state. It is expected that at the end of the 1978-83 Plan, membership would go up to 130.48 lakhs covering a major portion of agricultural families.

2.29. *Share Capital and Deposits*—At the end of 1977-78 share capital of members in PACs was Rs.4,200 lakhs. During the 1978-83 Plan period, a target for raising the share capital to the level of Rs.7000 lakhs has been proposed on the average, an increase of Rs.500 lakhs per year has been envisaged. Regarding deposits, it is proposed to increase these from a level of 1274 lakhs (at the end of 1977-78) to Rs.2500 lakhs by the end of the 1982-83.

TABLE VIII—Level of share Capital and Deposits

Item	Level at end of						(Rs. in lakhs)
	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	
1 Share Capital	4200.00	5000.00	5500.00	6000.00	6500.00	7000.00	
2 Deposits	1274.00	1450.00	1700.00	2000.00	2250.00	2500.00	

2.30. *Short-Term Loaning*—The short term loaning programme is meant primarily to cater to the requirements of farmers for agricultural production. The level of loaning expected to be achieved at the end of 1982-83 is Rs.355 crores. The Study Team set up by the Reserve Bank of India for Agricultural Credit in U. P. estimated the requirement of credit for

agricultural production in the year 1981-82 at Rs.415 crores, of which the share of commercial banks has been assessed of Rs.75 crores. Co-operatives are, consequently, expected to fill the gap to the extent of Rs.340 crores. Short term loaning by the Co-operatives during the 1978-83 plan period has, in view of the above studies, and the cost of required inputs to

be provided to agriculturists proposed as follows :

		(Rs. in crores)
Year		Amount
1978-79	.. ..	275
1979-80	.. ..	295
1980-81	.. ..	315
1981-82	.. ..	335
1982-83	.. ..	355

2.31. *Medium Term*—Medium term loan is advanced to farmers for repairing replacement of agricultural implements essential for maintenance/increase of farm production viz. Pump sets, construction/repairing of Pacca wells, Tube-wells, Bundhies, agricultural implements-such as Tractors, Dunlop-carts, threshers, milch-cattle, bullocks, Poultry, Camel-keeping, Piggery, sheep-rearing, Gobar-gas plants etc. The period of recovery of this loan ranges from 3 to 5 years. In SFDA project areas, subsidy is also available to small farmers/agricultural labourers on medium term loans for milch cattle, bullocks, pigs sheep and poultry etc. Diversification of medium term loan has opened new vistas of livelihood. Special stress has been laid on the development of backward areas through SFDA, DPAP, IRD and Command Area Development programme where subsidies are provided to weaker sections to enable them to avail of the benefits of co-operative credit. The weaker sections, specially the scheduled castes/tribes and land allottees, are increasingly being enrolled as members by providing medium term (interest-free) loans for purchase of shares of co-operative societies. It is proposed to advance a total Medium Term credit of Rs.125 crores during the Five Year Plan (1978-83), starting with Rs.15 crores in the first year and thereafter going up progressively by Rs.5 crores each year.

2.32. *Medium Term Loan to Weaker Sections*—Interest free medium-term loan will be advanced to weaker sections for purchase of shares of societies and to obtain loan so as to meet their credit requirements. As per Government policy 30 per cent of the loan distributed should go to the weaker sections in order to raise their economic condition. It is proposed that interest free loan of Rs.80 per member, 'as against the existing rate of Rs.40, will be

made available to all the small and marginal farmers regardless of whether or not they are covered under any special project. This will help in ensuring that out of the total coverage, the share of the weaker sections is 30 per cent. For this an outlay of Rs.25.50 lakhs (Rs.0.50 lakhs for hills) has been proposed for the Plan period.

2.33. *Risk Fund for Weaker Sections*—To encourage a more liberal flow of credit to weaker section, during the Third Plan, contribution to special Bad Debt Reserve Fund (now redesignated as Risk Fund) at the level of Primary Credit Societies and Central Co-operative Banks was initiated. This reserve is maintained over and above the normal Bad Debt Reserve provided for by the co-operatives. The existing scheme of Risk Fund provided for an out-right contribution of 4 per cent to primary Societies and 2 per cent to Central Co-operative Banks against the additional short-term loans advanced by the Primary Societies to small/marginal farmers during the preceding co-operative year. In case of medium term loans, the total advances (not increase in advances) every year are considered for calculation of Risk Fund contribution, the rate of contribution being the same as in the case of short-term loans. An *ad hoc* provision of Rs.166.60 lakhs for primary societies and Central Co-operative Banks has been made for the entire Plan period.

2.34. *Grant for Rehabilitation of PACs*—Irrecoverable amounts keep increasing year by year. It is necessary that such irrecoverable amounts be written off as early as possible so that overdues do not become too large. The Reserve Bank of India has also recommended the creation of a fund for this purpose. It is therefore, proposed to make a Plan provision of Rs.500 lakhs for the 1978-83 Plan period.

2.35. *Programme at Intermediate Level i.e. District Co-operative Bank level*—The District Co-operative Banks are the pivots of the Co-operative Credit system and form the connecting link in the chain of Co-operative Credit structure. It is on their strength the progress of Co-operative Credit programme largely depends because all the funds available from the Reserve Bank of India for financing seasonal agricultural operations and

marketing of crops are advanced to the banks on the basis of their financial strength and stability. Due attention has to be paid, therefore, to the need for strengthening the share-base and deposits of the

District Co-operative Banks. The progress achieved during Fifth Plan period in this sphere and programme envisaged in the 1978-83 Plan are indicated below :—

TABLE IX—Financial position of District Co-operative Banks

(Rs. in crores)

Items	Fifth Plan period at the end of 1977-78	Position to be attained at the end of (1982-83)
1	2	3
1 Share Capital	36.27	40.00
2 Deposits	137.54	200.00
3 State participation in the shares of DCBs.	7.19	8.85

2.36. At present all the districts of the State have a District Co-operative Bank. Saharanpur District has two Co-operative Banks—District Co-operative Bank and Central Co-operative Bank, Roorkee (Saharanpur). With a view to bringing the credit facilities nearer to the member, the District Co-operative Banks are trying to open branches in all the development blocks. The programme of opening branches was taken up during the Third Plan period. At present, out of 875 Development Blocks, 742 blocks are covered by the branches of District Co-operative Banks. During the 1978-83 Plan period, 133 branches (including 8 branches in the hills) will be opened and managerial subsidy at the rate of Rs.8,000 per year per branch for three years for branches in the plains and at the rate of Rs.10,000 per year per branch for five years in respect of branches in the hills would be provided. The managerial subsidy including the spill over of instalments for branches already opened has been worked out at Rs.51.32 lakhs including Rs. 10.32 lakhs for hills.

2.37. *Renovation of Branches of District Co-operative Banks*—In order to make the branches of District Co-operative Banks more attractive and to give them a commercial look, the scheme of renovation of branches will continue in the 1978-83 Plan period. 521 branches (including 21 branches of hill region) are proposed to be renovated for which an outlay of Rs.27.10 lakhs (Rs.2.10 lakhs

for hills) has been worked out for the Plan period. This assistance will be given for hills as subsidy and as loan in respect of plains.

2.38. *Risk Fund for Consumption Credit*—Risk fund assistance is provided on the recommendation of Shiva Raman Committee Report for covering risk in respect of loans advanced for consumption purposes—such as birth, marriage, funeral ceremonies etc. Under the scheme, the total subsidy is shared equally between the State and Central Government and the total amount of assistance is worked out at 10 per cent of the total quantity of loan advanced towards consumption credit. An outlay of Rs.25.35 lakhs (Rs.0.35 lakhs for hills) has been kept for the entire Plan period.

2.39. *Rehabilitation Cell*—For 31 districts in the plain areas of the State, an integrated programme of rehabilitation has been proposed. Under this scheme besides other measures, verification of overdues over three years will be undertaken. It is proposed to set up a Rehabilitation cell in each of these banks. An outlay of Rs.6.84 lakhs for this has been proposed for the 1978-83 Plan period. This assistance will continue for three years.

Programme at Apex Level

2.40. *U. P. Co-operative Bank*—The U. P. Co-operative Bank is the apex credit organisation of the State. The responsibility of financing the entire co-operative movement rests with this apex institution. It is, therefore, essential to strengthen its

share base and raise substantial deposits. The progress already made and the pro-

gramme envisaged during the 1978-83 Plan are given in the following table :

TABLE X—Financial position of the U.P. Co-operative Bank

(Rs. in Crores)

Serial no.	Items	Fifth plan up to 1977-78	Position to be attained at the end of 1982-83
1	2	3	4
1	Share capital by members.	6.675	10.000
2	Deposits	118.730	175.000
3	State participation in the share of U.P. Co-operative Bank	2.022	..

2.41. U. P. Co-operative Bank has built up a common cadre for key personnel (Secretaries) of District Co-operative Banks according to the staffing pattern proposed by the R. B. I. Uttar Pradesh Co-operative Bank is now the apex controlling, supervisory and financing institution for the District Co-operative Banks.

2.42. *Special Training Programme for Personnel of Credit Co-operatives*—A Co-operative Institute of Management, Research and Training is proposed to be opened in Lucknow by the U.P.C.B. Besides giving training to the officers of the department and co-operative institutions, this institution will also undertake the work of formulating projects and carrying out diagnostic and management studies. The recurring and non-recurring expenditure for this institution will be met from Endowment Fund which is being created on the basis of funds received from various co-operative institutions and the State Government. It is proposed that the State Government should contribute Rs.13 lakhs towards this fund during the 1978-83 Plan period.

2.43. *Agricultural Credit Stabilization Fund*—This fund is maintained at the U. P. Co-operative Bank level for conversion of short-term loan into medium-term loan in the event of occurrence of natural calamities. Under a centrally sponsored scheme, Government of India provides financial assistance for this fund at the rate of 75 per cent as grant and 25 per cent as loan. The U. P. C. B. contributes 15 per

cent of its annual profit to this fund. Besides this, dividend in excess of 3 per cent of Government Shares is also contributed to this fund by the State Government. At the end of 1977-78 there was a balance of Rs.6.41 crores in this fund. An outlay of Rs.7.00 crores is proposed for the entire Plan period.

2.44. *U. P. State Co-operative Land Development Bank*—Established in March, 1959 and functioning since 1961, this is the only apex institution of the State advancing long-term agricultural loans through its branches. The Land Development Bank has 225 branches spread all over the State. At the beginning of the Fifth Plan, this number was 209. During the 1978-83 Plan, 80 new branches will be opened. The total number of branches at the end of 1982-83 would be 305. During the entire Fifth Plan, long-term loans amounting to Rs.139.15 crores was distributed for the items listed below :

Item	Number
1. Pump-sets	1,17,359
2. Tube-wells	92,381
3. Rahats	3,562
4. Wells	31,728
5. Tractors and other Agriculture implements.	3,826
6. Other miscellaneous ..	4,045
Total ..	2,52,901

2.45. During the Fifth Five-Year Plan a target of Rs.20.36 crores was envisaged against which only Rs.15.18 crores could be utilized.

2.46. Ample Ground Water is available in the State and there is still tremendous scope for augmenting irrigation potential through minor irrigation projects. Taking this into consideration an ambitious programme for the disbursement of loans of an order of Rs.380.00 crores has been proposed for various minor irrigation projects and other diversified purposes during the 1978-83 Five-Year Plan. To help small farmers, provision has also been made to give loans for borings only, on the assumption that small farmers would avail of one mobile pump-set to draw water from their respective borings. As a result of implementation of this enormous lending programme, 6,92,000 new minor irrigation projects will be completed which will be three times the

achievement of the Fifth Five-Year Plan. These projects will provide irrigation to 32.10 lakhs hectares of land. Besides, loans will be advanced for horticulture in 3,240 hectares, for 180 dairy development projects and for the purchase of 8,625 tractors under the Farm Mechanization scheme.

2.47. Out of a total loan disbursement of Rs.380.00 crores during 1978-83 Plan, a sum of Rs.321.00 crores is meant for irrigation projects. To meet this very large commitment, adequate debenture support from the State Plan will be necessary. The State Government have proposed budgetary support of only Rs.25.00 crores which will have to be supplemented by debenture support at a flat rate of 10 per cent of the lending programme or at least Rs.36.20 crores. Year-wise lending programme and debenture support needed is detailed hereunder :

TABLE XI—Year-wise Programme of Lending and Debenture Support

(Rs. in Crores)

Year	Lending Programme			Debenture Support Required		
	Normal Scheme	Special Scheme	Total	Normal Scheme	Special Scheme	Total
1	2	3	4	5	6	7
1978-79	22.00	48.00	70.00	1.80	4.80	6.60
1979-80	22.00	48.00	70.00	1.80	4.80	6.60
1980-81	19.00	56.00	75.00	1.50	5.60	7.10
1981-82	18.00	62.00	80.00	1.50	6.20	7.70
1982-83	17.00	68.00	85.00	1.40	6.80	8.20
Total	98.00	282.00	380.00	8.00	28.20	30.20

2.48. *Urban Co-operative Bank*—The need of Urban Co-operative Banks to serve the needs of artisans, small traders, entrepreneurs running small-scale and cottage industries, salary earners and wage earners etc. is well recognised. These people constitute the bulk of population in cities and need credit support for their professional/vocational and personal needs. While salary earners' co-operative societies have done quite well in some States, in Uttar Pradesh, these have failed to make an impact because of lack of adequate attention. This programme was started during the Fifth Plan and some finance was also made available through 5 urban Co-operative Banks in the State. The scheme of urban banks, envisages a mini-

mum share capital of Rs.1.00 lakh to be raised from amongst the members against which another Rs.1.00 lakh would be contributed by the State as share capital. As against the 5 existing urban banks, 49 (seven in hills) banks will be opened during the Plan period. The requirement of managerial subsidy proposed at the rate of Rs.0.35 lakh per bank on tapering basis (Rs.0.20 lakh, 0.10 lakh and 0.05 lakh) works out to Rs.12.85 lakhs for plains only. The total requirement under the scheme will be Rs.29.65 lakhs. In addition, Government's contribution in the shares of these banks is also proposed between Rs.0.50 lakh to Rs.1.00 lakh per bank as suggested by the Reserve Bank of India.

2.49. *Acid Programme*—The R. B. I. has initiated a scheme for Intensive Development of Agricultural Credit. Under the scheme, R. B. I. has selected 50 districts all over the country, out of which 7 districts belong to U. P. The scheme postulates preparation of credit-cum-action Plans for all the selected districts for the intensification of credit for agricultural and non-agricultural sectors. For review, direction, co-ordination and monitoring of this scheme, District level task Forces have already been constituted in all the 7 districts of the State under Chairmanship of respective District Collectors. For this purpose, a cell was to be created at the State level with suitable arrangements in the Apex Institutions also. While the cells have been setup at the U. P. Co-operative Bank and Land Development Bank, provision for staff in Registrar's Office remains to be made. For this purpose, such additional staff as may be required, would be provided. An outlay of Rs.19.161 lakhs (including Rs.4.161 lakhs for hills) is tentatively proposed.

2.50. *Programme for strengthening of the Head Office for better execution, Monitoring Supervision research and development*—During last few years co-operatives have expanded their activities in agricultural as well as non-agricultural sectors. Co-operatives have been called upon to finance members of weaker sections, rural artisans and labourers in various fields. Co-operatives have also been engaged in providing consumption loan to the members of the weaker sections of society. To meet the various demands made on the co-operatives, it has become necessary to earmark staff at the Head Office specifically for different programmes. A strong and effective organisation is, therefore, proposed to be set up at the Head quarters for co-ordination, monitoring and supervision.

2.51. A total amount of Rs.58.958 lakhs has been proposed for the above programmes in the Five-Year Plan 1978-83. It has been pointed out that over the last decade, for every important scheme, at the head quarter of Registrar and also at various levels of the field organisation with a sanction of every new activity, additional staff has been sanctioned. While this was undoubtedly necessary at the time

of launching a programme, after the activity has stabilised, there is no longer the same need for separate staff. The whole situation obviously needs to be reviewed in respect of the Registrar's organisation as well as different apex organisations, to discover the scope not only for rationalisation but also for bringing about greater cohesion and operational efficiency.

2.52. A sum of Rs.810.886 lakhs has been proposed as the State's share participation (L. T. O.) in the shares of Co-operative Credit institutions. This includes Rs.110.50 lakhs for hills.

2.53. In this way, a total outlay of Rs.4283.727 lakhs has been proposed for Credit and Banking programme during the 1978-83 Plan. This includes Rs.263.911 lakhs for hills.

2.54. *Marketing and Storage*—Co-operative marketing societies have been organised to enable their farmer members to dispose of their surplus produce at the most favourable price. In addition, these societies also make storage facilities available to their members and provide them with pledged loan. Marketing societies have undertaken distribution of fertilizers, controlled cloths and other consumer goods in the rural areas. At the end of 1977-78, the number of such societies was 230 (208 in plains and 22 in hills) which marketed agricultural produce to the tune of Rs.21.61 crores accounting for 1.5 per cent of the total mandi arrivals. It has been planned that by the end of 1978-83 Plan 30 per cent of the agricultural families will be covered by them and business will reach a figure of Rs.41.80 crores registering an increase of about 5.00 crores per year. It is proposed to increase the turnover of marketing societies by diversification of their business activities. This would be achieved by involving the affiliated recognised Primary Agricultural Credit Societies to work as collection agents for agricultural produce, particularly of small farmers, at the village level. Besides increasing membership resuscitating weak and dormant societies and strengthening the financial base of the existing societies, 20 new marketing societies would be organised.

2.55. For the 20 new marketing societies which are proposed to be established (17 in the plains and 3 in the hills), share capital

participation at the rate of Rs.50,000 per society in plains and Rs.25,000 per society for hills, a total of Rs.8.00 lakhs would be required. Managerial subsidy to these new marketing societies at the rate of Rs.10,000 per year per society for three years will be provided so that the quantum of the business of the society may increase without straining the funds of the society. An outlay of Rs.5.55 lakhs including Rs.0.90 lakh for hills is envisaged.

2.56. A programme for energising the existing dormant and weak marketing and improving the share capital base of 35 (including 3 of hills) old marketing societies on a matching contribution basis has also been envisaged. A total outlay of Rs.21.40 lakhs (including 2.00 lakhs for hills) has been proposed for the entire Plan period.

2.57. A lot of risk is involved in outright purchases being undertaken by the marketing societies because of fluctuation in prices. In fact protecting farmers from the vagaries of price trends in the market is one of the main functions of marketing societies. For the entire Plan period, an amount of Rs.18.575 lakhs (including Rs.4.00 lakhs for hills) being 2 per cent of the anticipated total outright purchases of foodgrains, has been provided to cover the risk in these transactions. In regard to the marketing societies in the hills, however, the contribution of the Government will have to be at the rate of 5 per cent of the total value of purchases.

2.58. As indicated earlier, common cadre at the State level like the one established in the case of Agriculture Credit Societies and Central Co-operative Banks, is proposed to be established for marketing societies alone. It is envisaged that one-fifth of the total expenditure of the cadre be provided by the State Government as subsidy so that the societies may not face a heavy financial burden. An amount of Rs.33.60 lakhs has been proposed for this purpose.

2.59. With the increase in the number and quantum of business of Marketing Societies, it would be necessary to have adequate staff for inspection, guidance and supervision of Marketing Societies.

2.60. *Rural Godowns*—As has been indicated earlier, all the Primary Agricul-

tural Credit Societies have been reorganised at the Nyaya Panchayat level with a view to providing better service not only to the producers but to the consumers as well. These societies are expected to function as mini banks and growth centres in their area of operation. It is proposed that all such societies should have a godown of 100 and 50 M. T. capacity in the plains and hills respectively. An attached residence for the Secretary is also proposed to be provided so that his services may be readily available to the producers and consumers. Under the World Bank Scheme, 4,600 Rural Godowns of 100/50 M. T. capacity at the Nyaya Panchayat levels and 35 godowns at the P.C.F. level of which 20 would have a capacity of 1,000 M. T. capacity and 15 would be of 200 M. T. capacity, are proposed to be constructed. Provision for residences for secretaries has been made not only in almost all of these proposed godowns but also in those already constructed at the Nyaya Panchayat level under N.C.D.C./State Government programmes. On this basis 606 godowns will be provided with residences in the next Plan. Residential accommodation would in any case have to be provided for in the Plain for 7,293 rural godowns (including 100 of hills). So far a storage capacity of 405.30 thousand M. T. has been achieved and it is proposed that by the end of the 1978-83 Plan, 1059.050 thousand M. T. capacity will be made available under this programme in the entire State. Under the World Bank Scheme, the share of State Government shall be 20 per cent. The existing scheme under which State Government provides subsidy at 37½ per cent of the total cost of a rural godown shall continue. Accordingly, for construction of these rural godowns a total outlay of Rs.764.875 lakhs (including Rs.26.636 lakhs for the hill region) is proposed. An outlay of Rs.25.575 lakhs (including Rs.1.125 lakhs for hills) has been proposed for construction of Marketing godowns-cum-residences. An outlay of Rs.35.196 lakhs has been earmarked for the 35 P.C.F. godowns. The technical staff sanctioned for supervising the construction of rural and marketing godowns in 1977-78 (one Assistant Engineer at Head Quarter and a junior engineer for each of 10 divisions) will continue, for which provision has

been made for the entire Plan period. For an ambitious and essential programme of this character, it is imperative that an evaluation and monitoring cell be created at headquarters. Such a cell would be of immense use in collecting and processing information regarding the construction and functioning of the godowns in order to identify problem spots and take correctional measures. One of the main function of this cell could be to watch level of utilization of these godowns and their viability right from the stage of

completion of buildings. The cell would also suggest steps to be taken to make these godowns viable investments within a reasonable time. It may, however, be mentioned here that in view of the diversified activities to be undertaken by the primary agricultural credit societies and marketing societies, it is expected that godowns constructed by them will be fully utilised and will be financially and economically viable. The economics of a godown is being reproduced for the sake of convenience :

TABLE XII—*Economics of Godowns*

Item	First year	Second year	Third year	Fourth year	Fifth year
1	2	3	4	5	6
<i>100 tonnes storage godowns</i>					
Income (in Rs.)	9,150	10,750	12,725	15,325	18,950
Expenses (in Rs.)	5,435	5,735	7,585	7,935	8,335
Profit	3,715	5,015	5,140	7,390	10,615
After deducting interest on loan and other depreciation— Net accrual	275	1,575	1,700	4,184	7,620
<i>50 tonnes storage godowns</i>					
Income (in Rs.)	6,100	7,850	9,600	11,475	13,150
Expenses (in Rs.)	4,880	5,230	5,480	5,630	5,880
Profit	1,220	2,620	4,120	5,845	7,270
After deducting interest on loan and other depreciation— Net-accrual. (—)	730	670	1,170	4,027	5,570

2.61. *Processing Activities*—To ensure better returns to cultivators and reasonable price to consumers, small and medium sized processing units were setup. It is proposed to strengthen the existing units and establish new units in the 1978–83 Plan. Establishment of agro-service-centres is also in line with these objectives. At the end of 1977-78, there were 21 rice mills, 17 Dal mills, 46 cold storages, 6 power ghanies, a jute bailing mill, a cotton spinning mill and an oil complex in the Co-operative sector in addition to eight small procuring units. During the 1978–83 Plan, it is proposed to set-up 40 cold storages of 4,000 M. T. capacity each along with a 10 M.T. capacity Ice-Plant, 12 modern rice mills, 18 modern dal mills and 100 custom hiring and service centres with the assistance of N.C.D.C. In

addition, there is a proposal for the strengthening of the share capital base of old processing units and providing assistance to them by way of managerial subsidy. A total outlay of Rs.601.907 lakhs (including Rs.0.555 lakh for hills) under the State sector has been estimated. A common cadre for personnel in processing units, along the lines of the cadre for marketing societies has been proposed. State subsidy on tapering basis for a period of 3 years works out to Rs.49.359 lakhs. In order to provide necessary guidance, technical know-how and assistance and close supervision, it is felt that there should be an apex institution of processing societies and cold storages. For this purpose, provision has been made for an apex institution of processing societies and cold storages. This would help in

running these units on sound commercial lines. Creation of a cadre of managers of processing units and setting up of a technical and monitoring cell for the preparation of projects and evaluation of the working of processing units is also essential. These have been provided to ensure proper working of these units. An outlay of Rs. 22.009 lakhs has been proposed to provide managerial subsidy for the administrative and technical staff of the proposed Federation.

2.62. *Education and Training*—With the increase in the activities of the co-operatives it is imperative that there should be vigorous programmes for the training and education of members. At present there are 4 junior level training centres which can train only 600 employees a year. During the last Five-Year Plan period, only 6,853 junior level workers could be trained. If any real dent is to be made on the co-operative movement through training, expansion of training facilities will have to be taken up. Accordingly, 10 Regional Training Centres are being proposed. These centres will impart pre-service and in-service training and also run special courses for new types of programmes being undertaken through the co-operative societies. These centres will be run by the State Co-operative Union of which the co-operative institutions of various disciplines i.e. credit, marketing, consumers etc. are members. In addition to the above, two middle level centres will also be opened in the State. As against the existing 57 peripetatic units which cater to the needs of educating members of societies, 175 new units are to be opened so that the members' training programme can be made more effective. With this, every tahsil will have one unit. In addition, one Farm Guidance Instructor will also be employed to make the training agricultural oriented. Emphasis will also be laid on publication of folders, monthly and periodical news-letters, organization of conferences, essay competitions and publicity through mass media. Member education, training and publicity schemes will be implemented by the State Co-operative Union with subsidy from State. The financial outlay for these programmes works out to Rs. 282.595 lakhs.

2.63. *Consumer's Co-operatives*—The consumer's co-operatives have to be the

backbone of the public distribution system and bulwark of consumer protection. Hence it is proposed to expand their coverage and intensify their activities to cover all the urban areas by opening branches of central stores, and serve the rural areas by opening retail shops in each PACs. Provision has been made for the same in this Plan. Efforts will be made to establish units producing consumer goods in the co-operative sector so that dependence on private manufacturers for supply of some of the essential goods of common usage is minimised. It is also proposed to reduce the existing four tier structure of consumers co-operatives to a two tier one, so that the ultimate beneficiary gets greater benefit. Up-to the year 1977-78, distribution of consumer articles in the rural areas had reached a level of Rs. 8 crores and retail sales in the urban areas were of the order of Rs. 15 crores. The corresponding figures by the end of the 1978-83 Plan are envisaged to be Rs. 130 and 120 crores respectively. The main programme to be undertaken include rehabilitation of 32 (including 2 of hills) weak central consumers stores for which an outlay of Rs. 50.00 lakhs (including Rs. 2.50 lakhs for hills) has been provided. This is a centrally sponsored scheme in which 75 per cent of the total requirement is met by the Central Government and only 25 per cent burden falls on the State Government. If the supply of essential commodities to the consumer's stores and retail outlets is maintained with the assistance of the Government and the National and State Level Co-operative Institutions and the State Government patronises the Co-operatives for the distribution of essential commodities, the modest target of Rs. 250 crores will surely be achieved. For this purpose, necessary measures for strengthening the State Consumers' Federation and Central Co-operative Stores are also envisaged in the Plan. In order to meet the losses on account of price fluctuation, it is proposed to provide assistance in the shape of Price Fluctuation Fund. An outlay of Rs. 29.102 lakhs has been proposed for the entire Plan period.

2.64. Since the need for professionalised management has been well recognised, creation of a common-cadre of Secretaries of central stores and general

managers of Naya Bazars under the control of Uttar Pradesh Upbhokta Sehakari Sangh Ltd. is proposed. The expenditure on this scheme will have to be met equally by the State and the Central Governments. The financial outlay for the State Government has been worked out as Rs.11.94 lakhs (including Rs.1.24 lakhs for hills). A programme for setting up of manufacturing and processing units under the N.C.D.C Scheme in which 80 per cent of the cost would be met by the N.C.D.C., 15 per cent by the State Government and 5 per cent by society, has also been included in the financial outlay and Rs.17.55 lakhs (including Rs.2.25 lakhs for hills) has been kept for this purpose.

2.65. In order to ensure strict quality control and to combat the problems of adulteration, a quality testing Laboratory has been proposed with a financial outlay of Rs.7.50 lakhs. A provision also exists for construction of building and godowns for central consumer's stores. The expenditure will be met from the State Government's resources with the ratio of 62½ per cent loan and 37½ per cent subsidy. A nucleus of additional staff to cope with the increase in work has also been proposed with an outlay of Rs.16.26 lakhs. In regard to the staff under the rural consumer's scheme, which envisages supplying of consumer articles through satellite societies, it is proposed that the expenditure incurred on additional staff be met equally by the State Government and the Central Government. An outlay under the State sector has been worked out at Rs.175.589 lakhs including Rs.14.552 lakhs for hills. A scheme to give assistance to some of the employees' consumer's stores and those in the industrial area has been taken up for the year 1978-79. The amount involved on this scheme has also been reflected in the 1978-83 Plan. Thus a total outlay of Rs.337.051 lakhs has been proposed for the entire Plan period.

2.66. *Co-operative Farming Scheme*—In order to protect the interest of the weaker section, it is essential that those having uneconomic, small and scattered land holdings are given due encouragement and assistance through Co-operatives. At the end of the year 1977-78, there were 1,488 Farming Co-operative Societies in the State having a membership of 30,568. During the 1978-83 Plan period a target of orga-

nising 40 new farming societies and revitalising 100 weak societies has been fixed. The main plank of the work would be revitalisation of weak and defunct societies and liquidation of dormant and irredeemable societies. This scheme includes assistance by way of managerial subsidy, share participation so as to increase working capital base and provision of agro-industrial and production loan. Provision has also been made for training the members of farming societies. The total requirement under the scheme has been worked out as Rs.25.102 lakhs for the entire Plan period.

2.67. *Supply of Agricultural Inputs*—It is expected that by the end of the current Plan the requirement of seeds of High Yielding Varieties will reach a level of 3.5 lakh quintals, starting from 1.5 lakh quintals in the year 1978-79. In order to meet the requirement of advance payments, it is proposed to provide financial assistance to the P. C. F., which is the main distributing agency, in the shape of margin money. In the year 1978-79 an outlay of Rs.2 lakhs to DCDF for this purpose has already been proposed and is therefore, included in the Plan. The total requirement under this scheme has been worked out as Rs.50 lakhs for the entire Plan period.

2.68. *Scheme for Weaker Sections*—In keeping with Government's concern for the weak and the down-trodden, efforts will be made to activate the 361 labour societies in the State and help them in getting sufficient contracts from P. W. D. and other Government Departments. The total outlay under the entire scheme is Rs.6.640 lakhs, which incorporate the proposals to organise some new societies and reorganise and strengthen existing ones through managerial subsidy and loans.

2.69. *Rickshaw Pullers' Scheme*—143 rickshaw pullers societies are in existence now, 25 societies more are proposed to be organized by the end of 1978-83 Plan. Subsidy to these societies has been proposed to be increased to Rs.5,400 for a period of five years in order to enable these societies to stand on their feet. In addition, a provision for share capital participation to the new societies, loan for purchase of equipments, subsidy for workshop building have also been included. The total outlay under the entire scheme is Rs.7.765 lakhs.

Special Scheme for Hill Region

2.70. The National Co-operative policy resolution has laid special emphasis on removal of regional imbalances and creation of employment opportunities. The Hill area of U. P. has so far been receiving inadequate attention in this regard. The special schemes in the hill area proposed are expected to fulfill the aims set forth in the policy resolution.

2.71. The main schemes under the hill area are—

- (1) Herb collection and Development scheme ;
- (2) Co-operative Fruit Marketing ; and
- (3) Tribal Development Scheme.

2.72. *Herb Development Scheme*—A vast potential exists in the hill area for production and utilization of medicinal herbs. However, because of difficulties of transportation, paucity of funds and storage difficulties, the progress of the collection of herbs has been impeded. It is proposed to increase the number of societies doing this work from 63 to 120. Managerial subsidy and transport subsidy will also be given and is expected to generate partial employment to 20,000 people.

2.73. At present three district level drug federations exist to deal with the marketing of herbs. It is proposed to open such federations in the remaining districts of the region also besides laying out 40 small sized demonstration units at the block level. Necessary staff for this has also been included in the Plan. The training centre at Ranikhet which is engaged in training of officials and non-officials, in identification, collection, grading and processing is totally ill-equipped to cope with the increased volume of work. It is, therefore, proposed to upgrade the training centre so as to accommodate 50 trainees at a time. The total outlay in the scheme is envisaged Rs.106.546 lakhs.

2.74. *Co-operative Fruit Marketing*—Marketing of highly perishable fruits poses special problems. If timely transportation and proper handling is not ensured, the producer and the societies face heavy losses. To eliminate the mal-practices of

the private traders and to ensure fair prices to the growers, this scheme was launched and at present there are eight fruit co-operative marketing societies in the hill area. To consolidate their work it is proposed to open 21 sub-centres in the 1978–83 Plan, so as to serve the interest of the producers more effectively. A scheme for the establishment of a Regional Co-operative Fruit Marketing Federation is also envisaged. The federation will provide marketing intelligence and technical guidance and also remove any other bottle-necks in the working of the societies. To give proper guidance and to run the scheme more effectively, a small complement of staff has also been included in this scheme. The total outlay earmarked for this purpose is Rs.26.057 lakhs.

2.75. *Tribal Development Scheme*—As already indicated in the review of the 1978–83 Plan, a Tribal Development Scheme on the basis of the report of Bawa Committee has been launched in the hill region. 42 LAMPS are working at present in identified blocks. During the 1978–83 Plan, efforts will be made to consolidate and improve the working of these societies which need greater attention and effective supervision. This would be possible only by providing a basic minimum of staff. The R. B. I. has also recommended that the State Government should subsidise the cost of staff in these LAMPS. At the headquarters of the Registrar of Co-operative Societies also proper monitoring of the scheme is extremely essential, for which a skeleton staff has been proposed. The outlay for this scheme is Rs.40.488 lakhs, including Rs.38.936 lakhs for Tribal Development and Rs.1.552 lakhs for the staff proposed for Headquarters.

2.76. Keeping in view the geographical conditions of the hilly region and also the arduous duties which the Deputy Registrars of the hilly regions are called upon to perform, a vehicle for each region along with a driver and P. O. L. charges has been proposed. The outlay of Rs.1.932 lakhs has been included.

2.77. *Role of State Level Co-operative Apex Institutions*—It is proposed in the plan that the Apex level institutions

for various activities should be strengthened by the provision of State contribution for their share capital and for encouraging them to create technical and promotional cells, establish cadres of key personnel of various types of institutions under the respective apex institutions. In this way the Apex institutions will be enabled to help the societies in increasing their business by providing necessary guidance, business know-how and improving the working efficiency of their affiliated institutions. These Apex institutions will also be encouraged to provide financial assistance to their subordinate institution for the on going programmes where such assistance is required.

2.78. *Strengthening of Co-operative Machinery*—In view of the multifarious duties that the department is going to be entrusted with, it has become imperative to review the present structure and strength of staff. This point has also been underlined by the study team of

the R. B. I. in the context of a massive expansion programme of credit in the Five-Year Plan for 1978–83. To ensure quick and effective supervision, decentralisation and investing the field level officers with greater powers is essential.

2.79. In anticipation of a detailed study a financial outlay of Rs.213.544 lakhs for reorganization, strengthening and setting up of technical cells has been proposed.

2.80. *Generation of employment*—Co-operative institutions generate additional employment through their development activities both at the governmental and institutional level. During the 1978–83 Plan it is estimated that a total of 1,09,324 manyears of employment (Government institutional, part-time and seasonal) will be generated including 52,007 man-years on a part-time/seasonal basis. The table below gives the scheme-wise direct employment position at the end of 1978–83 Five Year Plan :—

TABLE XIII—Scheme-wise employment position

Name of Scheme	Proposed outlay for 1978–83 Plan (Rs. in lakhs)	Employment in man years		
		Government	Institutional	Total
1	2	3	4	5
1 Co-operative Credit and Banking	4283.727	26	17,158	17,184
2 Co-operative Marketing and Storage	956.282	613	80	216
3 Processing Scheme	673.275	219	1,171	1,390
4 Co-operative Education and Training	282.595	697	..	697
5 Consumer's Cooperative Schemes	337.051	808	4,098	4,906
6 Labour Co-operatives	6.640	..	6,500	6,500
7 Rickshaw Co-operatives	7.765	..	2,100	2,100
8 Supply of Inputs	50.000	..	16,500	16,500
9 Co-operative Farming	25.102	28	715	743
10 Drug Development	106.546	250	5,950	6,200
11 Fruit Marketing	26.057	22	42	64
12 Tribal Development	38.936	168	..	168
13 Conveyance for-Deputy Registrars Kumaon and Garhwal Division.	1.932	2	..	2
14 Staff at Hqrs. for implementation, guidance and monitoring of Tribal Development Scheme.	1.552	4	..	4
15 S.F.D.A. (Staff)	12.450	1	..	1
16 Additional Departmental Staff	213.544	642	..	642
Total (A)	7023.454	3,003	54,314	57,317

TABLE XIII—Scheme-wise Employment Position

Name of Scheme	Proposed outlay for 1978—83 Plan (Rs. in lakhs)	Employment in man years			
		Government	Institutional	Total	
1	2	3	4	5	
B. Part-Time Seasonal—					
(a) Seasonal job potential on account of godown construction under storage scheme.	47,730	47,730	
(b) Job potential of seed, Fertilizer and wheat purchase activities.	4,277	4,277	
Total (B)..	52,007	52,007	
Total (A)	..	7023.454	3,003	54314	57,317
Total (B)	52,007	52,007
GRAND TOTAL	..	7023.454	3,003	1,06,321	1,09,324

2.81. *Resources Mobilization*—The total resource mobilization during the 1978—83 Five-Year Plan will be of the order of Rs.12,901.813 lakhs. The State Government share will be Rs.7023.454

lakhs, N. C. D. C. share will be Rs.5119.459 lakhs, Government of India share will be Rs.758.90 lakhs. The scheme-wise resource mobilization is given below :—

TABLE XIV—Scheme-wise Resource Mobilisation

(Rupees in lakhs)

Serial no.	Name of Scheme	State Government	N.C.D.C.	Govt. of India	Total
1	2	3	4	5	6
1	Credit and Banking Cooperatives ..	4283.727	..	758.900	5042.627
2	Marketing and Storage Cooperatives ..	956.282	2355.451	..	3311.733
3	Processing Cooperatives ..	673.275	1366.669	..	2039.944
4	Education and Training ..	282.595	..	..	282.595
5	Consumer's Cooperatives ..	337.051	1397.339	..	1734.390
6	Cooperative Farmings ..	25.102	..	..	25.102
7	Labour Cooperatives ..	6.640	..	..	6.640
8	Rikshaw puller Cooperatives ..	7.765	..	..	7.765
9	Supply of inputs ..	50.000	..	..	50.000
10	S.F.D.A., ..	12.450	..	..	12.450
11	Drug Development ..	106.546	..	..	106.546
12	Fruit marketing ..	26.057	..	..	26.057
13	Tribal Development ..	38.936	..	..	38.936
14	Conveyance of-Deputy Registrars of Kumaon and Garhwal Divisions.	1.932	..	..	1.932
15	Staff at headquarter for implementation, guidance and monitoring of Tribal Scheme.	1.552	..	..	1.552
16	Additional Departmental Staff ..	213.544	..	..	213.544
Total ..		7023.454	5119.459	758.900	12,901.813

2.82. *Salient features of the Annual Plan 1979-80*—Strengthening of the co-operative structure has been taken up in a big way during the current year, 1978-79. Re-organisation of primary agricultural credit societies has been completed and all the co-operative societies from the base level to the Apex level have their newly elected committees of management. An ambitious programme of loaning, supply of inputs, marketing, storage, processing and distribution of consumer goods has also been put into operation. The Annual Plan for 1979-80 has been formulated against this background.

2.83. *Membership of the co-operatives*—At the end of the year 1977-78, the total membership in the Primary Agricultural Credit Societies of the State was 80.48 lakhs representing a coverage of approximately 57 per cent of the 150 lakhs farmer families of the State. The target for the year 1978-79 is to increase the membership by 10 lakhs, so as to bring the coverage to 60 per cent. This would increase in 1979-80 by another 10 lakhs, bringing more than a crore families within the co-operative fold. Efforts will be made to see that all members play an active part in co-operative activities. Under the master plan recommended by the Reserve Bank, a drive for membership which includes assistance of share capital to the small farmers, is being undertaken to increase the coverage and to motivate all the members to become active participants in the co-operative movement.

2.84. *Farmer's Service Societies*—There are 8,201 reorganised primary agricultural co-operative societies in the State. By the end of 1978-79, 393 primary societies are being constituted into Farmers Service Societies, as recommended by the National Commission on Agriculture, to provide all essential services to the farmers, namely credit, supply of inputs, marketing and storage facilities and distribution of essential commodities. 985 societies more will be converted into Farmers Service Societies during the year 1979-80, bringing the total number of farmers Service Societies to 1378. The criterion of viability for these societies has been taken into account in determining this number. These societies, with increased managerial, technical and financial assistance, are bound to create a discernible impact in the rural areas.

2.85. *Co-operative Credit—Advances of Short Term Loan* at the end of 1977-78 were reported to be at the level of Rs.137.37 crores. The target for the year 1978-79 is Rs.275 crores which is exactly the double of the advances made during the last year. The average per cropped hectare investment in the State, which was barely 55 rupees at the end of 1977-78, is likely to go up Rs.110 per cropped hectare in one year. The operational plan for the year includes Rs.145 crores to be given as component "B" of the loan in the shape of fertilizers against Rs.130 crores to be disbursed as cash credit. The achievement of this level of credit assistance is bound to raise the productivity of foodgrains. During 1979-80, the short-term lending programme will be increased by another Rs.20 crores and brought to the level of Rs.295 crores.

2.86. *Medium-term loan advances* which have been kept at Rs.15 crores this year will be increased to Rs.20 crores during 1979-80.

2.87. *The Long-term Loans* advanced by the Land Development Bank have been going up steadily during the last five years with the increasing financial assistance from the Agricultural Refinance and Development Corporation. The target for 1978-79 has been kept of Rs.70 crores with Rs.54 crores exclusively for minor irrigation and the remaining Rs.16 crores for other agricultural purposes such as farm mechanisation, horticulture, on-farm development, dairy etc. The massive programme supported by co-operatives for the development of minor irrigation will facilitate the construction of more than a lakh tube-well/pump sets annually. As the level of long-term loan advances has already been raised sufficiently during the current year, it is proposed to keep the target of Rs.70 crores during the year 1979-80.

2.88. It may not be out of place to mention that the recoveries of both short and medium-term co-operative loans also of long term loans of the Land Development Bank were quite encouraging during the year 1977-78. The percentage of recovery for short and medium-terms was 66.3 per cent, the corresponding figure for long-term being 75.4 per cent. Another significant development in the State has been the verification of all

overdues of more than three years as on June 30, 1976. In 54 districts of the State, on the spot verification was conducted in respect of 5,65,818 members, involving an amount of Rs.35.64 crores. As a result of the verification it was found that Rs.23.87 crores was recoverable, Rs.7.54 crores was fit for conversion and Rs.4.23 crores may have to be written off. This spot verification has helped in creating an atmosphere of confidence amongst the members and it is hoped that the credit structure in the co-operative sector will now be placed on a firm footing.

2.89. During the year 1979-80, the total advances in the shape of short, medium and long-term loans will amount to Rs.385 crores. The most important programme for the year will be the constitution of a large number of Farmers' Service Societies which will provide all the requirements of the farmers in the village itself. In the Plan for the year, therefore, provision has been made for giving financial assistance for managerial and technical staff of the Farmers' Service Societies and also for the strengthening of their equity base, as envisaged in the scheme of the Government of India and in the guidelines for the 1978-83 Five-Year Plan.

2.90. *Co-operative Marketing and Storage*—The co-operative marketing societies at the Mandi level, numbering 230 at present, marketed agricultural produce to the tune of Rs.32.56 crores in 1977-78. In 1978-79, five more co-operative marketing societies are being organised and the business of these societies is likely to go up to Rs.39.50 crores. During 1979-80, this process will be continued and five more co-operative marketing societies will be organised. The volume of business, apart from procurement of foodgrains which they do on behalf of the Provincial Co-operative Federation, will be of the order of Rs.46.00 crores. The provision in the annual plan is, however, for assistance in the organisation of new co-operative marketing societies and strengthening their equity base thereby promoting the business of the societies.

2.91. *Construction of Rural Godowns*—The State has undertaken a comprehensive programme of construction of godowns for all the re-organised primary

co-operative societies of the State and this programme has already made much headway with the assistance of the N. C. D. C. The number of rural godowns constructed till June 1978 was 2,159 and 1140 godowns are under construction. The N. C. D. C. have sponsored a World Bank Project on behalf of the State for construction of 4,600 rural godowns to be completed during the 1978-83 Five Year Plan. Out of this, 1,100 rural godowns are being constructed during the current year i.e. 1978-79. During 1979-80, another 1,200 rural godowns will be constructed under the World Bank Project. Most of these rural godowns, which will have a capacity of 100 M.Tonnes storage each, will also have the necessary accommodation for office, consumer store of the primary society and residential accommodation for the Secretary/Managing Director. The primary society will thus be enabled to fulfill their multi-purpose role of banking, supply of inputs, marketing, storage and distribution of consumer articles. The provision in the annual plan of 1979-80 is for assistance by the State Government under the World Bank Project.

2.92. *Co-operative Cold Storages and Co-operative Processing Unit*—There were 46 co-operative cold storages at the end of the year 1977-78 with a total capacity of 85,400 M. T. During 1978-79, 4 cold storages are being added in the co-operative sector raising the capacity to 1,01,400 M. T. Potato is a very important crop of the State and there is still a pressing demand for the establishment of a large number of cold storages. Keeping in view the viability of the societies taking up the work of cold storages, it is proposed to have 9 more cold storages during the year 1979-80, each with a capacity of 4,000 M. T.

2.93. At the end of 1977-78 there were 108 co-operative processing units including 21 rice mills and 17 Dal mills. Three rice mills and three Dal mills are being added during the current year. It is proposed to have two more rice mills and three Dal mills during 1979-80 at suitable places. The total number of Rice and Dal mills will then come to 25 and 23 respectively. Provision has been made in the Plan for assistance to be given to these units under the N. C. D. C. Scheme.

2.94. *Consumers Cooperatives*—In accordance with the national policy of making the co-operative the medium for a broad based public distribution system, special efforts are being made to re-organise and strengthen consumer co-operative institutions, including the State Co-operative Consumer Federation and the Central Consumer Stores. The re-organised primary co-operative societies will all take up the work of distribution of controlled cloth and other essential commodities. The management of the Central Co-operative Consumer Stores is being given due attention and a new management cadre is being constituted this year. A new fillip is being given to the consumer activity which was almost dormant. At the end of 1977-78, the total business of the consumer stores and the consumer societies, both of urban and rural areas came to barely Rs.23 crores. During the current year, it is proposed to bring the level of distribution of consumer articles in rural areas through re-organised multi-purpose primary societies to the level of Rs.35 crores and through the urban consumer co-operatives to Rs.30 crores. With the re-organised set up it is envisaged to raise the level of distribution in the rural areas to 55 crores and in the urban areas to 50 crores, a total 105 crores during the year 1979-80. Full advantage is being taken of the Rural Consumer Scheme of the N. C. D. C. under which viable marketing societies have been given assistance as lead societies and the primary agricultural societies have been attached to them for distribution of consumer articles in rural areas. Necessary provision has been made in the Plan to give effect to the N. C. D. C. scheme. Besides, equity base of the consumer stores would also be strengthened to make them viable and effective institutions.

2.95. To give an idea of the role to be played by the State Government in promoting the co-operative movement, some relevant information is being presented in Annexure I.

Co-operative Audit Organisation—

2.96. An efficient and effective system for the audit of Co-operative institutions is a sine-qua-non for the success of Co-operative movement. If the organisational set up for audit is loose inadequate or ineffective,

the co-operatives will not be able to inspire confidence amongst their members and there will remain a likelihood of irregularities and misuse of funds and authority by those who wield power in these institutions. There has been tremendous growth in co-operative movement, both in terms of the nature of their work and volume of business but the strengthening of the audit organization has not kept pace with this growth. Consequently a fairly large number of cases of misappropriations are still taking place in co-operative Societies. As an illustration, it may be pointed out that whereas during 1963-64, the special reports relating to such irregularities involved an aggregate amount of Rs.68.1 lakhs the same amount went up to 868.75 lakhs in 1976-77. The need for enforcing a better financial discipline in Co-operatives is therefore, self-evident and one of the most effective measures to do so is to firm up the audit organization to the requirements.

2.97. During the 1978-83 Plan the volume of business in various Co-operative Societies will increase manifold and the co-operatives will be entering into new areas of work. A large number of consumer stores are proposed to be opened in rural areas. Keeping the proposed expansion in view as well as the desirability of performance of the following functions, audit organisation should be suitably strengthened :

(1) Annual Audit of all the co-operative societies.

(2) Introduction of an effective concurrent audit of big and important institutions in which the nature and volume of day to day transactions calls for a timely effective check on possible loop-holes or leakage of income to obviate huge losses if not detected in time.

(3) Effective supervision of audit of big and important institutions by superior officers.

(4) Documentation and Monitoring at the Head Quarters.

(5) Scrutiny of the cost aspects in the case of various Co-operative processing units or other factories in the co-operative sector in order to assist auditors in appraising the cost structure.

2.99. On the basis of the above as well as the need for other supportive services, the requirements of posts during the Plan period will be as shown below :—

TABLE XVI—Estimated Expenditure against posts required during 1978—83 Plan

Serial no.	Detail	Name of posts	Number of posts	Estimated expenditure (Rs. in lakhs)
1	2	3	4	5
1	Ground level staff for the work generated up to the end of the 1978—83 plan.	(i) Auditor	277	136.98
		(ii) Sr. Auditor	264	
2	Ground level staff for the work to be generated in 1978—83 Plan	(i) Auditor	740	69.19
		(ii) Sr. Auditor	169	
3	Documentation Monitoring and Evaluation Cell.	(i) Statistical Officer	1	1.91
		(ii) Statistical Assistant Gr. I	2	
		(iii) Statistical Asstt. Gr. II	4	
4	Officers	(i) Joint Chief Audit Officer (900—1600)	2	14.47
		(ii) Dy. C. A. O. (800—1450)	3	
		(iii) Sr. R. A. O. (650—1300)	7	
		(iv) Sr. D. A. O. (550—1200)	16	
		(v) Audit Officer (550—1200)	3	
5	Ministerial and Class IV Staff	(i) Head Clerk (300—500)	1	7.89
		(ii) Noter and Drafter (280—460)	3	
		(iii) Assistant Accountant (250—425)	27	
		(iv) Stenographer (250—425)	5	
		(v) Typist (200—320)	48	
		(vi) Peon (165—215)	5	
6	Typewriter, Calculator, Telephone, Office Equipment and Contengency.			2.75
7	Training Centre (Stipend, Library, Games and pay of Gardener)			1.66
			Total ..	234.85
		Outlay for 1978-79		10.00
		Total for plain		244.85
		Hill 1979-80 to 1982-83		3.53
		Hill outlay for 1978-79		1.62
		Grand Total ..		250.00

2.100. Based upon the above requirement of additional staff an outlay of Rs.2.50 crores has been kept for Co-operative Audits.

2.101. *Annual Plan 1979-80*—The following posts are proposed to be created

during 1979-80 and the outlay for this year is proposed to be kept at Rs.13.21 lakhs:

TABLE XVII—*Creation of posts during Annual plan 1979-80*

Serial no.	Name of posts	Numbers of posts required	Pay Scale
1	2	3	4
1	Joint Chief Audit Officer	2	900—1600
2	Senior Regional Audit Officer	7	650—1300
3	Senior District Audit Officer	16	550—1200
4	Audit Officer	1	550—1200
5	Statistical Officer	1	550—1200
6	Senior Auditor	271	350—700
7	Statistical Assistant Group-I	2	350—700
8	Statistical Assistant Group-II	4	280—460
9	Auditor	307	280—460
10	Head Clerk	1	300—500
11	Noter and Drafter	3	280—460
12	Stenographers	2	250—425
13	Typist	12	200—320
14	IV Class	2	165—215
15	Training Scheme .. .. .	..	..
		631	

Major Head of Development—2. CO-OPERATION

Scheme-wise outlays

Sub-major Head of Development—2.01 Co-operation

Serial no.	Name of Scheme	Fifth Plan 1974—78 Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed Outlay			
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange	
1	2	3	4	5	6	7	
<i>Co-operative Department—</i>							
	Direction and Administration ..	..	12.83	2.02	184.89	..	..
1	Credit Co-operatives ..	..	1267.77	584.39	4283.73	883.19	..
2	Marketing and storage ..	..	268.31	180.00	956.28	470.00	..
3	Processing Co-operatives ..	..	678.57	97.34	673.28	495.03	..
4	Education and Training ..	..	39.41	9.77	282.59	..	..
5	Consumer's Co-operatives ..	..	50.95	31.24	337.05	85.20	..
6	Farming Co-operatives ..	..	9.15	2.33	25.10	17.65	..
7	Labour Co-operatives ..	..	6.52	0.79	6.64	5.02	..
8	Rickshaw Puller's Co-operatives ..	..	9.36	0.87	7.76	2.05	..
9	Supplies of input's ..	..	12.00	6.00	50.00	50.00	..
10	Drug Development ..	..	1.24	0.24	106.55	9.95	..
11	Staff of Small Farmer's Development Agency	..	3.16	2.85	12.45	..	..
12	Fruit Marketing ..	..	9.63	1.00	26.06	9.27	..
13	Consumption Credit ..	..	200.00	..	..	..	..
14	Other Expenditure ..	..	0.15	..	..	..	..
NEW SCHEMES							
15	Tribal Development ..	..	..	..	38.94	..	..
16	Staff at H.Q. for implementation, guidance and monitorings of tribal Development Scheme.	..	..	..	1.55	..	..
17	Conveyance for Deputy Registrar's Kumaon and Garahwal Region.	..	..	..	1.93	..	..
18	Additional Departmental Staff ..	..	..	..	213.54	..	..
Total, Co-operative Department		..	2556.22	916.82	7023.45	2027.36	..
<i>Finance Department—</i>							
19	Co-operative Audit Organisation ..	..	20.83	7.80	250.00	..	..
Total for 2.01.—Co-operation ..		..	2577.05	924.62	7273.45	2027.36	..

and expenditure

(Rupees in lakhs)

1978-79			1979-80			1980-81	1981-82	1982-83
Approved outlay	Anticipated Expenditure	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
4.50	3.55	45.15	..	..	0.42	45.08	45.08	45.08
419.43	419.43	814.99	..	193.25	115.21	933.74	1012.85	1102.72
134.48	134.48	316.51	..	195.62	8.64	249.61	145.97	109.71
163.98	163.98	134.74	..	86.04	..	129.16	125.60	119.80
31.02	31.02	60.61	..	..	..	66.93	59.92	64.11
56.35	56.35	87.26	..	20.35	11.34	65.37	60.63	67.44
1.88	1.88	5.62	..	4.10	..	5.77	5.92	5.91
0.86	0.86	1.34	..	1.10	..	1.40	1.46	1.58
0.69	0.69	1.61	..	0.45	..	1.67	1.76	2.03
6.00	6.00	11.00	..	11.00	..	11.00	11.00	11.00
..	..	41.20	..	5.40	41.20	25.20	21.35	18.80
2.85	2.85	2.40	..	..	..	2.40	2.40	2.40
1.16	1.16	13.70	..	9.27	13.70	4.20	3.95	3.05
..
..
10.04	10.04	7.22	..	..	7.22	7.22	7.23	7.23
0.10	0.10	0.42	..	..	0.42	0.34	0.34	0.35
1.20	1.20	0.41	..	..	0.41	0.11	0.11	0.10
..	..	51.89	..	..	..	52.86	53.86	54.93
830.04	830.04	1550.92	..	526.58	198.14	1556.98	1514.35	1571.16
11.62	11.62	13.21	..	..	0.04	53.19	72.54	99.44
841.66	841.66	1564.13	..	526.58	198.16	1610.17	1586.89	1670.60

AGRICULTURE AND RURAL DEVELOPMENT
Headwise/sub-head-wise break up of the financial outlays

AGR—32

(Rupees in lakhs)

Serial no.	Head of Development/Programmes	Fifth Plan outlay	Approved outlay 1978-79	Proposed Outlay 1978—83			Proposed outlay 1979-80		
				Total	Capital	Foreign exchange	Total	Capital	Foreign exchange
1	2	3	4	5	6	7	8	9	10
XIV. Co-operation									
(1)	Direction and Administration	122.16	4.50	184.89	..	..	45.15	..	..
(2)	Credit Co-operatives	..	1213.03	419.43	4283.73	883.19	..	814.99	193.25
(3)	Farming Co-operatives	..	20.71	1.88	25.10	17.66	..	5.62	4.10
(4)	Dairy Co-operatives	..	..	..	..	..	..	..	..
(5)	Fishermen's Co-operatives	..	..	..	..	..	..	..	..
(6)	Marketing and Processing Co-operatives.	1144.66	298.46	1629.56	965.03	..	451.25	281.66	..
(7)	Co-operative Sugar Mills	..	..	..	..	..	..	..	..
(8)	Education/Research and Training Information and Publicity.	67.13	31.02	282.59	..	..	60.61	..	..
(9)	Other Co-operatives	..	850.47	90.87	1052.47	161.48	..	231.66	47.57
	Total, XIV	..	3296.00	841.66	7273.45	2027.36	..	1564.13	526.58

AGRICULTURE AND RURAL DEVELOPMENT

AGR-37

Employment Generation

(In numbers)

Serial no.	Head of Development/Programme	Likely Employment Generation in Manyear					
		Scientists	Technical	Adminis- tration	Skilled	Unskilled	Total
1	2	3	4	5	6	7	8
XIV. Co-operatives							
(1)	Direction and Administration ..	..	..	140	..	..	140
(2)	Credit Co-operatives ..	..	..	5	16,362	127	16,494
(3)	Farming Co-operatives ..	..	..	..	68	675	743
(4)	Dairy Co-operatives ..	..	..	..	..	..	..
(5)	Fishermen's Co-operatives ..	..	..	..	..	..	..
(6)	Warehousing and Marketing, Processing Co-operatives.	..	583	220	310	493	1,606
(7)	Co-operative Sugar Mills ..	..	..	..	..	..	..
(8)	Education/Research and Training information and Publicity.	..	..	1	598	98	697
(9)	Other Co-operatives ..	2	1	114	30,918	59,553	90,588
	Total XIV ..	2	584	480	48,256	60,946	1,10,268

Abstract of State Plan Outlays for 1978—83 Under various activities

Sector—2.01 Co-operation

Serial no.	Name of Scheme/Activity	Unit	Provision for 1978-79				Provision for 1979-1980				Total for Five Years 1978-83				
			Share capital	Mane-rial subsidy	Addi-tional staff	Volume of business at the end of 1977-78	Vol. of business at the end of 1978-79 (Antici-pated)	Share capital	Mane-rial subsidy	Addi-tional staff	Vol. of business at the end of 1979-80 (Antici-pated)	Share capital	Mane-rial subsidy	Addi-tional staff	Vol. of business anticipated at the end of 1982-83
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
I—Credit and Banking :		Rs. in lakhs	215.30	180.44	5.11			177.900	358.10	7.82		810.89	2628.49	36.61	
1	Primary agricultural credit societies at the end of the year.	No.				7,756	7,736				6,756				3,756
2	Farmers Service Societies at the end of the year.	No.				373	393				1,373				4,373
3	Large Area-Multi-purpose Societies (LAMPS) at the end of the year.	Do.				72	72				72				72
4	Membership of Primary Agricultural Societies at the end of the year.	No. in lakhs				80.48	90.48				100.48				130.48
5	Loan distribution during the year :														
	(a) Short-term ..	Rs. in crores				137.73	275.00				295.00				1575.00
	(b) Medium-term ..	Do.				12.36	15.00				20.00				125.00
	(c) Long-term ..	Do.				49.27	70.00				70.00				380.00
6	Coverage of agricultural families at the end of the year.	%				57%	60%				70%				100%

7 Primary Agricultural Credit Societies—													
(a) Share Capital	..	Rupees in crores				42.00	50.00			55.00	70.00		
(b) Deposits	..	Do.				12.74	14.50			17.00	25.00		
8 District Cooperative Bank—													
(a) Branches	..	No.				748	873			881	881		
(b) Share Capital	..	Rupees in crores				36.27	37.00			37.75	40.00		
(c) Deposits	..	Do.				137.54	155.00			165.00	200.00		
9 U.P. Co-operative Bank—													
(a) Share Capital	..	Do.				6.67	7.35			8.00	10.00		
(b) Deposits	..	Do.				118.73	130.00			140.00	175.00		
10 Land Development Bank—													
(a) Branches	..	No.				223	223			243	303		
(b) Share Capital	..	Rupees in crores.				21.65	25.15			28.65	40.00		
11 Urban Co-operative Banks..													
	..	No.				7	9			19	49		
II—Marketing and Storage													
	..	Rupees in lakhs.	123.95	0.40	0.85			195.61	1.10	10.45	470.00	5.55	43.51
1 Agricultural produce marketed by Co-operatives during the year.													
	..	Rupees in crores (Value).				32.56	39.50			46.00	70.00		
2 Godowns at the end of the year—													
(a) Rural	..	No.				3,299	4,699			6,249	7,899		
(b) Marketing	..	No.				205	205			213	233		
(c) P.C.F.	..	No.				110	110			126	145		

Sector 2.01 Co-operation

Serial no.	Name of Scheme/ Activity	Unit	Provision for 1978-79					Provision for 1979-1980					Total for Five Years 1978—83			
			Share capital	Manage- rial subsidy	Addi- tional staff	Vol. of business at the end of 1977-78	Vol. of business at the end of 1978-79 (Antici- pated)	Share capital	Manage- rial subsidy	Addi- tional staff	Vol. of business at the end of 1979-80 (Antici- pated)	Share capital	Manage- rial subsidy	Addi- tional staff	Vol. of business antici- pated at the end of 1982-83	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
3	Storage Capacity available :															
	(a) Rural	.. Thousand M.T.				190.50	436.90				609.40				741.90	
	(b) Marketing	.. Do.				50.00	50.00				52.00				57.00	
	(c) P.C.F.	.. Do.				113.75	113.75				136.75				163.75	
III—Processing		.. Rupees in lakhs	125.77	10.21	3.00			86.04	30.07	18.63		470.03	99.92	78.32		
1	Co-operative Processing units installed at the end of the year :															
	(Commodity-wise Number)															
	(a) Oil Complex	.. No.					1	2				2			2	
	(b) Rice Mills	.. No.					21	23				25			33	
	(c) Dal Mills	.. No.					17	20				23			35	
	(d) Cotton spinning	.. No.					1	1				1			1	
	(e) Jute Baling	.. No.					1	1				1			1	

(f) Cotton ginning	..	No.	..	1	1	1	1	1			
(g) Oil seed unit	..	No.	6	6	6	6	6	6			
(h) Cold storages	..	No.	46	50	59	59	86	86			
(i) Others	..	No.	8	8	8	8	8	8			
<i>IV—Training and Education</i>	Rupees in lakhs.	..	21.48	0.65	..	59.28	0.33	..	270.61	1.99	..
1 Training Centres at the end of the year.	No.		4	4		8			16		
2 Training of employees during the year.	Thousand No.		0.63	0.80		1.80			12.55		
3 Training under member Education programme.	Do.		66.19	350.00		915.00			4010.00		
<i>V—Farming</i>	Rupees in lakhs.	..	0.09	..	0.20	0.23	0.75	0.80	1.76	2.98	
1 Organisation of farming Societies.	No.		1,497	1,497		10			40		
2 Revitalization of farming societies. (during the year)	No.		N.A.	20		20			100		
3 Crop Production (during the year).	Lakh Qnths.		3.45	5.84		15.40			77.01		
<i>VI—Consumer's Co-operatives</i>	Rupees in lakhs.	27.90	27.45	23.48	17.85	120.37	49.06	69.30	297.29	191.85	
1 Distribution of consumer articles in rural areas during the year.	Rupees in crores.		8.00	35.00		55.00		..	..	385.00	
2 Retail sales of the urban consumer Cooperatives during the year.	Do.		15.00	30.00		50.00		..	..	385.00	

ANNEXURE—I (concl'd)

Sector—2.01 Co-operation

Serial no.	Name of Scheme/ Activity	Provision for 1978-79						Provision for 1979-1980				Total for Five Years 1978-83			
		Unit	Share capital	Manage-rial subsidy	Addl. staff	Vol of business at the end of 1977-78	Vol. of business at the end of 1978-79 (Anticipate)	Share capital	Manage-rial subsidy	Addl. staff	Vol. of business at the end of 1979-80 (Anticipated)	Share capital	Manage-rial subsidy	Addl. staff	Vo. of business anticipated at the end of 1982-
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<i>VII—Labour Co-operatives</i>	..	Rupees in lakhs.	0.12	0.18	0.06			0.60	0.24			2.52	1.56	..	
Labour Societies	..	No.				361	366		..		371				386
<i>VIII—Rikshaw Puller's Co-operatives</i>		Rupees in lakhs.	0.15	0.44	..			0.30	1.15	..		1.35	5.71	..	
Rikshaw puller's Societies		No.				143	148				153				168
<i>IX—Supply of inputs</i>		Rupees in lakhs.	..	..	..			..	..	..		..	..	..
1 Fertilizer retialed by Cooperatives during the year.		Lakh M.T.				2.32	4.00				5.00				30.00
2 Value		Rupees in crores.				72.19	120.00				140.00				840.00
<i>X—Drug Development</i>		Rupees in lakhs	..	0.24	..			5.40	6.59	11.22		9.95	13.10	44.86	
1 Demonstration units at Block level		No.				24	73				73				73
2 Demonstration units at district level.		No.				3	3				8				8
3 Marketing of Herbs during the year.		Rupees in lakhs				1.67	2.50				3.50				6.50

<i>XI—Fruit Marketing</i>	Rupees in lakhs.	..	1.16	..	..	1.75	2.71	1.34	..	1.75	8.71	5.39	..
1 Business handled during the year.	Rupees in lakhs.	..	..	..	6.17	7.00	..	..	..	7.75	..	..	10.00
<i>XII—Tribal Development</i>	Rupees in lakhs.	..	10.04	..	..	..	7.22	..	..	..	38.94	..	..
<i>XIII—Staff for Tribal Development</i>	Do.	..	..	0.10	..	..	..	0.42	..	..	..	1.55	..
<i>XIV—S.F.D. A. (Staff)</i>	Rupees in lakhs	..	..	2.85	..	..	..	2.40	..	..	..	12.45	..
<i>XV—Additional Staff of General Administration.</i>	Do.	..	..	..	..	..	..	51.89	..	..	..	213.54	..

CHAPTER III
WATER AND POWER DEVELOPMENT
(1) IRRIGATION

The economy of Uttar Pradesh is primarily agriculture-based with about 78 per cent of its 100 million population dependent on agricultural and allied pursuits. Rapid increase in the pace of agricultural development is, therefore, essential to bring about the desired improvement in the State's economy. The resources of cultivable land of the State are, however, limited and agricultural production can therefore be increased mainly through multiple cropping and higher productivity of crops. For both these, irrigation is the most important input. High priority has, therefore, been given in the State Plan to the augmentation of additional irrigation facilities through major and medium irrigation schemes as well as State and Private minor irrigation schemes.

3.1.2. The total geographical area of the State is 294 lakh hectares and the net cultivated area is 172 lakh hectares. Of the gross cropped area of 230 lakh hectares, only 58 lakh hectares area is doubled cropped giving an intensity of cultivation of 134 per cent. The State is generally very favourably bestowed with highly fertile land and substantial surface and underground water resources. Development of water resources has been given considerable attention during the last ten years but the progress made so far is still considerably less than the total utilizable potential.

3.1.3. Uttar Pradesh is served by perennial rivers like Ganga, Yamuna, Ramganga, Ghagra, Rapti and Gandak etc. rising in the Himalayas. The Bundelkhand and Baghelkhand areas are served by rivers Betwa, Chambal, Ken, Tons, Belan, Kanhar and Karamnasa which flow north from the Vindhyas ultimately joining the major river system of the Ganga.

3.1.4. The report of the Irrigation Commission presented in 1972 placed the sur-

face water potential of the sub-basin of the Ganga Basin at 446 m.a.f. as per details given below:

TABLE I—*Surface Water potential*

Serial no.	Name of sub-basin	Run-off available (in m.a.f.)
1	2	3
1	Chambal River Basin	19.71
2	Yamuna River Basin	53.20
3	Ramganga Basin	15.10
4	Tons River Basin	5.09
5	Gomti Basin	6.86
6	Sone and other basins between Tons and Sone.	40.65
7	Ghagra	92.65
8	Right Bank Tributaries below Sone	36.60
9	Left Bank Tributaries below Ghagra	141.60
10	Main Ganga || .. ..	34.50
	Total ..	445.96
	Say ..	446.00

3.1.5. The whole of Uttar Pradesh lies in Ganga basin and it is estimated that out of about 270 m. a. f. water flowing through U. P. it is technically feasible to harness atleast 160 m.a.f. water for developing irrigation. Considering this quantity by itself, without taking into consideration the possibility of using the tremendous amount of groundwater available conjunctively, this will suffice for irrigation needs of 215 lakh hectares of area. Out of this, the ultimate irrigation potential through major and medium irrigation schemes has been estimated to be 200 lakh hectares, the remaining 15 lakh hectares being served by Minor surface irrigation schemes.

3.1.6. Since practically all the land usable for agriculture has already been pressed into service, water assumes the position of principal variable in the development of agriculture. Therefore, it is inevitable that its development should be the highest priority in the development plan of Uttar Pradesh. Even in the national context, development of irrigation potentials of U. P.'s deserves a special attention since creation of per unit of potential in this State, on the average, costs much less than most other States. During the Fifth Five Year Plan period, the average cost of creation of additional potential in Uttar Pradesh came to Rs.2,620 per hectare against the All-India average of Rs.5,970 per hectare.

3.1.7. The pace of development of irrigation potential was quite slow in the earlier plans. As a result of this the share of this State in the total irrigation potential of the country fell from 26 per cent at

the beginning of the First Plan to 19.8 per cent at the end of the Fourth Plan. This happened because Uttar Pradesh harnessed less than 30 per cent of its ultimate irrigation potential up to this time as against the utilisation of 50 per cent or more by other States. Since then, the State has demonstrated its ability to gear up the pace of development of irrigation and achieve targets laid down at the national level, by creating 13.68 lakh hectares of additional irrigation potential through Major and Medium irrigation schemes, during the first four years of the Fifth Plan.

Progress upto the end of Fourth Plan

3.1.8. As stated earlier, the pace of development of irrigation was rather slow up to the end of the Fourth Five-Year Plan. The outlays provided and the potentials developed in different plan periods are given in the table below :

TABLE—II—Outlays and potentials of various Plans through Major and Medium Irrigation Works

Sl. no.	Period	Actual Expenditure		Potential Created	
		(Rs. in crores)		(Thousand ha)	
		During	Cumulative	During	Cumulative
1	2	3	4	5	6
1	Pre-Plan	..	..	..	2553
2	First-Plan (1951—56)	..	..	330	2883
3	Second Plan (1956—61)	..	..	271	3154
4	Third Plan (1961—66)	..	..	357	3511
5	Annual Plan (1966—69)	..	..	96	3607
6	Fourth Plan (1969—74)	..	..	497	4104
7	Fifth Plan (1974—78)	..	..	1,368	5472

Progress during the Fifth Plan (1974—78)

3.1.8. The pace of development of irrigation facilities was stepped up during the Fifth Plan period. A target for the creation of 18.12 lakh hectares of additional potential was fixed for the Fifth Five-Year Plan period (1974—79), out of

which a potential of 13.68 lakh hectares had already been created during the first four years of the Plan. The annual outlays/actual expenditures, physical targets and achievements during the first four years of the Fifth Plan period are given below:

TABLE—III—Outlays and potentials during Fifth Plan

Year	Outlays (Rs. in crores)	Actual expenditure (Rs. in crores)	Potentials ('000 ha)	
			Targets	Achievements
1	2	3	4	5
1974-75	76.94	76.94	291	291
1975-76	82.89	82.43	341	341
1976-77	89.40	102.31	387	192
1977-78	116.18	109.91	349	544
	365.41	371.59	1368	1368

3.1.10. For 1978-79, a target for the creation of 3.94 lakh hectares of potential has been fixed which is expected to be attained in full. What is now being accomplished in one year used earlier to take four to five years.

Utilisation of the potential created—

3.1.11. Adequate attention has also been

paid towards utilisation of the potential created. Table IV below gives the position of creation and utilisation of potentials during the various plan periods and establishes the fact with facts and figures that in U.P., adequate attention has been paid to the utilization of potentials created :

TABLE—IV—Utilisation of potential created

(lakh Hectares)			
Period	Potential created (cumulative)	Utilisation	Percentage utilisation
1	2	3	4
Pre-plan	25.53	25.53	10
First Plan (1951—56)	28.83	26.57	92.2
Second Plan (1956—61)	31.54	29.76	94.4
Third Plan (1961—66)	35.11	33.41	95.2
Annual Plan (1966—69)	36.07	35.21	97.6
Fourth Plan (1969—74)	41.04	38.63	94.1

3.1.12. During Fifth Plan period, the

year-wise position of creation and utilisation of potential is given below :

TABLE—V—Potential created and utilisation during Fifth Plan

(Lakh Hactares)				
Year	Potential created	Utilisation	Percentage	Percentage as compared to potential to the end of previous year
1	2	3	4	5
1974-75	43.95	39.43	89.72	96
1975-76	47.36	40.45	85.60	92
1976-77	49.28	42.09	85.41	89
1977-78	54.72	43.99	80.39	89

3.1.13. The position with regard to immediate utilization of potentials has shown some deterioration during the Fifth Plan in comparison to earlier plans. This is largely attributable to tremendous stepping up of the process of creating potentials. However, the State Government is alive to this problem and hopes to deal with it effectively through the

mechanism of Integrated Block Level Planning which would enable it to mobilize all its resources towards this end. Of course, Command Area Development Authorities already exist for the commands of three major irrigation projects of the State, namely Ramganga, Gandak and Sarda Sahayak Projects. One of the principal functions of these project authorities

is to take up on-farm development works, including field drainage, and also help the cultivators with extension services, distribution of fertilizers, setting up of village service centres and other facilities to take advantage of newly created irrigation facilities expeditiously.

Long Term Goals and objectives of the 1978-83 Plan

3.1.14. The total potential created through major and medium works by the end of 1977-78 will be 54.72 lakh hectares. This is only 27.36 per cent of the ultimate potential possible through major and medium works. Thus, there is still ample scope for the development of further potential in the State. The pace of development, therefore, needs to be stepped up to enable the creation and utilisation of the bulk of the potential by 2000 A.D.

3.1.15. It is proposed to create additional irrigation potential of 21.67 lakh hectares during the Five-Year Plan 1978-83, with an outlay of Rs.1350.00 crores. This will give an average rate of growth of 4.33 lakh hectares per year as against the average rate of growth of 3.42 lakh hectares during the first four years of the Fifth Plan, representing a step up of 27 per cent in the rate of growth of irrigation potential over Fifth Plan period. The pace of growth will have to be at least doubled during the Plan period following the 1978-83 plan, if the objective of harnessing the bulk of untapped potential by 2000 A.D. is to be achieved.

Yearly outlays and physical targets

3.1.16. An outlay of Rs.1350 crores proposed for the Five Year Plan (1978-83) is based on assumption of about 30 per cent step up in the annual outlays every year. Year-wise breakup of the financial outlays and physical targets envisaged is given below :

TABLE VI—Financial and Physical Targets

Year	Proposed Outlay ¹ (Rs. crores)	Proposed physical Target (lakh ha.)
1	2	3
1978-79	149	3.94
1979-80	195	4.39
1980-81	254	4.10
1981-82	328	4.47
1982-83	424	4.77
Total	1350	21.67

3.1.17. A three pronged strategy is proposed to be resorted for formulation and implementation of the irrigation programme for the next quinquennium :

(a) Creation of additional irrigation potential by completing on-going and new projects within the time stipulated through better management;

(b) Effecting more efficient use of waters available in the existing irrigation systems.

(c) Development of conjunctive use of surface and ground water resources.

(a) **Creation of additional irrigation Potential by completing on going and new projects.**

On-going projects

3.1.18. In planning outlays for the 1978-83 Plan, the programme of works of all continuing projects of pre-Fifth Plan and Fifth Plan period have been scrutinised carefully. Maximum outlays subject to technical feasibility have been provided year by year for all the continuing projects. Medium irrigation schemes have been planned to be completed in three to five years while Major Schemes would, it is proposed, be completed between five to ten years, depending upon their magnitude and the complexity of the problems of execution. An outlay of Rs.650 crores has been earmarked for the continuing schemes. The total potential to be created by these schemes will be 19.76 lakh hectares.

3.1.19. All pre-Fifth Plan, Major and Medium schemes, with the exception of Tehri Dam will be completed during the 1978-83 Plan period. Out of the 19 major schemes of the Fifth Plan, 8 schemes will be completed by the end of 1982-83. Four other schemes, though still incomplete will start giving partial benefits during the current Plan itself. None of the major schemes included in the Plan is likely to spill-over beyond 1987-88. Out of the 14 medium schemes included in the Plan, 11 schemes will be completed during the current plan period. Only three will spill-over beyond 1982-83 and these will be completed in the early years of the next Plan.

New Schemes

3.1.20. For obvious reasons, as many new schemes as are ready for consideration with the necessary supportive data.

are proposed to be started during the current Five Year Plan. This approach would maintain continuity in the creation of potential during the future Five Year Plans and also make up for the shortcomings of the Fifth Plan during which adequate number of new schemes could not be started. To some extent the rate of growth in the creation of additional potential would be retarded because of this during the 1978-83 Plan period. It is hoped that, with the initiation of the number of new schemes proposed for the 1978-83 Plan, it will be possible to achieve the required step up in creation of potentials during future Plans also. The total outlay proposed for new schemes is Rs.658.00 crores. Additional potential of 1.91 lakh hectares will be created through some of these new schemes during the current Five-Year Plan period.

3.1.21. Three multipurpose projects namely Kishau Dam, Kotlibhel Dam and Eastern Ramganga Reservoir, with a total outlay of Rs.130.00 crores, are proposed to be started during this period. Work on Kishau Dam is being initiated during 1978-79 itself. Work on Eastern Ramganga Reservoir and Kotlibhel Dam is proposed to be initiated during 1979-80. Work on Kotlibhel Dam will remain only in the initial stages during the 1978-83 Plan period.

3.1.22. In all 28 major schemes have been identified so far for starting work during 1978-83 Plan. The starting of these projects in different years has been phased to match with the likely availability of funds and a careful assessment of organisational capability to handle schemes in different regions. Works on 6 schemes will be started during 1978-79, on 19 schemes during 1979-80 and on 3 schemes during 1980-81. The total outlay proposed on these major schemes is Rs.448.00 crores. Status of preparation of project reports of these scheme has been given in Statement IF-II. Detailed project reports of many of these schemes are still under preparation although technical feasibility has been studied and proved in almost all the cases.

3.1.23. As many as 24 new medium schemes are proposed to be included in this Plan. An outlay of Rs.36.44 crores is proposed for these schemes for the 1978-83 Plan. The present position with regard to the preparation of detailed project

reports in respect of these schemes is mentioned in the Statement IF-II.

(b) Effecting more efficient use of water in the existing irrigation systems

3.1.24. Schemes for modernisation of the existing irrigation systems are proposed to be implemented for more efficient use of the water available in the existing systems. Implementation of these modernisation schemes will ensure accrual of additional potential at comparatively lesser cost per hectare. Such schemes will also improve the utilisation of the potential already created. Seven modernisation schemes were started during 1977-78. Nine more new schemes are proposed to be implemented during the period 1978-83. Work on five of these has already been started during 1978-79.

(c) Development of conjunctive use of water.

3.1.25. Many of the schemes proposed for implementation, during the current Five-Year Plan are for the development of conjunctive use of water. Construction of augmentation tube-wells, State tube-wells and private tube-wells is being encouraged in the commands of the existing canal systems. Simultaneously new canal systems are also being constructed in the areas previously earmarked for irrigation by tube-wells in order to increase recharge in areas marked by serious groundwater depletion. These schemes envisage pumping water from the rivers during the monsoon period for the development of paddy irrigation in tube-well commands.

Organizational Improvements

3.1.26. It is recognised that organizational strengthening, streamlining and reorientation is necessary for the implementation of the major and medium irrigation programme envisaged for the 1978-83 Plan period. Some of the steps envisaged in this connection are briefly presented below :

(i) The Planning Commission has all along been emphasising the need for keeping a sizeable shelf of projects ready in advance so that a real choice could be made from possible alternatives and their appraisal, sanction and implementation could be taken up in a phased manner. It will also enable a sufficient number of the new starts year after year so as

to ensure a regular flow of benefits. A strong Investigation and Planning organisation is needed for this work and in recognition of this, the State Government have sanctioned considerable strengthening of the Investigation and Planning wing of the Irrigation Department. The Design wing has also been strengthened. Now, the question of finding and retaining personnel of high calibre in these wings on a stable basis, is engaging the attention of the Irrigation Department.

(ii) The structure of the Irrigation Department has remained unchanged for many decades despite tremendous increase in the magnitude and complexity of activities handled by the department. It is now well recognised that planning for irrigation involves the application of skills and techniques pertaining to a variety of disciplines, including Economics, Agriculture, Cost Accounting, Project Management, Cost Control, Financial Management and Monitoring. Proposals for restructuring the department in the light of these needs are under the active consideration of the Government.

(iii) There is a strong feeling that adequate attention must be paid to the inservice training of working engineers to keep them abreast of the latest developments in the scientific and technological fields. To undertake this, it has been decided to set up an Academy in which, apart from the inservice training of departmental officers, new entrants will also be acquainted with the procedural and accounting aspects of their duties. A training school is also under consi-

deration for the Junior Engineers of the Department.

(iv) The procedures for the sanction of projects by the State Government have recently been streamlined. An expenditure finance committee has been set up, which is expected to obtain appraisal reports from the State Planning Institute and thereafter sanction the projects on the basis of discussions round the table, without the files shunting back and forth between the administrative, planning and finance departments. State Government sanctions for most of the projects included in the annual plan have been issued.

(v) A monitoring cell has been set up in the office of the Chief Engineer for keeping watch over the progress of projects and reporting the same to the Chief Engineer and the Government. The cell, also identifies the bottlenecks in execution and suggests remedial measures. Monitoring cells attached to the managing personnel for major projects are proposed to be set up shortly.

Utilisation of irrigation Potential—

3.1.27. With the increased activities of the Command Area Development Authorities and various steps proposed to be under taken by Irrigation Department to utilise the irrigation potential already created, it is hoped that almost all the potential created by the end of Fifth Plan would be utilised by the end of year 1982-83. However, the irrigation potential proposed to be created during the 1978-83 period would be utilised only partially. The anticipated figures of year-wise creation of potential and its utilisation are given below :

TABLE VII—Year-wise potential creation and utilisation

(Lakh Hectares)

Year	Potential created by the end of previous year	Utilisation	Per cent utilisation of potential created by the end of previous year
1	2	3	4
1977-78	54.72	43.99	..
1978-79	58.66	46.79	86
1979-80	63.05	49.87	85
1980-81	67.15	53.48	85
1981-82	71.62	57.39	85
1982-83	76.39	61.45	86

3.1.28. It is observed that one of the major factors inhibiting the availability of desired benefits of irrigation projects, including utilisation of their potentials, is the presence of waterlogging conditions in the canal irrigated areas. To obviate this difficulty, adequate provision is being made in the irrigation projects for the construction of surface drains and suitable drainage crossings. Schemes for constructing augmentation tub-wells are being formulated in the commands of Gandak Canal and Sarda Sahayak Projects. Such schemes will be extended to the commands of other canal systems also in future.

Inter-State Schemes—

3.1.29. The names of the Inter-State schemes which will be under implementation during the current Five Year Plan are given in the Statement IF-1. Inter-State agreements have already been finalised in respect to Gandak Project, Reconstruction of Okhla Barrage, Reconstruction of Tajewala Barrage, Rajghat Dam, Bansagar Dam, Urmil Dam, Paisuni Diversion scheme and Remodelling of Ken Canal. The matter regarding distribution of waters of the river Yamuna between various basin States is already under the consideration of Government of India. Implementation of Greater Gangau Dam and Remodelling of Bariarpur Weir will be undertaken with the mutual agreement of the Governments of Uttar Pradesh and Madhya Pradesh. Action is being taken to set up Joint Control Board of the two States to expedite implementation of Inter-State schemes of the two States. Implementation of Karnali Dam and Pancheshwar Dam will require finalisation of agreements with Nepal for which action is being taken by the Government of India.

Liaison with Agriculture Department—

3.1.30. Liaison with the Agriculture

Department is maintained during various stages of all Irrigation Projects. Agriculture Department's formal concurrence is obtained in respect of each and every Irrigation Scheme before finalising the Project report. Some inadequacies in respect of the existing arrangements have, however, come to light. Suitable modifications for ensuring a high quality of advice from the Agriculture Department are being considered.

Losses on Irrigation works—

3.1.31. The continuing financial losses on irrigation works are a cause for concern. In addition to exercising all possible economies in maintenance and operation, the State Government has also been trying to increase the revenues of the department by rationalising water rates in a manner which would relate the rates to be charged from various categories of cultivators growing crops with variable returns with the benefits accruing to them from irrigation and their capacity to pay. The recommendations of the Nijilingappa Committee (1964), the National Irrigation Commission (1972) and the Lakdawala State Taxation Enquiry Committee will have to be kept in view in this connection. In this context, it seems relevant to review the steps taken in the recent past. The canal irrigation rates were revised first in 1969 and again in 1972 bringing about an increase of nearly 20 to 25 per cent each time. Keeping in view the recommendation of the First Conference of the State Irrigation Ministers held in July 1975, in New Delhi and also taking account of the increased cost of construction of irrigation projects, the irrigation rates were further revised by about 50 per cent to 75 per cent with effect from April 1, 1975. The irrigation rates in any one State, however, cannot differ markedly from those in other, specially the neighbouring States. In this

connection, the information presented in Table VIII regarding irrigation rates

prevalent in different States needs serious consideration.

TABLE VIII—Average Irrigation Rates of various States of India

Serial no.	State						Average water rate in rupees per ha.	Date of enforcement
1	2						3	4
<i>Southern Region :</i>								
1	Andhra Pradesh	..	..	..	..	..	70.66	1-7-74
2	Karnataka	..	..	..	..	..	68.44	1-7-74
3	Maharashtra	..	..	..	..	..	158.67	1-7-75
4	Kerala	..	..	..	..	..	65.50*	1-7-74
5	Orissa	..	..	..	..	..	7.61**	4-12-74
							23.64	4-12-74
6	Tamil Nadu	..	..	..	..	..	.. Data is available for six districts out of 14 districts. Hence average rate has not been computed.	
<i>Northern and Eastern Region :</i>								
1	Assam	..	..	..	..	..	No water rates.	
2	Bihar	..	..	..	..	..	58.92	17-8-74
3	Gujrat	..	..	..	..	..	126.82	16-6-76
4	Haryana	..	..	..	..	..	56.44	Kharif, 1975
5	Jammu and Kashmir	..	..	..	..	..	13.07	15-3-72
6	Madhya Pradesh	..	..	..	..	..	49.53	1-8-72
7	Punjab	..	..	..	..	..	27.07	20-6-74
8	Rajasthan	..	..	..	..	..	39.26	Kharif, 1974
9	Uttar Pradesh	..	..	..	..	..	67.29	4-12-75
10	West Bengal	..	..	..	..	..	52.64	11-12-74

NOTE :—*Inclusive of rates for rice.

**Exclusive of rice.

3.1.32. Irrigation rates for the principal crops are given in the Annexure I. The financial returns from irrigation projects including multipurpose, major, medium and minor for the year 1977-78 to 1982-83 are given in the Annexure II. Financial returns for multipurpose, major and medium projects only are given in

Annexure III. It will be seen that during 1977-78, for major and medium projects, gross receipts were more than the working expenses, the net excess being Rs.8.17 crores. But after taking into account the interest charges the net receipts become negative, showing a loss of Rs.22.64 crores.

Water rates for principal crops

Serial no.	Name of crop	Water rates in Rs./hectare	Date of enforcement of water rate
1	2	3	4
1	Rice	98.84	1-4-75
2	Cotton	39.54	..
3	Wheat	98.84	..
4	Jowar and Bajra etc.	59.30	..
5	Sugarcane	197.68	..
6	Garden etc.	98.84	..
7	Potato	136.38	..
8	Taboacco	108.72	..

ANNEXURE—II

FINANCIAL RETURNS FROM IRRIGATION PROJECTS

*(Major, Medium and Minor works combined)**(Rupees in lakhs)*

Serial no.	Item	1977-78		1978-79		1979—83	
		Irrigation (Commercial)	Irrigation portion of multipurpose river valley projects	Irrigation (Commercial)	Irrigation portion of multipurpose river valley projects	Irrigation (Commercial)	Irrigation portion of multipurpose river valley projects
1	2	3	4	5	6	7	8
1	Gross receipts	3864.00	..	4803.50	..	21389.50	..
2	Working expenses.. .. .	3637.35	..	6120.50	..	28052.22	..
3	Interest charges	4101.68	..	5206.21	..	33884.09	..
4	Depreciation	476.02	..	551.00	..	3600.00	..
5	Net receipts (i)—(ii+iii+iv)	(—)4351.05	..	(—)7074.21	..	(—)44416.81	..

NOTE—Irrigation portion of multipurpose river valley projects is included in Major Medium, Schemes due to mixed Irrigation system.

Financial Returns from Major and Medium Irrigation Projects including Multipurpose Projects
(Rupees in lakhs)

Serial no.	Item	1977-78		1978-79		1979-83	
		Irrigation (Commer- cial)	Irrigation portion of Multipur- pose river valley projects	Irrigation (Commer- cial)	Irrigation portion of multipur- pose river valley projects	Irrigation (Commer- cial)	Irrigation portion of multipur- pose river valley projects
1	2	3	4	5	6	7	8
(i)	Gross Receipts	.. 2414.00	..	3262.50	..	13477.50	..
(ii)	Working expenses	.. 1596.82	..	3165.50	..	14606.22	..
(ii)	Interest charges	.. 3080.99	..	3780.56	..	25201.24	..
	Net receipts i-(ii+iii)	..(-)2263.81	..	(-)3683.56	..	(-)26329.96	..

NOTE—Irrigation portion of multipurpose river valley projects is included in major, medium schemes due to mixed irrigation system.

STATEMENT IF-I

List of Inter-State Schemes
Multi-purpose and Irrigation Schemes

- | | |
|---|---|
| 1. <i>Gandak Canal:</i>
Bihar
U. P.
Nepal Works | 6. <i>Bansagar Dam:</i>
Madhya Pradesh
Uttar Pradesh
Bihar. |
| 2. <i>Reconstruction of Okhla Barrage:</i>
Uttar Pradesh
Haryana
Rajasthan | 7. <i>Urmil Dam:</i>
Madhya Pradesh
Uttar Pradesh |
| 3. <i>Reconstruction of Tajewala Barrage:</i>
Haryana
Uttar Pradesh | 8. <i>Greater Ganga Dam:</i>
Madhya Pradesh
Uttar Pradesh |
| 4. <i>Kishau Dam:</i>
Uttar Pradesh
Himachal Pradesh | 9. <i>Remodelling of Bariarpur Weir:</i>
Madhya Pradesh
Uttar Pradesh
International Project |
| 5. <i>Rajghat Dam:</i>
Uttar Pradesh
Madhya Pradesh | 10. <i>Karnali Dam:</i>
Nepal
Uttar Pradesh |
| | 11. <i>Pancheswar Dam ;</i>
Nepal
Uttar Pradesh |

STATEMENT : IF-II—MAJOR-MEDIUM IRRIGATION PROJECTS-OUTLAY

Major Head of Development—3 WATER AND POWER DEVELOPMENT

Sub-Major Head of Development—3.01. Irrigation

Serial no.	Name of Project	Approved estimated cost	Year	Latest estimated cost
1	2	3	4	5
A—Pre-Fifth Plan Schemes—				
I. Multipurpose Projects—				
1	Ramganga Dam	10,032	1971	11,719
	Total Cost	16,250		
	Irrigation Share	11,719		
	Power Share	4,531		
2	Tehri Dam	6,552	1971	15,274
	Total Cost	30,516		
	Irrigation Share	15,274		
	Power Share	15,242		
	Total-I ..	16,584	..	26,993
II—Irrigation Projects :				
(a) Major Projects—				
1	Gandak Canal	5,038	1973	9,150
2	Sarda Sahayak	9,961	1968	31,485
3	Kosi Irrigation Scheme	287	1968	1,264
4	Haripura Reservoir	176	1961	646
5	Adwa Dam	229	1971	609
6	East Baigul Reservoir	145	1967	767
7	Stengthening of Sarda Sagar	555	1975	555
8	Dohrightat Sahayak	380	1976	854
	Sub-Total (a) ..	16771.00	..	45,330
(b) Medium Projects—				
1	Kosi Valley	99	1976	99
2	Ramganga Valley	97	1977	97
3	Remodelling of Bhimgoda Head Works	1,605	1977	1,605
4	Dalmau Pump Canal, Stage-II	370	1974	370
5	Repair of Nanak Sagar	183	1969	341

AND EXPENDITURE

(Rupees in lakhs)

Year	Expenditure up to end of 1973-74	Expenditure during 1974-77	1977-78		Total expenditure to end of 1977-78	1978-79	
			Approved outlay	Actual expenditure		Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
1977	10,106	1,953.98	529.00	509.00	12,568.98	15.00	15.00
1975	264.00	272.88	150.00	198.00	734.88	984.00	984.00
	10,370.00	2,226.86	679.00	707.00	13,303.86	999.00	999.00
1977	3,562	854.24	600	561	4,977.24	800	800
1976	6,982	15,219.73	4,100	4,278.6	26,480.33	2,800	2,800
1976	310	506.02	100	123	939.02	150	150
1975	368	227.60	48	23	618.60	2.40	2.40
1978	145	427.39	(—)2	32.2	604.59	28.61	28.61
1975	180	149.04	50	62.7	391.74	150	150
1975	371	157.15	6.08	28.2	556.35	10	10
1977	61	456.32	210	230	747.32	120	120
	11,979	17,997.49	5,112.08	5,338.7	35,315.19	4,061.01	4,051.01
1976	19	60.42	10	11.5	90.92	10.48	10.48
1977	15	54.53	37	13.8	83.33	10.00	10.00
1977	20	97.15	50	31.6	148.75	325	325
1974	49	158.38	15	16	223.38	10	10
1976	277	51.95	10	24	352.95	2.05	2.05

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hill				
17	18	19	20	21	22	23	24
(-300)	..	(-300)	..	(-564.98)	..	..	Revised project under finalisation.
1716	..	1,716	..	1 900	2,000	2,400	Revised cost approved by C.W.C., detailed project report under preparation.
1,416	..	1,416	..	1,335.02	2,000.00	2,400.00	
1,300	..	1,300	..	1,500	572.76	..	Revised project under submission to C. W. C.
1,300	..	1,300	..	400	300	204.67	Revised project submitted to C. W. C. in 10/76
150	..	150	65	24.98	..	..	Revised project submitted to C. W. C. in 2/77
25	..	25	..	..	..	..	Revised project submitted to C. W. C. in 12/75
(-24.2)	..	(-24.2)	..	..	..	..	Revised project submitted to C. W. C. in 12/75
150	..	150	..	75.26	..	..	Revised project submitted to C. W. C. in 1/76.
(-11.35)	..	(-11.35)	..	..	..	..	Project cleared by Planning Commission.
(-13.02)	..	(-13.02)	..	..	..	..	Revised project under submission to C.W. C.
2,876.43	..	2,876.43	65	2,000.24	872.76	204.67	
(-2.4)	..	(-2.4)	(-2.4)	..	..	..	Cleared by Planning Commission.
3.67	..	3.67	3.67	..	..	..
500	..	500	..	525	106.25	..	Cleared by Planning Commission.
..	Revised project under submission to CWC.
(-14)	..	(-14)	..	..	..	..	Cleared by Planning Commission.

Major Head of Development—3 WATER AND POWER DEVELOPMENT

Sub-Major Head of Development—3.01—Irrigation (Contd.)

Serial no.	Name of Project	Approved Estimated cost	Year	Latest Estimated Cost
1	2	3	4	5
6	Chillimal Pump Canal	98	1975	176
7	Deokali Pump Canal	290	1974	290
8	Sarju Pump Canal	484	1974	484
9	Kishanpur Pump Canal	134	1973	408
10	Remodelling of Ken Canal	48	1969	141
Sub-Total (b)		3408.00		4011
Total (a+b)		20179.00		49341
Total (A)		36763		76334
B—Schemes of Fifth Plan				
<i>I—Multipurpose Projects—</i>				
1	Lakhwar Vyasi	1,277	1975	5463
	Total Cost 16,717			
	Irrigation Share .. 5463			
	Power Share 11254			
Total, I		1277.00		5463
<i>II—Irrigation Projects :</i>				
<i>(a) Major Projects—</i>				
1	Increasing capacity of Narainpur Pump Canal ..	996	1974	996
2	Parallel Lower Ganga Canal	2567	1974	4527
3	Sone Pump Canal	564	1974	1300
4	Raising Meja Dam .. .. .	..	..	891
5	(a) Rajghat Dam .. .. .	..	..	4500
	Total Cost : 9000			
	U. P. Share : 4500			
	(b) Rajghat Canal— .. .. .	..	..	1888
6	Shahzad Dam	802.50	1976	803
7	Jamarani Dam	6125	1975	6125
8	Kanhar Irrigation Scheme .. .. .	..	..	2775

(Rupees in lakhs)

Year			1977-78		Total Expenditure to end of 1977-78	1978-79	
	Expenditure up to end of 1973-74	Expenditure during 1974-77	Approved outlay	Actual expenditure		Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
1976	33	108.12	20	17.8	158.92	14.88	14.88
1974	66	183.81	25	7.2	257.01	15.19	15.19
1974	25	249.75	160	86.30	361.05	49.25	49.25
1977	42	139.69	100	26.5	208.19	94.31	94.31
1978	34	17.37	8.63	8.9	60.27	20	20
	580	1121.17	435.63	243.60	1944.77	551.16	551.16
	12559	19118.66	5547.71	5582.30	37259.96	4612.17	4612.74
	22929	21345.52	6226.71	6289.30	50563.82	5611.17	5611.17
1977	..	10	100	111	121	300	300
	..	10	100	111	121	300	300
1974	35	468.15	300	253.2	756.35	192.85	192.85
1976	10	737.59	875	557.8	1305.39	1,000	1,000
1978	12	384.69	150	230	626.69	17.31	17.31
1976	..	106.56	120	103.5	210.06	150	150
1978	46	193.54	50	77.3	316.84	250	250
1976	..	79.35	150	158	237.35	200	200
1975	..	113.60	150	115	228.69	250	250
1976	..	60.12	200	260	320.12	350	350

Major Head of Development—3. WATER AND POWER DEVELOPMENT
Sub-major Head of Development 3.01—Irrigation

Serial no.	Name of Project	Proposed 1978-83		
		Total	Capital content	Foreign Exchange
1	2	14	15	16
6	Chillimal Pump Canal	17.08	17.08	..
7	Deokali Pump Canal	32.99	32.99	..
8	Sarju Pump Canal	122.95	122.95	..
9	Kishanpur Pump Canal	199.81	199.81	..
10	Remodelling Ken Canal	81.05	81.05	..
Sub-Total (b)		1929.93	1929.93	..
Total (a+b)		11945.04	11945.04	..
Total (A)		20095.06	20095.06	..
B—Schemes of Fifth Plan				
<i>I—Multipurpose Projects</i>				
1	Lakhwar Vyasi	1,000	1,000	..
	Total Cost.	1671		
	Irrigation share	5463		
	Power share	11254		
Total-I		1,000	1,000	..
<i>II—Irrigation Project :</i>				
<i>(a) Major Projects—</i>				
1	Increasing Capacity of Narainpur Pump Canal	239.65	239.65	..
2	Parallel Lower Ganga Canal	3221.61	3221.61	..
3	Sone Pump Canal	673.31	673.31	..
4	Raising Meja Dam	680.94	680.94	..
5	(a) Rajghat Dam			..
	Total Cost : 9000	5,400	5,400	..
	U. P. Share : 4500			..
<i>(b) Rajghat Canal</i>				
6	Shahzad Dam	565.15	565.15	..
7	Jamarani Dam	2,000	2,000	..
8	Kanhar Irrigation Scheme	2,000	2,000	..

(Rs. in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hill				
17	18	19	20	21	22	23	24
2.2	..	2.2	..	..	..	..	Revised project submitted to C.W.C.
17.80	..	17.80	..	..	..	..	Cleared by Planning Commission.
73.7	..	73.7	..	..	..	..	Cleared by Planning Commission.
60	..	60	..	45.5	..	..	Revised project submitted to C.W.C.
30	..	30	..	31.05	..	..	Revised project not submitted to C. W. C.
670.97	..	670.97	1	601.55	106.25	..	
3547.40	..	3547.40	66	2601.79	979.01	204.67	
4963.40	..	4963.40	66	3936.81	2979.01	2604.67	
200	..	200	..	200	200	100	Revised project under preparation.
200	..	200	..	200	200	100	
40	..	40	..	6.8	..	..	Cleared by Planning Commission.
1000	..	1000	..	600	400	221.61	Revised project submitted to C. W. C. in 6/76.
150	..	150	..	200	250	56	Revised project submitted to C. W. C.
150	..	150	..	200	100	80.94	Revised project submitted to C. W. C.
650	..	650	..	1300	1600	1600	(a) Project of Dam portion to be recast by Betwa River Board.
							(b) Submitted to C. W. C.
200	..	200	..	150	15.15	..	Cleared by Planning Commission.
350	..	350	200	400	500	500	Cleared by Planning Commission.
350	..	350	..	400	400	500	Project submitted to Central Water Commission.

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Approved Estim.	Year	Latest estimated cost
1	2	3	4	5
9	Madhya Ganga Canal State-I	6601	1976	6601
10	Maudaha Dam	2565	1975	2592
11	Left Bank Ghagra Canal	7868	1976	7868
12	Okhla Barrage	..	..	2538
13	Tajewala Barrage	..	..	622
	Total Cost	1866	..	..
	U. P. Share	622	..	..
14	(a) Bansagar Dam	..	..	2282
	Total Cost	9130	..	..
	U. P. Share	2282	..	..
	(b) Feeder canal.	..	..	3500
15	Urmil Dam	856	1978	856
16	Suheli Irrigation	640	1977	640
17	Increasing Capacity of Zamania Pump Canal	..	..	939
18	Eastern Ganga Canal	..	..	3870
	Sub Total, II (a)	..	..	56113
	(b) Medium Schemes—			
1	Augasi Pump Canal	146	1973	197
2	Yamuna Pump Canal	446	1973	650
3	Chittaurgarh Reservoir	..	..	489
4	Rohini Dam	..	..	70
5	Sajnam Dam	..	..	432
6	Laster Valley	115.5	1975	115
7	Paisuni Diversion	..	..	461
8	Aliganj Irrigation Scheme	381	1975	381
9	Umarhat Pump Canal	78	1976	78
10	Khatima Irrigation Scheme	..	..	90
11	Increasing Capacity of Kwano Pump Canal	..	..	413
12	Khara Canal	265	1974	397
13	Hindan Barrage	386	1973	386
14	Increasing capacity of Tons Pump Canal	175	1972	351
	Sub Total, II (b)	..	..	4510

(Rupees in lakhs)

Year	Expenditure up to end of 1973-74	Expcnditure during 1974-77	1977-78		Total expenditure to end of 1977-78	1978-79	
			Approved outlay	Actual expenditure		Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
1976	..	14.48	450	480	494.48	600	600
1977	..	37.12	150	167.5	204.62	250	250
1978	..	13.5	300	304.9	318.4	700	700
1976	..	42.94	150	281.8	324.74	500	500
..
1978	..	..	..	..	..	..	..
	..	..	45	28.8	28.8	100	100
1977	..	..	..	..	..	..	..
1978	..	7.40	100	97.8	135.2	200	200
1977	..	1.50	150	80.5	82.00	200	200
1974	..	11.5	100	57.5	69.00	250	250
1974	..	..	30	9.8	9.8	190	190
..	103.00	2302.13	3,470	3263.40	5668.53	5,400.16	5400.16
1976	..	88.92	50	30.6	119.52	7.08	7.08
1978	12	439.89	10	97.8	549.69	5	5
1974	..	1.44	50	51.4	52.84	112.39	112.39
1975	..	15.40	43	2.4	17.8	8.60	8.60
1975	..	30	150	87.2	117.2	200	200
1975	..	10.23	25	19.6	29.83	39	39
1975	..	1.18	50	..	1.18	50	50
1975	..	50.98	100	57.5	108.48	200.00	200
1976	..	0.60	30	0.4	1.00	47.40	47.40
1975	..	31.39	50	39	70.39	8.61	8.61
1978	..	..	10	9	9	40	40
1978	45	324.32	16	28.8	398.12	0.68	0.68
1973	25	274.70	86	117.3	417	5	5
1977	101	5	60	27	133	50	50
..	183	1274.05	730	568	2082	773.76	773.76

Major Head of Development—3. WATER AND POWER DEVELOPMENT
 Sub-major Head of Development—3.01 Irrigation—(Contd.)

Serial no.	Name of Project	Proposed 1978—83		
		Total	Capital Content	Foreign Exchange
1	2	14	15	16
9	Madhya Ganga Canal Stage-I	3500	3500	..
10	Maudaha Dam	1900	1900	..
11	Left Bank Ghagra Canal	5000	5000	..
12	Okhla Barrage	2213.26	2213.26	..
13	Tajewala Barrage	622	622	..
	Total Cost .. 1866			
	U. P. Share .. 622			
14	(a) Bansagar Dam	1900	1900	..
	Total Cost 9130			
	U. P. Share 2282			
	(b) Feeder Canal	2500	2500	..
15	Urmil Dam	720.8	720.8	..
16	Suheli Irrigation	550	550	..
17	Increasing Capacity of Zamania Pump Canal	870	870	..
18	Eastern Ganga Canal	2000	2000	..
	Sub Total, II(a)	36556.72	36556.72	..
	(b) Medium Schemes—			
1	Augasi Pump Canal	77.48	77.48	..
2	Yamuna Pump Canal	100.31	100.31	..
3	Chittaurgarh Reservoir	412.39	412.39	..
4	Rohini Dam	52.2	52.2	..
5	Sajnam Dam	314.8	314.8	..
6	Laster Valley	85.67	85.67	..
7	Paisuni Diversion	300	300	..
8	Aliganj Irrigation Scheme	272.52	272.52	..
9	Umarhat Pump Canal	77	77	..
10	Khatima Irrigation Scheme	19.61	19.61	..
11	Increasing Capacity of Kwano Pump Canal	400	400	..
12	Khara Canal	(—)1.12	(—)1.12	..
13	Hindan Barrage	(—)31	(—)31	..
14	Increasing Capacity of Tons Pump Canal	218	218	..
	Sub Total, II(b)	2297.86	2297.86	..

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital Content	Hill				
17	18	19	20	21	22	23	24
650	..	650	..	700	750	800	Cleared by Planning Commission.
300	..	300	..	350	400	600	Revised Project submitted to C. W. C.
850	..	850	..	1,000	1,150	1,300	Cleared by Planning Commission.
800	..	800	..	700	213.26	..	Submitted to C. W. C.
100	..	100	..	150	200	172	Project to be prepared and work to be done by Haryana Government.
550	..	550	..	400	450	400	(a) Revised Project of dam portion to be submitted by M. P. Government.
300	..	300	..	500	700	1,000	(b) Submitted to C. W. C.
200	..	200	..	200	100	20.8	Cleared by Planning Commission.
150	..	150	..	100	75	25	Cleared by Planning Commission.
200	..	200	..	200	100	120	Project submitted to C.W.C. in 8/76.
310	..	310	..	400	500	600	Project submitted to Central Water Commission.
7,300	..	7,300	..	7,956.8	7,903.41	7,996.35	
50	..	50	..	20.4	..	..	Revised project submitted to C.W.C.
50	..	50	..	45.31	..	..	Revised project under preparation.
100	..	100	..	100	60	40	Submitted to C.W.C.
15	..	15	..	20	8.60	..	Cleared by Planning Commission.
50	..	50	..	50	14.80	..	Project submitted to C.W. C.
30	..	30	30	16.67	..	..	Cleared by Planning Commission.
50	..	50	..	50	75	75	Submitted to C.W.C., project being revised.
50	..	50	..	22.52	..	..	Cleared by Planning Commission.
29.6	..	29.6	..	..	..	..	Cleared by Planning Commission.
11	..	11	11	..	..	..	Submitted to C.W.C. in 12/75.
60	..	60	..	80	100	120	Revised Project under submission to C.W.C.
(-)-1.80	..	(-)-1.80	..	..	..	..	Revised Project submitted to C.W.C.
(-)-36	..	(-)-36	..	..	..	..	Cleared by Planning Commission.
100	..	100	..	68	..	..	Project under submission to C.W.C.
557.8	..	557.8	41	472.9	258.40	235	

Major Head of Development— 3.—WATER AND POWER DEVELOPMENT

Sub-major Head of Development—3·01—Irrigation—(Contd.)

Serial no.	Name of Project	Approved Estimated cost	Year	Latest Estimated cost
1	2	3	4	5
<i>(c)—Modernisations Schemes—</i>				
1	Lining of Channel .. .. .	..	..	936
2	Modernisation of Eastern Yamuna Canal .. .. .	..	..	931
3	Modernisation of Agra Canal .. .. .	..	..	496
4	Modernisation of Lachura Headworks .. .. .	..	..	704
5	Remodelling of Mat Branch .. .. .	..	..	359
6	Modernisation of Ghaggar Canal .. .. .	..	..	371
7	Modernisation of Upper Sarda Canal .. .. .	..	..	496
	Sub Total, II(c)	..	..	4,293
<i>(d) Schemes for conjunctive use of water—</i>				
1	Increasing Capacity of Deokali Pump Canal .. .. .	..	..	1,429
2	Gyanpur Pump Canal .. .. .	..	..	1,786
	Sub Total, II(d)	..	..	3,215
	Total, II (a+b+c+d)	..	..	68,131
	Total, (B) .. .. .	..	..	73,594
	Total, (A+B) .. .. .	..	..	1,49,928
New Schemes				
I—Multipurpose Projects :—				
1	Kishau Dam .. .. .	..	..	16,910
	Total Cost	45,984	..	..
	Irrigation Share	16,910	..	..
	Power Share	27,874	..	..
	Flood Share	1,200	..	..
2	Kotlibhel Dam .. .. .	..	..	13,300
	Total Cost .. .. .	..	..	..
	Irrigation Share	13,300	..	..
	Power Share .. .. .	..	..	..
3	Eastern Ramganga Reservoir .. .. .	..	..	6,406
	Total Cost	10,088	..	..
	Irrigation Share	6,406	..	..
	Power Share	3,682	..	..
	Total, I .. .. .	..	..	36,616

(Rupees in lakhs)

Year	Expenditure up to end of 1973-74	Expenditure during 1974-77	1977-78		Total expenditure to end of 1977-78	1978-79	
			Approved outlay	Actual expenditure		Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
1975	92	30.00	30	58	180	50	50
1976	..	..	55	49.4	49.4	150	150
1974	..	..	50	46	46	140	140
1974	..	..	10	..	..	35	35
1975	..	..	20	25.3	25.3	60	60
1976	..	5.50	80	32	37.5	100	100
1975	..	62.60	150	111.60	174.20	150	150
..	92	98.10	395	322.30	512.40	685	685
1976	104	528.22	300	150.7	782.92	350	350
1976	..	..	88	121.9	121.9	150	150
..	104	528.22	388	272.60	904.82	500	500
..	482	4,202.50	4,983	4,426.30	9,110.80	7,358.92	7,358.92
..	482	4,212.50	5,083	4,537.30	9,231.80	7,658.92	7,658.92
..	23,411	25,558.02	11,309.71	10,826.60	59,795.62	13,270.09	13,270.09
1978	..	..	..	..	..	300	300
..
1975	..	..	..	..	..	:	..
..	..	..	..	..	..	300	300

Major Head of Development—3 WATER AND POWER DEVELOPMENT

Sub-major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Proposed 1978—83		
		Total	Capital content	Foreign Exchange
1	2	14	15	16
<i>C--Modernisation Schemes--</i>				
1	Lining of Channel	756	756	..
2	Modernisation of Eastern Yamuna Canal	800	800	..
3	Modernisation of Agra Canal	400	400	..
4	Modernisation of Lachura Headworks	550	550	..
5	Remodelling of Mat Branch	240	240	..
6	Modernisation of Ghaggar Canal	333.5	333.5	..
7	Modernisation of Upper Sarda Canal	300	300	..
Sub Total, II(c)		3,379.5	3379.50	..
<i>(d) Schemes for conjunctive use of water :</i>				
1	Increasing Capacity of Deokali Pump Canal	625	625	..
2	Gyanpur Pump Canal	1,000	1,000	..
Sub Total, II(d)		1,625.00	1,625.00	..
Total, II(a+b+c+d)		43,859.08	43,859.08	..
Total, (B)		44,859.08	44,859.08	..
Total, (A+B)		64,954.14	64,954.14	..
New Schemes				
<i>I--Multipurpose Projects--</i>				
1	Kishau Dam	6,000	6000	..
	Total Cost			
	Irrigation Share			
	Power Share			
	Flood Share			
2	Kotlibhel Dam	3,000	3,000	..
	Total Cost			
	Irrigation Share			
	Power Share			
3	Eastern Ramganga Reservoir	4,000	4,000	..
	Total Cost			
	Irrigation Share			
	Power Share			
Total I		13,000.00	13,000.00	..

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hill				
17	18	19	2	21	22	23	24
250	..	250	..	250.00	206.00	..	Submitted to C.W.C.
200	..	200	..	200.00	150.00	100.00	Project submitted to C.W.C.
100	..	100	..	60.00	50.00	50.00	Project submitted to C.W.C. in 12/74.
65	..	65	..	100.00	150.00	200.00	Project submitted to C.W.C.
50	..	50	..	55.00	60.00	15.00	Project submitted to C.W.C.
150	..	150	..	83.50	..	..	Project submitted to C.W.C.
50	..	50	..	40.00	30.00	30.00	Project submitted to C.W.C.
865.00	..	865.00	..	788.50	646.00	395.00	
100	..	100	..	100	50	25	Project submitted to C.W.C.
150	..	150	..	250	350	100	Project submitted to C.W.C.
250.00	..	250.00	..	350	400	125	
8,972.80	..	8,972.80	41	9,568.2	9,207.81	8,751.35	
9,172.80	..	9,172.80	241	9,768.2	9,407.81	8,851.35	
14,136.20	..	14,136.20	307	13,705.01	12,386.82	11,456.02	
500	..	500	..	1,100	1,500	2,600	Project submitted to C.W.C.
300	..	300	..	500	1,000	1,200	Feasibility report prepared. Detailed project report under preparation.
300	..	300	..	700	1,200	1,800	Feasibility report finalised. Detailed project report under preparation.
1,100.00	..	1,100.00	..	2,300.00	3,700.00	5,600.00	

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-Major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Approved estimated cost	Year	Latest estimate cost
1	2	3	4	5
<i>II—Irrigation Projects—</i>				
<i>(a) Major Projects—</i>				
1	Arjun Sahayak Pariyojana .. / .. ..	..	..	2685
2	Bewar Feeder .. ..	..	..	867
3	Badaun Canal .. ..	..	..	1313
4	Gangan Irrigation Scheme .. ..	..	..	435
5	Madho Tanda Irrigation .. ..	..	..	180
6	Kho Reservoir .. ..	..	..	531
7	Fatehabad Lift Irrigation Scheme .. ..	..	..	152
8	Kotawali Rao Reservoir .. ..	..	..	1333
9	Sarju Nahar Pariyojna .. ..	..	..	35,000
10	Madhya Ganga Canal St. II .. ..	..	..	3873
11	Parallel Eastern Yamuna Canal .. ..	..	..	2736
12	Parallel Sarda Canal .. ..	..	..	7800
13	Increasing capacity of Parallel Lower Ganga Canal .. ..	..	..	2500
14	Kamganga Irrigation Scheme .. ..	..	..	1627
15	Malin Dam .. ..	..	..	696
16	Increasing capacity of Bhopauli Pump Canal .. ..	..	..	802
17	Jera Escape .. ..	..	..	861
18	Baghain Dam .. ..	..	..	714
19	Karnali Dam .. ..	..	..	..
20	Pancheshwar Dam .. ..	..	..	..
21	Nandhaur Dam .. ..	..	..	4057

(Rupees in lakhs)

Year	1977-78		Approved outlay	Actual expenditure	Total expenditure to end of 1977-78	1978-79	
	Expenditure up to end of 1973-74	Expenditure during 1974-77				Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
1978	35	35
1978	20	20
1978	10	10
1978	10	10
1976	20	20
1977	25	25
1975
1975
1977
1977
1975
1976
..
1975
1976
1978
..
1974
..
..
1976

Major Head of Development—3. WATER AND POWER DEVELOPMENT**Sub-major Head of Development—3.01.—Irrigation—(Contd.)**

Serial no.	Name of Project	Proposed 1978—83		
		Total	Capital content	Foreign Exchange
1	2	14	15	16
<i>II—Irrigation Project :</i>				
<i>(a) Major Projects—</i>				
1	Arjun Sahayak Pariyojna	2000	2000	
2	Bewar Feeder	900	900	
3	Badaun Canal	1000	1000	
4	Gangan Irrigation Scheme	400	400	
5	Madho Tanda Irrigation	150	150	
6	Kho Reservoir	500	500	
7	Fatehabad Lift Irrigation Scheme	100	100	
8	Kotawali Rao Reservoir	1200	1200	
9	Sarju Nahar Pariyojna	12500	12500	
10	Madhya Ganga Canal St. II	3000	3000	
11	Parallel Eastern Yamuna Canal	2300	2300	
12	Parallel Sarda Canal	6000	6000	
13	Increasing capacity of Parallel lower Ganga Canal	2000	2000	
14	Ramganga Irrigation Scheme	1200	1200	
15	Malin Dam	600	600	
16	Increasing capacity of Bhopauli Pump Canal	750	750	
17	Jora Escape	800	800	
18	Baghain Dam	700	700	
19	Karnali Dam	1000	1000	
20	Pancheshwar Dam	1000	1000	
21	Nandhaur Dam	500	500	

(Rupees in lakhs)

Total	1979-80			1980-81	1981-82	1982-83	Remarks
	Foreign Exchange	Capital content	Hill				
17	18	19	20	21	22	23	24
65	..	65	..	300	600	1000	Project under submission to Central Water Commission
80	..	80	..	200	300	300	Submitted to C W C
90	..	90	..	200	300	400	Project under submission to C W C
40	..	40	..	80	120	150	Project under checking
30	..	30	..	30	35	35	Submitted to C W C
75	..	75	..	100	150	150	Project under checking
..	20	30	50	Feasibility report finalised. Detailed project report under preparation.
150	..	150	..	200	350	500	Feasibility report finalised. DPR under preparation.
300	..	300	..	1300	1000	6900	F. R. prepared. D.P.R. under preparation
100	..	100	..	350	850	1700	F.R. prepared. D.P.R. under preparation.
100	..	100	..	400	800	1000	F.R. prepared and submitted to C.W.C.
300	..	300	..	800	1700	3200	F.R. prepared. D.P.R. under preparation.
100	..	100	..	400	600	900	F.R. prepared.
100	..	100	..	250	350	500	Submitted to Central Water Commission.
50	..	50	..	100	150	300	Feasibility report prepared.
40	..	40	..	110	200	400	D. P. R. prepared—under checking
50	..	50	..	150	250	350	Feasibility report prepared
50	..	50	..	150	200	300	F. R. prepared
100	..	100	..	200	300	400	F.R. prepared by Nepal Govt. and received. Further investigations and negotiation in progress.
100	..	100	..	200	300	400	F.R. prepared. Further investigation and negotiation in progress.
50	..	50	50	100	150	200	F.R. prepared. Investigation for preparing D.P.R. in progress.

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-Major Head of Development—3.01.—Irrigation—(Contd.)

Serial no.	Name of Projects	Approved Estimated cost	Year	Latest Estimated cost
1	2	3	4	5
22	Kalaunia Dam .. .. .	..	..	3150
23	Panchnad Dam .. .. .	..	..	11454
24	Greater Gangau Dam .. .. .	..	..	..
25	Molen Dam .. .. .	..	..	..
26	Chalthi Dam .. .. .	..	..	4547
27	Changad Dam .. .. .	..	..	58600
28	Increasing capacity of Chillimal Pump Canal .. .. .	..	..	1131
29	Other New Schemes .. .. .	..	..	..
	Sub Total, (a) .. .. .	..	..	147048
<i>(b) Medium Schemes—</i>				
1	Dongri Dam .. .. .	..	..	111
2	Pathrai Dam .. .. .	..	..	258
3	Kurar Dam .. .. .	..	..	78
4	Lakheri Dam .. .. .	..	..	336
5	Sizra Dam .. .. .	..	..	75
6	Barchauli Pump Canal .. .. .	..	..	136
7	Dhenkwan Bundh .. .. .	..	..	89
8	Khaprar Dam .. .. .	..	..	45
9	Vindhayachal Pump Canal .. .. .	..	..	273
10	Bandai Dam .. .. .	..	..	61
11	Lower Jagnair Dam .. .. .	..	..	453
12	Pahara Lake Scheme .. .. .	..	..	108
13	Grautha Dam .. .. .	..	..	400
14	Kulwan Dam .. .. .	..	..	64
15	Kho Dam .. .. .	..	..	443

(Rupees in lakhs)

Year	1977-78				1978-79		
	Expenditure up to end of 1973-74	Expenditure during 197-477	Approved outlay	Actual Expenditure	Total Expenditure to end of 1977-78	Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
..
1977
..
..
..
..
..
..
..	129	120
1978	20	20
1978	15	15
1978	25	25
1978	15	15
1978	10	10
1977	20	20
1977	25	25
1978	10	10
1977
1974
1977
1977
1977
1977
1976

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Proposed 1978—83		
		Total	Capital Content	Foreign Exchange
1	2	14	15	16
22	Kalaunia Dam	500	500	.
23	Panchnad Dam	1000	1000	..
24	Greater Gangau Dam	1000	1000	..
25	Molen Dam	1000	1000	..
26	Chalthi Dam	500	500	..
27	Changed Dam	1000	1000	..
28	Increasing capacity of Chillimal Pump Canal	200	200	..
29	Other New Schemes	1000	1000	..
Sub Total, (a)		44800	44800	..
<i>(b) Medium Schemes—</i>				
1	Dongri Dam	111	111	..
2	Pathrai Dam	258	258	.
3	Kurar Dam	78	78	.
4	Lakheri Dam	336	336	.
5	Sizra Dam	75	75	..
6	Barchauli Pump Canal	136	136	..
7	Dhenkwan Bundh	89	89	..
8	Khaprar Dam	45	45	..
9	Vindhayachal Pump Canal	273	273	..
10	Bandai Dam	61	61	..
11	Lower Jagnair Dam	400	400	..
12	Pathara Lake Scheme	108	108	..
13	Grautha Dan	400	400	..
14	Kulwan Dan	64	64	..
15	Kho Dam	300	300	..

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hill				
17	18	19	20	21	22	23	24
50	..	50	50	100	150	200	F. R. prepared. Investigation for preparing D. P. R. in progress.
100	..	100	..	200	300	400	F.R. prepared. Investigation for preparing D.P.R. in progress.
100	..	100	..	200	300	400	D.P.R. to be prepared by Madhya Pradesh Government.
100	..	100	100	200	300	400	Project under Investigation.
50	..	50	..	100	150	200	F.R. prepared. Further investigations for preparing D.P.R. in progress.
100	..	100	..	200	300	400	Ditto.
..	50	75	75	Ditto
..	200	300	500	Ditto
2470.00	..	2470.00	200.00	6890.00	13610.00	21710.00	
40	..	40	..	51	..	..	D.P.R. prepared and under checking.
30	..	30	..	50	100	63	F. R. prepared. D. P. R. under preparation.
25	..	25	..	15	13	..	Ditto
50	..	50	..	85	150	36	Ditto
10	..	10	..	25	30	..	Ditto
50	..	50	..	66	..	..	D. P. R. prepared and under checking.
30	..	30	..	34	..	..	Cleared by Planning Commission.
15	..	15	..	15	5	..	F.R. prepared. D. P. R. under preparation.
25	..	25	..	50	125	73	Ditto
10	..	10	..	15	25	11	Ditto
40	..	40	..	60	100	200	F.R. prepared. D. P. R. under preparation.
10	..	10	..	30	50	18	Ditto
30	..	30	..	75	150	145	Ditto
5	..	5	..	20	30	9	Ditto
..	50	100	150	Ditto

Major Head of Development— 3. WATER AND FCWER DEVELOPMENT

Sub-major Head of Development — 3.01. —Irrigation—(Contd.)

Serial no.	Name of Project	Approved Estimated cost	Year	Latest Estimated cost
1	2	3	4	5
16	Tundiari Dam .. .. .	..	..	137
17	Chattar Dam .. .. .	..	..	197
18	Takia Dam .. .. .	..	..	170
19	Chitiya Dam .. .. .	..	..	130
20	Pathkauli Dam .. .. .	..	..	240
21	Nawalgarh Dam .. .. .	..	..	185
22	Chunar Pump Canal .. .. .	..	..	..
23	Khatima Irrigation Scheme Stage II .. .. .	..	..	..
24	Resin Dam .. .. .	..	..	201
Sub Total II (b) .. .. .		..	..	4190
(c) Modernisation Schemes:				
1	Modernisation of upper Ganga Canal .. .. .	..	..	1467
2	Modernisation of Farrukhabad Branch .. .. .	..	..	253
3	Modernisation of Bewar Branch .. .. .	..	..	156
4	Modernisation of Anupshahar Branch .. .. .	..	..	599
5	Modernisation of Bhognipur Branch .. .. .	..	..	258
6	Remodelling Bariarpur Weir .. .. .	..	..	..
7	Modernisation of Betwa Canal System .. .. .	..	..	..
8	Modernisation of Dhasan Canal System .. .. .	..	..	..
9	Modernization of Deoha Baigul Feeder .. .. .	..	..	..
Sub Total, II (c) .. .. .		..	..	2733
(d) Schemes for conjunctive use of water :				
1	Chambal Lift Scheme .. .. .	..	..	1221
2	Providing Paddy Channel in Hindon Krishni Doab .. .. .	..	..	565
Sub Total, II (d) .. .. .		..	..	1786

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Proposed 1978—83		
		Total	Capital content	Foreign Exchange
1	2	14	15	16
16	Tundiari Dam	100	100	..
17	Chattar Dam	150	150	..
18	Takia Dam	150	150	..
19	Chitiya Dam	100	100	..
20	Pathkauli Dam	200	200	..
21	Nawalgarh Dam	150	150	..
22	Chunar Pump Canal	100	100	..
23	Khatima Irrigation Scheme Stage II	50	50	..
24	Resin Dam	50	50	..
Sub Total II(b)		3784	3784	..
(c) Modernisation Schemes:				
1	Modernisation of upper Ganga Canal.	1200	1200	..
2	Modernisation of Farrukhabad Branch	200	200	..
3	Modernisation of Bewar Branch	156	156	..
4	Modernisation of Anupshahar Branch	500	500	..
5	Modernisation of Bhognipur Branch	200	20	..
6	Remodelling Bariarpur weir	100	100	..
7	Modernisation of Betwa Canal System	75	75	..
8	Modernisation of Dhasan Canal System	25	25	..
9	Modernisation of Deoha Baigul Feeder	100	100	..
Sub Total II(c)		2556	2556	..
(d)—Schemes for conjunctive use of water				
(1)	Chambal Lift Scheme	1100	1100	..
(2)	Providing paddy Channel in Hindon Krishni Doab	550	550	..
Sub Total II(d)		1650	1650	..

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hill				
17	18	19	20	21	22	23	24
..	20	30	50	F. R. Prepared. D.P.R. under Preparation
..	25	50	75	F. R. Prepared. D. P. R. under Preparation.
..	25	50	75	F.R. under checking.
..	20	30	50	D.P.R. under checking.
..	40	60	100	D.P.R. under checking
..	30	45	75	F.R. under preparation.
..	25	75	F.R. prepared, D.P.R. under preparation.
..	20	30	F.R. prepared. D.P.R. under preparation.
..	20	30	
370	..	370	..	801	1208	1265	
120	..	120	..	250	300	500	Submitted to C.W.C.
50	..	50	..	60	30	20	Submitted to C.W.C.
40	..	40	..	30	20	26	Submitted to C.W.C.
80	..	80	..	100	150	150	Submitted to C.W.C.
30	..	30	..	40	50	55	Submitted to C.W.C.
..	30	30	40	D.P.R. to be prepared in consultation with M.P. Govt.
..	15	25	35	F.R. to be prepared.
..	5	5	15	F.R. to be prepared
..	25	75	F.R. to be prepared
320	..	320	..	530	635	916	
160	..	160	..	200	300	400	Submitted to C.W.C.
60	..	60	..	100	150	200	D.P.R. under checking.
220	..	220	..	300	450	600	

Major Head of Development--3. WATER AND POWER DEVELOPMENT

Sub-Major Head of Development--3.01--Irrigation--(Contd.)

Serial no.	Name of Project	Approved Estimated cost	Year	Latest Estimated cost
1	2	3	4	5
	Total II--(a+b+c+d)	..	..	1,55,757
	Total (C)	..	..	19,23,73
D--Water Development				
	Investigation and Survey	..	..	..
	Research.	..	..	..
	Training	..	..	..
	Total (D)	..	..	..
	Schemes taken up-earlier but not included in 1978--83 Plan	..	..	..
	Total for 3.1. Irrigation	..	..	110733.00
				342301

(Rupees in lakhs)

Year			1977-78		Total Expenditure to end of 1977-78	1978-79	
	Expenditure up to end of 1973-74	Expenditure during 1974-77	Approved outlay	Actual expenditure		Approved outlay	Anticipated expenditure
6	7	8	9	10	11	12	13
..	..	..	..	..	..	495	495
..	..	..	..	..	..	795	795
..	..	334.95	240.47	141.70	476.65	750	750
..	..	8.05	25.00	23.00	31.05	50	50
..	..	..	25.00	..	..	50	50
..	..	343.00	290.47	164.7	507.70	850	850
..	9874	266.68	..	..	10140.68	..	..
..	332.85	26167.70	11600.18	10991.30	70444.00	14915.09	14915.09

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Sub-Major Head of Development—3.01—Irrigation—(Contd.)

Serial no.	Name of Project	Proposed 1978-83		
		Total	Capital content	Foreign Exchange
1	2	14	15	16
	Total II—(a+b+c+d)	52790	52790	.
	Total (C)	65790	65790	..
	D—Water Development Service:			
	Investigation and Survey	3750	3750	..
	Research	250	250	..
	Training ..	250	250	..
	Total (D)	4250	4250	..
	Schemes taken up earlier but not included in 1978—83 Plan	..	..	..
	Total for 3.1, Irrigation	134994.14	134994.14	..

(Rupees in lakhs)

1979-80				1980-81	1981-82	1982-83	Remarks
Total	Foreign Exchange	Capital content	Hills				
17	18	19	20	21	22	23	24
3,380	..	3,380	200	8,521	15,903	24,491	
4,480	..	4,480	200	10,821	19,603	30,091	
750	..	750	..	750	750	750	
50	..	50	..	50	50	50	
50	..	50	..	50	50	50	
850	..	850	..	850	850	850	
..	
.. 19466.20	..	19466.20	507.00	25376.01	32839.82	42397.02	

STATEMENT I.F.—III—(Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.O.A.	Ultimate Irrigation Potential	CUMULATIVE			
					Fourth Plan (Actual)		1974-75 (Actual)	
					Potential	Utilisation	Potential	Utilisation
1	2	3	4	5	6	7	8	9
18	Remodelling Agra Canal	.. Agra, Mathura.	Supplemental.	8.25	8.25	8.25	8.25	8.25
19	Tanda Pump Canal	.. Faizabad	N.A.	27.48	27.48	27.48	27.48	27.48
20	Dohrighat Pump Canal	.. Azamgarh, Ballia.		104.58	48.07	48.07	48.07	48.07
21	Remodelling of Eastern Yamuna Canal.	Saharanpur, Muzaftarnagar, Meerut.	Supplemental.	8.90	8.90	8.90	8.90	8.90
22	Upper Khajuri Reservoir	.. Mirzapur		21.02	7.28	7.28	7.28	7.28
23	Kwano Pump Canal	.. Basti		20.21	8.59	8.59	8.59	8.59
24	Jirgo Reservoir	.. Mirzapur		93.02	15.90	15.90	15.90	15.90
25	Tumaria Reservoir	.. Nainital Moradabad.		32.38	16.19	16.19	16.19	16.19
26	Balmiki Ohen Sarovar	.. Banda,		23.29	6.27	6.27	6.27	6.27
27	Nanak Sagar Dam	.. Bareilly, Pilibhit, Nainital.	Supplemental.	53.71	53.71	53.71	53.71	53.71
28	Meja Reservoir	.. Mirzapur, Allahabad.	Supplemental.	21.21	21.21	21.21	21.21	21.21
29	Project of five miles Channels on Ohen Canal.	Banda	N.A.	0.34	0.34	0.34	0.34	0.34
30	Project of Five miles Channels on Ken Canal.	Banda	N.A.	4.28	4.28	4.28	4.28	4.28
31	Construction of 40 miles Channels on Dhanapur Dy.	Mirzapur	N.A.	5.70	5.70	5.70	5.70	5.70
32	Keolari Dam	.. Hamirpur	N.A.	1.46	1.46	1.46	1.46	1.46
33	Gujaria Dam	.. Allahabad		2.99	1.28	1.28	1.28	1.28
34	Jahangiraganj Branch	.. Faizabad		80.03	13.81	13.81	13.81	13.81
35	Tumaria Extension	.. Nainital, Moradabad.		40.47	18.21	18.21	18.21	18.21
36	Pili Dam	.. Nainital, Bijnor.		18.82	11.48	11.48	11.48	11.48
37	Barwa Dam	.. Banda		16.57	5.46	5.46	5.46	5.46
38	Baur Reservoir	.. Rampur, Nainital.		37.54	18.93	18.93	18.93	18.93

STATEMENT I.F. III—(Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 (Actual)		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
39	Moosakhand Dam	.. Varanasi	64.87	22.29	22.29	22.29	22.29	22.29	22.29
40	East Baigul Reservoir	.. Naini tal, Bareilly, Pilibhit.	17.24	17.24	17.24	17.24	17.24	17.24	17.24
41	Naraini Gandak Canal	.. Gorakhpur, Deoria.	150.75	23.86	23.86	23.86	23.86	23.86	23.86
42	Jamni Dam	.. Jhansi	N.A.	12.48	12.48	2.43	12.48	4.93	
43	Chandrawal Dam	.. Hamirpur	20.62	4.31	4.31	1.54	4.31	4.04	
44	Dalmau Pump Canal	.. Raebareli, Pratapgarh.	51.70	30.35	30.35	28.33	30.35	30.35	
45	Bhopauli Pump Canal	.. Varanasi	20.24	24.28	24.28	18.21	24.28	24.28	
46	Zamania Pump Canal	.. Ghazipur	20.24	24.28	24.28	18.21	24.28	24.28	
47	Tons Pump Canal	.. Allahabad	27.65	33.14	33.14	24.28	33.14	33.14	
48	Narainpur Pump Canal	.. Mirzapur, Varanasi.	20.28	24.28	24.28	8.09	24.28	10.03	
49	Increasing Capacity of Dohri-ghat P.C.	Azamgarh, Ballia.	104.58	21.85	21.85	10.12	21.85	15.17	
	Sub-Total	..	..	905.24	905.24	841.48	905.24	876.49	
	Total, A. Completed Scheme	..	..	1145.92	1145.92	1082.16	1145.92	1117.17	
B. Continuing Schemes (Pre-Fifth Plan Schemes)									
<i>I—Major Projects</i>									
1	Ranganga Dam	.. Saharanpur, Meerut, Bulandsahar, Aligarh, Agra, Mathura, Mainpuri, Farrukhabad, Etawa, Kanpur, Fatehpur, Allahabad, Bijnor, Muza-ffarnagar, Moradabad.	1201.90	591.11	169.97	121.41	269.97	133.55	
2	Tehri Dam	.. Do.	N.A.	270	..	..	..	..
3	Gandak Canal	.. Deoria, Gorakhpur.	443.12	332.25	216.51	102.17	266.51	130.75	

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Potential	Utilisa- tion	Poten- tial	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
22.29	22.29	22.29	22.29	22.29	22.29	22.29	22.29	22.29	22.29
17.24	17.24	17.24	17.24	17.24	17.14	17.24	17.24	17.24	17.24
23.86	23.86	23.86	23.86	23.86	23.86	23.86	23.86	23.86	23.86
12.48	10.00	12.48	12.48	12.48	12.48	12.48	12.48	12.48	12.48
4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
30.35	30.35	30.35	30.35	30.35	30.35	30.35	30.35	30.35	30.35
24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28
24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28
33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14	33.14
24.28	14.93	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28
21.85	17.00	21.85	21.85	21.85	21.85	21.85	21.85	21.85	21.85
905.24	888.56	905.24	905.24	905.24	905.24	905.24	905.24	905.24	905.24
1145.92	1129.24	1145.92	1145.92	1145.92	1145.92	1145.92	1145.92	1145.92	1145.92
389.97	165.83	439.97	218.11	543.48	270.90	575.48	342.13	591.11	548.76
276.37	160.41	283.37	187.51	288.37	215.40	298.37	238.11	332.25	306.64

STATEMENT I.F. III —(Contd.)'

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 (Actual)		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
4	Sharda Sahayak	.. Allahabad, Varanasi, Kheri, Gazi- pur, Rae Bareli, Faizabad, Sultanpur, Pratapgarh, Jaunpur, Azamgarh, and Ballia.	2000	1742	..	..	127	..
5	Kosi Irrigation Scheme	.. Nainital, Rampur, Moradabad.	N.A.	48.80	6.07	2.02	16.07	3.09	
6	Haripura Reservoir	.. Nainital, Rampur.	38.57	19.99	12.14	3.05	16.19	5.34	
7	Adwa Dam	.. Mirzapur, Allahabad.	21.77	16.98	..	..	..	..
8	Dohrightat Sahayak	.. Azamgarh, Ballia.	57.30	45.81	..	..	..	..
Total—I			..	3066.94	404.69	228.65	695.74	272.6	
<i>II—Medium Projects :</i>									
1	Kosi Valley	.. Nainital	0.59	0.59	..	..	..	..
2	Ramganga Valley	.. Almora	1.15	1.15	..	..	..	..
3	Dalmau Pump Canal Stage-II	.. Rai Bareli, Pratapgarh.	93.88	81.99	..	..	..	..
4	Chillimal Pump Canal	.. Banda	89.29	7.77	..	..	..	..
5	Deokali Pump Canal	.. Gazipur	26.3	26.3	..	..	..	..
6	Sarju Pump Canal	.. Bahraich	24.4	24.4	..	..	..	..
7	Kishanpur Pump Canal	.. Allahabad	38.64	38.64	..	..	..	..
Total—II			..	180.84	..	..	..	..
Total—(B)(I+II)			..	3247.78	404.69	228.65	695.74	272.6	

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Poten- tial	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
250	31.75	305	81.55	680	132.80	930	272.30	1742	1062.00
31.07	6.14	48.80	12.00	48.80	20.84	48.80	27.60	48.80	47.03
19.19	7.70	19.99	10.41	19.99	12.96	19.99	15.13	19.99	19.91
..	..	7.00	..	12.78	1.75	12.78	4.25	16.98	13.23
..	..	..	..	5.00	..	5.00	1.25	45.81	26.45
966.60	371.83	1104.13	509.58	1598.42	654.65	1890.42	900.77	2796.94	2024.02
0.25	..	0.59	0.06	0.59	0.18	0.59	0.27	0.59	0.54
0.25	..	0.50	0.06	0.75	0.16	1.15	0.30	1.15	0.96
60.00	..	71.99	15.00	76.99	26.99	81.99	39.05	81.99	78.29
..	..	7.77	..	7.77	1.24	7.77	3.10	7.77	6.99
..	..	10.00	..	16.3	2.50	26.30	5.58	26.30	21.05
..	..	..	..	..	..	..	..	24.40	13.42
10.00	..	18.64	2.50	28.64	6.16	38.64	11.45	38.64	32.77
70.50	..	109.49	17.620	131.04	37.23	156.44	59.75	180.84	154.02
1037.10	371.83	1213.62	527.20	1729.46	691.88	2046.86	960.52	2977.78	2178.04

STATEMENT I.F.—III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE			
					Fourth Plan (Actual)	1974-75 (Actual)	Potential	Utilisation
1	2	3	4	5	6	7	8	9
C Schemes of Fifth Plan—								
<i>I—Multipurpose Projects—</i>								
1	Lakhwar Vyasi ..	Saharanpur, Muzaffarnagar Meerut.	N.A.	49.57	..	..	..	..
<i>II—Irrigation Share—</i>								
(a) Major Projects—								
1	Increasing Capacity of Narainpur Pump Canal.	Varanasi, Mirzapur, Gazipur.	69.97	111.29	..	..	..	..
2	Parallel Lower Ganga Canal ..	Etah, Mainpuri, Varanasi, Gazipur.	1971.90	90.00	..	..	..	..
3	Sone Pump Canal	Mirzapur	90.00	77.79	..	..	..	..
4	Raising Meja Dam	Mirzapur, Allahabad.	71.02	40.00	..	..	..	..
5	Rajghat Dam and Canal	Lalitpur, Jhansi, Jalaun, Hamirpur.	593.26	153.00	..	..	..	..
6	Shahzad Dam ..	Lalitpur	20.23	20.00	..	..	..	..
7	Jamrani Dam ..	Nainital, Rampur, Bareilly.	154.62	94.00	..	..	..	..
8	Kanhar Irrigation	Mirzapur	19.65	25.00	..	..	..	..
9	Madhya Ganga Canal Stage-I	Bulandshahr, Aligarh, Agra, Mathura, Etah.	1,388.00	178.00	..	..	..	..
10	Maudaha Dam ..	Hamirpur	74.86	36.00	..	..	..	..
11	Left Bank Ghagra Canal	Bahraich, Gonda.	1,247	266.60	..	..	..	..
12	Okhla Barrage ..	Agra, Mathura	N.A.	N.A.	..	..	..	..
13	Tajewala Barrage ..	Saharanpur, Muzaffarnagar.	N.A.	N.A.	..	..	..	..
14	Bansagar Dam and Feeder Canal.	Varanasi, Allahabad, Mirzapur.	204.00	204.00	..	..	..	..
15	Urmil Dam ..	Hamirpur	30.95	4.77	..	..	..	..

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Poten- tial	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
..
..	15.00	..	111.29	52.57
..	90.00	5.00
..	15.00	..	77.79	28.50
..	40.00	7.75
..
..	20.00	1.25
..	21.00	2.50
..
..
..
..
..
..
..
..	4.77	..

STATEMENT I.F.—III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 (Actual)		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
16	Suheli Irrigation ..	.. Lakhimpur	36.42	23.00	..	..	..	..
17	Increasing Capacity of Zamania Pump Canal.	Ghazipur	21.46	31.81	..	..	..	..
18	Eastern Ganga Canal	.. Bijnor	232.24	105.00	..	..	..	..
Total, II (a) ..			6225.58	1460.26	..	..	..	..
(b) Medium Scheme ;									
1	Augasi Pump Canal	.. Banda	12.69	13.35	..	..	..	..
2	Yamuna Pump Canal	.. Allahabad	33.27	25.00	..	..	..	..
3	Chittaurgarh Reservoir	.. Gonda	22.85	13.50	..	..	..	..
4	Rohini Dam ..	.. Lalitpur	20.21	10.00	..	..	..	..
5	Sajnam Dam ..	.. Lalitpur	67.30	12.45	..	..	..	..
6	Laster Valley ..	.. Garhwal	0.83	0.69	..	..	..	..
7	Paisuni Diversion ..	.. Banda	36.90	14.44	..	..	..	..
8	Aliganj Irrigation ..	.. Kheri	85.97	38.70	..	..	..	..
9	Umarhat Pump Canal	.. Kanpur	4.86	5.30	..	..	..	..
10	Khatima Irrigation Scheme	.. Nainital	19.20	9.60	..	..	..	..
11	Increasing Capacity of Kwano Pump Canal.	Basti	20.21	10.00	..	..	..	..
12	Khara Canal ..	.. Saharanpur	12.47	7.00	..	..	..	..
13	Hindon Barrage ..	.. Mathura, Agra	..	..	..	..	..	..
14	Increasing Capacity of Tons Pump Canal.	.. Allahabad	50.59	4.27	..	..	..	..
Total, II (b) ..			..	164.30	..	..	..	..
(c) Modernisation Schemes									
1	Lining of Channels	.. Varanasi, Allahaad, Mirzapur, Lalitpur, Jhansi, Banda, Hamirpur.	..	14.70	..	..	..	..
2	Modernisation of Eastern Yamuna Canal	Saharanpur, Muzaffarnagar, Meerut.	482	27.00	..	..	..	..
3	Modernisation of Agra Canal	Agra, Mathura	327	71	..	..	..	..

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
..	15.0	1.25
..	31.81	2.50
..
..	30.00	..	411.66	101.32
..	..	5.00	..	10.00	1.25	13.35	3.25	13.35	10.85
..	..	5.00	..	15.00	6.12	25.00	10.70	25.00	24.09
..	10.00	..
..	1.70	..	1.70	1.19
..	12.45	1.25
..	0.69	0.30
..
..	10.00	..	38.70	20.73
..	5.30	2.92
..	9.60	..	9.60	6.72
..	5.00	..
..	..	4.00	..	7.00	1.00	7.00	2.35	7.00	6.00
..
..	4.27	4.27
..	..	14.00	..	32.00	8.37	66.65	16.30	133.06	78.32
..	..	1.00	..	1.50	0.25	1.50	0.53	14.70	6.10
..	20.00	4.50
..	5.00	..	5.00	1.25	45.00	11.75

STATEMENT I.F.— III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	CUMULATIVE					
				Ultimate Irrigation	Fourth Plan (Actual)		1974-75 (Actual)		
				Poten- tial	Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
4	Modernisation of Lachura Head Works	Hamirpur.	..	..	..	..	..	..	..
5	Remodelling Mat Branch	Bulandshahr Aligarh, Mathura, Agra, Etah.	306.00	39.38	..	..	..	..	..
6	Modernisation of Ghaggar Canal ..	Mirzapur	9.92	6.94	..	..	..	..	..
7	Modernisation of Upper Sarda Canal	Pilibhit, Saha- ranpur, Bareilly, Kheri, Har- doi, Sitapur, Unnao, Rae Bareli, Lucknow.	..	66.00	..	..	..	..	..
Total II (c) ..			..	225.02	..	..	1..	..	..
(d) Schemes for Conjunctive use of water									
1	Increasing Capacity of Deokali Pump Canal.	Ghazipur, Allahabad, Varanasi.	81.74 62.30	82.00 65.42	....	....	....	....	....
2	Gyanpur Pump Canal	Mirzapur	..	..	..	..	..	..	..
Total. II (d)			..	147.42	..	..	..	..	..
Total—(C) (a + b + c + d)			..	1997.09	..	..	..	..	..
Total (B+C) ..			..	5294.35	..	404.69	228.65	695.74	272.65
D—New Schemes									
<i>I—Multipurpose Projects :</i>									
1	Kisau Dam	Saharanpur, Muzaffarnagar, Meerut, Mathura, Agra.	N.A.	271	..	..	..	..	..
2	Kotlibhel Dam	Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Mathura, Agra, Main- puri, Etah, Farrukhabad, Etawah, Kan- pur, Allaha- bad, Fatehpur.	N.A.	N.A.	..	..	..	..	..

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Poten- tial	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
..
..	25.00	2.50
..	6.94	1.73
..	7.50	..	50.00	17.25
..	..	1.00	..	6.50	0.25	14.00	81.78	161.64	43.83
..	5.00	..	10.00	1.25	65.00	22.75
..
..	5.00	..	10.00	1.25	65.00	22.75
..	..	15.00	..	43.50	8.62	120.65	19.33	771.36	246.22
1037.10	371.83	1228.62	527.20	1772.96	700.50	2167.51	979.85	3749.14	2424.26

STATEMENT I. F.—III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Pot.	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 (Actual)		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
3	Eastern Ramganga Reservoir	Naini Tal, Bareilly, Pilibhit, Sahjahanpur, Kheri, Har- doi, Sitapur, Lucknow, Unnao, Bara Banki.	..	N.A.	172	..	..	..
Total (I)			..	..	443	..	..	..
<i>II—Irrigation Projects:</i>									
<i>(a) Major Projects—</i>									
1	Arjun Sahayak Pariyojna	Hamirpur, Banda.	..	139	65	..	..	..
2	Bewar Feeder	Etah, Main- puri, Farru- khabad.	..	27	18.28	..	..	..
3	Badaun Canal	Badaun	..	106	32	..	..	..
4	Ganga Irrigation Scheme	Rampur, Bareilly	..	20	9.9	..	..	..
5	Modhotanda Irrigation Scheme	Pilibhit	..	32	17.60	..	..	..
6	Kho Reservoir	Bijnor	..	17	3.98	..	..	..
7	Fatehabad Lift Scheme	Agra	..	20	12.20	..	..	..
8	Kotwali Rao Reservoir	Bijnor, Mora- dabad.	..	179	45.5	..	..	..
9	Sarju Nahar Pariyojna	Bahraich, Gonda, Basti, Gorakhpur.	..	N.A.	N.A.	..	..	..
10	Madhya Ganga Canal, State-II	Bijnor, Morada- bad, Badaun, Bareilly.	..	404	101	..	..	..
11	Parallel Eastern Yamuna Canal.	Saharanpur, Muzaffarnagar, Meerut, Naini Tal, Pilibhit.	..	N.A.	N.A.	..	..	..
12	Parallel Sarda Canal	Hardoi, Sitapur, Kheri, Shah- jahanpur, Lucknow, Unnao, Rae Bareli.	..	N.A.	N.A.	..	..	..

STATEMENT I. F.--III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 Actual		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
13	Increasing Capacity of Parallel Lower Ganga Canal.	Etah, Etawa, Mainpuri, Farrukhabad, Kanpur, Fatehpur, Allahabad.	N.A.	N.A.	..	..	..	..
14	Ramganga Irrigation Scheme	Bareilly, Badaun	61	54.6	..	..	..	..
15	Malin Dam ..	Garhwal	3	3.4	..	..	..	..
16	Increasing Capacity of Bhopauli Pump Canal.	Varanasi	28	37	..	..	..	..
17	Jera Escape ..	..	N.A.	N.A.	..	..	..	..
18	Baghain Dam ..	Banda	N.A.	N.A.	..	..	..	..
19	Karnali Dam ..	..	N.A.	N.A.	..	..	..	..
20	Pancheshwar Dam ..	..	N.A.	N.A.	..	..	..	..
21	Nandhaur Dam ..	Naini Tal	17	36	..	..	..	..
22	Kalaunia Dam ..	Naini Tal ..	10	10	..	..	..	..
23	Panchnad Dam ..	Etawa, Kanpur, Jalaun, Hamirpur, Jhansi.	632	680	..	..	..	..
24	Greater Gangau Dam ..	Banda. ..	N.A.	N.A.	..	..	..	..
25	Molen Dam ..	Lalitpur, Jhansi, Jalaun, Hamirpur.	3.4	3.4	..	..	..	..
26	Chalthi Dam ..	..	N.A.	N.A.	..	..	..	..
27	Chamgad Dam ..	..	N.A.	N.A.	..	..	..	..
28	Increasing Capacity of Chillimal Pump Canal.	Banda ..	N.A.	22.3	..	..	..	..
29	Other New Schemes ..	..	N.A.	N.A.	..	..	..	..
		Total, (a)	..	..	..	..	..	..
<i>(b) Medium Schemes—</i>									
1	Dongri Dam ..	Jhansi	1.9	1.1	..	..	..	..
2	Pathrai Dam ..	Jhansi	6.6	1.03	..	..	..	..
3	Kurar Dam ..	Jhansi	2.5	0.9	..	..	..	..
4	Lakheri Dam ..	Jhansi	5	3.24	..	..	..	..

STATEMENT I.F.—III (Contd.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE				
					Fourth Plan (Actual)		1974-75 (Actual)		
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion	
1	2	3	4	5	6	7	8	9	
5	Sizar Dam	.. Jhansi	..	2.4	0.97	..	..	..	..
6	Barchauli Pump Canal	.. Etawah	..	3.2	3.79	..	..	..	..
7	Dhenkawan Bundh	.. Mirzapur	..	2.4	1.31	..	..	..	..
8	Khaprar Dam	.. Jhansi	..	1.2	0.57	..	..	..	..
9	Vindhayachal Pump Canal	.. Mirzapur	..	9.4	9.12	..	..	..	..
10	Bandai Dam	.. Lalitpur	..	11.4	2.00	..	..	..	..
11	Lower Jagnair Dam	.. Agra	..	11	9.4	..	..	..	..
12	Pahara Lake Scheme	.. Hamirpur	..	9	2.2	..	..	..	..
13	Garautha Dam	.. Jhansi	..	8.9	8.9	..	..	..	..
14	Kulwan Dam	.. Jhansi	..	..	0.7	..	..	..	..
15	Kho Dam	.. Garhwal	..	3.9	2.5	..	..	..	..
16	Tundiari Dam	.. Allahabad	..	1.2	1.00	..	..	..	..
17	Chattar Dam	.. Mirzapur	..	3.1	2.3	..	..	..	..
18	Takia Dam	.. Bahraich	..	4.6	2.9	..	..	..	..
19	Chitiya Dam	.. Gonda	..	5.00	2.4	..	..	..	..
20	Pathkauli Dam	.. Bahraich, Gonda	..	9.1	4.9	..	..	..	..
21	Nawalgarh Dam	.. Gonda	..	5.7	3.4	..	..	..	..
22	Chunar Pump Canal	.. Mirzapur	..	N.A.	N.A.	..	..	..	..
23	Ind Stage Khatima Irrigation Schemes.	.. Naini Tal	..	N.A.	N.A.	..	..	..	..
24	Resin Dam	.. Banda	..	4.8	3.3	..	..	..	..
Total, (b)			..	..	..	..	..	..	..

(c)—Modernisation Schemes—

1	Modernisation of Upper Ganga Canal.	.. Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Mathura, Agra, Etah, Etawah.	..	452	51.34	..	..	..	..
2	Modernisation of Farrukhabad Branch.	.. Etah, Farrukhabad.	..	95	17.77	..	..	..	..

STATEMENT I. F.—III—(Concl.d.)

Serial no.	Name of Scheme	Districts to be benefited	C.C.A.	Ultimate Irrigation Potential	CUMULATIVE					
					Fourth Plan (Actual)		1974-75 (Actual)			
					Poten- tial	Utilisa- tion	Poten- tial	Utilisa- tion		
1	2	3	4	5	6	7	8	9		
3	Modernisation of Bewar Branch.	Etah, Mainpuri, Farukhabad.	81.5	9.86	..	..	..	..
4	Modernisation of Anupshahr Branch.	Meerut, Bulandshahr, Muzaffarnagar.	140	20.24	..	..	..	..
5	Modernisation of Bhognipur Branch.	Etawah, Kanpur.	156	26.38	..	..	..	..
6	Remodelling Bariarpur Weir	Banda.	..	N.A.	N.A.	..	..	..
7	Modernisation of Betwa Canal System.	N. A.	N.A.	N.A.	..	..	..	..
8	Modernisation of Dhasan Canal System.	..	N.A.	N.A.	..	..	..	..
9	Modernisation of Deoha Baigul Feeder.	..	N.A.	N.A.	..	..	..	..
Total, (c)		..	..	..	..	..	..	..
<i>(d) Schemes for Conjunctive use of Water—</i>										
1	Chambal Lift Scheme	..	Etawah	..	60	120	..	..	..
2	Providing Paddy channel in Hindan Krishni Doab.	..	Meerut, Muzaffarnagar.	..	31.4	8.5	..	..	..
Total, (d)		..	..	..	91.40	128.50	..	..	..
Total, II (a+b+c+d)		..	..	..	..	..	..	..	..
Total, (D)		..	..	..	..	..	..	..	..
<i>(e) Water Development Services—</i>										
	Investigation	..	..	..	..	..	..	..	..
	Survey	..	..	..	..	..	..	..	..
	Research	..	..	..	..	..	..	..	..
	Training	..	..	..	..	..	..	..	..
Total, (B+C+D+E)		14745.40	7244.66	404.69	228.65	695.74	272.65
Total Plan Schemes(A+B+C+D+E)		17090.82	8390.58	1550.61	1310.81	1841.66	1389.82
Benefits from pre-plan Schemes		N.A.	2552.96	2552.96	2552.96	2552.96	2552.96
Grand Total		..	..	..	10943.54	4103.57	3863.77	4394.62	3942.78

('000 hectares)

BENEFITS TO END OF

1975-76 (Actual)		1976-77 (Actual)		1977-78 (Actual)		1978-79 (Target)		1982-83 (Target)	
Poten- tial	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion	Potential	Utilisa- tion
10	11	12	13	14	15	16	17	18	19
..	9.86	1.25
..	10.00	1.00
..	15.00	1.75
..
..
..
..	74.86	11.75
..	40.00	3.75
..
..	40.00	3.75
..	190.69	21.94
..	190.69	21.94
..
..
..
..
037.10	371.83	1228.62	527.20	1772.96	700.50	2167.51	979.85	3939.83	2446.20
183.02	1501.07	2374.54	1673.12	2918.88	1846.42	3313.43	2125.77	5085.75	3592.12
552.96	2552.96	2552.96	2552.96	2552.96	2552.96	2552.96	2552.96	2552.96	2552.96
735.98	4054.03	4927.50	4226.08	5471.84	4399.38	5866.39	4678.73	7638.71	6145.08

STATEMENT I. F.—III(b)—Major and Medium Irrigation Projects—Phasing of Benefits

(’000 Hectares)

Serial no.	Name of Schemes	Targets of Additional Benefits during 1978—83										Total additional benefits during 1978—83		
		1978-79		1979-80		1980-81		1981-82		1982-83		Potential	Utilisation	
		Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
A—Pre-Fifth Plan Schemes.														
<i>I—Multi-purpose Projects</i>														
1	Ramganga Dam	32.00	71.23	15.63	63.88	..	58.59	..	49.67	..	34.49	47.63	277.86	
2	Tehri Dam	..	..	..	..	..	..	..	..	..	..	..	..
	Total-I	32.00	71.23	15.63	63.88	..	58.59	..	49.67	..	34.49	47.63	277.86	
<i>II—(a) Major Projects</i>														
1	Gandak Canal	10.00	22.71	10.00	22.22	10.00	23.22	13.88	12.93	..	10.16	43.88	91.24	
2	Sarda Sahayak	250.00	139.50	250.00	158.15	250.00	189.50	200.00	224.25	112.00	217.80	1062.00	929.20	
3	Kosi Irrigation Scheme	..	6.76	..	6.31	..	5.57	..	4.27	..	3.28	..	26.19	
4	Haripura Reservoir	..	2.17	..	1.88	..	1.73	..	0.79	..	0.38	..	6.95	
5	Adwa Dam	..	2.50	4.20	1.91	..	2.97	..	2.19	..	1.91	4.20	11.48	
6	Dohrihat Sahayak	..	1.25	40.81	0.75	..	10.95	..	6.87	..	6.63	40.81	26.45	
	Sub-Total— (a)	260.00	174.89	305.01	191.22	260.00	233.94	213.88	251.30	112.00	240.16	1150.89	1091.51	
<i>(b) Medium Schemes</i>														
1	Kosi Valley	..	0.09	..	0.09	..	0.08	..	0.05	..	0.05	..	0.36	
2	Ramganga Valley	0.40	0.14	..	0.21	..	0.16	..	0.15	..	0.14	0.40	0.80	
3	Remodelling Bhimgoa Head Works	..	..	..	..	..	..	..	..	..	..	..	..

4	Dalmau Pump Canal Stage-II	..	..	5.00	12.06	..	12.79	..	9.30	..	8.71	..	8.44	5.00	51.30
5	Chillimal Pump Canal	..	..	..	1.86	..	1.17	..	1.17	..	0.77	..	0.78	..	5.75
6	Deokali Pump Canal	..	..	10.00	3.00	..	5.02	..	3.94	..	3.45	..	3.14	10.00	18.55
7	Sarju Pump Canal	..	..	..	..	24.40	..	..	6.10	..	3.66	..	3.66	24.40	13.42
8	Kishanpur Pump Canal	..	..	10.00	5.29	..	6.81	..	5.33	..	4.82	..	4.36	10.00	26.61
9	Remodelling Ken Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sub-Total (b)		..	..	25.40	22.44	24.40	26.09	..	26.08	..	21.61	..	20.57	49.80	116.79
Total (II)		..	..	285.40	197.33	329.41	217.31	260.00	260.02	213.88	272.91	112.00	260.73	1200.69	1208.30
Total (A)		..	..	317.40	268.56	345.04	281.19	260.00	318.61	213.88	322.58	112.00	295.22	1248.32	1486.16

B—Schemes of Fifth Plan

I—Multi-purpose Projects—

1	Lakhwar Vyasi	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total-I		..	..	..	..	..	..	..	..	..	..	..	..	..	..

II—Irrigation Projects

(a) Major Projects

1	Increasing capacity of Narainpur Pump Canal	..	..	15.00	..	35.00	3.75	50.00	11.00	11.29	20.00	..	17.82	111.29	52.57
2	Parallel Lower Ganga Canal	..	..	..	..	..	..	..	..	20.00	..	70.00	5.00	90.00	5.00
3	Sone Pump Canal	..	..	15.00	..	15.00	3.75	15.00	6.00	15.00	8.25	17.79	10.50	77.79	28.50
4	Raising Meja Dam	..	..	..	..	..	..	10.00	..	15.00	2.50	15.00	5.25	40.00	7.75
5	(a) Rajghat Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(b) Rajghat Canals	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Shahzad Dam	..	..	..	..	..	..	..	..	5.00	..	15.00	1.25	20.00	1.25
7	Jamrani Dam	..	..	..	..	..	..	..	..	10.00	..	11.00	2.50	21.00	2.50
8	Kanhai Irrigation Scheme	..	..	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT IF—III (b)—Major and Medium Irrigation Projects—Phasing of Benefits

—(Contd.)

(*000 Hectares)

Serial no.	Name of Schemes	Targets of Additional Benefits during 1978—83										Total additional benefits during 1978—83		
		1978-79		1979-80		1980-81		1981-82		1982-83		Potential	Utilisation	
		Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
9	Madhya Ganga Canal Stage-I	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Maudaha Dam	..	..	..	..	..	..	..	..	..	..	..	..	..
11	Left Bank Ghagra Canal	..	..	..	..	..	..	..	..	..	..	..	..	..
12	Okhla Barrage	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Tajewala Barrage	..	..	..	..	..	..	..	..	..	..	..	..	..
14	(a) Bansagar Dam	..	..	..	..	..	..	..	..	..	..	..	..	..
	(b) Feeder Canal	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Urmil Dam	..	..	..	..	..	..	..	..	..	4.77	..	4.77	..
16	Suheli Irrigation Scheme	..	..	..	..	..	..	5.00	..	10.00	1.25	15.00	1.25	..
17	Increasing Capacity of Zamania Pump Canal	..	..	..	..	..	..	10.00	..	21.81	2.50	31.81	2.50	..
18	Eastern Ganga Canal	..	..	..	..	..	..	..	..	..	..	..	..	..
	Sub-Total-(a)	..	30.00	..	50.00	7.50	75.00	17.00	91.29	30.75	165.37	46.07	411.66	101.32
	(b) Medium Schemes:													
1	Augasi Pump Canal	..	3.35	2.00	..	2.34	..	2.00	..	1.75	..	1.51	3.35	9.60
2	Yamuna Pump Canal	..	10.00	4.58	..	5.63	..	3.75	..	3.50	..	0.51	10.00	17.97
3	Chittaurgarh Reservoir	..	..	..	..	..	..	..	..	10.00	..	10.00	..	..
4	Rohni Dam	..	1.70	..	..	0.43	..	0.25	..	0.26	..	0.25	1.70	1.19

5	Sajnan Dam	..	..	..	..	..	..	..	..	5.00	..	7.45	1.25	12.45	1.25
6	Laster Valley	..	..	..	..	0.20	..	0.49	0.05	..	0.15	..	0.10	0.69	0.30
7	Paisuni Diversion	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Aliganj Irrigation Scheme	..	..	10.00	..	15.00	2.50	13.70	5.25	..	7.17	..	5.81	38.70	20.73
9	Umarhat Pump Canal	..	..	..	..	5.30	..	..	1.33	..	0.79	..	0.80	5.30	2.92
10	Khatima Irrigation Scheme	..	..	9.60	..	..	2.40	..	1.44	..	1.44	..	1.44	9.60	6.72
11	Increasing Capacity of Kwano Pump Canal	..	..	..	..	..	..	..	..	..	..	5.00	..	5.00	..
12	Khara Canal	1.35	..	1.05	..	1.05	..	0.85	..	0.70	..	5.00
13	Hindon Barrage	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Increasing Capacity of Tons Pump Canal	..	..	..	..	..	..	4.27	0.89	..	0.89	..	2.49	4.27	4.27
Sub-Total (b)				..	34.65	7.93	20.50	14.35	18.46	16.01	5.00	16.80	22.45	14.86	101.06	69.95

(c) Modernisation Schemes:

1	Lining of channels	..	..	..	..	0.28	3.00	0.22	4.00	0.97	6.20	1.63	..	2.75	13.20	5.85
2	Modernisation of Eastern Yamuna Canal	..	..	..	..	..	..	..	5.00	..	5.00	1.25	10.00	3.25	20.00	4.50
3	Modernisation of Agra Canal	..	..	..	..	1.25	..	0.75	10.00	0.75	15.00	3.25	15.00	5.75	40.00	11.75
4	Modernisation of Lachura Head Works	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Remodelling Mat Branch	..	..	..	..	..	..	..	..	10.00	..	15.00	2.50	25.00	2.50	
6	Modernisation of Ghagga Canal	..	..	..	..	..	..	..	..	6.94	..	..	1.73	6.94	1.73	
7	Modernisation of Upper Sarda Canal	..	..	7.50	..	10.00	1.88	10.00	3.62	10.00	5.13	12.50	6.62	50.00	17.25	
Sub-Total (c)				..	7.50	1.53	13.00	2.85	29.00	5.34	53.14	11.26	52.50	22.60	155.14	43.58

(d) Schemes for Conjunctive use

1	Increasing Capacity of Deokali Pump Canal	..	..	5.00	1.25	10.00	2.00	15.00	4.00	15.00	6.75	15.00	8.75	60.00	22.75	
2	Gyanpur Pump Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sub-Total (d)				..	5.00	1.25	10.00	2.00	15.00	4.00	15.00	6.75	15.00	8.75	60.00	22.75
Total-II				..	77.15	10.71	93.50	26.70	137.46	42.35	164.43	65.56	255.32	92.28	727.86	237.60
Total-B				..	77.15	10.71	93.50	26.70	137.46	42.35	164.43	65.56	255.32	92.28	727.86	237.60
Total-A+B				..	394.55	279.27	438.54	307.89	397.46	360.96	378.31	388.12	367.32	387.50	1976.18	1723.76

STATEMENT IF—III (b)—Major and Medium Irrigation Projects-Phasing of Benefits

(Contd.)

('000 Hectares)

Serial no.	Name of Schemes	Targets of Additional Benefits during 1978—83										Total additional benefits during 1978—83		
		1978-79		1979-80		1980-81		1981-82		1982-83		Potential	Utili- sation	
		Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C—New Schemes														
<i>I- Multipurpose Projects—</i>														
1	Kisau Dam .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Kotlibhel Dam .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
3	Eastern Ramganga Reservoir .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
Total—I		..	..	..	..	..	..	..	..	..	..	..	..	..
<i>II-Irrigation Projects—</i>														
(a) Major Projects														
1	Arjun Sahayak Pariyojna .. .. .	..	..	..	..	..	..	..	..	..	10.00	..	10.00	..
2	Bewar Feeder .. .. .	..	..	..	..	..	..	..	..	..	10.00	..	10.00	..
3	Badaun Canal .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
4	Gangan Irrigation Scheme .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Madhotanda Irrigation Scheme .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
6	Kho Reservoir .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Fatehabad Lift Scheme .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Kotwali Rao Reservoir .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
9	Sariu Nahar Parivoiana .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..

11	Parallel Eastern Yamuna Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12	Parallel Sarda Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Increasing Capacity of Parallel Lower Ganga Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Ramganga Irrigation Scheme	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Malin Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Increasing Capacity of Bhopauli Pump Canal	..	..	..	..	..	..	..	10.00	..	10.00	2.50	20.00	2.50	..
17	Jera Escape	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Beghain Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	Karnali Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Pancheswar Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Nandhaur Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Kalaunia Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Panchnad Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24	Greater Gangau Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25	Molen Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26	Chalthi Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Chamgad Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28	Increasing Capacity of Chillimal Pump	..	..	..	..	..	..	..	..	..	..	..	..	..	..
29	Other New Schemes	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Sub-Total (a)	..	..	..	..	..	..	..	10.00	..	30.00	2.50	40.00	2.50	..
	(b) Medium Schemes :														
1	Dongri Dam	..	..	..	..	..	..	1.10	..	..	0.28	..	0.16	1.10	0.44
2	Pathrai Dam	..	..	..	..	..	..	..	..	..	1.03	..	1.03	..	..

STATEMENT—IF-III (b)—Major and Medium Irrigation Projects-Phasing of Benefits

(Contd.)

('000 Hectares)

Serial no.	Name of Schemes	Targets of Additional Benefits during 1978—83										Total additional benefits during 1978—83		
		1978-79		1979-80		1980-81		1981-82		1982-83		Potential	Utili- sation	
		Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
3	Kurar Dam	0.90	..	0.90	..
4	Lakheri Dam	..	..	..	..	..	..	1.00	..	2.24	0.25	3.24	0.25
5	Sizer Dam	..	..	..	..	..	..	..	..	0.97	..	0.97	..
6	Barchauli Pump Canal	..	..	..	..	..	..	3.79	..	..	0.95	3.79	0.95
7	Dhekwan Bundh	..	..	..	..	1.00	..	0.31	0.25	..	0.07	1.31	0.32
8	Khaprar Dam	..	..	..	..	..	..	..	..	0.57	..	0.57	..
9	Vindhyaçal Pump Canal	..	..	..	..	..	..	3.00	..	6.12	0.75	9.12	0.75
10	Bandai Dam	..	..	..	..	..	..	..	..	2.00	..	2.00	..
11	Lower Jagnair Dam	..	..	..	..	..	..	..	..	..	..	..	..
12	Pahara Lake Scheme	..	..	..	..	..	..	1.00	..	1.20	0.25	2.20	0.25
13	Garautha Dam	..	..	..	..	..	..	3.90	..	5.00	0.98	8.90	0.98
14	Kulwan Dam	..	..	..	..	..	..	..	..	0.70	..	0.70	..
15	Kho Dam	..	..	..	..	..	..	..	..	..	..	..	..
16	Tundiary Dam	..	..	..	..	..	..	..	..	..	..	..	..
17	Chhatar Dam	..	..	..	..	..	..	..	..	..	..	..	..
18	Taki Dam	..	..	..	..	..	..	..	..	..	..	..	..

19	Chitiya Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Pathkauli Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Newalgarh Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Chunar Pump Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Khatima Irrigation Scheme Stage-II	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24	Resin Dam	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total (b)		..	..	..	..	..	2.10	..	13.00	0.53	20.73	3.41	35.83	3.94	

(c) Modernisation Schemes :

1	Modernisation of Upper Ganga Canal	..	..	..	..	..	10.00	..	10.00	2.50	10.00	4.00	30.00	6.50	
2	Modernisation of Farrukhabad Branch	..	..	..	..	..	..	..	5.00	..	5.00	1.25	10.00	1.25	
3	Modernisation of Bewar Branch	..	..	..	..	..	..	..	5.00	..	4.86	1.25	9.86	1.25	
4	Modernisation of Anupshahar Branch	..	..	..	..	..	..	..	4.00	..	6.00	1.00	10.00	1.00	
5	Modernisation of Bhognipur Branch	..	..	..	..	..	..	..	7.00	..	8.00	1.75	15.00	1.75	
6	Remodelling Baryarpur Weir	..	..	..	..	..	..	..	..	..	..	..	..	..
7	Modernisation of Betwa Canal System	..	..	..	..	..	..	..	..	..	..	..	..	..
8	Modernisation of Dhawan Canal System	..	..	..	..	..	..	..	..	..	..	..	..	..
9	Modernisation of Deoha Baigul Feeder	..	..	..	..	..	..	..	..	..	..	..	..	..
Total (c)		..	..	..	..	..	10.00	..	31.00	2.50	33.86	9.25	74.86	11.75	

(d) Schemes for Conjunctive Use of Water

1	Chambal Lift Scheme	..	..	..	..	..	..	..	15.00	..	25.00	3.75	40.00	3.75	
2	Providing Paddy Channel in Hindan Krishna Doab	..	..	..	..	..	..	..	..	..	..	..	..	..
Total (d)		..	..	..	..	..	..	..	15.00	..	25.00	3.75	40.00	3.75	
Total-II		..	..	..	..	..	12.10	..	69.00	3.03	109.59	18.91	190.69	21.94	
Total (C)		..	..	..	..	..	12.10	..	69.00	3.03	109.59	18.91	190.69	21.94	

STATEMENT IF-III(p)—Major and Medium Irrigation Projects-Phasing of Benefits

(Concl.d.)

('000 Hectares)

Serial no.	Name of Schemes	Targets of Additional Benefits during 1978--83										Total additional benefits during 1978--83		
		1978-79		1979-80		1980-81		1981-82		1982-83				
		Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	Poten- tial	Utili- sation	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
D-Water Development														
Investigation
Survey
Research
Training
Total (D)	
Grand Total (A+B+C+D)		..	394.55	279.27	438.54	307.89	409.56	360.96	447.31	391.15	476.91	406.41	2166.87	1745.70

Major Irrigation Projects costing more than Rs.30 Crores Check Lists.

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and inter-State projects, details of sharing of cost and benefits among various purposes and status.

(1) *Ramganga Project*—Ramganga Dam project is a multipurpose project and is located on river Ramganga near Kalagarh in district Garhwal 72 miles from Moradabad. A storage reservoir having a capacity of 16 million acre ft. has been created by construction of two earthen and rock fill dams one being 128 M. high main dam across river Ramganga. 3.2kms. u/s of Kalagarh where the river emerges into the plains and other being 72 M. High saddle dam across a low saddle on the left flank of the reservoir. The water released from the Ramganga reservoir flows down the river for 26 km. before being diverted to river Ganga through 82.km. long feeder channel by a 405 meter long barrage across the river near Hareoli. The augmented supplies of river Ganga are picked up at Narora and utilised on the lower Ganga Canal system to irrigate additional 5.75 lakhs hectare of land lying mainly in Western and Central districts of Uttar Pradesh. The power house located at the foot of the dam has three units of 66 MW each to generate 542 million K. W. H. of electricity annually. The project also provide flood protection benefits to area on the bank of river Ramganga and Ganga. Districts of Aligarh, Mathura, Agra, Mainpuri, Etah, Farrukhabad, Etawah, Kanpur, Fatehpur and Allahabad have benefited from this project.

Status of Project :—Original project approved, Revised project is under preparation.

1961-62

(a) Main works 1977-78.

(b) Distribution system 1979-80.

2. Date of commencement.

3. Target date of completion.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979—83 and details of expenditure and outlay for 1978-79 and 1979—83.

All the main works of the dam have been completed. Some works on distribution system and works of Afzalgarh barrage is in progress, which is likely to be completed by the end of 1979-80.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expenditure up-to Fifth Plan	Phasing of outlay in the next Five Year Plan 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
Unit I— Dam and Appurtenant works	8002							
Unit II—A-Barrages and Feeder Channel	2808							
B. Distribution system.	2740	12569	15	(—)300	(—)564.98	..	..	(—)849.98
Unit III—Power House	2530							
Ramganga-Phika Doab Scheme	170							
Total ..	16250	..	..	..	..	..	..	....
Power ..	4531	..	..	..	..	..	..	..
Irrigation ..	11719	12569	15	(—) 300	(—)564.98	..	..	(—)849.98

Part II—Physical progress and programme

Item	Unit	Total estimated quantity	Work done to end of Fifth Plan	Target for 1978-79	Target 1979—83
1	2	3	4	5	6
Unit—I					
(1) Main Dam					
(2) Saddle Dam					
(3) Chute Spillway					
(4) Auxiliary spillway					
(5) Finishing and architectural works.	Completed job	Completed 100%	20%	80%	..
Unit—II-A					
1. Hareoli Barrage		Completed.			
2. Kho Barrage					
3. Feeder Channel					
4. Afzalgarh Barrage :					
(a) Earth Work	Lac CM	0.35	0.35	..	..
(b) Concrete work	Lac CM	0.17	0.10	0.07	..
(c) Gate and Hoists	Job	100%	50%	50%	..
Unit—II-B					
1. Earth work	Job	100%	98.5%	1.5%	..
2. Masonry work	Job	100%	95%	25%	2.5%
Unit—III (Civil Works)					
1. Power House and intake works	Completed.				
2. Tail race	Completed.				
3. Finishing and architectural works	Job	100%	50%	50%	..
<i>Ramganga Phika Doab Schemes—</i>					
1. Earth work	Job	100%	..	30%	70%
2. Masonry works	Job	100%	..	30%	70%
<i>Man power requirement :</i>					
(i) Unskilled	Lac Manday	..	..	0.45	..
(ii) Skilled	..	..	..	0.08	..
(iii) Engineers :					
(a) Diploma Holders	..	..	..	0.02	..
(b) Graduates	..	..	..	0.01	..

1. Name of projects with brief description, location and districts benefited. In case of Multipurpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

2. Date of Commencement.

3. Target date of completion.

4. Various main components of the project completed up to 1977-78 and the work proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

(2) *Tehri Dam*—260.5 meter high Tehri Dam will be located on river Bhagirathi in Tehri U. P. 1.5 km. D/s of confluence of Bhilangan and Bhagirathi river. It is a multipurpose Project. The Dam will have 3539 million CM storage at F. S. L. (R. L. 830) and storage at D. S. L. (R. L. 740 m) 924 million C. M. The installed capacity for power generation will be 600 MW which will be increased to 1200 MW later on. Annual additional irrigation potential 6.67 lakh hectare on completion of project. The cost of the project is Rs.305.16 crores excluding cost of the distribution system. The sharing of cost between power and irrigation sector is Rs.19672 lakhs and Rs.10844 lakhs respectively. Annual Power generation on 90 per cent availability will be 2820 G. W. H. and 3260 G. W. H. respectively.

Status of Project—Revised Cost approved by C. W. C.

1970-71.

10 to 12 years after land is acquired.

Due to paucity of funds, only token allotments had been made for this project in the previous years. Therefore the work could not started in a proper way. Excavation of portals of diversion tunnels, construction and widening of roads, construction of colony at Rishikesh, construction of Godowns have been completed. Work of stripping for Rock fill demand diversion tunnels is being started during 1978-79 and are to be continued with other works of main dam during Mid Term Plan period.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expenditure to Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83						
			1978-79	1979-80	1980-81	1981-82	1982-83	Total 1978—83	
1	2	3	4	5	6	7	8	9	
1. A—Preliminary	180	}							
2. B-land	1000								
3. C-Works	17518								
4. K-Buildings	540								
5. Q-Equipment	5945								
6. R—Communications	464		735	984	1716	1900	2000	2400	9000
7. Special T & P	835								
8. Establishment	2652								
9. O—Miscellaneous	1012								
10. Other Items	370								
Total	30516								
Power	19672	..	..	..	..	..	..	..
Irrigation	10844	735	984	1716	1900	2000	2400	9000	

Part II—Physical progress and programme (Tehri Dam)

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
A. River Diversion—					
(i) Tunnel Excavation	Lac M ³	7.90	..	N.A.	N.A.
(ii) Concreting	Lac M ³	2.07	..	N.A.	N.A.
B. Rock Fill Dam—					
(i) Excavation	Lac M ³	10.60	..	..	N.A.
(ii) Rockfill	Do.	168.0	..	..	N.A.
(iii) Transition, Material	Do.	26.0	..	..	N.A.
(iv) Core material	Do.	28.0	..	..	N.A.
C. Chute spillway					
(i) Excavation	Do.	14.63	..	..	N.A.
(ii) Concreting	Do.	2.13	..	..	N.A.
D. Intake Structure					
(i) Excavation	Do.	4.12	..	..	N.A.
(ii) Tunnel excavation	Do.	0.16	..	..	N.A.
(iii) Concreting	M ³	34352	..	..	N.A.
E. Pen Stocks—					
(i) Tunnel Excavation	M ³	34580	..	..	N.A.
F. Power House and Switchyard					
(i) Excavation	Do.	45000	..	..	N.A.
(ii) Tunnel Excavation	Lac M ³	1.96	..	..	N.A.
(iii) Concreting	M ³	32940	..	..	N.A.
G. Irrigation Outlet					
(i) Tunnel excavation	M ³	2910	..	..	N.A.
(ii) Concreting	M ³	5268	..	..	N.A.
<i>Man power requirement :</i>					<i>Peak</i>
(i) Unskilled	Lac manday	—	—	29.52	64.00
(ii) Skilled	..	..	..	4.92	9.00
(iii) Engineers	..	..	..	1.14	2.00
(a) Diploma Holders	..	..	..	1.14	2.00
(b) Graduates	..	..	..	0.50	0.00

NOTE : N.A. stands for not available.

1. Name of projects with brief description location and districts benefited. In case of Multi-purposes and Inter-State projects/detailed of sharing of cost and benefits among various purposes and status.

(3) *Gandak Canal*—This is a joint venture of Uttar Pradesh and Bihar. It involves the construction of a barrage (by Government of Bihar) across the Great Gandak river in Nepal territory about 17.6 km. north of Uttar Pradesh/Nepal border.

The State of Uttar Pradesh is concerned with the construction of main Western Gandak Canal in U. P. from mile 11-6 to 81-5-296 along with its distribution system. The head discharge of the main Western Gandak Canal is 15,800 cusecs out of which share of U. P. is about 7,300 cusecs. The main canal has been lined in the entire reach in U. P. from mile 11-6 to 81-5-296 to prevent seepage losses and waterlogging.

The length of channels and distribution system in Uttar Pradesh is about 2156km. (including-remodelling of Baraini Canal system.) The project envisages irrigation of 3.32 lakh hectares annually in district of Deoria and Gorakhpur.

Status—Revised Project costing Rs.91.50 crores is under checking.

1960-61

1981-82

The barrage on the great Gandak River has been completed by the Bihar Government. Work of main western Gandak Canal have been completed. Earth work and masonry works of distribution system are in progress. The works of drains and water courses is also in progress.

2. Date of Commencement.

3. Target date of completion.

4. Various main components of the project completed up to 1977-78 and the work proposed for 1978-89 and 1979-83. The details of expenditure and outlay for 1978-79 and 1979-83.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expen- diture upto Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
A. River training works	992	} 4977	} 800	} 1300	} 1500	} 572.76	} ..	} 4172.76
B. Main canal	2803							
C. Dy. systems	2903							
D. Water courses	340							
E. Drainage Improvement	2112							
Total ..	9150	4977	800	1300	1500	572.76	..	4172.76

Part II—Physical progress and programme

Gandak Canal

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
1. Headworks :					
(i) Excavation	}		Works completed		
(ii) Concreting					
(iii) Masonry					
(iv) Earth work					
2. Main Canals :					
(i) Earth work	}		Works completed		
(ii) Lining					
(iii) Cross drainage structures					
3. Distribution System :					
(i) Length	Kms.	3223	N.A.	N.A.	N.A.
(ii) Quantity of earth works	Lac M ³	346	N.A.	N.A.	N.A.
(iii) Number of structures	Nos.	5265	N.A.	N.A.	N.A.
(iv) Drains	Kms.	2793	N.A.	N.A.	N.A.
(v) Guls	Kms.	10515	N.A.	N.A.	N.A.
4. Man power requirement category (peak nos.) Mandays.					
					<i>Peak</i>
<i>Man power requirement :</i>					
(i) Unskilled	Lac Manday	..	..	24.00	45
(ii) Skilled	..	..	..	4.00	7.5
(iii) Engineers					
(a) Diploma holders	..	..	..	.93	1.74
(b) Graduates	..	..	..	.41	0.77

Note : N.A. stands for not available.

1. Name of projects with brief description, location and districts benefited. In case of Multi-purpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

(4) *Lakhwar-Vyasi Dam*—This is mainly a hydroelectric project having irrigation benefits also. It is proposed to construct 192 m. high concrete dam across river Yamuna at Lakhwar nearly 20 km. upstream of Kalsi in district Dehradun. It would be highest dam of its type. Another dam 61 m. high will be constructed near village Vyasi also on river Yamuna. The project envisages generation of 840 MW power and will give additional Irrigation potential of 49,570 hectares.

Status—Approved for Rs.140.97 crores (total cost). Latest estimated cost is Rs.167.17 crores.

1976-77.

VII Plan.

2. Date of Commencement.
3. Target date of completion.
4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83 indicated as below.

Preliminary works of buildings, approach road, side drifts, construction plan and installation are being started during 1978-79. Work of diversion tunnels is also proposed for start during 1978-79.

Part-I-Expenditure

(Rs. in Lakhs)

Item	Latest cost	Expenditure up to fifth plans	Phasing of outlay in the next Five-year Plan 1978-83					
			1978-79	1979-80	1980-81	1981-82	1982-83	Total 1978-83
1	2	3	4	5	6	7	8	9
1. A-Preliminary	145	} 110	} 300	} 200	} 200	} 200	} 100	} 1000
2. B-Land	434							
3. C-Works of Main Dam	8299							
4. K-Building	465							
5. Q-Equipment	5406							
6. R-Communication	250							
7. Special T&P	110							
8. Establishment	1136							
9. Other items	472							
Grand Total	16717							
Power	15117							
Irrigation	1600	110	300	200	200	200	100	1000

Part II—Physical progress and Programme (Lakhwar and Vyasi Dam)

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979—83
1	2	3	4	5	6
<i>A—Diversion Tunnels Lakhwar Dam:</i>					
(1) Excavation soft and hard rock	Lac cm.	0.20	..	N.A.	N.A.
(2) Excavation in tunnel	Do.	0.20	..	N.A.	N.A.
(3) Concrete in tunnel lining	Do.	0.17	..	A.A.	N.A.
<i>B—Lakhwar Dam :</i>					
(1) Excavation	Do.	17.38	..	..	N.A.
(2) Rock fill and black fill	Do.	1.41	..	..	N.A.
(3) Concreting	Do.	19.24	..	..	N.A.
<i>C—Lakhwar Power House :</i>					
(1) Excavation soft and hard rock	Do.	1.32	..	..	N.A.
(2) Concreting	Do.	0.99	..	..	N.A.
<i>D—Vyasi Dam :</i>					
(1) Excavation soft and hard rocks	Lac M ³	0.14	..	..	N.A.
(2) Rock fill and back fill	Do.	0.03	..	..	N.A.
(3) Concreting	Do.	2.40	..	..	N.A.
<i>E—Vyasi intake:</i>					
(1) Excavation	Lac cm.	0.45	..	..	N.A.
(2) Concreting	Do.	0.10	..	..	N.A.
<i>F.—Vyasi Hatiari Tunnel:</i>					
(1) Excavation	Do.	1.75	..	..	N.A.
(2) Concreting	Cm.	57500	..	..	N.A.
<i>G—Hathiari Surge Tank :</i>					
(1) Excavation	Lac Cm.	0.40	..	..	N.A.
(2) Concreting in lining	cm.	8000	..	..	N.A.
<i>H—Hathiari Power House :</i>					
(1) Excavation	Lac cm.	0.63	..	..	N.A.
(2) Concreting	Lac cm.	0.34	..	..	N.A.
<i>I—Hathiari Pen stocks:</i>					
(1) Excavation	Cm.	3000	..	..	N.A.
(2) Concreting	Cm.	1000	..	..	N.A.
<i>J—Katpathar Barrage:</i>					
(1) Excavation	Lac cm.	1.1	..	..	N.A.
(2) Concreting	Lac cm.	1.0	..	..	N.A.
<i>Man power requirement :</i>					
(i) Unskilled	Lac Manday	..	..	9.00	6.00
(ii) Skilled	"	..	..	1.50	1.0
(iii) Engineers					
(a) Diploma Holders	"	..	..	.35	0.23
(b) Graduates	"	..	..	.15	0.10

NOTE—N.A. stands for not available

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and inter-State projects/details of sharing of cost and benefits among various purposes and status.

5. *Parallel Lower Ganga Canal*—It is proposed to construct a canal parallel to the existing Lower Ganga Main Canal taking off from the existing Narora Weir for diverting an additional discharge of 8900 cusecs for *khari* irrigation as sufficient supplies are available in the Ganga during the rainy season. This additional supply would be fed into the existing Lower Ganga Canal System by suitable remodelling or extending the distribution system. The scheme would irrigate an additional area of 0.9 lakh hectares on the Lower Ganga Canal System in districts Etah, Farrukhabad, Mainpuri, Etawah, Kanpur, Fatehpur and Allahabad.

Status of project—Revised project submitted to CWC in June 1976.

2. Date of commencement.

1974-75

3. Target date of completion.

1980-81

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

Work of earth work and masonry works of the main Canal are in progress.

Part I—Expenditure—Earth work and masonry works are in progress on the main canal

(Rupees in lakhs)

Item	Latest cost	Expenditure up to Fifth Plan	Phasing of outlay in the next Five-Year Plan, 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
A. Preliminary	37	1305.39	1000	1000	600	400	221.61	3221.61
B. Land	225							
C. Works								
(i) Regulators	269							
(ii) Drainage syphons	134							
(iii) Drainage inlets	6							
(iv) Madrai Aqueduct	575							
(v) Bridges	299							
(vi) Earth work	1714							
(vii) Other items	568							
D. Establishment	700							
Total	4527	1305.39	1000	1000	600	400	221.61	3221.61

Part II—Physical Progress and Programme

Item	Unit	Total estimated quantity	Work done to end of Fifth Plan	Target for 1978-79	Target for 1979—83
1	2	3	4	5	6
<i>Manpower requirements</i>					(Peak)
(i) Unskilled	Lac manday	..	..	30.00	30.00
(ii) Skilled	..	..	..	5.00	5.00
(iii) Engineers—					
(a) Diploma holders	..	..	..	1.16	1.16
(b) Graduates	..	..	..	0.51	0.51
<i>I. Head Regulator—</i>					
(a) 1. Earth work	Lac cm.	0.3	} 14%	26%	60%
2. Concreting	Lac cm.	0.05			
3. Brick work	Lac cm.	0.03			
(b) <i>Main Canal—</i>					
1. Earth work	Lac cm.	187	54	37	96
2. Masonry works	Nos.	50	25%	20%	55%

STATEMENT I.F.—4 (Contd.)

1. Name of project with brief description, location and districts benefited. In case of multi-purposes and inter-State projects/details of sharing of cost and benefits among various purposes and status.

(6) *Rajghat Dam*—The project envisages construction of a dam on river, Betwa upstream of Matatila as per inter-State agreement between Uttar Pradesh and Madhya Pradesh. The live storage of 62 TMC will be instrumental in rapid development of backward Bundelkhand region. On completion of Project 1.43 lakh hectares of Jhansi, Jalaun and Hamirpur districts will be benefited in U. P. The dam will be constructed through the Betwa River Control Board which has been constituted under an Act of Parliament. The estimated cost of the project is Rs.72.56 crores which is likely to increase to Rs.90.00 crores. Fifty per cent of the cost of the dam will be borne by U. P. Canal Systems required for utilising Rajghat Dam waters in U. P. is being dealt separately.

Status of Project—Submitted to CWC and is technically approved.

1977-78

SEVENTH PLAN

2. Date of commencement.

3. Target date of completion.

4. Various main components of the projects completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

Part-I-Expenditure

(Rs. in lakhs)

Item	Estima- ted cost	Expendi- ture upto Fifth Plan	Phasing of Outlay in the next Five Year Plan 1978-83					Total 1978-83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
I. Head Work								
A. Preliminary	59							
B. Land	921							
C. Works	4784	288.84	150	450	900	1100	1100	3700
D. Others	835							
II. Establishment								
A. Others	627							
	30							
Total	7256	288.84	150	450	900	1100	1100	3700

NOTE—The cost of the project is likely to increase to Rs.90.00 crores.

Part II—Physical Progress and Programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
<i>(A) Diversion Canal—</i>					
(i) Excavation	cm.	8625	N.A.	N.A.	N.A.
<i>(B) Diversion Bund—</i>					
(i) Excavations	cm.	3600	N.A.	N.A.	N.A.
(ii) Concreting	cm.	1200	N.A.	N.A.	N.A.
<i>(C) Main Dam :</i>					
(i) Excavation	Lac cm.	6.4	N.A.	N.A.	N.A.
(ii) Filling cutoff Trench ..	Lac cm.	6.4	N.A.	N.A.	N.A.
(iii) Earth work clay core and blanket	Lac cm.	4.8	N.A.	N.A.	N.A.
(iv) Earth work in filling shall material	Lac cm.	5.8	N.A.	N.A.	N.A.
(v) Laying of filter too	Lac cm.	3.0	N.A.	N.A.	N.A.
<i>(D) Unstream slope pitching</i> ..	Lac cm	1.4	N.A.	N.A.	N.A.
<i>(E) Turfing down stream slope</i> ..	Job	1	N.A.	N.A.	N.A.
<i>(F) Spillway :</i>					
(i) Excavation in foundation ..	Lac cm.	2.19	N.A.	N.A.	N.A.
(ii) Concreting	Lac cm.	4.17	N.A.	N.A.	N.A.
(iii) Spillway gates and sluice gates	Job	1	N.A.	N.A.	N.A.
<i>Manpower requirement :</i>					(peak)
(i) Unskilled	Lac mandays	..	..	4.5	33
(ii) Skilled .. ..	"	..	..	0.75	5.5
<i>(iii) Engineers:</i>					
(a) Diploma holders .. ..	"	..	..	0.17	1.28
(b) Graduates .. ..	"	..	..	0.08	0.56

NOTE—N.A. stands for not available.

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of Multipurpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

7. *Rajghat Dam—Canal Portion*—The project envisages utilisation of 22 TMC in U. P. out of the total live storage of the Rajghat Dam. This will be U. P.'s share which will irrigate 143.5 hectares in Lalitpur, Jhansi, Jalaun and Hamirpur districts. This water will be utilised through Rajghat Canal and Jakhlaun, Baragaon and Pahuj pumped canals. Part of it would also be utilised for extension of existing Betwa and Gursarai canal systems.

The project costing Rs.18.28 crores has already been approved by CWC. The cost of the project is likely to increase to Rs.18.88 crores.

2. Date of commencement.

1977-78.

3. Date of completion.

SEVENTH PLAN.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

The work on canal system was started during 1977-78 which will be continued in the Mid Term Plan also.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expenditure upto Fifth Plan	Phasing of outlay in the next five year plan 1978—83					
			1978-79	1979-80	1980-81	1981-82	1982-83	Total 1978—83
1	2	3	4	5	6	7	8	9
. A—Preliminary	13	} 28						
. B—land	38							
. Headworks	274							
. Main canal and Branches	999		100	200	400	500	500	1700
. Distributory and minors	354							
. Water courses	41							
. Establishment	139							
. Others	30							
Total	1888	28	100	200	400	500	500	1700

Part II—Physical progress and programme

Item	Unit	Total estimated quantity	Work done to end of fifth plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
<i>(a) Rajghat main canal and branches :</i>					
Earth Work	Lac cm.	50	1%	N.A.	N.A.
Masonry Works	Nos.	104	..	N.A.	N.A.
<i>(b) Jakhlaun Pump Canal :</i>					
Earth Work	Lac cm.	35	..	N.A.	N.A.
Masonry works	Nos.	66	..	N.A.	N.A.
<i>(c) Betwa Canal System :</i>					
Earth Works	Lac cm.	22	..	N.A.	N.A.
Masonry works	Nos.	152	..	N.A.	N.A.
<i>(d) Baragaon Pump Canal :</i>					
Earth Work	Lac cm.	1.2	..	N.A.	N.A.
Masonry Works	Nos.	3	..	N.A.	N.A.
<i>(e) Pahuj Pump Canal :</i>					
Earth Work	Lac cm.	0.1	..	N.A.	N.A.
Masonry Works	Nos.	22	..	N.A.	N.A.
<i>(f) Gursarai Canal System :</i>					
Earth works	Lac cm.	3	..	N.A.	N.A.
<i>Manpower requirement—</i>					(Peak)
(i) Unskilled	Lac Mandays	..	..	3.00	12.00
(ii) Skilled .. ..	..	..	..	0.50	2.00
<i>(iii) Engineers :</i>					
(a) Diploma Holders .. ..	..	..	..	0.12	0.46
(b) Graduates .. ..	..	..	..	0.05	0.20

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

(8) *Jamrani Dam*—A 145 m. high rock-fill dam with upstream concrete membrane is proposed to be constructed on river Gola near village Jamrani in district Naini Tal to provide more irrigation facilities in the cultivated area of Tarai and Bhabar in the districts of Naini Tal, Rampur and Bareilly. An additional area of 94129 hectares would receive irrigation facilities after construction of this Dam. It is proposed to expedite work of construction of Gola Barrage and extension and remodelling of channels in order to make available partial benefits as soon as possible. The project has been approved by the Planning Commission for 61.25 crores.

2. Date of commencement.

1975-76.

3. Target date of completion.

SEVENTH PLAN

4. Various main components of the projects completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

Preliminary work of remodelling of channels and construction of head works and new channels was started in V Plan. Construction of Gola Barrage has been started during 1978-79. Work on main dam is proposed to be taken up during 1979-80 which continued during the Mid Term Plan period.

Part I —Expenditure—Jamrani Dam

Item	Latest cost	Expenditure upto Fifth Plan	Phasing of outlay in the next Five Year Plan 1978—83					Total 1978—83	
			1978-79	1979-80	1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	
1. A—Preliminary	..	52							
2. B—Land	..	71							
3. Main Dam and appurtenant works.	..	4079							
4. <i>Distribution system :</i>									
(New Channels and old channels)	..	563	229	250	350	400	500	500	
5. Buildings	..	213							
6. Special T & P	..	255							
7. Communication	..	151							
8. Establishment	..	566							
9. Other items	..	175							
Total	..	6125	229	250	350	400	500	500	2000

Part II—Physical progress and programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
1. Dam and appurtenant works—					
A—Dam :					
(i) Excavation	Lac Cms	2.26	..	..	N.A.
Rock fill	..	85.00	..	..	..
B—Tunnels :					
(i) Tunnel excavation	1.25	..	..	..
(ii) Concreting	0.16	..	..	..
C—Spillway :					
(i) Excavation	0.15	..	..	..
(ii) Tunnel excavation	0.23	..	..	..
(iii) Concreting	0.03	..	..	..
2. Gola Barrage					
(i) Excavation	0.60	0.04	0.4	0.16
(ii) Concreting	0.35	..	0.2	0.15
3. Feeder Channels :					
(i) Excavation	.. .. LacCms	2.13	0.65	1.04	0.46
(ii) Concreting	0.17	0.07	0.08	0.02
(iii) Stone masonry	0.65	0.11	0.40	0.14
4. Lined Minors (35 kms)					
(i) Excavation	20,000	2030	15000	2970
(ii) Concreting	3000	267	2200	533
(iii) Break masonry	9600	631	6800	2169
5. Buildings	100%	50%	10%	..	..
Manpower requirement :					
					(peak)
(i) Unskilled	.. .. Lac Manday	..	..	7.50	6.00
(ii) Skilled	1.25	1.00
(iii) Engineers —					
(a) Diploma Holders	0.29	0.23
(b) Graduates	0.13	0.10

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description location and districts benefited. In case of multi-purpose and Inter-State Projects/details of sharing of cost and benefits among various purposes and status.

(9) *Madhya Ganga Canal*—Under this projects a barrage across river Ganga in district Bijnor is under construction which will divert additional monsoon supplies of river Ganga into the Upper Ganga Canal System through feeder on the right bank of the barrage. The scheme will provide irrigation facilities to additional areas of 1.78 lakh hectares for *kharif* crops in district Aligarh, Bulandshahr, Mathura and Etah.

2. Date of commencement.

Status of Project—Project sanctioned.
1976-77.

3. Target date of completion.

SEVENTH PLAN

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

The work on main canal has been started and is in progress.

Part I Expenditure

Item	Latest cost	Expenditure up to Fifth Plan	Phasing of outlay in the next Five Year Plan 1978-83					Total 1978-83	
			1978-79	1979-80	1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	
1. A—Preliminary ..	47	} 495	..	..	..	
2. B—Land ..	377								
3. C—Works Main Canal ..	3850								
4. <i>Distribution System</i>									
(i) Anupshahar Branch	112			600	650	700	750	800	3500
(ii) Mat Branch ..	435								
(iii) Hathras Branch ..	82								
(iv) Other channels ..	790								
5. Drains ..	121								
6. Water courses ..	83								
7. Others ..	704								
Total ..	6601	495	600	650	700	750	800	3500	

Part II—Physical progress and programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
<i>A—Headworks :</i>					
(1) Earth work	Lac CM	20.0	..	3.0	N.A.
(2) Concreting	Lac CM	3.2	..	0.3	N.A.
<i>B—Main Canal :</i>					
(1) Earth work	Lac CM	268.00	8.0	23.0	N.A.
(2) Length	Kms.	115.	..	..	N.A.
<i>C—Branches :</i>					
1. Anupshahar Branch—					
(i) Earth work	Lac CM	15.94	..	..	..
2. Mat Branch—					
(i) Earth work	Lac CM	62.60	..	3%	..
3. Hathras Branch					
(i) Earth work	Lac CM	9.85	..	..	..
<i>D—Distribution system</i>	Kms.	1645	..	..	..
Manpower requirement:					
(i) Unskilled	Lac Manday	..	..	18.00	30.00
(ii) Skilled .. ..	..	..	..	3.00	5.00
(iii) Engineers—					
(a) Diploma holders .. ..	..	..	..	0.70	1.16
(b) Graduates .. ..	..	..	..	0.31	0.51

NOTE—N.A. stands for not available.

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and inter-State projects/details of sharing of cost and benefits among various purposes and status.

(10) *Left Bank Ghagra Canal*—The project envisages construction of a 51.2 kms long link channel from the left bank of the Ghagra barrage constructed under Sarda Sahayak Project. The channel will have a capacity of 141.5 cumecs which will link Ghagra waters to Sarju river where a level crossing is proposed by construction of a barrage. Thereafter the combined discharge of Ghagra and Sarju would be utilised for providing irrigation facilities to an area of 2.66 lakh hectares in the districts of Gonda and Bahraich in the Rapti-Ghagra doab.

The project costing Rs.78.68 crores has already been approved by CWC.

2. Date of commencement.

1975-76.

3. Target date of completion.

SEVENTH PLAN

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

Preliminary work was started during 1976-77 and construction work was started during 1977-78 which is in progress. Construction of Main Canal and distribution system will be continued in Mid Term Plan period.

Part-I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expenditure upto Fifth Plan	Phasing of outlay in the Next Five Year Plan 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
1. Preliminary	.. 40	10	10					
2. Land	.. 941	120	140					
3. Head works	1150	50	100					
4. Main Canal and Branches	.. 2429	28	180	850	1000	1150	1300	5000
5. Distribution system	.. 782	..	..			
6. Buildings	.. 253	..	30					
7. Water courses	.. 107	..	..			
8. Drains	.. 350	..	..			
9. Others	.. 1816	110	2.0					
Total	.. 7868.00	318.00	700	850	1000	1150	1300	5000

Part—II-Physical Progress and Programme

(Progressive totals given)

Item	Unit	Total estimated quantity	Work done to end of Fifth Plan	Target for 1978-79	Total for 1979-83
1	2	3	4	5	6
1. Land acquisition	Hectares	15000	1200	2600	15000
2. Head works					
(a) Earth work	Lac cms	15.00	..	2.0	15.00
(b) Concreting	Lac cms	1.5	..	0.05	1.50
3. Main Canal and Branches					
(a) Earth work	Lac cms	380.00	2.0	27.0	380.00
(b) Masonry works	Nos.	100	..	4	100
(c) Cross drainage work	Nos.	30	..	1	30
4. Distribution system					
(a) Earth work	Lac cms.	90.00	..	..	90
(b) Masonry works	Nos.	17.00	..	..	1500
(c) Length	Kms.	25.84	..	..	25.84
5. Manpower requirement					Peak
(i) Unskilled	Lac Mandays	..	..	21.00	39.00
(ii) Skilled .. .. .	"	..	..	3.50	6.50
(iii) Engineers					
(a) Diploma holders .. .. .	"	..	..	0.81	1.51
(b) Graduates .. .. .	"	..	..	0.36	0.66

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

(11) *Eastern Ganga Canal*—The Scheme envisages diversion of 5,800 cusecs supplies during monsoon from the left bank of river Ganga at Bhimgoda Headworks to benefit 1.05 lakh hectares of Bijnor and Moradabad districts.

2. Date of commencement.

1977-78.

3. Target date of completion.

SEVENTH PLAN.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

The work on the project was started during 1977-78 and it is in a preliminary stage.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest cost	Expenditure up to Fifth Plan	Phasing of outlay in the next Five Year Plan 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
1. Head works ..	145							
2. Main Canal and Branches ..	2,390							
3. Distributaries and Minor ..	662							
4. Drains ..	147	9.8	190	310	400	500	600	2000
5. Sepcial T & P ..	50							
6. Establishment ..	380							
7. Others ..	96							
	3870	9.8	190	310	400	500	600	2000

Part II—Physical Progress and Programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan		Target for 1978-79	Target for 1979—83
			3	4		
1	2	3	4	5	6	
<i>A—Main Canal and Branches</i>						
1. Head Regulator—						
(i) Earth work Lac cm.	0.14	N.A.	N.A.	N.A.
(ii) Concreting Lac cm.	0.12	N.A.	N.A.	N.A.
<i>B—Silt Ejector ..</i> Nos	1	N.A.	N.A.	N.A.

1	2	3	4	5	6
<i>C</i> —Stone Pitching .. ..	.. Lac cms.	0.40	N.A.	N.A.	N.A.
<i>D</i> —Concreting in R.C.C. Barrels .	.. Lac cms.	0.38	N.A.	N.A.	N.A.
<i>E</i> —Distribution Svstem Length of channels	.. Kms.	1500	N.A.	N.A.	N.A.
Man Power Requirement—					Peak
(i) Unskilled .. ..	.. Lac Mandays	..	..	5.7	18
(ii) Skilled .. ..	.. „	..	..	0.95	3.0
(iii) Engineers					
(a) Diploma Holders ... ..	.. „	..	..	0.22	0.70
(b) Graduates .. ..	.. „	..	..	0.10	0.31

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

(12) *Kishau Dam*—The projects envisages construction of 253 meter high rock-fill dam and a power house of 600 M. W. capacity near Kishau, 32 kms. upstream of Kalsi on river Tons, a major tributary of river Yamuna in district Dehra Dun. Out of the gross storage of 2400 m. cum. created by Kishau Reservoir, the live storage of 1,230 m. cum. is proposed to be utilised for irrigation purpose and power generation. Kishau Dam would provide $1,822 \times 10$ KWH electric energy in 90 per cent availability year and $2,414 \times 10$ KWH in an average year. The power house will have an installed capacity of 600 M.W. It would also provide additional irrigation to 2,71,139 hectares annually on the Eastern Yamuna Canal System besides providing better service to existing irrigated area. It would also give protection from floods to an area of 80,000 hectares along river Yamuna between Tajewala and Delhi.

The project costing Rs.459.84 crores is an inter-State project between U. P. and Himachal Pradesh benefiting Saharanpur, Muzaffarnagar and Meerut districts of U. P. the sharing of costs between the beneficiary States remains to be fixed. The distribution of cost sector-wise is given under Part I.

2. Date of commencement. 1978-79.

3. Target date of completion. VII Plan.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

The execution of this project will be taken up after finalization of inter-State agreement between U. P. and Himachal Pradesh. It is proposed to start construction of approach roads, site colonies, stores and other works during 1978-79.

Part I—Expenditure

(Rupees in lakhs)

Item	Latest Expendi- cost ture up to Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83						
		1978-79	1979-80	1980-81	1981-82	1982-83	Total 1978—83	
1	2	3	4	5	6	7	8	9
1. Preliminary	.. 251	}	300	500	1,100	1,500	2,600	6,000
2. Land	.. 429							
3. Head works of main Dam	.. 28,572							
4. Distribution system	.. 1,254							
5. Buildings	.. 1,199							

Item	Latest cost	Expenditure up to Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83						Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	
6. Special T & P	..	2,198	..						
7. Communication	..	680	..						
8. Power Plant and Electrical system.	..	7,199	..						
9. Establishment	..	4,133	..						
10. Other items	..	69	..						
Total	..	45,984							
Flood	..	1,200							
Power	..	27,874							
Irrigation	..	16,910	Nil	300	500	1,100	1,500	2,600	6,000

Part II— Physical Progress and Programme

Item	Unit	Total estimated quantity	Work done to end of Fifth Plan	Target for 1978-79	Target for 1979—83
1	2	3	4	5	6
<i>A—Diversion Tunnels :</i>					
(i) Excavation soft and hard	.. Cm.	8,47,000	..	..	..
(ii) Tunnelling (4 Nos. × 890m')	.. Meter	3560	..	..	..
<i>B—Rock Fill Dam :</i>					
(i) Excavation in foundation	.. Lac Cm.	84	..	..	..
(ii) Rock Fill	.. Lac Cm.	381	..	..	..
(iii) Transition Zone	.. Lac Cm.	10.9	..	..	..
(iv) Impervious core	.. Lac Cm.	38.4	..	..	..
(v) Pitching	.. Lac Cm.	0.7	..	..	..
<i>C—Spillway :</i>					
(i) Excavation	.. Lac Cm.	16.45	..	..	..
(ii) Concreting	.. Lac Cm.	0.70	..	..	..
(iii) Radial Gates	.. Nos.	8	..	..	..
<i>D—Intake and Pen Stock :</i>					
(i) Excavation	.. Lac Cm.	0.425	..	..	..
(ii) Concreting	.. Lac Cm.	1.058	..	..	..
<i>E—Power House—</i>					
(i) Excavation	.. Lac Cm.	3.00	..	..	..
(ii) Concreting	.. Lac Cm.	0.559	..		
(Peak)					
<i>Manpower Requirement :</i>					
(i) Unskilled	.. Lac Manday	..	..	9.00	48.00
(ii) Skilled	.. "	..	..	1.50	8.00
<i>(iii) Engineers—</i>					
(a) Diploma Holders	.. "	..	..	0.35	1.80
(b) Graduates	.. "	..	..	0.15	0.80

STATEMENT IF-4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and inter-State projects/details of sharing of cost and benefits among various purposes and status.

(13) *Eastern Ramganga Reservoir Scheme*—The scheme envisages construction of a 181 meter high straight gravity dam on Ram Ganga river 21 kms. U/S of its confluence with Sarju river in Pithoragarh district. These rivers are tributaries of river Sarda. This is a multi-purpose scheme which will have installed capacity of 80 MW. The live storage of the reservoir will be 26.1 TMC which will provide irrigation facilities to 1.72 lakh hectares (4,25,500 acres) on the Sarda Canal System.

The total cost of the project will be Rs.100.88 crores which will be shared as follows :

Irrigation Sector—Rs.64.06 Crores
Power Sector —Rs.36.82 "
Total : Rs.100.88 "

2. Date of commencement.

1979-80

3. Target date of completion.

VII Plan.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

It is proposed to start preliminary work on the project during 1979-80 only a feasibility report has been prepared for the project hence details required under Part-II Physical Progress and Programme are not available.

Part I—Expenditure

(Rupees in lakhs)

Items	Latest Expenditure up to Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83					Total 1978—83		
		1978-79	1979-80	1980-81	1981-82	1982-83			
1	2	3	4	5	6	7	8	9	
1. Preliminary	.. 90	}							
2. Land Compensation	.. 80								
3. Head works	.. 6,340								
4. Buildings	.. 269								
5. Equipment	.. 1,250		300	700	1,200	1,800	4,000
6. Communication	.. 430								
7. Special T & P	.. 280								
8. Establishment	.. 780								
9. Other items	.. 569								
Total	.. 10,088	..	..	..	..	..	..	..
Power	.. 36.82	..							
Irrigation	.. 64.06	..	..	300	700	1,200	1,800	4,000

Part II—Physical Progress and Programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Traget for 1978-79	Target for 1978—83
1	2	3	4	5	6
Man-power Requirement—					Peak
(i) Unskilled	Lac Man-day—	..	..	..	30
(ii) Skilled .. ..	„	..	..	..	5.0
(iii) Engineers—					
(a) Diploma Holders .. ..	„	..	..	..	1.16
(b) Graduates .. ..	„	..	..	..	0.51

STATEMENT IF—4 (Contd.)

1. Name of projects with brief description, location and districts benefited. In case of multi-purpose and Inter-State projects/details of sharing of cost and benefits among various purposes and status.

(14) *Madhya Ganga Canal Stage II*—A barrage on river Ganga near Raoli Ghat about 10 km. from Bijnor is already under construction under Madhya Ganga Canal Stage-I scheme. Under Stage-II, of the project it is proposed to construct another Canal system on left bank off taking from this barrage. The estimated cost of the Stage-II project is likely to be Rs.38.73 crores which will provide irrigation facilities to 1.01 lakh hectares in the district of Moradabad, Rampur, Badaun and Bareilly in the Ganga-Ramganga Doab.

Status :—Feasibility Report for the project has been prepared.

2. Date of commencement.

1979-80

3. Target date of completion.

VII Plan.

4. Various main components of the project completed up to 1977-78 and the works proposed for 1978-79 and 1979-83 and details of expenditure and outlay for 1978-79 and 1979-83.

Preliminary works on the project are proposed to be started during 1979-80.

Part I—Expenditure

(Rupees in lakhs)

Item	Estimated cost	Expenditure upto Fifth Plan	Phasing of outlay in the next Five-Year Plan 1978—83					Total 1978—83
			1978-79	1979-80	1980-81	1981-82	1982-83	
1	2	3	4	5	6	7	8	9
(a) Preliminary	.. 33							
(b) Land	.. 193							
(c) Main Canal	.. 973							
(d) Branches	.. 529							
(e) Distributaries	.. 1375	..	..	100	350	850	1700	3000
(f) Other Works	.. 770							
Total	.. 3873	..	..	100	350	850	1700	3000

Part—II-Physical Progress and Programme

Item	Unit	Total estimated quantity	Works done to end of Fifth Plan	Target for 1978-79	Target for 1979-83
1	2	3	4	5	6
1. Main Canal					
(1) Length	.. km.	75	..	..	N.A.
(2) Earth	.. Lakh cm.	2.16	..	..	N.A.
2. Bijnor Branch					
(1) Length	.. km.	96	..	..	N.A.
(2) Earth work	.. Lac cm.	1.51	..	..	N.A.
3. Distribution System					
(1) Length	.. km.	2658	..	..	N.A.
<i>Man Power requirement</i>					(Peak)
(i) Unskilled	.. Lakh Manday	..	..	..	45
(ii) Skilled	.. „	..	..	..	7.5
(iii) Engineers					
(a) Diploma holders	.. „	..	..	..	1.74
(b) Graduates	.. „	..	..	..	0.77

Statement—II-A

Irrigation Schemes Benifiting the Drought Prone Areas

(Rupees in lakhs)/(000 hectares gross)

Serial no.	Name of Schemes	Districts to be benefited	Latest estimated cost	Expenditure upto end of 1973-74	Expenditure during 1974-75	1978-79 approved outlay	1979-83 outlay proposed	Ultimated Irrigation potential	Benefit to end of Fifth Plan		Targets of additional benefits during 1978-83	
									Potential Utilization	Potential Utilization	Potential Utilization	Potential Utilization
1	2	3	4	5	6	7	8	9	10	11	12	13
A—PRE-FIFTH PLAN SCHEMES												
1	Adwa dam	Mirzapur, Allahabad.	609	145	459.59	28.61	(—)24.20	16.98	12.78	..	4.20	..
2	Chillimal Pump Canal	Banda	176	33	125.92	14.88	2.20	7.77	7.77	..	..	..
3	Kishanpur Pump Canal	Allahabad	408	42	166.19	94.31	105.50	34.64	28.64	..	10.00	..
	Total—A	..	1,193	220	751.70	137.80	83.50	59.39	49.19	..	14.20	..
B—FIFTH PLAN SCHEMES												
1	Increasing capacity of Narainpur Pump Canal.	Varanasi, Mirzapur, Ghazipur.	996	35.00	721.35	192.85	46.80	111.29	..	..	111.29	..
2	Sone Pump Canal	Mirzapur	1,300	12.00	614.69	17.31	656.00	77.79	..	..	77.79	..
3	Raising Meja Dam	Mirzapur, Allahabad.	891	..	210.06	150.00	530.94	40.00	..	..	40.00	..
4	Rajghat Dam and Canal	Lalitpur, Jhansi, Jalaun, Hamirpur.	6,388	46	270.84	250.00	5,150.00	153.00	..	..	..	..
5	Kanhar Irrigation Schemes	Mirzapur	2,775	..	320.12	350.00	16,50.00	25.00	..	..	..	..
6	Maudaha Dam	Hamirpur	2,592	..	204.62	250.00	16,50.00	36.00	..	..	..	..
7	Bansagar Dam and Irrigation Project of U. P.	Varanasi, Allahabad, Mirzapur	5,782	..	28.80	100.00	4300.00	204.00	..	..	..	..

Irrigation Schemes Benefiting the Drought Prone Areas

STATEMENT I. F.—9 (Contd.)
(Rupees in lakhs)/(000 Hectares gross)

Serial no.	Name of Schemes	Districts to be benefited	Latest estimated cost	Expenditure upto end of 1973-74	Expenditure during 1974-75	1978-79 approved outlay	1979-83 ² outlay proposed	Ultimate Irrigation potential	Benefit to end of Fifth Plan		Targets of additional benefits during 1978-83	
									Potential Utilization	Potential Utilization	Potential Utilization	Potential Utilization
1	2	3	4	5	6	7	8	9	10	11	12	13
8	Urmil Dam	.. Hamirpur	856	..	135.20	200.00	520.80	4.77	..	..	4.77	..
9	Augasi Pump Canal	.. Banda	197	..	119.52	7.08	70.40	13.35	10.00	..	3.35	..
10	Yamuna Pump Canal	.. Allahabad	650	12.00	537.69	500.00	95.31	25.00	15.00	..	10.00	..
11	Paisuni Diversion	.. Banda	461	..	1.18	50.00	250.00	18.44	..	..	..	..
12	Revised Tons Pump Canal	.. Allahabad	351	101	32.00	50.00	168.00	37.40	33.13	..	4.27	..
13	Lining of Channels	.. Varanasi, Allahabad, Mirzapur, Lalitpur, Jhansi, Banda, Hamirpur.	936	92	88.00	50.00	706.00	14.70	1.50	..	13.20	..
14	Modernisation of Lachura Head Works.	Hamirpur	704	..	..	35.00	515.00	..	..	..	..	..
15	Modernisation of Ghaggar Canal.	.. Mirzapur	371	..	37.50	100.00	233.50	6.94	..	..	6.94	..
16	Gyanpur Pump Canal	.. Allahabad, Varanasi, Mirzapur.	1,786	..	121.90	150.00	850.00	66.00	..	..	..	..
	Total—B	..	27,036	298	3,443.47	2452.24	17,392.75	833.68	59.63	..	271.61	..

C—NEW SCHEMES

1	Arjun Sahayak Pariyojna	.. Hamirpur, Banda	2,689	..	..	35.00	1,965	65.00	..	..	10.00	..
2	Increasing capacity of Bhopauli Pump Canal.	.. Varanasi	802	..	..	..	750.00	37.00	..	..	20.00	..

3	Parvati Dam	..	Etawah, Hamirpur, Jalaun, Hamirpur, Jhansi.	11,454	..	..	..	1000	680.00	..	..	..	..
4	Greater Gangau Dam	..	Banda, Lalitpur, Jhansi, Jalaun.	..	..	..	..	1000	..	..	..	..	..
5	Molen Dam	..	Hamirpur	..	..	..	..	1000	3.40	..	..	..	..
6	Increasing capacity of Chhillimal Pump Canal.	..	Banda	1,131	..	..	..	200	22.30	..	..	..	..
7	Dhankwan Bandh	..	Mirzapur	89	..	..	25.00	64	1.31	..	..	1.31	..
8	Vindhyachal Pump Canal	..	Mirzapur	273	..	..	..	273	9.12	..	..	9.12	..
9	Pahara Lake Scheme	..	Hamirpur	108	..	..	..	108	2.20	..	..	2.20	..
10	Tundiary Dam	..	Allahabad	137	..	..	..	100	1.00	..	..	..	..
11	Chattar Dam	..	Mirzapur	197	..	..	..	150	2.30	..	..	..	..
12	Chunar Pump Canal	..	Mirzapur	..	..	..	..	100	N.A	..	..	..	..
13	Remodelling Bariyarpur Weir	..	Banda	..	..	..	..	100	N.A	..	..	..	..
14	Modernisation of Betwa Canal System.	..	N.A	..	..	..	..	75	N.A	..	..	..	..
15	Modernisation of Dhasan Canal System.	..	N.A	..	..	..	..	25	N.A	..	..	..	..
16	Baghain Dam	..	Banda	774	..	..	..	700	..	..	..	..	..
17	Tundiary Pump Canal	..	Allahabad	42.00	..	..	..	42.00	2.54	..	..	..	..
18	Tundiary Bundh Scheme	..	Do.	136.60	..	..	..	136.60	1.25	..	..	..	..
19	Manda Irrigation Scheme	..	Do.	180	..	..	..	180	1.98	..	..	..	..
20	Jarar Bundh Scheme	..	Do.	100	..	..	..	100	1.32	..	..	..	..
21	Janla Bundh Schemes	..	Do.	170	..	..	..	170.00	2.82	..	..	..	..
22	Grahwa Bundh Schemes.	..	Do.	73	..	..	..	73.00	1.12	..	..	..	..

STATEMENT I. F-9

Irrigation Schemes benefiting the Drought Prone Areas—(Concl.d.)

(Rupees in lakhs)/(’000 Hectares gross)

Serial no.	Name of Schemes	Districts to be benefited	Latest estimated cost	Expenditure upto end of 1973-74	Expenditure during 1974-75	1978-79 approved outlay	1979-83 outlay proposed	Ultimate Irrigation potential	Benefit to end of Fifth Plan		Targets of additional benefits during 1978-83	
									Potential Utilization	Potential Utilization	Potential Utilization	Potential Utilization
1	2	3	4	5	6	7	8	9	10	11	12	13
23	Yamuna Pump Canal	.. Allahabad	26.00	..	..	..	26.00	1.78	..	..	..	..
24	Bachra Dam	.. Do.	74.20	..	57.30	16.90	..	1.62	1.62	..	..	..
25	Constructing Small Lift Schemes.	Banda ..	50.00	..	..	..	50.00	N.A.	..	..	..	..
26	Gunta Nala Bundh	.. Do.	263.00	..	137.50	131.66	..	4.49	4.49	..	..	..
27	Bardaha Bundh Schemes	.. Do.	126.00	..	3.90	40.00	82.50	0.99	..	..	..	..
28	Constructing Khair Bhishampur Pump Canal.	Hamirpur	50.00	..	..	..	50.00	2.63	..	..	..	..
29	Papeora Pump Canal	.. Do.	46.48	42.05	..	2.72	..	3.10	3.10	..	..	..
30	Surauli Buzurg Pump Canal	.. Do.	36.72	34.66	..	2.25	..	2.62	2.62	..	..	..
31	Sohrapur Pump Canal	.. Do.	46.60	40.31	..	2.25	..	2.66	2.66	..	..	..
32	Constructing New Channels	Jalaun ..	70.00	..	..	..	70.00	N.A.	..	..	..	..
33	Adwa Meja Link Scheme	.. Mirzapur ..	151.16	..	..	..	151.16	4.35	..	..	..	..
34	Gaurwa Canal Schemes	.. Do. ..	51.57	..	..	..	51.57	0.88	..	..	..	..
35	Chunar Lift Schemes	.. Do. ..	98.00	..	..	..	98.00	7.29	..	..	..	..
36	Belan Bakhar Diversion	.. Do. ..	225.00	..	99.20	102.80	23.00	6.66	6.66	..	..	..
37	Bakhar Marihan Faeder	.. Do. ..	94.70	..	8.64	40.00	46.10	2.09	..	..	..	..
38	Dhoba Pump Canal	.. Do.. ..	75.00	..	0.31	30.00	45.00	4.10	..	..	..	..

39	Pandria Pump Canal	..	Varanasi	..	35.00	..	..	..	5.00	1.28	..	..	..
40	Guraini Pump Canal	..	Do.	..	30.00	..	..	..	30.00	..	..	..	..
41	Kaul Pump Canal	..	Do.	..	30.00	..	..	..	30.00	..	..	..	..
<hr/>														
	Total—C	19,935.03	117.02	306.85	428.58	9,099.93	881.20	21.15	42.63	..
<hr/>														
	Total (A+B+C)	48,164.03	635.02	4,502.02	3,018.62	26,576.18	1,774.27	129.97	..	328.44	..
<hr/>														

Irrigation Schemes Benefiting the Tribal Area and Backward Classes

(Rupees in lakhs)/(000 Hectares Gross)

Serial no.	Name of Schemes	Districts to be benefited	Latest estimated cost	Expenditure upto end of 1973-74	Expenditure during 1974-78	1978-79 approved outlay	1979-83 proposed outlay	Ultimate Irrigation potential	Benefit to end of Fifth Plan		Targets of additional benefits during 1978-83	
									Potential Utilization	Potential Utilization	Potential Utilization	Potential Utilization
1	2	3	4	5	6	7	8	9	10	11	12	13
I.	Tribal area sub-plan	..	..	..	..	Nil.	..	..	..	..	..	..
II.	Backward area sub-plan	..	..	..	..	Nil.	..	..	..	..	..	..

(2) FLOOD CONTROL

Floods are a regular feature in Uttar Pradesh. The damages on account of floods in Uttar Pradesh are the highest in the country. A study of the damages by floods shows that out of the total area of 294.4 lakh hectares in Uttar Pradesh, an area of 24.71 lakh hectares, on an average is affected by floods annually. In a year of heavy floods, as much as 59.88 lakh hectares and up to 23 per cent population of the State gets affected. The loss to crops, property and cattle is estimated at Rs.70.72 crores in an average year which goes above Rs.200.00 crores in a year. Recent floods and heavy rains of 1978 affected as many as 55 districts out of a total of 56. The magnitude of the problem can be well judged by the following data about 1978:

1. Villages affected (No.) ..	48,889
2. Population affected (No.) ..	2,25,86,580
3. Area affected (hects.) ..	73,35,668
4. Agriculture area affected (hects.)	39,27,320
5. Houses affected (No.) ..	11,97,552
6. People died (No.) ..	739
7. Cattle died (No.) ..	7,430

3.2.2. Up to the year 1954, the flood problem was not attended to in a scientific manner. Before the planning era, there were very few flood control or drainage works and the few that existed served only local interests. The only important old works worth mentioning, are :

(a) The marginal embankment between Delhi Railway bridge and Okhla weir on river Yamuna.

(b) Malony bund in district Gorakhpur town and adjoining area, and

(c) An embankment on the left bank of River Tons for the protection of Azamgarh town.

3.2.3. Flood control organisations were set up both at the centre and in the States after the floods of 1954. Four River Commissions were constituted under the Central Flood Control Board. At the State level, a State Flood Control Board

assisted by a technical sub-committee was set up.

3.2.4. During the various Plan periods, a large number of flood protection works have been executed in Uttar Pradesh. Some of the major works constructed up to the end of Fourth Plan are given below :

(i) 57 miles long Belha-Bhaurauli bunds along rivers Sarju and Ghaghra for protection of 3.6 lakh acres of land in District Bahraich.

(ii) 36 miles long Parasur-Dhaurara bund along river Ghaghra for protection of 0.51 lakh acres of land in district Gonda.

(iii) 33 miles long Mahola-Garhwal bund along river Ghaghra for protection of 0.28 lakh acres of land in districts Faizabad and Azamgarh.

(iv) 59 miles along Haha-nala-Turtipar-Shrinagar bunds along river Ghaghra for protection of 1.21 lakh acres of land in districts Azamgarh and Ballia.

(v) 25 miles long Naraini-Chitauri bund along river Gandak for protection of 1.64 lakh acres of land in districts Gorakhpur and Deoria.

(vi) Strengthening of Malony bund along river Rapti for the protection of Gorakhpur town and 0.50 lakh acres of land.

(vii) 20 miles long Ballia-Baria bund along river Ghaghra for protection of 0.61 lakh acres of land in district Ballia.

(viii) 18 miles long Aswar-Govindpur-Goshalpur bund along river Tons for protection of 0.22 lakh acres of land in district Ghazipur.

(ix) Protection of towns like Badrinath, Haldwani, Bageshwar, Kankhal, Pilibhit, Lucknow, Ballia, Varanasi, Rajpur and Chitrakoot.

(x) Raising of nearly 4,500 marooned village in eastern districts of the State.

3.2.5. The expenditure to the end of Fourth Plan on different classes of works is given below :

		(Rupees in crores)
1.	Marginal embankments ..	11.69
2.	Protection of towns ..	11.63
3.	Flood detention reservoirs ..	0.81
4.	Survey, investigation and flood forecasting.	0.36
5.	River Improvement and anti-erosion works.	6.44
6.	Extension of waterways ..	0.36
7.	Raising marooned villages ..	5.56
8.	Drainage improvement schemes ..	4.86
Total ..		41.71

3.2.6. In physical terms, the works executed up to the end of the Fourth Plan are as follows :—

TABLE I—Works executed by end of 1973-74

Serial no.	Description	Units	Work executed
1	2	3	4
1	Length of marginal embankments.	kms.	989.19
2	Town protection works ..	Nos.	41
3	Raising villages ..	Nos.	4500
4	Length of drainage Channels	kms.	11288.02
5	Area benefited ..	lakh hectares.	6.16

3.2.7. In the four years (1974—78) of Fifth Plan, flood control works of Rs.37.69 crores were carried out and an area of 3.00 lakh hectares was protected. The important works carried out during this period are as follows :—

(1) Protection of Railway embankment on Gandak river, strengthening of Chitauni bund and Virbhar spur ; strengthening of Tigra Marachi bund, strengthening of Katali Bhatpurwa bund ; flood protection on Gandak river in Chitauni area, Protection work on Gandak river below Chitauni in Deoria district.

(2) Strengthening of K. G. bund and Bansi Panghatia bund in Basti district.

(3) Construction of Zarda Domri bund; Malony bund; construction and strengthening of Karmaini bund; construction of bund from Shahjanwa to Domria along Rapti ; and Bhowapur-Bela bund in Gorakhpur District.

(4) Construction of Baria-Sansartola bund; pitching with launching apron at Kathaunda; providing pitching and launching apron on Ballia-Baria bund; construction dampeners at Chandpur along Ghaghra, Flood Protection works near Shukulpur-Chapra and Gaighat on Ganga river; construction of spur at Gaighat in Ballia district.

(5) Azamgarh town protection works and protection of Mau town in Azamgarh district.

(6) Pumping arrangement at Buxi bund for protection of Allahabad and Flood protection work of village Lalapur Kalan in Allahabad district.

(7) Launching apron in front of Varanasi ghats in Varanasi district.

(8) Flood protection works of Kamla Nehru Institute in Sultanpur district.

(9) Flood protection works downstream of Kunda Kalan, Hamirpur Tapu, Beggi and Kunda Khurd villages in Saharanpur district.

(10) Construction of Harnad, Kosi Arterial and Pathway drains in Mathura district.

(11) Flood protection works of village Mahmoodpur Nagla Rai along river Yamuna ; village Dundukher ; and village Bhatti Mazhra in district Muzaffarnagar.

(12) Construction of Kakua drain in Agra district.

(13) Construction of Alipur bund in Meerut district.

(14) Construction of Choiya drain and remodelling of Hathaura drain in Hardoi district.

(15) Construction of Basaha drain Stage-I and Stage-II ; Maharajganj, drain ; Issaur drain, Inhauna drain ; and Gomital drain in Rae Bareli district.

(16) Strengthening of Mahmoodabad zamindari bund in Sitapur district.

(17) Lucknow town protection works in Lucknow district.

(18) Flood protection works of Badrinath in district Chamoli.

3.2.8. The following is the abstract of flood control works which have been executed during the Fifth Plan.

TABLE II—Progress during Fifth Plan

Serial no.	Item	Unit	Constructed during Fifth Plan
1	2	3	4
1	Length of embankment	Km.	185
2	Town protection works	Nos.	12
3	Length of new drains including Remodelling of drains.	Kms.	665
4	Area benefited	Lakh hectares.	3.0

3.2.9. The flood protection works executed in the past have generally taken care of problems which have arisen in specific areas due to erosion, flooding and waterlogging from time to time. The limited outlays available for this sector did not permit execution of works on the basis of a careful consideration of long-term plans for different river basins. The lack of proper investigation and planning was also a constraint. After the experience of 1978 floods, the Government of India themselves have asked the States to prepare basin-wise action plans for implementation of flood control and drainage schemes during the next five to seven years. The State has submitted a basin-wise action plan for Ghagra, Rapti, Gandak, Yamuna, Gomti and Ramganga basins for Rs.242.66 crores to the Government of India. The pattern of financing for this action plan has not been made clear as yet and as such all essential schemes have been included in the States 1978–83 plan as well, though the outlays indicated in the action plan had to be readjusted in order to accommodate schemes for areas not covered by the action plan.

3.2.10. The Action Plan and the plan for 1978–83 have been framed taking into account the characteristics, and the general and specific erosion, flooding, drainage congestion and waterlogging problems of different basins and sub-basins. In the main Ganga basin, the problem is of prevention of spills and of erosion in the lower reaches particularly in the districts of Azamgarh, Pratapgarh, Ballia and Ghazipur. The problems of Yamuna sub-basin get complicated largely on account of its being an inter-State river. Construction of embankments and spurs, while affording protection to one State create adverse conditions for areas of the other State on the opposite bank. Schemes for drainage improvement in the upper states cause aggravation of the problem lower down and areas in Uttar Pradesh suffer loss of agriculture crops and property year after year on account of drainage of waters of Haryana and Rajasthan through Govardhan drain. River Gomti creates problems on account of sluggish bed slopes, shallow and tight sections, inadequate waterways of bridges and poor outfall conditions, the problems being specially serious for the towns of Lucknow, Jaunpur and Sultanpur. River Ghagra causes problems due to its tendency to meander in a width of six to ten kilometres and deposition of heavy load of silt and detritus carried from the Himalayan catchment. It affects districts of Basti, Azamgarh, Ballia, Gorakhpur, and Deoria most severely. Its tributary Rapti also carries very heavy silt load and its deposition aggravates outfall conditions of its large number of tributaries causing drainage congestion, particularly effecting Gorakhpur town and district most severely.

3.2.11. Substantial damages are caused year after year by River Gandak. Though embankments on this river have been constructed in the past, they are not continuous and there are gaps which are not yet covered. The 43 kms. long Bihar Bund constructed by the Bihar Government from Chitauni Ghat to Bhuldarwa is of inadequate section and has breached repeatedly in the past. The construction of continuous embankment in the gap portion from Chitauni stub to Pipraghat by the two States in their respective territories is, therefore, a necessity. The construction of these embankments is now

being taken up simultaneously according to a time bound programme.

3.2.12. With basin-wise planning, the following priorities emerge for schemes for the 1978-83 plan :

- (i) Expeditious completion of on going schemes.
- (ii) Schemes for protections of towns and large habitations.
- (iii) Schemes for areas chronically affected by floods.
- (iv) Schemes for relieving water-logging and drainage congestion.

(v) Reservoir shemes for flood absorption and flood moderation.

3.2.13. An abstract of schemes included in the 1978-83 is given in Annexure II. Brief description of important schemes of 1978-83 Plan are given in Annexure I. An outlay of Rs.40.00 crores is proposed for the year 1979-80, out of which Rs.1340.81 lakhs is for continuing and Rs.2483.27 lakhs for new schemes besides Rs.175.92 lakhs for survey and investigation etc.

3.2.14. The total outlay proposed for 1978-83 for this sector is Rs.242.66 crores. Item-wise details are given in Table below:—

TABLE—III—Outlays for 1978—83

(Rupees in lakhs)

Item	Provision for		Total
	Continuing Schemes	New Schemes	
1	2	3	4
1. Marginal Embankment	1473.16	3636.99	5110.15
2. Drainage improvement	2342.75	4512.86	6855.61
3. Anti erosion and river improvement	378.09	2836.62	3214.71
4. Town protection	435.39	6564.50	6999.89
5. Reservoir Schemes .. .. .	..	1200.00	1200.00
6. Survey and Investigation .. .. .	..	500.00	500.00
7. Emergent and unforeseen works .. .. .	..	385.92	385.92
Total	4629.39	19636.89	24266.28

3.2.15. Main physical targets are :—

1. Construction of new drains 2760 kms.
2. Remodelling of existing drains, 1580 kms. and improving rivers.
3. Construction of embankments 800 kms.

4. Raising and strengthening of existing embankments. 1101 kms.

5. Area to be benefited .. 13.7 lakh hect.

6. Town protection] .. 43 nos.

ANNEXURE I

BRIEF DESCRIPTION OF IMPORTANT FLOOD CONTROL SCHEMES

(1) *Strengthening Khadda Chhitauni Railway Embankment, Tehsil Hata in District Deoria*

Railway embankment from Khadda to Chhitauni in district Deoria had been under attack of river Gandak since last many years. The attack was severest during the flood season of 1975. To provide the adequate security to the area down below the railway embankment it has been proposed to construct the following works :

(i) Revetment of the embankment.

(ii) Replenishment of spur Ch+2987+3650+4150+4650.

(iii) Raising railway embankment according to the highest flood level.

(iv) Strengthening of ring bunds at Malahiya.

(v) Regulator at Nautar bund.

(vi) Improvement of Inspection road from Khadda to Chhitauni.

These works have been recommended by the Gandak High Level Committee.

The cost of the project is Rs.247.43 lakhs. It will provide protection to 1,01,363 hectares of land with population of 1,32,500 in district Deoria. The overall benefit cost ratio comes to 4.07 : 1.

(2) *Amwakhas Bund*

The area between Bhuldharwa and Bhatakwa along the river Great Gandak has no protection works at present. To provide the security from flooding, 9.8 km. long earthen bund has been provided.

The Gandak High Level Committee has felt the necessity of providing flood protection works to the area under this project.

The project will provide relief to an area of 7163 hectares with a population of 32,000.

The cost of project is Rs.78.63 lakh and the benefit cost ratio comes to 4.07 : 1.

(3) *Strengthening of Chhitauni Bund and Birbhar Spur in District Deoria*

The Chhitauni bund between reach mile 4-5-0 to mile 8-0 had been under attack of river Gandak since many years. The attack was severest during the flood season of 1975. To provide adequate security to the area in the kankar land of the Chhitauni bund, it has been proposed to make the following works :

1. Raising embankment according to the highest flood level.

2. Development of the embankment.

3. Backward extension of spur at Mile 4-5, 5-0, 6-0-500, 7-0.

4. Strengthening of Birbhar spur.

The works have been recommended by Gandak High Level Committee.

The cost of the project is Rs.231.57 lakhs. It will provide protection to 1,03,416 hectares of land with population of 1,32,500 in district Deoria. The benefit cost ratio comes to 4.07 : 1.

(4) *Strengthening and Extension of Pipra-ghat Ahirauli Dun Bund in U. P.*

The existing P. A. bund is put to main action of river Bansi, main spill of river Gandak. To provide a sense of security

to the area down below the bund, following works have been provided in the projects :

1. 3.3 kms. along embankment i.e. extension of P. A. bund.
2. Regulator on Bansri river.
3. Strengthening of existing P. A. bund i.e. from 0—0 km. to 13.1 and 12.4 to 16.4 km.

The above works have been recommended by the Gandak High Level Committee in 1974 report.

The project will provide relief to an area of 8,448 hectares with population of 26,168 in district Deoria.

The cost of the project is Rs.62.35 lakhs and the benefit cost ratio comes to 4.07: 1.

(5) *Constructing Hulwana Diversion Drain in District Mathura costing Rs. 1,515.00 lakhs*

The Storm run off from some parts of District Gurgaon of Hariyana and district Bharatpur of Rajasthan had been flowing through depressions, western depression drain and Khari Nadi into river Yamuna. The problem aggravated by heavy rains in 1958 compelled to prepare a drainage scheme called Nuh-ujhina pahari-kama Goverdhan drain with concurrence of all the three concerning States. Goverdhan drain was a part of above scheme.

Taking into the account some defects in the Goverdhan drain this project has been prepared to provide the following :—

- (i) 1000 cusecs from U. P. area lying on the right bank of Goverdhan drain with flow through existing Goverdhan drain.
- (ii) There will be an independent deep drainage system for low lying

areas lying on the left bank of Goverdhan drain. The new drain will be deeper with steeper bed slopes to provide quicker drainage. The catchment of this diversion drain is about 250 to 300 sq. mile.

(iii) A pocket of village Mogarrah and Rasulpur will be drained off, through western depression drain by constructing a cross drainage work under Goverdhan drain at km. 29.6.

The alignment of this drain has been proposed in such a way so that it may provide quicker relief to the catchment area on the left side of the Goverdhan drain. The spring levels in this area have risen by 5.0 ft. during last-two years. The proposed drain will not only provide quicker relief to such areas but it will also go a long way in improving sub-soil condition and this will bring more area under cultivation.

The project costing Rs.1515 lakhs with a benefit cost ratio of 1.9 will provide benefit to 95,000 acres area.

(6) *Remodelling and Extension of Ral Drain in District Mathura costing Rs.141 lakhs*

Existing Ral drain 17.25 mile long falling into the river Yamuna through Mathura escape was constructed earlier at a runoff factor of 5 cuses per square miles for a catchment area of 66 sq. miles (discharge of 330 cusecs) to provide relief in areas of Tahsils Chhata and Mathura of district Mathura. Due to heavy rains during 1976, the vast area got sub-merged and the drain with its present capacity was found inadequate to provide relief to waterlogged area in time. Dewatering of these areas to enable sowing of Rabi was carried out by Rigs division, Tube-wells and Jal Nigam. In order to provide relief to this area, it is essential to remodel

the drain. The project estimate envisages the following :—

(i) Remodelling of the existing drain and its extension by remodelling the existing Mathura escape in a length of 1.875 miles for discharge of 100 cusecs based as a runoff factor of 10 cusecs/sq. mile for a catchment area of 90 sq. miles.

(ii) Remodelling of 2 DRB, 1 PRB, 2 Railway culverts. Reconstruction of 1 bridge and 1 VRB, and construction of 1 VRB in the extended reach.

(iii) Remodelling of 2 Falls, 12 Gul crossings, 2 Syphons, 7 VRB'S 1 DRB. Reconstruction of 1 inlet, 5 gul crossings and construction of 40 inlets.

The project estimate costing Rs.141.00 lakhs with a benefit cost ratio of 3.7 will provide relief to an area of 18,3000 acres.

(7) *Constructing Biyonhi Bijhari and Raya Drains in District Mathura costing Rs.41.55 lakhs*

Due to increase in irrigation facilities and heavy rain fall the drainage problem of Mathura District has aggravated. Large area of Sadabad and Mat Tehsils, lying between Jagnera and Sadabad distributaries have no drainage system at present. During heavy rains in 1976-77 large pockets in this area got submerged and water had to be drained by cultivators through fields and even by cutting roads and canals. In order to provide relief to this area, it is essential to provide adequate drainage. Biyonhi Bijhari mile 14-6-0 and Raya drain mile 6-3-0 are proposed to be constructed.

The project estimate envisages the following :

(i) Constructing 6 M-3F long Raya Drain for a discharge of 120 cusecs having a catchment area of 24 sq. mile based on a run off factor of 5 cusecs per sq. mile. Raya drain out falls in Byonhi Bijhari drain.

(ii) Byonhi Bijhari drain mile 14-6 F long for a discharge of 240 cusecs having a catchment area of 44 sq. miles based on a discharge factor of 5 sq. mile. Byonhi Bijhari drain out falls in Karwan Nadi. The total catchment area at its outfalls is 68 sq. miles and the total discharge is 340 cusecs.

(iii) Constructing one 10 ft. Fall, one V. R. B. cum 2.5 ft. Fall, one 2.5 ft. Fall, 2 P. R. B.'s, 2 Syphons and 11 nos. V. R. B.'s on Byonhi Bijhari drain.

(iv) Constructing one Syphon, one Gul crossing, one D. R. B. and 10 nos. V. R. B.'s on Raya drain.

The project estimate costing Rs.41.55 lakhs with a benefit cost ratio of 6.8 and will benefit an area of 10,425 acres.

(8) *Remodelling Western Depression Drain in Districts Mathura and Agra costing Rs.495 crores.*

In the good old time a river named Sonrakha used to flow during periods of heavy rainfall from the depression beyond hills of Nandgaon and Barsana. This river adopting a course through natural depression of villages Kamai-Da-Harauli, Sehi, Palson, Mundsoras, Goverdhan, Paintha, Sonkh and to Khari Nadi and finally to river Utangaon. In course of time due to scanty rainfall and increased population, the river bed had been put under cultivation. The natural course of the river has thus vanished and only a drain namely Western Depression drain, which was later on canalised for a runoff factor of 2.5 cusecs/sq. miles, remained as its remnants.

The flood problem is aggravated whenever there is heavy rainfall on Barsana-Nandgaon-Bichori hilly range situated practically on the U. P., Rajasthan and Haryana border. The problem was highlighted during the extraordinary rains of 1958. An unfortunate decision was then taken with the concurrence of the three States of Haryana, Rajasthan and Uttar Pradesh and also the Central Government to construct an inter-State drainage scheme named as Ujhina-Pahari-Kama-Goverdhan drain and the work was executed during 1961-65. As it runs in filling in most of the reaches, it used to breach in embankment portions causing extensive damage in Mathura and Agra districts. During the year 1965, 67, 70, 72 and 1977 breaches occurred in Goverdhan drain and W. D. drain experienced heavy floods.

Because all the three States are now constructing their independent drainage schemes, it is therefore expected that no additional discharge will now flow from upper reaches. Hence Western Depression drain is therefore proposed to be remodelled in a total length of 52.2 km. to cater for a runoff factor of 10 cusecs/sq. miles. The waterway of masonry works has been designed for a discharge factor of 15 cusecs/sq. mile and foundation for 20 cusecs/sq. mile. The catchment area at km. 52.2 is 323 sq. km. (125 sq. miles) including some catchment area lying in Rajasthan also and the discharge works out to 35.4 cumecs (1250 cusecs). The discharge of the drain at the point of outfall into the Khari Nadi is 62.26 cumecs (2180 cusecs) for a catchment area of 565 sq. km (218 sq. miles). Because of lowering the bed of existing drain it is proposed to reconstruct 18 V. R. B.'s; 3 Railway crossings, 1 National High-way bridge, 5 D. R. B.'s and 2 nos. V. R. B.-cum-falls.

The project estimated costing Rs.495

lakhs with a benefit cost ratio of 1.82 will protect an area of 4017 hectares.

(9) *Drainage Plan for New Okhla Industrial Area in District Ghaziabad costing Rs.1,004 lakhs*

Yamuna Hindan Doab in tehsil Sikan-darabad of district Ghaziabad has been notified as new Okhla Industrial Development area under U. P. Act no. 6 of 1976 by the State Government and the same is being developed for industrialization. The area is surrounded by river Yamuna on the west and river Hindan on the east. The area is full of depression having flat slopes and water table is high resulting in sluggish drainage. The observed maximum discharge of river Yamuna and Hindan are 1.77 lakhs and 60,000 cusecs respectively.

The project estimate envisages the following :

(i) Construction of 23.3 km. long main trunk drain starting from Makanpur village up to 16 km. traversing along the country till it meets the old course of Hindan river and thereafter it out-falls into the river Yamuna. The discharge of the drain has been computed on the basis of 3 days maximum rainfall over 15 years return period to be drained off in 3 days. The catchment areas are 10 sq. mile for industrial area and 28 sq. miles for rural area respectively.

(ii) Construction of 5 no. of V. R. B.'s.

(iii) Construction of 1 no. 3.12 m. tail fall-cum-V. R. B.

(iv) Construction of 1 no. regulator.

(v) Construction of 14 km. long earthen bund starting from near village Raipur Phadar upto village

Kulesra. The top of the bund will be 6.0 m. wide having 2 : 1 side slopes on both sides with 1.5 m. free board above H. F. L. In the first 8 kms. the bund runs parallel to the current and is quite close to the river at several places. To provide extra strength and safety to the bund in its first 8 kms. provision for boulder pitching of 0.3 m. thickness over .15 m. filter on the river face with 0.3 m. free board and launching apron instead of spurs is provided.

(vi) Construction of 18 km. long Hindan marginal bund starting from Kulsera and connecting Hindan barrage. The top to the bund will be 6.0 m. wide having 2 : 1 side slope on both sides with 1.5 m. free board above HFL, pitching of slope on river face has been provided in 11 kms. length where ever it is required.

The cost of the project is Rs.1004 lakhs and the benefit cost ratio is 8.2. The scheme will provide benefit by 11,000 hectares of land.

(10) *Canalisation of Kalyani Nadi in District Bara Banki costing Rs.49.40 lakhs*

Kalyani river forms the major drainage

system between river Ghagra and Gomti in Bara Banki District. This drainage lies between two major water sheds of Daryabad Branch and Bara Banki Branch and outfalls in river Gomti after traversing a length of 161 km. It starts from the confluence of East and West Kalyani Nadi East and West Kalyani rivers were improved in the year 1960-61 with a factor of $C=20 M^{\frac{3}{4}}$ and 5.m respectively but no work was done in the main Kalyani river.

In the year 1970 large areas along the river were adversely affected by the floods which led to persistent public demand to improve this major drainage.

The project had envisaged the following :—

(i) Remodelling of 161 kms. long river with a factor of 10 cusecs per sq. mile in dickens formula.

(ii) Remodelling of two D. R. B.'s.

This project estimate has been modified in accordance with the recommendation of the Technical Advisory Committee. The modified project costs Rs.49.40 lakhs with a benefit cost ratio 3.25.

The project estimate costing Rs.49.40 lakhs will provide benefit to 12,075 acres of land.

Major Head of Development—3. WATER AND POWER DEVELOPMENT

Scheme-wise outlays

Sub-major Head of Development—3.02—Flood Control (Concl'd.)

Serial no.	Name of Scheme	Fifth Plan (1974—78) Actual Expenditure	1977-78 Actual Expenditure	Five-Year Plan 1978—83 Proposed outlay		
				Total (Col. 8+10+14+15+16)	Capital	Foreign Exchange
1	2	3	4	5	6	7
(A) CONTINUING SCHEME—						
1	Drainage Improvement	241.30	127.36	2342.75	2342.75	..
2	Marginal Embankment	738.59	418.19	1473.16	1473.16	..
3	Town Protection	640.87	138.44	435.39	435.39	..
4	Anti Erosion and River Improvement ..	365.05	167.56	378.09	378.09	..
Total (A) Continuing Scheme..		1985.81	851.55	4629.39	4629.39	..
(B) NEW SCHEMES—						
5	Drainage Improvement .. ..	..	..	4512.86	4512.86	..
6	Marginal Embankment .. ..	..	..	3636.99	3636.99	..
7	Town Protection .. ..	..	..	6564.50	6564.50	..
8	Anti Erosion and River Improvement ..	..	..	2836.62	2836.62	..
Total (B) New Scheme ..		..	..	17550.97	17550.97	..
Total (A+B)		1985.81	851.55	22180.36	22180.36	..
9	Survey and Investigation .. ..	..	..	500.00	500.00	..
10	Reservoir Schemes .. ..	..	..	1200.00	1200.00	..
11	Emergent and Unforseen Schemes ..	..	..	385.92	385.92	..
12	Flood protection work in Hill zone. ..	..	..	..	..	..
13	Repairs to Flood works .. ..	..	..	..	..	..
14	Expenditure on completed Works ..	1783.19	..	..	..	..
Total for 3.02. Flood Control ..		3769.00	851.55	24266.28	24266.28	..

and Expenditure

(Rupees in lakhs)

1978-79		1979-80			1980-81	1981-82	1982-83	
Approved outlay	Anticipated Expendi- ture	Total	Foreign Exchange content of total outlay	Capital content of total outlay	Hills	Estimated	Estimated	Estimated
8	9	10	11	12	13	14	15	16
596.86	467.01	563.17	..	563.17	..	460.31	447.66	274.75
348.73	488.62	481.88	..	481.88	..	315.29	327.26	..
173.05	102.57	156.79	..	156.79	..	83.40	22.15	..
113.72	169.35	138.97	..	138.97	12.80	84.19	37.32	3.89
1232.36	1227.55	1340.81	..	1340.81	12.80	943.19	834.39	278.64
41.60	83.63	384.04	..	384.04	7.37	932.58	1330.60	1824.04
32.00	24731	760.69	..	760.69	5.00	870.39	913.61	1060.30
1.90	73.99	365.51	..	365.51	10.00	1727.79	2067.86	2401.44
37.14	258.44	973.03	..	973.03	39.83	621.05	643.54	561.86
112.64	663.37	2483.27	..	2483.27	62.20	4151.81	4955.61	5847.64
1345.00	1890.92	3824.08	..	3824.08	75.00	5095.00	5790.00	6126.28
..	..	100.00	..	100.00	..	125.00	125.00	150.00
..	..	..	..	..	..	200.00	500.00	500.00
55.00	69.08	75.92	..	75.92	..	80.00	85.00	90.00
..	50.00	..	..	..	..	..	..	..
..	475.00	..	..	..	..	..	..	..
..
1400.00	2485.00*	4000.00	..	4000.00	75.00	5500.00	6500.00	6866.28

*Includes special central assistance of Rs.10.85 crores out of an allocation of Rs. 65.62 crores for cyclones and floods details of which are as follows :

	(Rs. in crores)
(i) Halwana Drain	2.35
(ii) Repair of Ex-Zamindari Bunds	0.25
(iii) Flood Control repairs	4.25
(iv) Repair/Reconstruction of damaged flood Control and drainage works in plains.	3.00
(v) New Schemes of repair/reconstruction of flood Control works in Hill areas.	1.00
Total	10.85

Serial no.	Name of Scheme	Zone	District to be benefited	Estimated cost		
				Approved	Latest	Expenditure up to the end of 1973-74
1	2	3	4	5	6	7
A. pre-Fifth Plan Schemes						
<i>(i) Drainage improvement—</i>						
1	Constructing Phuldera drain	Western	Meerut	4.57	4.57	0.53
2	Raising and strengthening Left and Right guide bund and remodelling Kama regulator.	„	Mathura	10.40	10.40	1.95
3	Constructing Harnad drain	„	„	73.82	73.82	40.89
4	Constructing Paintha drain	„	„	18.90	18.90	8.20
5	Constructing Kakua drain	„	„	60.15	60.15	0.55
Total D. I. Western Zone ..				167.84	167.84	52.12
6	Remodelling and extension of Hathoda drain	Central	Hardoi	23.80	23.80	12.40
7	Remodelling and extension of Choiya drain	„	„	22.12	22.12	9.20
8	Remodelling and extension of Bharel and Ahirauli drain.	„	„	15.05	15.05	6.35
9	Remodelling and extension of Kursat drain	„	„	5.86	5.86	0.27
10	Constructing of Sarwantal drain	„	„	7.94	7.94	5.30
11	Remodelling Loni Nadi pucca works	„	„	12.26	12.26	1.64
12	Remodelling of Kalyani Nadi	„	Bara Banki	49.40	49.40	3.45
13	Constructing of Basha drain Stage-II	„	Rae Bareli	27.19	27.19	6.80
14	Remodelling Issur drain	„	„	22.68	22.68	9.95
15	Constructing of Basha drain Stage-I	„	„	29.98	29.98	13.90
16	Constructing of Maharajganj drain	„	„	96.50	96.50	3.58
Total D.I. Central Zone ..				312.78	312.78	72.84
17	Constructing Maisontal drain	Eastern	Sultanpur	24.81	24.81	0.58
18	Constructing Ahurital drain	„	„	9.94	9.94	0.55
19	Constructing Jaissaratal drain	„	„	2.86	2.86	0.69
20	Drain in four Eastern district of U.P.	„	Deoria, Azamgarh, Ghazipur, Jaunpur.	34.56	34.56	25.49
Total—D. I. Eastern Zone				72.17	72.17	27.31
GRAND TOTAL—D. I. of pre-Fifth Plan				552.79	552.79	152.27

and expenditure

STATEMENT—1. F-5

Anti-erosion and Waterlogging Projects

(Rupees in lakhs)

1974-77 Expen- diture	1977-78 Approved outlay	Ex- pendi- ture	Total expen- diture to the end of 1977-78	1978-79		1979-83	Proposed year-wise outlays				
				Approved outlay	Anti- cipated expendi- ture	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
8	9	10	11	Central Assistance	12	13	14	15	16	17	18
2.67	0.18	0.06	3.26	1.15	0.57	..	..	..	..	..	..
2.66	..	0.36	4.97	5.75	..	5.43	5.43	..	..	..	..
11.42	2.27	2.01	54.32	19.20	6.78	12.72	7.00	5.72	..	..	..
5.17	2.15	0.29	13.66	3.35	..	5.24	3.00	2.24	..	..	..
4.01	7.91	14.52	19.88	32.53	20.34	19.93	19.93	..	..	..	..
26.73	12.51	17.24	90.09	61.98	27.69	43.32	35.36	7.96	..	..	..
1.20	4.52	0.81	14.41	5.65	3.77	5.62	4.00	1.62	..	..	..
8.78	..	..	17.98	4.10	4.72	..	..	..	..	..	..
0.84	2.26	..	7.19	5.60	..	7.86	4.86	3.00	..	..	..
1.70	2.83	0.01	1.98	0.95	1.66	2.22	2.22	..	..	..	..
1.15	1.36	..	6.45	0.10	..	1.49	1.49	..	..	..	..
0.24	5.65	..	1.88	4.70	..	10.38	5.00	5.38	..	..	..
0.53	..	0.01	3.99	30.00	9.04	36.37	15.00	15.00	6.37	..	..
1.73	5.65	..	8.53	13.00	..	18.66	9.33	9.33	..	..	..
5.44	1.13	0.97	16.36	6.15	0.57	5.75	3.50	2.25	..	..	..
6.86	..	2.86	23.61	9.20	2.26	4.11	2.11	2.00	..	..	..
9.97	33.90	22.59	36.14	49.05	19.78	40.58	20.58	20.00	..	..	..
37.29	57.30	27.24	138.52	128.50	41.80	133.04	68.09	58.58	6.37	..	..
3.60	5.09	4.66	8.84	15.50	4.52	9.67	6.00	3.67	..	..	..
2.75	3.39	2.98	6.28	3.25	2.26	1.40	1.40	..	..	..	..
..	..	..	0.69	2.15	..	2.17	2.17	..	..	..	..
2.75	..	2.12	30.36	..	..	4.20	4.20	..	..	..	..
9.10	8.40	9.76	46.17	20.90	6.78	17.44	13.77	3.67	..	..	..
73.12	78.29	54.24	280.78	211.38	76.27	193.80	117.22	70.21	6.37	..	..

STATEMENT IF-5—(Contd.)

Serial no.	Name of Scheme	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
2 Marginal embankment—					
1	Extension of Ganga Mehwa Bund	Western	Badaun	10.92	10.92
Total—M.E. Western Zone				10.92	10.92
1	Strengthening and Raising and closing breaches at Bansi	Eastern	Basti	40.70	40.70
2	Panghatia Bund	„	„	5.48	5.40
3	Constructing Bailach Tal Bund	„	„		
4	Constructing Zarda Domri Bund	„	Gorakhpur	32.19	32.19
Total—M.E. Eastern Zone				78.37	78.37
GRAND TOTAL—M.E. pre-Fifth Plan				89.29	89.29
3. Town Protection					
1	Consrructing of Gomti Barrage (I.D.)	Central	Lucknow	459.70	459.70
2	Pumping arragement by Jal Nigam, Lucknow	„	„	334.00	334.00
Total—Central Zone				793.78	793.78
3	Launching apron in front of Varanasi Ghat	Eastern	Varanasi	93.59	93.59
Total—Eastern Zone				93.59	93.59
GRAND TOTAL—T. P. of the pre-Fifth Plan				887.37	887.37
4 River improvement and Anti-erosion works					
1	FPW of V. Shitalgarhi	Western	M.Nagar	22.83	22.83
2	FPW of V. Nathaila	„	Meerut	3.18	3.18
3	FPW D/S of Kunda Kalna	„	Saharanpur	30.35	30.35
Total—R. I. A. E. Western Zone				56.36	56.36
4	Constructing Baria Sansartola Bund Phase-I)	Eastern	Ballia	52.80	52.80
Total—R. I. and A. E. Eastern Zone				52.80	52.80
GRAND TOTAL—R. I. and A. E. of pre-Fifth Plan				109.16	109.16
Grant total of plains' schemes started during pre-Fifth Plan"period				1638.61	1638.61

(Rupees in lakhs)

Expendi- ture up to end of 1973-74	1974-77	1977-78		Total Expen- diture to end of 1977-78	1978-79		1979-83		Proposed year-wise outlays			
	Expen- diture	Approved outlay	Expen- diture		Approved outlay	Anti- cipated expen- diture	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
7	8	9	10	11	12	13	14	15	16	17	18	
3.44	6.36	0.68	0.66	10.46	0.40	..	..	..	..	..	..
3.44	6.36	0.68	0.66	10.46	0.40	..	..	..	..	..	..
6.91	15.40	13.56	4.50	26.81	4.80	13.56	..	..	..	..	..
1.54	1.16	0.28	0.32	3.02	2.50	2.26	..	..	..	..	..
4.72	15.77	5.65	3.14	23.63	6.00	1.13	7.43	4.00	3.43	..	..
13.17	32.33	19.49	7.96	53.46	13.30	16.95	7.43	4.00	3.43	..	..
16.61	38.69	20.17	8.62	63.92	13.70	16.95	7.43	4.00	3.43	..	..
177.70	265.94	9.04	10.19	453.83	7.10	9.04	..	..	..	..	..
172.81	124.90	22.60	40.68	338.39	13.65	..	..	..	..	..	..
350.51	390.84	31.64	50.87	792.22	20.75	9.04	..	..	..	..	..
30.01	22.62	14.13	13.98	66.61	28.00	16.80	10.18	10.18	..	..	..
30.01	22.62	14.13	13.98	66.61	28.00	16.80	10.18	10.18	..	..	..
380.52	413.46	45.77	64.85	858.83	48.75	25.84	10.18	10.18	..	..	..
0.08	18.51	2.71	3.74	22.33	1.50	..	..	..	..	..	..
0.20	1.04	1.02	0.06	1.30	0.90	..	..	..	..	..	..
10.95	6.66	2.26	0.41	18.02	3.20	2.00	10.33	6.33	4.00	..	..
11.23	26.21	5.99	4.21	41.65	5.60	2.00	10.33	6.33	4.00	..	..
5.80	3.94	24.86	4.12	14.13	..	11.30	27.37	15.00	12.37	..	..
5.80	3.94	24.86	4.12	14.13	..	11.30	27.37	15.00	12.37	..	..
17.03	30.15	30.85	8.33	55.78	5.60	13.30	37.70	21.33	16.37	..	..
566.43	555.42	175.08	136.04	1259.31	279.43	132.36	249.11	152.73	90.01	6.37	..	

STATEMENT I. F.—5—(Contd.)

Serial no.	Name of Scheme	Zone	Districts to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
B. Fifth Plan Schemes					
<i>Drainage Improvement</i>					
1	Consructing Gunarsi drain	Western	Saharanpur	2.42	2.42
2	Channelization of Katha Nala	"	"	59.90	59.90
3	Remodelling and extension Dhansari Drain	"	M.Nagar	13.66	13.66
4	Construction Khurasana Drain	"	"	3.94	3.94
5	Construction Machhrauli Drain	"	"	7.45	7.45
6	Constructing Urban Bund at R/B of Balkhera Nala	"	"	12.99	12.99
7	Remodelling Ikhu Drain	"	Mathura	12.48	12.48
8	Constructing Kosi Arterial drain	Western	Mathura	160.00	160.00
9	Halwana diversion drain	"	"	1515.00	1515.00
10	Remodelling of pathway drain	"	"	48.73	48.73
11	Remodelling of Bhurekha and Pachera and Shiwala drains	"	"	17.44	17.44
12	Remodelling of Naya bans drain	"	Agra	2.31	2.31
13	Constructing Zool drain	"	Moradabad	6.01	6.01
Total D.I. Western Zone				1864.28	1864.28
14	Anti waterlogging schemes in Nighason tehsil along Suheli Central Kheri river.			0.69	0.69
15	Constructing Sivgarh drain	"	Rae Bareli	12.39	12.39
16	Constructing Moongtal drain	"	"	14.87	14.87
17	Constructing Inhauna drain	"	"	39.46	39.46
18	Constructing Haswatal drain	"	"	3.97	3.97
19	Constructing Gomiyatal drain	"	"	22.19	22.19
Total D. I. Central Zone				93.57	93.57

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77		1977-78		Total expenditure to end of 1977-78	1978-79		1979-83		Proposed Year-wise Outlays			
	Expenditure	Approved outlay	Expenditure	Approved outlay		Anti-cipated expenditure	Proposed outlay		1979-80	1980-81	1981-82	1982-83	
							Central Assistance	Total					
7	8	9	10	11	12	13	14	15	16	17	18		
..	..	..	0.07	0.07	2.40	0.23	2.12	2.12	..	..	..
..	0.48	4.52	1.08	1.56	27.00	1.70	56.64	20.00	26.64	10.00	..		
..	0.11	2.26	2.36	2.47	11.25	6.78	4.41	4.41	..	..	..
..	0.45	2.25	0.84	1.29	3.10	1.13	1.52	1.52	..	..	..
..	0.45	2.26	0.37	0.82	4.70	2.26	4.37	3.00	1.37	..	..
..	..	..	..	8.49	6.75	3.39	1.99	1.99	..	..	..
..	..	..	..	4.13	2.60	7.91	..	..	..	..	..
..	0.55	13.56	18.43	18.98	58.12	33.98	107.12	40.00	40.00	27.12	..		
..	..	..	15.25	5.25	385.00	235.00	1274.75	300.00	300.00	400.00	274.75
..	1.02	18.08	12.00	13.02	44.60	16.80	18.91	18.91	..	..	..
..	..	..	2.09	2.09	5.00	11.00	4.35	4.35	..	..	..
..	..	..	..	1.28	1.00	1.13	..	..	..	..	..
..	3.36	0.23	(-) 0.02	3.34	2.45	..	2.67	2.67	..	..	..
..	6.42	43.17	42.47	62.79	553.97	321.31	1478.85	398.97	368.01	437.12	274.75		
..	0.26	..	..	0.26	0.40	..	0.43	0.43	..	..	..
..	7.37	5.65	1.73	9.10	..	3.11	..	..	..	..	..
..	3.45	6.78	4.68	8.13	4.60	6.50	..	..	..	..	..
..	4.80	9.04	1.25	6.05	15.00	9.24	25.17	15.17	10.00	..	..
..	4.06	..	(-) 2.78	1.28	..	1.81	0.88	0.88	..	..	..
..	3.31	5.65	1.32	4.63	13.20	3.39	14.17	5.00	5.00	4.17	..		
..	23.25	27.12	6.20	29.45	33.20	24.05	40.65	21.48	15.00	4.17	..		

STATEMENT—I. F. 5—(Contd.)

Serial no.	Name of Scheme	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
20	Remodelling Darban Tal drain	Eastern	Faizabad	3.04	3.04
21	Channelization of Morwa nadi .. ..	..	Varanasi	14.57	14.57
22	Constructing Mansaita nala .. ..	..	Allahabad	22.31	22.31
23	Increasing capacity of choti Sarju .. ..	..	Azamgarh	15.23	15.23
24	Constructing tal Ratai drain .. ..	..	..	3.95	3.95
25	Constructing Suhela tal drain .. ..	..	Gonda	2.37	2.37
26	Constructing Suhela tal drain .. ..	..	Ballia	2.35	2.35
27	Constructing Pakrital drain .. ..	..	..	2.80	2.80
28	Constructing Tulsital drain .. ..	..	..	13.56	13.56
29	Constructing Jamunatal drain .. ..	..	..	7.98	7.98
30	Constructing Pandehtal drain .. ..	..	..	6.81	6.81
31	Remodelling Rasratal drain .. ..	..	..	4.78	4.78
32	Remodelling Garhatal drain .. ..	..	..	6.68	6.68
33	Remodelling Khadiyatatal drain .. ..	..	..	4.35	4.35
Total D. I. Eastern Zone				110.78	110.78
GRAND TOTAL D. I. Fifth Plan Scheme				2068.63	2068.63
<i>Marginal embankments</i>					
1	Constructing bundh R/B of Katha nala	Western	M. Nagar	7.20	7.20
2	Constructing bundh along R/B of Betahra .. ..	..	..	12.99	12.99
3	Constructing Alipur bundh .. ..	..	Ghaziabad	180.19	180.19
4	FPW of Noida area .. ..	..	..	1004.00	1004.00
5	Constructing Hasanpur bundh .. ..	..	Moradabad	68.00	68.00
Total, M. E. Western Zone				1272.38	1272.38
6	Raising and strengthening old zamindari bundh. Mahmoodabad	Central	Sitapur	22.00	22.00
Total, M. E. Central Zone				22.00	22.00

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77		1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure	Approved outlay		Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
												Central Assistance	Total
7	8	9	10	11	12	13	14	15	16	17	18	
..	..	..	2.45	2.45	1.00	5.09	..	..	..	..	..
..	..	5.65	5.83	5.83	8.90	9.04	..	..	..	..	..
..	6.03	1.13	8.48	14.51	15.15	2.83	4.97	2.97	2.00	..	..
..	3.83	2.26	2.05	5.88	3.25	2.26	7.09	4.00	3.09	..	..
..	1.17	1.70	1.19	2.36	1.05	1.13	0.46	0.46	..	..	..
..	..	..	..	1.84	0.10	0.34	0.19	0.19	..	..	..
..	..	0.57	0.24	0.24	1.75	1.13	0.98	0.98	..	..	..
..	0.08	0.57	0.67	0.75	2.15	1.13	0.92	0.92	..	..	..
..	0.04	0.57	1.15	1.19	21.81	8.86	3.52	3.52	..	..	..
..	..	0.57	0.05	0.05	7.40	2.26	5.67	5.67	..	..	..
..	..	0.57	..	0.18	6.20	2.83	3.80	3.80	..	..	..
..	..	0.57	0.52	0.52	4.20	2.26	2.00	2.00	..	..	..
..	..	0.57	1.53	1.53	6.10	3.39	1.76	1.76	..	..	..
..	..	0.57	0.29	0.29	3.75	2.83	1.23	1.23	..	..	..
..	11.15	15.30	24.45	37.62	82.81	45.38	32.59	25.50	7.09	..	..
..	40.82	85.59	73.12	129.86	669.98	390.74	1552.09	445.95	390.10	441.29	274.75	
..	5.35	1.58	0.55	5.90	0.25	0.25	1.05	1.05	..	..	..
..	1.70	4.52	5.79	7.49	6.75	3.39	2.11	2.11	..	..	..
..	0.73	5.65	61.19	61.92	74.55	67.58	50.69	50.69	..	..	..
..	11.30	44.08	120.35	131.65	75.00	219.22	653.13	200.00	203.13	250.00	..	
..	15.91	45.20	35.18	51.09	6.85	15.82	2.09	1.88	..	..	..
..	34.99	101.03	223.06	258.05	163.40	306.26	708.07	254.94	203.13	250.00	..	
..	9.25	11.30	..	9.25	1.45	..	12.75	7.00	5.75	..	..
..	9.25	11.30	..	9.25	1.45	..	12.75	7.00	5.75	..	..

STATEMENT I. F. 5.—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
7	Brick soling on the top of Surajpur Haha nala bundh	Eastern	Azamgarh	11.60	11.60
8	Constructing II-retired Haha nala bundh	"	"	6.97	6.97
9	Strengthening Moha Garhwal bundh	"	"	10.54	10.54
10	Strengthening of K. G. bundh	"	Basti	43.36	43.36
11	Strengthening of Mukhlispur bundh	"	"	6.33	6.33
12	Construction of Uskalakhanpur bundh	"	"	13.92	13.92
13	Strengthening and raising dismentalling brick soling including relaying of Malony bund from floods of Rapti river.	"	Gorakhpur	39.71	39.71
14	Ditto Kotha Rakhat bundh	"	"	12.54	12.54
15	Ditto and Gagha Rakhat bundh	"	"	9.19	9.19
16	Constructing Panghatia Kirmani bundh along river Rapti	"	"	24.24	24.24
17	Constructing Chheri bundh	"	"	8.87	8.87
18	Strengthening Pilot Dhurandha bundh	"	Ballia	8.43	8.43
19	Retired Buklahs Sansar toal bundh	"	Gorakhpur	8.90	8.90
20	Construction bundh Sahjanwa to Domaria along Rapti	"	"	36.16	36.16
21	Construction Kudaria Maniram bundh along Rohin	"	"	15.42	15.42
22	Strengthening and raising Malon bundh	"	"	4.01	4.01
23	Constructing Bhowapar Bela bund	"	"	31.64	31.64
24	Protection of Rly embankment on Ganga	"	Deoria	247.42	247.42
25	Strengthening of Chitauni bundh and Bhirbharspur	"	"	231.57	231.57
26	Constructing Amwakhas bundh	"	"	78.64	78.64
27	Constructing Pipraghat Ahrauli bundh	"	"	62.35	62.35
28	Strengthening of Tighra Marachi bundh	"	"	24.87	24.87
29	Strengthening and Raising Hober bundh from floods of Rapti river.	"	Gorakhpur	6.23	6.23
Total, M.E. Eastern Zone				985.36	985.36
GRAND TOTAL M.E. of Schemes of Fifth Plan				2279.74	2279.74

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
					Central Assistance		Total				
7	8	9	10	11	12	13	14	15	16	17	18
..	3.69	6.78	5.92	9.61	1.10	1.47	..	..	..	..	..
..	4.38	..	..	4.38	2.55	..	2.59	2.59	..	..	..
..	1.72	2.26	3.89	5.61	6.55	..	4.92	4.93	..	..	..
..	20.82	16.95	15.93	36.75	5.55	3.96	..	..	..	..	..
..	4.22	2.26	1.54	5.76	..	0.51	..	..	..	..	..
..	..	..	1.39	1.39	2.00	1.70	10.83	4.00	4.00	2.83	..
..	24.58	6.78	7.22	31.80	7.35	6.78	..	..	..	..	..
..	4.40	6.78	5.20	9.60	1.35	2.26	..	..	..	..	..
..	1.65	4.52	4.01	5.66	3.00	1.69	1.84	1.84	..	..	..
..	4.84	11.30	16.28	21.82	8.10	3.11	..	..	..	..	..
..	..	..	..	2.28	..	5.09	1.50	1.50	..	..	..
..	..	..	..	5.65	..	2.83	..	..	..	..	..
..	..	..	..	4.06	..	4.06	..	..	..	..	..
..	1.14	11.30	20.15	21.29	10.00	9.04	5.83	5.83	..	..	..
..	1.10	11.30	6.22	7.32	3.00	7.91	..	..	..	..	..
..	1.21	2.26	1.32	2.53	0.50	0.23	1.25	1.25	..	..	..
..	1.76	11.30	5.37	7.13	18.55	11.30	13.21	8.00	5.21	..	..
..	71.28	22.60	12.58	83.86	50.00	11.30	152.26	50.00	50.00	52.26	..
..	67.72	67.80	38.88	106.00	54.88	22.80	102.17	40.00	40.00	22.17	..
..	..	..	12.32	12.32	8.56	31.00	35.32	35.32	..	..	..
..	6.60	..	8.18	14.78	11.69	33.34	14.23	14.23	..	..	..
..	9.87	5.65	6.10	15.97	9.35	1.13	7.77	4.00	3.77	..	..
..	4.23	1.70	5.34	9.57	0.30	..	..	..	..	..	..
..	235.21	191.54	178.14	389.31	204.38	161.51	396.18	215.94	102.98	77.26	..
..	279.45	303.87	401.20	656.61	369.23	467.77	1117.00	477.88	311.86	327.26	..

STATEMENT IF—5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost —	
				Approved	Latest
1	2	3	4	5	6
<i>Town Protection :</i>					
1	FPW of Kali Nadi bundh to protect of B. Shahr	Western	Bulandshahr	62.00	62.00
2	Protection of Shahi town from Kichha river	..	..	5.81	5.81
3	Protection of Nawabganj town from Panhauli river	..	..	0.97	0.97
Total, Western Zones				68.78	68.78
4	Construction of bundh u/s Harding bridges on both bank of Lucknow river.	Central	Lucknow	148.19	148.19
5	Rai Bareli town protection schemes from Sai river	..	..	11.04	11.04
Total, Central Zone				159.73	159.73
6	Pumping arrangement at Barhi bundh for protection of Allahabad.	Eastern	Allahabad	34.60	34.60
7	Protection of Mau town	..	..	49.98	49.98
8	Pumping arrangement at Hobert bundh of Gorakhpur to protect town (L.S.G.E.D.)	..	..	46.60	46.60
9	Azamgarh link bundh	..	..	3.78	3.78
10	Raising Azamgarh town protection bundh along R/B of river Tons.	..	..	49.98	49.98
11	Protection of Kamla Nehru Institute at Sultanpur	..	..	53.93	53.93
Total, Eastern Zone				238.87	238.87
12	Experimental project for protection of Hamirpur town B. Khand	..	..	49.88	49.88
Total, B. Khand Zone				49.88	49.88
Total, T. P. started in Fifth Plan				517.26	517.26
<i>River improvement and Anti erosion works</i>					
1	FPW of V. Hamirpur and tapu on Yamuna river	..	..	28.26	28.26
2	FPW of V. Alahanpur	..	..	4.22	4.22
3	FPW of V. Beggi	..	..	29.88	29.88

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	14.45	..	..	14.45	25.00	15.82	31.73	20.00	11.73	..	..
..	0.40	3.39	2.85	3.25	2.00	..	2.56	2.56	..	..	..
..	0.24	0.44	0.41	0.65	0.25	..	0.32	0.32	..	..	..
..	15.09	3.83	3.26	18.35	27.25	15.82	34.61	22.88	11.73	..	..
..	2.26	42.90	42.94	45.20	50.00	25.29	77.70	53.00	24.70	..	..
..	2.26	6.78	5.06	7.32	2.00	0.57	3.15	2.00	1.15	..	..
..	4.52	49.68	48.00	52.52	52.00	25.86	80.85	55.00	25.85	..	..
..	22.83	..	1.04	23.87	9.75	..	10.73	10.73	..	..	..
..	6.47	30.51	4.54	11.01	28.00	15.00	23.97	15.00	8.97	..	..
..	22.75	..	..	22.75	10.35	..	23.85	15.00	8.85	..	..
..	..	..	2.28	2.28	3.57	1.69	..	..	..	..	..
..	..	..	25.55	25.55	..	2.54	21.89	8.00	8.00	5.89	..
..	12.79	9.04	6.68	19.47	10.00	6.78	27.73	10.00	10.00	7.73	..
..	64.84	39.55	14.54	104.93	61.85	26.01	108.17	58.73	35.82	13.62	..
..	4.52	13.56	7.79	12.31	15.00	9.04	28.53	10.00	10.00	8.53	..
..	4.52	13.56	7.79	12.31	15.00	9.04	28.53	10.00	10.00	8.53	..
..	88.97	106.62	73.59	188.11	156.10	76.73	252.16	146.61	83.40	22.15	..
..	11.48	7.91	12.55	24.03	8.85	2.26	..	..	..	..	..
..	2.40	1.70	1.67	4.07	0.10	..	..	..	..	..	..
..	31.97	5.65	2.94	24.91	2.25	2.26	..	..	..	..	..

STATEMENT—I.F. 5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
4	FPW fo V. Kutubpur Kusaini	Western	Saharanpur	3.39	3.39
5	FPW of V. Kunda Khurd	"	"	27.47	27.47
6	FPW of V. Naniyari Godhebans	"	"	14.69	14.69
7	FPW of V. Hakimpur Turra	"	"	4.09	4.09
8	FPW of V. Jandheri from Gangroo Rao	"	"	4.73	4.73
9	FPW of Safipur	"	"	5.22	5.22
10	FPW of Katra Kosi Bertha Aslampur Pertha	"	"	34.49	34.39
11	A.E. works near the V. Udpur	"	"	20.83	20.83
12	FPW of V. Shitalgarhi	"	"	23.27	23.27
13	FPW of V. Usufpur Chautra	"	"	11.15	11.15
14	FPW of V. Basera	"	"	12.30	12.30
15	Reconstruction and repairs to FPW of V. Mandawar from Yamuna.	"	"	12.76	12.76
16	FPW of V. Mehendipur	"	"	1.40	1.40
17	FPW of V. Lalitpur	"	"	12.74	12.74
18	FPW of V. Karanwas	"	"	23.46	23.46
19	FPW of V. Afzalgarh from N.I.E.H.E.A. N.A.L.A.	"	Bijnor	0.42	0.42
20	A.E. along Ganga river near Shahjahanpur	"	Shahjahanpur	2.85	2.85
21	Protection of Brijghat	"	Ghaziabad	3.92	3.92
Total Western Zone				281.44	281.44
22	Protection works of 4 villages in Rampur, Mathura Blocks	Central	Sitapur	30.35	30.35
23	Protection of banks at Dal Mau ghats	"	Rai Bareli	16.50	16.50
Total, Central Zone				46.85	46.85
24	FPW of Fatehpur Rai ka tola	Eastern	Ballia	22.93	22.93
25	FPW of Lilkar	"	"	12.82	12.82
26	FPW of Belthara bazar	"	"	10.10	10.10
27	Providing pitching and launching apron from 1275 M to 1745 M on Ballia bundh.	"	"	49.96	49.9

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83		Proposed year-wise outlay			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anti-cipated expenditure	Proposed outlay	Total	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18	
..	2.13	0.85	0.26	2.39	0.30	0.68	..	..	..	..	..
..	10.38	10.17	11.47	21.85	6.90	1.02	4.60	3.00	1.60	..	..
..	1.34	7.91	11.48	12.82	5.00	1.41	..	..	..	..	..
..	0.23	2.26	1.57	1.80	0.15	2.03	..	..	..	..	..
..	0.24	0.45	0.21	0.45	0.10	3.39	0.89	0.89	..	..	..
..	0.43	2.38	3.22	3.65	..	0.23	..	..	..	..	..
..	8.68	5.65	1.88	10.56	5.00	0.68	23.15	15.00	8.15	..	..
..	..	..	8.55	8.55	..	10.17	2.11	2.11	..	..	..
..	..	..	5.94	5.94	..	14.69	2.64	2.64	..	..	..
..	0.43	9.61	4.24	4.67	1.10	3.39	3.09	3.09	..	..	..
..	11.87	..	..	4.87	0.40	6.78	0.65	0.65	..	..	..
..	..	..	1.97	1.97	1.00	1.00	9.79	4.00	4.00	1.79	..
..	0.52	0.85	0.72	1.24	..	0.10	..	..	..	..	..
..	..	..	0.62	0.62	1.00	7.91	4.21	4.21	..	..	..
..	9.66	6.78	5.19	14.85	7.00	1.13	7.48	4.00	3.48	..	..
..	..	0.41	..	..	..	0.34	..	..	..	..	..
..	1.13	..	..	1.13	1.70	..	1.72	1.72	..	..	..
..	..	..	0.68	0.68	3.90	2.26	0.98	0.98	..	..	..
..	71.02	69.58	75.16	155.52	38.79	63.16	61.31	42.29	17.23	1.79	..	
..	0.46	22.60	..	0.46	7.25	..	29.89	6.00	10.00	10.00	3.89	
..	0.02	4.52	0.34	0.36	6.00	45.82	..	..	..	..	..
..	0.48	27.12	0.34	0.82	13.25	15.82	29.89	6.00	10.00	10.00	3.89	
..	..	..	2.08	2.08	2.00	16.95	3.90	3.90	..	..	..
..	..	..	2.16	2.16	1.00	10.62	..	..	..	..	..
..	..	..	5.57	5.57	1.00	3.28	1.25	1.25	..	..	..
..	32.33	..	0.03	32.36	3.15	..	17.60	10.00	7.60	..	..

STATEMENT—1. F. 5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
28	FPW of Jajhawan at 3100 to 3400 M at Saighat from Ganga river.	Eastern	Ballia	15.75	15.75
29	FPW near Shukulpur Chhapra and Gaighat chainage 2200 M to 2525 M from Ganga river.	„	„	47.36	47.36
30	FPW of Rampur Dhanauli from river Ghagra.	„	Azamgarh	5.95	5.95
31	FPW of Bokta barwar bundh	„	Gorakhpur	11.15	11.15
32	FPW of Malony bundh	„	„	49.82	49.82
33	FPW of Kanail majhgawan bundh	„	„	3.28	3.28
34	Constructing 15 nos. dampeners along L/B of Ghagra	„	Basti	8.55	8.55
35	A.E. works at Bansi Panghatia bundh at Km. 2672 to 32.4	„	„	40.70	40.70
36	A.E. works on Bajraha buzurg on Rapti	„	„	10.66	10.66
37	Revised P/E of erosion control on L/B of river Ganga near V. Lilapur Kalan.	„	Allahabad	49.40	49.40
Total, A.E. Eastern Zone				338.43	338.43
Total, A.E. of Fifth Plan				666.72	666.72
GRAND TOTAL U.P. (PLAINS) SCHEMES STARTED DURING FIFTH PLAN				5532.35	5532.35
HILL RANGE					
Fifth Plan Schemes					
<i>Marginal embankment</i>					
1	Strengthening Madanpur bundh on Katna nala	Hill	Nainital	8.51	8.51
2	P/E for safety Bazpur bundh	„	„	6.22	6.22
Total, M.E.				14.73	14.73
<i>River improvement and anti-erosion works</i>					
1	FPW of Paniyali	„	Nainital	1.30	1.30
2	FPW of Sanauli Shera	„	Pithoragarh	1.60	1.60
3	FPW of Nayagot	„	Nainital	0.60	0.60
4	FPW of Jail farm from Kailash river	„	„	5.50	5.50

(Rupees in lakhs)

Expendi- ure up to end of 1973-74	1974-77 Expendi- ture	1977-78		Total Expen- diture to end of 1977-78	1978-79		1979-83		Proposed year-wise outlay			
		Approved outlay	Ex- pen- diture		Approved outlay	Anti- cipated expen- diture	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
												Central Assistance	Total
7	8	9	10	11	12	13	14	15	16	17	18	
..	6.84	7.19	0.49	7.33	3.00	8.25	..	..	..	..	..
..	8.07	2.55	0.32	8.39	3.00	..	38.97	13.00	13.00	12.97	..	
..	..	4.52	3.07	3.07	1.40	..	2.88	2.88	..	..	..
..	2.20	6.78	5.13	7.39	2.15	1.13	2.63	2.63	..	..	..
..	1.76	11.30	3.24	5.00	5.00	2.26	42.56	15.00	15.00	12.56	..	
..	1.10	2.37	0.61	1.71	..	1.58	..	..	..	..	..
..	..	..	6.66	6.66	5.00	..	1.89	1.89	..	..	..
..	15.61	..	14.10	29.71	2.00	..	10.99	6.00	4.99	..	..
..	1.98	7.35	5.94	7.92	1.30	2.60	..	..	..	..	..
..	16.13	10.17	14.84	30.97	..	18.08	..	..	..	..	..
..	86.02	52.23	64.44	150.32	30.00	64.75	122.67	56.55	40.59	25.53	..	
..	157.52	148.93	139.94	306.66	82.04	143.73	213.87	104.84	67.82	37.32	3.89	
..	566.76	645.01	687.85	1281.24	1277.35	1078.97	3135.12	1176.28	853.18	828.02	278.64	
..	2.26	4.52	4.53	6.79	1.73	1.70	..	..	..	..	..
..	..	..	3.84	3.84	3.00	2.20	..	..	..	..	..
..	2.26	4.52	8.37	10.63	4.73	3.90	..	..	..	..	..
..	0.66	0.28	0.24	0.90	0.36	..	0.40	0.40	..	..	..
..	0.98	0.23	0.23	1.21	0.39	0.40	..	..	..	..	..
..	0.56	0.02	0.34	..	..	0.68	..	..	..	..	..
..	0.29	..	4.09	4.38	9.80	0.90	..	..	..	..	..

STATEMENT—IF-5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
5	FPW of Kishanpur Chhoit .. .. .	..	Nainital	1.35	1.35
6	FPW of Arjun nala .. .. .	..	..	3.00	3.00
7	FPW of Uchali Brahman dev. .. .. .	..	..	2.11	2.11
8	FPW of village Pratitpur .. .. .	..	Dehradun	2.39	2.39
9	FPW along river Rispana to protect bridge on Mohni road.	..	..	0.20	0.20
10	FPW of V. Mathli .. .. .	..	..	1.83	1.83
11	FPW of V. Nand prayag anti-erosion works	..	Chamoli	6.45	6.45
12	FPW of Badrinath .. .. .	..	..	18.09	18.09
13	FPW of Srinagar .. .. .	..	Pauri	4.57	4.57
14	FPW of Giwai garhi ghat .. .. .	..	..	2.96	2.96
15	FPW of Saneh .. .. .	..	..	3.94	3.94
Total, A.E. Works (Hill)] ..				55.89	55.89
Grand Total, Hills (Schemes started during Fifth Plan)				70.62	70.62
C—NEW SCHEMES					
<i>Drainage improvement</i>					
1	Drainage improvement in distt. Saharanpur ..	..	Western Saharanpur	..	25.00
2	Constructing Dhatera drain .. .. .	..	M. Nagar	..	3.10
3	Constructing Salimpur drains paste drain, Alwanpur and Badheo kalan Haider nagar drain.	..	..	..	19.20
4	Constructing Pathrauli nala .. .. .	..	Meerut	..	7.45
5	P/E for extension of Basi drain .. .. .	..	..	..	23.21
6	Constructing Lawar drain .. .. .	..	..	..	10.76
7	Channelization of Basi drain .. .. .	..	Meerut/ Ghaziabad, Mathura	..	27.15
8	Remodelling and extension of Ral drain .. .. .	..	..	..	141.00
9	Constructing Byali Brihari and Raya drain ..	..	..	..	41.55
10	Remodelling Jamon Pirsua and other new drain	..	..	..	47.60
11	Remodelling Ikhu drain .. .. .	..	..	..	12.48

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlay			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anti-cipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	..	1.47	1.15	1.15	..	0.26	..	..	..	..	..
..	..	2.26	1.80	1.80	0.74	1.13	..	..	..	..	..
..	1.10	0.90	0.75	1.85	0.11	0.23	..	..	..	..	..
..	..	0.45	..	..	..	..	3.39	2.39	..	..	..
..	..	..	..	..	0.20	..	0.20	0.20	..	..	..
..	0.34	1.40	1.06	1.40	0.09	..	0.43	0.43	..	..	..
..	0.29	0.26	0.79	1.08	3.90	2.26	3.11	3.11	..	..	..
..	3.89	5.28	4.86	8.73	7.23	5.65	3.71	3.71	..	..	..
..	0.98	2.26	2.01	2.99	1.33	0.40	1.18	1.18	..	..	..
..	..	1.81	1.24	1.24	3 1.15	0.34	1.38	1.38	..	..	..
..	0.73	2.54	2.53	3.26	0.67	0.07	..	..	..	..	..
..	9.82	21.16	19.29	30.89	26.08	12.32	12.80	12.80	..	..	..
..	12.08	25.68	27.66	41.52	30.81	16.22	12.80	12.80	..	..	..
..	..	..	..	..	..	..	25.00	..	10.00	10.00	5.00
..	..	..	..	..	1.00	1.13	1.97	1.97	..	..	..
..	..	..	..	..	..	..	19.20	2.00	10.00	7.20	..
..	..	..	..	..	1.00	..	7.45	4.00	3.45	..	..
..	..	..	..	..	..	6.78	16.43	16.43	..	..	..
..	..	..	..	..	..	..	10.76	10.76	..	..	..
..	..	..	..	..	..	..	27.15	27.15	..	..	..
..	..	..	..	..	15.00	22.60	118.40	28.40	30.00	30.00	30.00
..	..	..	..	..	5.00	4.52	37.03	20.00	17.03	..	..
..	..	..	..	..	5.00	16.95	30.65	15.00	15.65	..	..
..	..	..	..	..	2.60	9.04	3.44	3.44	..	..	..

STATEMENT-IF-5 (Contd)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
12	Remodelling Gangotu drain and Khandoha drain	..	Western Mathura	..	14.80
13	Remodelling western depression drain	.. ..	.. Agra	..	495.00
14	Aurangabad Badshahpur tal drain	.. ..	.. B. Shahr/Meerut.	..	19.98
15	Improving capacity extension of waterways of Choiya nala	..	.. B. Shahr	..	56.00
16	Constructing Kheri drain	.. ..	.. ..	..	8.94
17	Remodelling Karwan nadi	.. ..	.. B. Shahr/Aligarh/Mathura/Agra	..	1320.00
18	Drainage Improvement in distt. Bulandshahr	..	.. B. Shahr	..	25.00
19	Remodelling Semra drain 22.00 to 42.30 and Khardaja drain.	..	.. Aligarh	..	14.60
20	Constructing Baharnpur Barauli drain	.. ..	.. ..	..	1.85
21	Constructing Chiktura drain	.. ..	.. ..	..	7.62
22	D.I. in distt. Aligarh	.. ..	.. ..	..	25.00
23	Constructing Birauni Khanda drain	.. ..	.. Agra	..	9.00
24	Remodelling Panwari drain	.. ..	.. ..	..	5.00
25	Constructing Railway bridge no. 85 on Kanpur Tundla section over Tapu khurd drain.	..	.. ..	..	10.13
26	Revised P/E for Isai drain	.. ..	.. Mainpuri	..	4.19
27	Improving drainage capacity and extension waterway of Sengar nadli and Sirsa nadi, Arind Isan Kak and Kala nadi.	..	.. Mainpuri/Etawah/Etah/Farrukhabad/Aligarh/Agra	..	400.00
28	Drainage improvement in distt. Mainpuri	.. ..	.. Mainpuri	..	25.00
29	Drainage Improvement in distt. Etah	.. ..	.. Etah	..	25.00
30	Drainage Improvement in distt. Farrukhabad	.. ..	.. Farrukhabad	..	25.00
31	Drainage Improvement in distt. Etawah	.. ..	.. Etawah	..	25.00
32	Drainage Improvement in distt. Bareilly	.. ..	.. Bareilly	..	25.00
33	Drainage Improvement in distt. Shahjahanpur	.. ..	.. Shahjahanpur	..	25.00
34	Drainage Improvement in distt. Moradabad	.. ..	.. Moradabad	..	25.00
35	Drainage Improvement in distt. Rampur	.. ..	.. Rampur	..	25.00
Total, D.I. Western Zone				..	2975.61

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77		1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlay			
	Expenditure	Approved outlay	Expenditure	Approved outlay		Anticipated expenditure	Proposed outlay	Total	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18	
..	14.80	..	8.00	6.80	..	
..	495.00	50.00	100.00	150.00	195.00	
..	1.00	5.65	14.33	14.33	..	..	..
..	56.00	..	15.00	20.00	21.00	
..	1.00	2.26	6.68	6.68	..	..	..
..	1270.00	20.00	200.00	390.00	660.00	
..	15.00	..	10.00	5.00	..	
..	14.60	..	8.00	6.60	..	
..	1.13	0.72	0.72	..	..	..
..	7.62	..	7.62	..	..
..	25.00	..	10.00	10.00	5.00	
..	2.74	2.74	..	..	..
..	5.00	..	5.00	..	..
..	10.13	..	10.13	..	..
..	4.19	..	4.19	..	..
..	400.00	..	100.00	150.00	150.00	
..	25.00	..	5.00	10.00	10.00	
..	25.00	..	5.00	10.00	10.00	
..	25.00	..	5.00	10.00	10.00	
..	20.00	..	5.00	5.00	10.00	
..	20.00	..	5.00	5.00	10.00	
..	20.00	..	5.00	5.00	10.00	
..	20.00	..	5.00	5.00	10.00	
..	20.00	..	5.00	5.00	10.00	
..	31.60	70.06	2814.29	223.62	604.07	840.60	1146.00	

STATEMENT IF-5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
36	D.I. in distt. Kanpur	Central	Kanpur	..	25.00
37	D.I. in distt. Sitapur .. ..	..	Sitapur	..	25.00
38	P/E for Satoliganj Mechannath drain .. ..	..	Lakhimpur/ Kheri.	..	6.26
39	PFW of Lucknow from G. N. Canal .. ..	..	Lucknow	..	105.00
40	Improving drainage capacity of Sai river and extension waterway. .. ..	..	Lucknow/ Unnao/Rai Bareli/ Hardoi/Pra- tapgarh/Jaunpur	..	500.00
41	D.I. in distt. Hardoi .. ..	..	Hardoi	..	40.00
42	Improving drainage capacity of Behta nala .. ..	..	..	..	20.00
43	D. I. in distt. Fatehpur .. ..	..	Fatehpur	..	25.00
44	Remodelling Loni nadi .. ..	..	Unnao/Rai Bareli.	..	263.00
45	D.I. in distt. Raibereli .. ..	..	Rai Bareli	..	25.00
46	D.I. in distt. Barabanki .. ..	..	Barabanki	..	25.00
Total D.I. Central Zone				..	1059.26
47	Channelization of Morwa nadi .. ..	..	Varanasi/ Faizabad.	..	17.00
48	D.I. in distt. Varanasi .. ..	..	Varanasi	..	25.00
49	Constructing Naraini drain .. ..	..	Ballia	..	2.25
50	Constructing Sisotal drain .. ..	..	..	..	2.66
51	Gopalpur drain .. ..	..	..	..	3.30
52	Baheri drain .. ..	..	..	..	20.00
53	Remodelling Basherana nala drain .. ..	..	..	..	48.34
54	Ditto Nagra drain .. ..	..	..	..	21.00
55	D.I. in distt. Gonda .. ..	..	Gonda	..	35.00
56	Constructing new drain in Basti and Bahraich distt. .. ..	..	Bahraich/Basti	..	100.00
56A	Puraniya tal drain .. ..	..	Bahraich	..	16.52

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77		1977-78		Total	1978-79		1979-83		Proposed year-wise outlay			
	Expenditure	Approved outlay	Expenditure	Approved outlay	Expenditure to end of 1977-78	Approved outlay	Anticipate expenditure	Proposed outlay	Total	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18		
..	25.00	..	5.00	10.00	10.00		
..	25.00	..	5.00	10.00	10.00		
..	6.26	..	6.26	..	..
..	5.00	..	105.00	..	30.00	30.00	45.00		
..	500.00	..	50.00	150.00	300.00		
..	40.00	..	10.00	15.00	15.00		
..	20.00	..	5.00	10.00	5.00		
..	25.00	..	5.00	10.00	10.00		
..	263.00	20.00	60.00	80.00	103.00		
..	25.00	..	5.00	10.00	10.00		
..	25.00	..	5.00	10.00	10.00		
..	5.00	..	1059.00	20.00	186.26	335.00	518.00		
..	17.00	7.00	5.00	5.00	..		
..	25.00	5.00	10.00	10.00	..		
..	1.00	1.70	0.55	0.55	..	..	..
..	1.00	1.13	1.53	1.53	..	..	..
..	1.00	1.70	1.60	1.60	..	..	..
..	6.78	13.58	13.58	..	..	..
..	48.34	18.34	15.00	15.00	..		
..	21.00	10.00	11.00	..	..
..	35.00	5.00	10.00	10.00	10.00		
..	100.00	25.00	25.00	25.00	25.00		
..	16.52	16.52	..	..	..

STATEMENT—IF-5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
57	Constructing Kanuwatal drain	Central	Basti	..	6.86
58	Ditto Pikia drain .. ..	..	Faizabad	..	45.04
59	D.I. in distt. Sultanpur .. ..	..	Sultanpur	..	25.00
60	P/E of Masurital drain .. ..	..	Sultanpur	..	29.33
61	D.I. in distt. Pratapgarh .. ..	..	Pratapgarh	..	50.00
62	Improving Arsi nadi .. ..	..	Jaunpur	..	11.25
Total, D.I. Eastern Zone .. ..				..	458.91
Grand total of D.I. .. ..				..	4493.78
<i>Marginal Embankment</i>					
1	P/E of conversion of Pather to Issapur, Khargaon link road into marginal bund.	Western	M. Nagar	..	17.22
2	Raising existing roads along L/B of river Yamuna in 125 Kms. length.	..	M. Nagar/Meerut	..	875.00
3	Constructing M.E. along bank of river Yamuna from Kasna to Tappal	..	Saharanpur/B. shahr/Aligarh.	..	500.00
4	Retirement and strengthening Ganga Mahewa bund .. ..	..	Badaun	..	100.00
5	Second extension of Usot bund .. ..	..	..	..	34.81
6	P/E for providing pitching ring bund around village Pachera Km. 2.52 to 3.8.	..	Ghaziabad	..	15.88
Total, M.E. Western Zone .. ..				..	1542.91
7	P/E for construction of Pariar bundh along L/B of river Ganga.	Central	Unnao	..	117.0
8	M. E. on R/E of Ghagra D/S of Elgin bridge .. ..	..	Barabanki	..	144.35
9	M.E. on R/E of Ghaghra river u/s of Elgin bridge .. ..	..	..	..	196.50
10	M.E. along river Ghagra .. ..	..	Sitapur	..	65.00
Total M.E. Central Zone .. ..				..	522.85

(Rupees in lakhs)

Expendi- ture upto end of 1973-74	1974-77 Expen- diture	1977-1978		Total Expen- diture to end 1977-78	1978-79		1979-83 Proposed outlay Total	Proposed yearwise outlay			
		Approved outlay	Expen- diture		Approved outlay	Anti- cipated expen- diture		1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	1.00	2.26	4.60	4.60	..	..	..
..	45.04	5.00	5.00	20.00	15.04
..	25.00	..	5.00	10.00	10.00
..	29.33	14.33	15.00	..	..
..	50.00	..	10.00	20.00	20.00
..	11.25	5.00	6.25	..	..
..	4.00	13.57	445.34	133.05	117.25	115.00	80.04
..	40.60	83.63	4318.89	376.67	907.58	1290.60	1744.04
..	17.22	2.00	3.00	5.00	7.22
..	400.00	..	50.00	100.00	250.00
..	500.00	..	100.00	150.00	250.00
..	22.40	33.70	66.30	30.00	36.30	..	..
..	34.81	10.00	15.00	9.81	..
..	15.88	2.00	5.00	8.88	..
..	22.40	33.70	1034.21	44.00	209.30	273.69	507.22
..	117.00	15.00	30.00	35.00	37.00
..	144.35	40.00	40.00	40.00	24.35
..	196.50	40.00	50.00	50.00	56.50
..	65.00	15.00	15.00	20.00	15.00
..	522.85	110.00	135.00	145.00	132.85

STATEMENT—IF-5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
11	Raising Ballia Baria bund	Eastern	Ballia	..	59.92
12	Constructing Baria Sansertola bund	"	"	..	161.26
12A	Strength Turtipar Sinagar bund (0.0—10.0 km)	"	"	..	8.08
13	Constructing Ballia Kirindit bund	"	"	..	150.00
14	Strengthening and Raising Rajdhani Solhota Zamindari bund along L/B of river Gurrha.	"	Gorakhpur	..	9.46
15	Protection Zardi Dorma bund at km. 12 near V. Aurahiya	"	"	..	1.06
16	Construction of Anantpur Barhera bund along L/B of river Rohin.	"	"	..	6.53
17	Protection of Village Aurahia along L/B of R. Rohin	"	"	..	1.88
18	Constructing Nakwar Bhowapur bund along L/B of river Gurrha.	"	"	..	11.03
19	Strengthening and raising Makhnaha Zamindari bund along R/B of river Rohin.	"	"	..	21.38
20	Construction of Kharagpur Shahpur Supai bund along L/B of river Ghagra.	"	"	..	36.77
21	Protection of V. Updhauliyia Jagia, Jairam Kal along L/B of R. Gurrha.	"	"	..	7.04
22	Strengthening and raising Paria Dadri Samera Zamindari bund along R/B of river Rapti.	"	"	..	3.05
23	P/E for constructing Barhya Kotha bund along L/B of river Rapti.	"	Gorakhpur	..	49.53
24	P/E for constructing Maghar Chhatia bund along L/B of river Ami.	"	"	..	43.00
25	Strengthening and raising Aswanpur Koraghat bund	"	"	..	4.48
26	Constructing Malauhi Gajpur bund	"	"	..	15.76
27	Constructing of Chiariram bund	"	"	..	9.31
28	Strengthening of bunds Eastern district of U.P.	"	Gorakhpur/ Basti/Deoria.	..	100.00
29	Constructing Semar Kodar bund	"	Deoria	..	20.00
30	Constructing Nabuwa manghria bund	"	"	..	55.00
31	Constructing Rajgarhi Natwar bund	"	Gorakhpur	..	20.00
32	Constructing Maniram Mahodpur bund	"	"	..	10.00

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77	1977-78		Total expenditure to end of 1977-78	1978-79	1979-83		Proposed year-wise outlay			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anti-cipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	59.92	20.00	20.00	19.92	..
..	161.26	40.00	60.00	61.26	..
..	8.08	8.08	..	..	..
..	150.00	25.00	50.00	50.00	25.00
..	9.46	9.46	..	..	..
..	1.06	1.06	..	..	..
..	1.00	..	6.53	6.53	..	..	..
..	1.88	1.88	..	..	..
..	2.00	..	11.03	11.03	..	..	..
..	6.22	15.16	15.16	..	..	..
..	36.77	15.00	21.77	..	..
..	7.04	7.04	..	..	..
..	3.05	3.05	..	..	..
..	49.53	15.00	19.53	15.00	..
..	43.00	23.00	20.00	..	..
..	1.00	1.13	3.35	3.35	..	..	..
..	15.76	13.00	2.76	..	..
..	9.31	2.00	3.00	4.31	..
..	67.20	67.20	32.80	32.80	..	..	..
..	20.00	..	5.00	5.00	10.00
..	55.00	..	15.00	15.00	25.00
..	20.00	..	5.00	5.00	10.00
..	10.00	..	5.00	5.00	..

STATEMENT IF-5— (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
33	Constructing basi Machaligaon	Eastern	Gorakhpur	..	13.00
34	Constructing Alghatpur Mohaag bund	"	"	..	6.00
35	Constructing Shahpur Badarpur	"	"	..	32.00
36	Malauli Sauhraoro	"	"	..	3.00
37	Strengthening extension of Chhitauhari Barhi non-departmental bund.	"	"	..	30.00
38	Strengthening extension of Phaphuri Katsi kong bund] ..	"	"	..	3.00
39	M.E. river Ami with regulator	"	"	..	15.00
40	Strengthening Barhipath Chitari thunni bund ..	"	"	..	26.17
41	Constructing Daulatpur bund	"	"	..	76.00
42	Constructing Saraiya Belsari on Right bank of Tarainanadi	"	"	..	50.00
43	M.E. on both sides of river Rohin upto village Sahhau ..	"	"	..	60.00
44	Five nos. ring bund at Maloni	"	"	..	13.13
45	Constructing Piprasi bund ¹	"	Deoria	..	27.62
46	Constructing Chhitauni Piprasi bund	"	"	..	81.80
47	Strengthening and raising Pachhlari Zamindari bund .. along R/B of river Gurra.	"	"	..	5.72
48	Strengthening and raising of Pidra Karanpur Zamindari bund along L/B of Gurra.	"	"	..	5.68
49	Strengthening and raising of Bhusual Pindra Zamindari bund along L/B of Gurra.	"	"	..	6.80
50	Constructing Turtipar Churia along L/B of river Ghagrha	"	"	..	39.62
51	Strengthening and raising of Pande Majha Jogia Buzurg Zamindari bund along L/B of Gurra.	"	"	..	11.79
52	Constructing Demariaganj to Bansi bund	"	Basti	..	27.30
53	Strengthening and extension of Uska Lakhanpur bund ..	"	"	..	13.92
54	Constructing Bikseema Joyoti Dukailibund	"	"	..	40.51
55	Construction Maghar bund along R/B of river Ami ..	"	"	[..	8.49
56	Strengthening of Asogowa Nagwa Zamindari bund along T/B Rurhi Rapti river	"	"	..	27.50

(Rupees in lakhs)

Expendi- ture up to end of 1973-74	1974-77	1977-78		Total expen- diture to end of 1977-78	1978-79		1979-83	Proposed yearwise outlays			
	Expendi- ture	Approved outlay	Expen- diture		Approved outlay	Anti- cipated expen- diture	Propo- sed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	13.00	..	3.00	5.00	5.00
..	6.00	..	2.00	4.00	..
..	32.00	..	7.00	15.00	10.00
..	3.00	..	3.00	..	..
..	30.00	..	..	15.00	15.00
..	3.00	..	3.00	..	..
..	15.00	..	5.00	5.00	5.00
..	3.96	22.21	22.21	..	..	..
..	76.00	6.00	15.00	25.00	30.00
..	50.00	..	15.00	15.00	20.00
..	60.00	10.00	15.00	15.00	20.00
..	2.00	1.70	11.43	..	6.00	5.43	..
..	7.00	15.26	12.36	12.36	..	..	..
..	5.00	46.90	34.90	34.90	..	..	..
..	5.72	5.72	..	..	..
..	5.68	5.68	..	..	..
..	6.80	3.80	3.00	..	..
..	39.62	19.62	20.00	..	..
..	11.79	11.79	..	..	..
..	5.00	9.04	18.26	18.26	..	..	..
..	2.00	1.70	12.22	12.22	..	..	..
..	40.51	10.00	10.00	10.00	10.51
..	3.39	5.10	5.10	..	..	..
..	27.50	14.50	13.00	..	..

STATEMENT—I F-5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
57	Strengthening and raising of Karmaini Belauli bund along R/B of river Rapti	Eastern	Basti	..	20.13
58	Strengthening and raising of Kakrahi Gonha Zamindari bund including retirement of Shemara maruchabag bund R/B of Burhi Rapti ..	..	..	..	14.22
59	P/E for strengthening and raising Sonkar Tandia Zamindari bund along L/B of river Rapti	..	..	..	14.40
60	P/E for strengthening and raising Madraha Barhadandi Zamindari bund along L/B of river Ghagra	..	..	..	37.00
61	Strengthening Asogawa Nagwa Zamindari bund ..	..	..	..	27.50
62	Strengthening Piloj Dhurandha ring bund ..	..	..	..	8.43
63	P/E for strengthening and Extension of Supa Zamindari bund along R/B of river Burhi Rapti	..	..	..	2.20
64	Strengthening and raising of Zamindari bund to protect Narkhata town	..	..	..	4.26
65	Realignment restoration and strengthening of zamindari bund	..	Basti Gorakhpur	..	250.00
66	Constructing of Radhopur ring bund L/B of river Tons	..	Azamgarh	..	4.79
67	Constructing Ikhuna to Ruraria bund (72 km.) ..	..	Gonda	..	243.72
68	Constructing Colonalganj to Bhaggarwa bund ..	..	..	..	87.00
69	P/E for constructing of Gulhari bund along L/B of river Rapti	..	..	..	7.36
70	Constructing Ami along R/B of Rapti in district Bahraich	..	Baharaich	..	36.00
71	Constructing cross bund in north of Bassing bund ..	..	Allahabad	..	21.00
72	Constructing bund and Barraval of Panuau nala No. 1 ..	..	..	..	2.48
73	Constructing bund and Barraval of Panuau nala No. 2	..	..	..	0.61
74	Constructing bund and Barraval of Panuau nala No. 3	..	..	..	1.85
Total—M.E. Eastern Zone			..	..	221.54
Grand Total of M. E.			..	..	4277.30

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77	1977-78		Total expenditure to end of 1977-78	1978-79		1979-83		Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
7	8	9	10	11	12	13	14	15	16	17	18	
..	5.00	11.30	8.83	8.83	..	..	..
..	1.70	12.52	12.52	..	..	..
..	5.65	8.75	8.75	..	..	..
..	4.97	32.03	16.00	16.03	..	..
..	2.26	25.24	10.24	15.00	..	..
..	2.00	2.83	5.60	5.60	..	..	..
..	1.70	0.50	0.50	..	..	..
..	1.70	2.56	2.56	..	..	..
..	25.00	25.00	225.00	40.00	50.00	60.00	75.00	
..	4.79	4.79	..	..	..
..	243.72	25.00	50.00	75.00	93.72	
..	87.00	..	17.00	30.00	40.00	
..	7.36	7.36	..	..	..
..	36.00	10.00	16.00	10.00	..	
..	21.00	..	5.00	10.00	6.00	
..	2.48	2.48	..	..	..
..	0.61	0.61	..	..	..
..	1.85	1.85	..	..	..
..	124.20	213.61	1997.93	601.69	516.09	479.92	400.23	
..	146.60	247.31	3554.99	755.69	860.39	898.61	1040.30	

STATEMENT—I-F—5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
<i>Town Protection</i>					
1	Protection of Tarkali village in Nehtaur	Western	Bijnor	..	1.90
2	Protection of police line and officers colony in Pilibhit town. .. .. .	..	Pilibhit	..	1.75
3	Protection of Mathura town .. .. .	..	Mathura	..	1000.00
4	Protection of Agra town .. .. .	..	Agra	..	1000.00
5	Protection of Etawah town .. .. .	..	Etawah	..	500.00
Total—T.P. of Western Zone .. .. .				..	2503.65
6	Pumping Storm water stage-II, Lucknow	Central	Lucknow	..	426.00
7	Protection of Palia town .. .. .	..	Lakhimpur kheri.	..	50.00
8	Protection of Sitapur town from river Ghagra .. .. .	..	Sitapur	..	205.00
9	Protection of Behta Block from river Ghagra .. .. .	..	..	..	25.00
Total —T.P. Central Zone .. .. .				..	706.00
10	Protection of Mirzapur against erosion	Eastern	Mirzapur	..	300.00
11	Protection of Vindhyachal against erosion .. .. .	..	..	..	100.00
12	Diversion of Ganda nala and construction of bund to protect Sultanpur from the floods of river Gomti. .. .. .	..	Sultanpur	..	19.70
13	P/E for boulder pitching of L/B of river Ganga for protection of Saidpur town. .. .. .	..	Ghazipur	..	11.54
14	Jaunpur town protection from the floods of Gomti river .. .. .	..	Jaunpur	..	719.00
15	P/E for strengthening Hobert bund with counter berm and filter to along L/B of river Rapti. .. .. .	..	Gorakhpur	..	13.73
16	Protection of Gurra Barhaj town .. .. .	..	Deoria	..	42.00
17	Protection of Gurra Bazar and Gurra Panchautri .. .. .	..	Basti	..	20.00
18	Strengthening and raising of bund to protect Narkhata town along L/B of river Rapti. .. .. .	..	..	..	4.26
19	Constructing advance bund with strengthening Azamgarh town protection bund. .. .. .	..	Azamgarh	..	99.08
20	Protection of Ram Janki Mandir and village .. .. .	..	Gonda	..	20.00
21	P/E for extension of Pucca ghat of Sarju nadi at Hanumangarhi temple. .. .. .	..	Faizabad	..	1.88

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77	1977-78		Total expenditure to end of 1977-78	1978-79	1979-83	Proposed yearwise outlays				
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12 Central Assistance	13	14 Total	15	16	17	18
..	1.90	1.70	0.20	0.20	..	..	..
..	1.75	1.75	..	..	..
..	500.00	..	100.00	150.00	250.00
..	500.00	..	100.00	150.00	250.00
..	500.00	..	100.00	150.00	250.00
..	1.90	1.70	1501.95	1.95	300.0	450.00	750.00
..	426.00	51.00	50.00	100.00	225.00
..	50.00	5.00	10.00	15.00	20.00
..	205.00	..	40.00	60.00	105.00
..	25.00	5.00	10.00	10.00	..
..	706.00	61.00	110.00	185.00	350.00
..	300.00	15.00	75.00	100.00	110.00
..	100.00	15.00	30.00	25.00	30.00
..	19.70	10.00	9.70	..	..
..	11.54	11.54	..	..	..
..	719.00	..	200.00	200.00	319.00
..	3.39	10.34	10.34	..	..
..	42.00	12.00	15.00	15.00	..
..	20.00	5.00	5.00	10.00	..
..	1.70	2.56	2.56	..	..
..	33.60	33.60	65.48	30.00	35.48
..	20.00	..	5.00	5.00	10.00
..	1.88	1.88	..	..	..

STATEMENT—IF-5(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
5					
1	2	3	4	5	6
22	Protection of Allahabad town	Eastern	Allahabad	..	1200.00
23	Raising and strengthening bunds of Ganga river at Allahabad.	..	..	..	30.21
24	Raising and strengthening bunds on Yamuna river at Allahabad	..	Allahabad	..	49.03
25	Protection of Varanasi town .. .. .	..	Varanasi	..	1000.00
Total—T.P. Eastern Zone				..	3630.43
26	Hamirpur town protection .. .. .	..	Bundelkhand	..	1000.00
27	Protection of Banda town .. .. .	..	..	..	400.00
Total—T.P. Bundelkhand Zone				..	1400.00
Grand total of T.P.				..	8240.08
<i>River improvement and Anti erosion works</i>					
1	FPW of Bateshwar ghat .. .. .	..	Western Agra	..	54.80
2	FPW of Alhanpur along L/B of river Yamuna	..	.. Saharanpur	..	8.25
3	FPW of Hakikat nagar and Gill colony .. .. .	..	..	..	20.00
4	FPW of village Satpura .. .. .	..	..	..	5.00
5	FPW of village u/s Beggi on river Yamuna .. .. .	..	..	..	17.61
6	FPW of village d/s Manpur, on river Yamuna	..	..	..	15.68
7	FPW of village d/s Beggi .. .. .	..	..	..	19.06
8	FPW at village Manpur from river Yamuna	..	..	..	14.86
9	FPW d/s of village Kunda Khurd .. .. .	..	..	..	25.87
10	FPW of village Banjarwala from Mohan Rao	..	..	..	9.12
11	U/S of village Dhikka kalan from river Yamuna	..	..	..	7.68
12	FPW of village Raipur kalan on river Maskara Rao	..	..	..	4.40
13	P/E for FPW village Farakhpur Nagdeo Rao	..	..	..	4.81
14	FPW of village Jhinawarheri from river Kaluwala Rao	..	..	..	4.21
15	Reconstruction and repair of FPW of village Shitalgarhi from river Yamuna	..	Muzaffar-Nagar	..	9.46
16	FPW of village Mavi kalan .. .. .	..	..	..	25.32

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83	Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure		Approved outlay	Anti-cipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	Central Assistance	13	14	15	16	17	18
..	33.60	33.60	1166.40	70.00	150.00	300.00	646.40
..	30.21	30.21	..	..	..
..	49.03	49.03	..	..	..
..	842.85	..	485.23	357.67	..
..	67.20	72.29	3400.99	262.56	1010.41	1012.62	1115.40
..	570.00	20.00	200.00	300.00	50.00
..	321.04	10.00	75.00	100.00	136.04
..	891.04	30.00	275.00	400.00	186.04
..	69.10	73.99	6499.98	355.51	1695.41	2047.62	2401.44
..	54.80	20.00	20.00	14.80	..
..	8.25	8.25	..	..	..
..	20.00	..	..	5.00	15.00
..	5.00	..	..	2.00	3.00
..	17.61	..	..	7.00	10.61
..	15.68	..	..	5.00	10.68
..	13.56	5.50	5.50	..	..	..
..	11.30	3.56	3.56	..	..	..
..	16.95	8.92	8.92	..	..	..
..	9.12	9.12	..	..	..
..	7.68	7.68	..	..	..
..	4.40	4.40	..	..	..
..	4.81	4.81	..	..	..
..	1.70	2.51	2.51	..	..	..
..	3.00	9.46	4.00	5.46	..	..
..	25.32	..	5.00	5.00	15.32

STATEMENT—IF-5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
17	FPW of village Budhan town temple from Hindan river	Western	Muzaffarnagar	..	5.00
18	FPW of village Barahi Musalmananki ..	..	..	..	6.46
19	FPW of Barahi Mustafabad ..	..	..	..	8.91
20	FPW of village Bara Chly amroki ..	..	..	..	22.60
21	FPW of d/s village Mandawar from river Yamuna	..	..	..	16.13
22	FPW of village Nai Nagla from river Yamuna	..	..	..	23.46
23	FPW of d/s of village Fatehpur from river Yamuna	..	..	..	8.65
24	FPW at village Sahpat from river Yamuna ..	..	..	..	8.47
25	FPW of village Pather from river Yamuna ..	..	..	..	21.48
26	P/E d/s of Budhana town ..	..	..	..	3.30
27	FPW of village Kulana from river Yamuna ..	..	Meerut	..	1.71
28	FPW of village Subhanpur from river Yamuna	..	..	..	22.39
29	FPW of village Poly from river Yamuna ..	..	..	..	6.36
30	FPW of village Sankraudh form river Yamuna	..	..	..	20.42
31	FPW of village Kurri (Construction) of 6 dampners	..	..	..	2.17
32	FPW of village Badarka ..	..	..	..	26.56
33	FPW of strengthening at village Mabikalan	..	..	..	15.74
34	FPW d/s of village Pachera ..	..	..	..	26.21
35	FPW of u/s of village Yousufpur Chantera ..	..	..	..	24.10
36	FPW of village Pachera ..	..	..	..	21.05
37	FPW to old Baghpath town ship from river Yamuna	..	..	..	9.91
38	Construction dampners IA, IB, 4A, 4B at Karanwal town from river Ganga.	..	Bulandshahr	..	5.13
39	FPW on Yamuna river ..	..	Bulandshahr/ Meerut/ Saharanpur/ Muzaffar- nagar.	..	200.00
40	FPW of d/s of village Makanpur Khadar ..	..	.. Bulandshahr	..	17.58
41	FPW of village Khar on river Ganga	..	..	..	6.45

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77		1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83		Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure	Approved outlay		Approved outlay	Anticipated expenditure	Proposed outlay	Total	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18		
..	5.00	..	..	5.00	..	..
..	6.46	6.46	..	..	..	..
..	8.91	8.91	..	..	..	..
..	22.60	15.00	7.60	..	..	..
..	13.56	2.57	2.57	..	..	..	..
..	16.95	6.51	6.51	..	..	..	..
..	6.78	1.87	1.87	..	..	..	..
..	8.47	8.47	..	..	..	..
..	14.70	6.78	6.78	..	..	..	..
..	3.30	..	3.30	..	..	..
..	1.67	..	..	..	..	..	..
..	22.39	22.39	..	..	..	..
..	5.65	0.71	0.71	..	..	..	..
..	20.42	20.42	..	..	..	..
..	2.17	2.17	..	..	..	..
..	26.56	26.56	..	..	..	..
..	15.74	..	..	5.00	10.74	..	
..	26.21	26.21	..	..	..	..
..	24.10	24.10	..	..	..	..
..	13.56	7.49	7.49	..	..	..	..
..	9.91	9.91	..	..	..	..
..	3.39	1.74	1.74	..	..	..	..
..	200.00	50.00	50.00	50.00	50.00	50.00	
..	5.65	11.93	11.93	..	..	..	..
..	6.45	6.45	..	..	..	..

STATEMENT IF-5— (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
42	FPW of village Basi	Western	Balandshahr	..	15.39
43	FPW of u/s V. Malav	..	Aligarh	..	7.12
44	FPW of Pipli	..	..	..	14.41
45	FPW of Mahrajgarh and Kihsanpur from river Yamuna	..	..	..	21.05
46	FPW at village Sherpur	..	Aligarh	..	29.00
47	FPW of Makauli from floods of Kichha river	..	Bareilly	..	2.37
48	FPW to Aundh on Western Begul	..	..	..	0.61
49	FPW of Killa area	..	..	..	0.31
50	FPW along L/B of river Deorani at Idgah	..	..	..	0.44
51	FPW of Satarpur from floods of Deoha river	..	..	..	1.37
52	FPW of village Dalel Nagar	..	..	..	1.06
53	FPW of village Gola	..	..	..	2.72
54	FPW of village Manaura	..	..	..	1.28
55	FPW of village Gundaur	..	..	..	0.54
56	FPW of Nankhera F. P. Scheme	..	..	..	1.45
57	Bahrauni FPW	..	..	..	0.70
58	P/E for Dundhi flood protection scheme	..	..	..	0.61
59	FPW of Barhapur	..	Bijnore	..	4.60
60	Protection of village Alampur and Chhatarpur	..	..	..	1.98
61	FPW of village Noorpur Arab from floods of Swarankha Nala.	..	..	..	0.52
62	FPW of village Shiopuri from Barkha Nala	..	..	..	0.54
63	FPW of village Tarkauli in Nahataur	..	..	..	1.90
64	FPW of village Jharpur Laddhapur and Asdullahpur	..	..	..	5.36
65	FPW of Narosa	..	Pilibhit	..	1.93
66	FPW of village Chandoi from Khakhra	..	..	..	1.54
67	FPW of Kabrganj	..	..	..	43.22
68	FPW of village Madrasa from Apsara	..	..	..	0.69

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77 Expenditure	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83 Proposed outlay	Proposed year-wise outlays			
		Approved outlay	Expenditure		Approved outlay	Anti-cipated expenditure		1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	15.39	..	..	5.00	10.39
..	7.12	..	..	2.00	5.12
..	14.41	..	..	4.00	10.41
..	21.05	21.05	..	..	..
..	29.00	29.00	..	..	..
..	2.25	0.40	1.97	1.97	..	..	..
..	0.61	0.61	..	..	..
..	0.30	0.28	..	..	..	..	..
..	0.44	0.44	..	..	..
..	1.35	1.13	0.24	0.24	..	..	..
..	1.05	0.90	0.16	0.16	..	..	..
..	2.70	0.89	1.93	1.93	..	..	..
..	1.25	..	1.28	1.28	..	..	..
..	0.54	..	0.54	..	..
..	1.45	..	1.45	..	..
..	0.57	0.13	0.13	..	..	..
..	0.61	0.61	..	..	..
..	1.13	3.47	3.47	..	..	..
..	1.98	1.98	..	..	..
..	0.25	0.28	0.24	0.24	..	..	..
..	0.50	..	0.54	0.54	..	..	..
..	1.90	1.90	..	..	..	..	..
..	5.36	..	..	..	..	..
..	1.90	..	..	..	..	..
..	0.80	0.80	0.74	0.74	..	..	..
..	11.77	11.77	31.45	31.45	..	..	..
..	0.65	0.51	0.18	0.18	..	..

STATEMENT IF-5— (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
69	FPW of village Naiona Gandhi Nagar	Western	Pilibhit	..	1.90
70	A/E for checking erosion Gandhi Park and Abadi from Gurra Nadi.	..	Shahjahanpur	..	1.32
71	FPW of village Kachera from river Yamuna .. ..	..	Ghaziabad	..	22.90
72	FPW of village d/s Harampur from river Yamuna .. ..	..	..	..	16.80
73	FPW of village Badarpur from river Yamuna .. ..	..	..	..	39.92
74	A.E. works on L/B of river Ganga opposite village Ballipatti.	..	Farrukhabad	..	4.25
75	A.E. works along L/B of Ganga river in Farrukhabad district.	..	..	..	50.00
Total A.E. Western Zone .. ..				..	1005.35
CENTRAL ZONE					
76	Temporary A.E. measures along L/B of Ganga river at Kanpur and Unnao.	..	Kanpur/Unnao.	..	226.00
77	Permanent A.E. measures along Ganga river at Unnao	..	Unnao	..	300.00
78	FPW of Ganeshpur from floods of river Ghaghra .. ..	..	Barabanki	..	0.88
79	FPW of village Arwal Shahabuddinpur, Pethtalakhi, Behtara and Perijore against erosion from kunda nala.	..	Hardoi	..	21.00
Total A. E. Central Zone .. ..				..	447.88
80	Protection of village Nayagaon, Karamaini, Belaubund on R/B of river Rapti.	Eastern	Basti	..	5.00
81	Protection of village Cwhapia and Thathar on R/E of river Rapti.	..	..	..	6.96
82	A.E. works on river Ghagra and district Basti .. ..	..	..	..	56.30
83	Protection of village Gurra Pachgauri and Gaurdih on R/B of Rapti	..	..	..	4.80
84	Raising of 28 village to protect floods from Thiima Nala	..	Faizabad	..	3.74
85	A.E. works on village Kaithaulia along Rapti .. ..	..	Basti	..	2.10
86	5 Nos. dampners along R/B of river Rapti at village Belauli.	..	..	..	4.55
87	3 No. dampners along river Rapti at village Magarbaha	..	..	..	2.00

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-75	1977-78		Total	1978-79		1979-83	Proposed year-wise outlays			
	Expenditure	Approved outlay	Expenditure	Expenditure to end of 1977-78	Approved outlay	Anticipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	1.87	..	..	..	..	..
..	1.32	1.32	..	..	..
..	22.90	22.90	..	..	..
..	16.80	16.80	..	..	..
..	20.34	19.58	19.58	..	..	..
..	4.07	..	..	..	..	..
..	50.00	15.00	15.00	15.00	5.00
..	27.87	188.60	896.47	517.05	108.35	124.80	146.27
..	11.20	24.76	201.24	25.00	50.00	76.24	50.00
..	300.00	..	75.00	100.00	125.00
..	0.85	0.96	..	..	..	..	..
..	21.00	21.00	..	..	..
..	12.05	25.72	522.24	46.00	125.00	176.24	175.00
..	5.00	5.00	..	..	..
..	6.96	6.96	..	..	..
..	56.30	25.00	31.30	..	..
..	4.80	4.80	..	..	..
..	3.74	3.74	..	..	..
..	2.10	2.10	..	..	..
..	2.94	1.61	1.61	..	..	..
..	1.70	..	..	..	..	..

STATEMENT IF-5—(Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated costs	
				Approved	Latest
1	2	3	4	5	6
88	P/E for protection of Uska Sahans road at km. 6.00 along R/B of river Kunhra.	Eastern	Basti	..	2.57
89	3 Nos. dampners along river Rapti at village Umharia	"	"	..	1.80
90	P.E. for A.E. Works on near village Rehara on Chhitapur bund along Khera.	"	"	..	2.66
91	3 Nos. dampners along river Rapti at village Kashipur..	"	"	..	1.80
92	P/E for village from Baidula Misir to Kotawarpur on L/B of river Ghagia	"	"	..	7.81
93	FPW of village Bhagwatpur	"	"	..	3.94
94	5 Nos. dampners at village Panchghoti and village Gurdih	"	"	..	3.00
95	A.E. works along Hobert bund	"	Gorakhpur	..	15.00
96	P/E for protection of village Dadri along R/B of river Rapti.	"	"	..	1.90
97	A.E. works for protection of village Madaba on L/B of rive Rapti.	"	"	..	3.55
98	Protection of 7 villages against erosion on Rapti river district Deoria.	"	Deoria	..	11.00
99	FPW of river Basu	"	"	..	6.60
100	FPW of Chitehri Thunni bund near village Sarar Majhawan	"	Gorakhpur	..	2.90
101	FPW on Gangi	"	Deoria	..	2.65
102	Protection of Tighia Marachi bund and to protect 3 Nos. villages.	"	"	..	7.64
103	FPW to Saeedpur on L/B of Ganga	"	Ghazipur	..	17.40
104	P/E for A. E. works at village Haldi Rampur along R/B of river Ghaghra.	"	Ballia	..	17.34
105	A. E. works at V. Bihra	"	"	..	23.05
106	P/E for A. E. works at Nardarao Gareria Bhunsaula from river Ganga.	"	"	..	10.95
107	P/E for A.E. works and Kutubganj along R/B of river Ghaghra.	"	"	..	18.04
108	P/E for A. E. works at village Dharampur along L/B of river Ganga.	"	"	..	40.06
109	FPW of village Sehoran Laong L/B of Rapti ..	"	Gorakhpur	..	4.70

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77 Expenditure	1977-78		Total Expenditure to end of 1977-78	1978-79		1979-83 Proposed outlay	Proposed year-wise outlays			
		Approved outlay	Expenditure		Approved outlay	Anticipated expenditure		1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	2.57	1.52	..	..	..
..	0.65	1.15	1.15	..	..	..
..	2.66	2.66	..	..	..
..	1.58	..	..	..	..	..
..	7.81	7.81	..	..	..
..	2.83	1.11	1.11	..	..	..
..	2.26	0.74	0.74	..	..	..
..	15.00	10.00	5.00	..	..
..	1.36	0.54	0.54	..	..	..
..	3.55	3.55	..	..	..
..	11.00	4.00	7.00	..	..
..	6.60	..	..	..	6.60
..	2.90	2.90	..	..	..
..	2.65	..	..	2.65	..
..	7.64	7.64	..	..	..
..	17.40	17.40	..	..	..
..	17.34	..	..	17.34	..
..	23.05	23.05	..	..	..
..	10.95	..	..	..	10.95
..	18.04	..	..	..	18.04
..	40.06	25.06	15.00	..	..
..	4.70	4.70	..	..	..

STATEMENT-I.F.—5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
110	A. E. works at village Naudara and Jagdishpur from river Ganga.	..	Eastern Ballia	..	7.62
111	Constructing Pilot channel on Tons at Indrapur Thampur.	..	..	..	4.69
112	Constructing dampners at village Bhagejion Tons river	..	..	..	3.38
113	Protection of village abadies along river Ghaghra	..	Basti/ Gorakhpur/ Deoria/ Azamgarh.	..	500.00
114	A. E. works on Ganga river	..	Deoria/ Azamgarh	..	300.00
115	A. E. works at village Majhawan along L/B of river Ganga.	..	Ballia	..	27.43
116	A. E. works at village Tirahipur along R/B of river Tons	..	..	..	1.33
117	A. E. works near village Inderpur on R/B of river Tons	..	..	..	9.41
118	A. E. works at village Nasirpur along R/B of river Tons	..	..	..	3.86
119	P/E for constructing 2 no. dampners on R/B of river Ghaghra at Rampur Dhanuali.	..	Azamgarh	..	2.56
Total—A. E. Eastern zone				..	1152.09
120	FPW of Chitrakoot ghat B-Khand	..	Banda	..	8.65
121	Renovation of Chitrakoot ghat on Paiswani	..	..	..	8.78
122	FPW of Konch bund at Basti on Nariya nala	..	Jalaun	..	0.57
Total A. E. of Bundelkhand Zone				..	18.00
Grand Total A. E.				..	2803.32
Grand Total of U. P. Plains (New Scheme)				..	19814.48
NEW SCHEMES HILL ZONE					
<i>Drainage Improvement—</i>					
1	Bhimtal drainage schemes	..	Hill Nainital	..	2.3
2	Drainage improvement scheme	..	Dehradun	..	150.00
Total—Drainage Improvement				..	152.37

(Rupees in lakhs)

Expendi- ture up to end of 1973-74	1974-77	1977-78		Total	1978-79	1979-83		Proposed year-wise outlays				
	Expen- diture	Approved outlay	Expen- diture	Expen- diture to end of 1977-78	Approved outlay	Anti- cipated expen- diture	Proposed outlay	1979-80	1980-81	1981-82	1982-83	
7	8	9	10	11	12	13	14	15	16	17	18	
..	7.62	..	..	7.62	..	
..	4.52	..	..	..	..	..
..	3.38	3.38	..	..	..
..	500.00	100.00	150.00	150.00	100.00	
..	300.00	50.00	100.00	100.00	50.00	
..	27.43	27.43	..	..	..
..	1.33	1.33	..	..	..
..	9.41	9.41	..	..	..
..	1.70	2.16	2.16	..	..
..	2.54	..	..	..	..
..	22.08	1129.30	357.80	308.30	277.61	185.59
..	1.00	..	8.65	8.65	..	..	..
..	1.00	5.65	3.13	3.13	..	..	..
..	0.57	0.57	..	..	..
..	2.00	5.65	12.35	12.35	..	..	..
..	41.92	242.05	2560.36	933.20	541.65	578.65	506.89	
..	298.22	646.98	16934.22	2421.07	4005.03	4815.48	5692.64	
..	1.00	..	2.37	2.37	..	..	..
..	150.00	5.00	25.00	40.00	80.00	
..	1.00	..	152.37	7.37	25.00	40.00	80.00	

STATEMENT-I.F.—5 (Contd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
<i>Marginal Embankment—</i>					
3	Strengthening and Constructing New bunds	Hill	Nainital/ Dehradun/ Pauri/Chamoli	..	50.00
Total—Marginal Embankment				..	50.00
<i>Town Protection—</i>					
4	Protection of various town in hill districts		Nainital Dehradun/ Pauri/Chamoli }	..	50.00
5	Protection of Sitarganj town from loads of river Baighul	..	..	..	12.62
Total—Town Protection				..	62.62
<i>River improvement and Anti erosion schemes—</i>					
6	FPW to extension of Dharchula .. .. .	..	Pithoragarh	..	28.97
7	FPW to Protect Bulla wala canal and village from Bullawala and Babarwala.	..	Dehradun	..	18.25]
8	A. E. works in District Dehradun .. .. .	..	..	..	25.00
9	FPW to protect village Sailakhi from Bayankhal nala	..	..	..	1.00
10	FPW of Dhansala Adboiwala and new basti .. .. .	..	..	..	0.31
11	FPW to protect Gandhi gram colony from river Bindal	..	..	..	5.33
12	FPW Sidhowala on river Darar .. .. .	..	..	..	1.02
13	FPW Harizan basti and new Patel nagar basti .. .. .	..	..	..	0.21
14	FPW of Pratitpur .. .. .	..	..	..	0.64
15	FPW of Kusaini of Pindur .. .. .	..	Chamoli	..	0.96
16	FPW of Chuplaghat .. .. .	..	..	..	1.25
17	FPW of Jhabrawala from river Suswa .. .. .	..	Dehradun	..	0.57
18	FPW of village Bhogpur from river Mehadoooshee .. .. .	..	..	..	0.76
19	FPW of Nari shilp mandir marg colony along river Bindal	..	..	..	0.63
20	FPW of village Khotimansingh from river Baldi in district Dehradun.	..	..	..	1.31
21	FPW of ghon on the R/B of river Nandakini .. .. .	..	Chamoli	..	0.29
22	FPW of Markanday from river Bhagirathi .. .. .	..	Uttarkashi	..	3.26
23	FPW Manglaghat to police line from river Bhagirathi at Uttarkashi.	..	..	..	3.50
24	FPW of Uttarkashi .. .. .	..	..	..	4.99

(Rupees in lakhs)

Expenditure upto end of 1973-74	1974-77		1977-78	Total	1978-79		1979-83	Proposed year-wise outlays			
	Approved outlay	Expenditure	Expenditure of 1977-78	Expenditure to end of 1977-78	Approved outlay Central Assistance	Anticipated expenditure	Proposed outlay Total	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	50.00	5.00	10.00	15.00	20.00
..	50.00	5.00	10.00	15.00	20.00
..	50.00	5.00	25.00	20.00	..
..	12.62	5.00	7.38	0.24	..
..	62.62	10.00	32.38	20.24	..
..	2.83	26.14	3.00	11.00	12.14	..
..	18.25	..	10.00	8.25	..
..	5.04	..	25.00	..	7.00	8.00	10.00
..	1.00	..	4.00	..	..
..	0.31	0.31	..	..	..
..	5.33	5.33	..	..	..
..	1.02	1.02	..	..	..
..	0.21	..	..	..	..	..
..	0.58	..	..	..	..	..
..	0.96	..	0.96	0.96	..	..	..
..	1.13	0.12	0.12	..	..	..
..	0.57	0.57	..	..	..
..	0.76	0.76	..	..	..
..	0.63	0.63	..	..	..
..	1.31	1.31	..	..	..
..	0.29	0.29	..	..	..
..	3.26	3.26	..	..	..
..	3.50	3.50	..	..	..
..	4.99	2.26	2.73	2.73	..	..	..

STATEMENT IF 5—(Concl'd.)

Serial no.	Name of Schemes	Zone	District to be benefited	Estimated cost	
				Approved	Latest
1	2	3	4	5	6
25	FPW of Oshairal on L/B of Bhagirathi	Hill	Uttarkashi	..	0.40
26	FPW of Gangotri river from Bhagirathi	"	"	..	2.91
27	FPW of Gangotri town from river Bhagirathi	"	"	..	0.34
28	FPW of Bhusapur	"	Nainital	..	1.20
29	Diverting kosi river flood along course of 75-76 at V. Sakra patti.	"	"	..	6.00
30	FPW of P/F for extension of Maldhan chaur colony no.687.	"	"	..	0.71
31	P/E for protection of strengthening Rudra prayag sangam-ghat.	"	"	..	0.49
32	FPW of Sitarganj town	"	Nainital	..	4.20
33	FPW of Chhoi from river kosi	"	"	..	1.61
34	Extension of Shantipur FPW.	"	"	..	2.35
35	P/E construction spurs under Salmati F.P.N.	"	"	..	7.96
36	A. E. works in District Nainital	"	"	..	25.00
37	Protecting land U/S of V. Gobra.	"	"	..	4.00
38	FPW of V. Sanwali Sera from river Gurzigarh	"	"	..	1.60
39	FPW of Naichaini	"	Tehri Garhwal	..	6.58
40	FPW of V. Sirsidhi	"	"	..	0.44
41	FPW of Kileshwar from river Alakhnanda	"	"	..	7.92
42	Anti erosion schemes in various Hill district	"	Various Hill district.	..	75.00
43	FPW of village paniyali sot	"	Garhwal	..	7.94
44	FPW of Garuda and tota shiling from river Kosi	"	Almora	..	0.74
Total A. E. .. ..				..	255.64
Total Hills (New) .. ..				..	520.63
Flood protection schemes in Almora, Chamoli, Pithoragarh and (Uttarkashi.) .. ..				..	50.00
Repairs to flood works .. ..				..	..
Emergent and unforeseen scheme .. ..				..	..
Grand total U. P. (Plains/Hills) (New Schemes). .. ..				..	20365.11

(Rupees in lakhs)

Expenditure up to end of 1973-74	1974-77 Expenditure	1977-78		Total Expenditure to end 1977-78	1978-79		1979-83	Proposed year-wise outlays			
		Approved outlay	Expenditure		Approved of outlay	Anti-cipated expenditure	Proposed outlay	1979-80	1980-81	1981-82	1982-83
7	8	9	10	11	12	13	14	15	16	17	18
..	0.40	0.40	..	..	..
..	2.91	1.91	1.00	..	..
..	0.34	..	..	..	..	..
..	1.20	1.13	..	..	..	..	..
..	1.13	4.87	1.50	3.37	..	..
..	0.71	..	0.71	..	..
..	0.49	..	0.49	..	..
..	4.20	1.00	3.20	..	..
..	1.61	1.61	..	..	..
..	1.13	1.22	1.22	..	..	..
..	3.39	4.57	2.32	2.25	..	..
..	6.00	..	25.00	..	7.00	8.00	10.00
..	2.26	1.74	1.74	..	..	..
..	1.60	0.60	1.00	..	..
..	6.58	..	2.00	4.58	..
..	0.44	..	0.44	..	..
..	7.92	2.00	2.00	3.92	..
..	75.00	..	20.00	20.00	35.00
..	7.94	1.00	6.94	..	..
..	0.74	0.74	..	..	..
..	18.19	16.39	239.12	39.83	79.40	61.89	55.00
..	19.19	16.39	504.11	62.20	146.78	140.13	155.00
..	50.00	50.00	..	..	..	..	..
..	475.00	475.00	..	..	..	..	..
..	55.00	69.08	..	..	..	..	..
..	897.41	1267.45	17433.32	2483.27	4151.81	4955.61	5847.64

Note:—The outlay for 1978-79 includes Special Central Assistance of Rs. 10.85 crores for Cyclones and Floods also

Flood Control Projects—Targets and Achievement

Serial no.	Item	Constructed up to end of fourth Plan	Actual achievement 1974—77	1977-78 (Actual)	1978-79 (Targets)	1979—83 (Target)
1	2	3	4	5	6	7
1	Volume of flood storage created (m.cu.m.)	..	..	..	..	..
2	Length of embankments (km.)	989.19	103.20	81.80	100	1,801
3	Town protection works (nos.)	41	12	..	3	40
4	Raising of village (nos.)	4,500	..	..	..	..
5	Length of drainage channels (kms.)	11,288.02	365.50	300	235	4,105
6	Area to be benefited ((lakhs hecets.)	6.155	0.68	2.32	1.5	12.2
	(i) Flood Control, Drainage and Anti-water-logging Measures.	..	..	..	..	..
	(ii) Anti-sea Erosion measures	..	..	..	..	..
7	Length of sea wall (km.)	..	..	..	..	..

Major and Medium Irrigation Programmes and Flood Control
Requirement of Material

(Metric tonnes)

Serial no.	Item	1978-79 requirement		1979—83	
		Major and Medium Irrigation Programmes	Flood Control	Major and Medium Irrigation Programmes	Flood Control
1	2	3	4	5	6
1	Cement	7,47,200	12,960	41,03,900	2,17,040
2	Steel	86,700	3,240	4,21,300	53,760
3	Coal	24,000	16,200	17,41,000	2,71,800
4	<i>Explosives—</i>				
	(i) Ordinary detonators (in no.)	50,000	..	2,00,000	..
	(i) Kgms.	25,000	..	10,000	..
	(iii) Fuse Coil (No.)	1,250	..	5,000	..

Major and Medium Irrigation Programme and Flood Control
Employment Generation

(Lakh Mandays)

Employment	Major and Medium Irrigation			Flood Control		
	1977-78 Anticipated	1978-79 Target	1979—83 Target	1977-78 Anticipated	1978-79 Target	1979—83 Target
1	2	3	4	5	6	7
A. Engineers—						
(a) Graduate Engineer ..	5.61	7.61	61.19	0.66	0.71	12.04
(b) Diploma Holders ..	12.75	17.30	139.17	1.51	1.62	27.38
B. Skilled Workman and Skilled Labourer.	54.96	74.58	599.89	6.50	7.00	118.00
C. Unskilled Labourers ..	329.76	447.45	3,599.37	39.00	42.00	708.00

(3) POWER DEVELOPMENT

The economic and industrial backwardness of Uttar Pradesh is apparent from the fact that at 1960-61 prices, the *per capita* income of the State was only Rs.270 in 1975-76 as against the All-India average of Rs.366. Another important indicator of backwardness is low *per capita* consumption of electric power. To get out of the cycle of poverty, unemployment, low productivity and lack of economic diversification, Uttar Pradesh would have to use electric power as a major instrument of development. This would mean a significant increase in the level of consumption and, therefore, of the demand for power. When, even at the present stage of development, the State is facing acute power shortages, it follows that planning for its development must aim at a rapid and very sizeable step up in power generation.

Installed capacity

3.3.2. Before the commencement of the planning era, the State had an installed capacity of 178.54 MW which increased to 370.17 MW at the end of Second Plan giving an increase of 107.3 per cent. The increase for the country as a whole during the same period was 145.8 per cent. Thereafter concentrated efforts were made by Uttar Pradesh to accelerate the capacity for power generation as a result of which an installed capacity of 539.97 MW was added

during the Third Plan, 399.90 MW including 125 MW from Renuagar during three annual plans and 363.70 MW during the Fourth Plan. This brought the total capacity to 1673.75 MW. In this way, the increase over 1960-61 was 352 per cent for U. P. while corresponding step up on All-India basis was only 226 per cent. Even with this higher rate of increase in generation capacity, *per capita* power generation in 1973-74 in this State was only 64 Kwh which was way behind the national level of 116 Kwh *per capita*.

3.3.3. In the Fifth Plan it was proposed initially to add 2462 MWs to installed capacity with an outlay of Rs.1328 crores. This target, however, was reduced to 2016 MW though the Planning Commission accepted the target of only 1944 MW for U. P. in the national target of 12,500 MW. In the first four years of the Fifth Plan 1318 MWs have been added, the details of which are given in Annexure I. An installed capacity of 200 MW would be added during 1978-79 bringing the Five-Year achievement to 1518 MW, against a total anticipated expenditure of Rs.1109 crores. Despite the shortfall, it is evident from the data presented in the following table that in comparison to earlier Plans, the achievement in the five years between 1974-75 and 1978-79 have been of a much greater order.

TABLE I—Installed Capacity-Planwise Details

Period ending		Addition during the Plan period	Cumulative at the end of Plan period
1		2	3
Pre-Plan	.. .. .	..	178.54
First Plan	.. .. .	109.34	287.88
Second Plan	.. .. .	82.29	370.17
Third Plan	.. .. .	539.97	910.14
Three Annual Plans (1966—69)	.. .. .	399.90*	1310.04
Fourth Plan	.. .. .	363.70	1673.74
1974-75	.. .. .	290.00	1963.74
Retirement during 1974-75	.. .. .	..	(—)6.40
At the end of 1974-75	.. .. .	..	1957.34
1975-76	.. .. .	246.00	2203.34
1976-77	.. .. .	412.00	2615.34
1977-78	.. .. .	370.00	2985.34
Retirement during 1977-78	.. .. .	..	(—)2.99
At the end of 1977-78 (Fifth Plan)	.. .. .	1318.00	2982.35
1978-79 (Anticipated)	.. .. .	200.00	3182.35
1974-75 to 1978-79	.. .. .	1518.00	3182.35

*Includes 125 MW from Renuagar.

The total installed capacity of 2982 MWs in the State at the end of 1977-78 was about 12 per cent of the total installed capacity of the country. Considering the size and population of the State, this capacity is rather inadequate for meeting the growing demand.

3.3.4. The projects which could not be completed during the Fifth Plan period

are expected to contribute 1154 MW during the 1978-83 Plan period. The Parichha Thermal Project which was cleared by the C. E. A. and the Planning Commission in 1977-78 is also expected to be commissioned in the later part of the 1978-83 Five-Year Plan. In this way, a total installed capacity of 1374 MWs would be available from spillover projects, as detailed below :

TABLE II—*Details of spillover generation projects*

(Megawatt)

Project	Total installed capacity	Achievement upto 1977-78	Target for 1978-83 Plan
1	2	3	4
1. Yamuna Hydel Stage II (Khodri P.H.)	4×30	..	120
2. Maneri Bhali, Part I	3×30	..	90
3. Garhwal Rishikesh Chilla	4×36	..	144
4. Obra Thermal Extension, Stage II and III ..	5×200	200	800
5. Parichha Thermal	2×110	..	220
Total ..	1574	200	1374

The main reasons for the slippages in the schedule of completion during the Fifth Plan period are enumerated below :

(i) Acute shortage of essential items viz. steel, cement etc. during the early Fifth Plan period.

(ii) Delay in civil works, mainly due to unforeseen geological factors such as bad strata in tunnel excavation under Yamuna Stage II (Part II) and Maneri Bhali—Part I, and occurrence of plastic seams in Garhwal Rishikesh Chilla.

(iii) Delay in the supply of power plant and accessories from suppliers and import of vital components.

(iv) Inability of the contracting agencies due to labour trouble and other reasons to adhere to the time schedules given to them.

3.3.5. Besides 1374 MW of installed capacity which would be available from the spillover projects, it is expected that 40 per cent output from the Central projects of Singrauli Super Thermal and Narora Atomic Power Stations, a total of 352 MWs, would also become available to this State. The total additions in the Five-Year Plan 1978-83 would, on this basis, come to only 1726 MWs which

would be quite insufficient to cope with the essential needs for the balanced growth of the State's economy. It is, therefore, proposed to execute two of the projects to be initiated during the 1978-83 Plan in such a manner that at least partial benefits would accrue therefrom in the later period of this Five-Year Plan. The projects of Tanda and Anpara, which have been technically cleared by the Central Electricity Authority, have been identified for accelerated completion. In addition, the Gas Turbine Project of Muradnagar is expected to yield results expeditiously. It is expected that these projects would contribute 880 MW of installed capacity. This, undoubtedly sets a gigantic task before the State but this would have to be accomplished if a crisis arising out of the frustration of the legitimate socio-economic aspirations of the people is to be avoided. Taking this into account the total installed capacity in the State would increase from 2982 MW in 1977-78 to 5236 MW in 1982-82, besides the availability of 451 MW from Central projects. The addition during 1978-79 and 1979-80 would be of 200 MW and 236 MW respectively. It is expected that the installed capacity at the national level would increase by 19,380 MW (18,500 MW as envisaged in Draft National Plan, 1978-83

plus 880 MW from U. P.'s new projects during 1978-83. On this basis the State system would be producing about 12 per cent of the Nation's installed capacity in 1982-83, which is at the same level as in 1977-78. The percentage increase in the State system in 1982-83 over the year 1977-78 would work out to 75.6 per cent as against 75.4 per cent for the country as a whole. These figures indicate that despite all out efforts, U. P.'s position in the national framework would not register any improvement. On the other hand, if additional capacity from new projects does not materialise, the position would deteriorate.

Power Generation—

3.3.6. With an installed capacity of 1549 MW, (excluding 125 MW of Renu-nagar) the gross electricity generated in 1973-74 was 5889 million units. In other words 3802 units were generated per KW. installed. The national average during the same year was 4002 units. The State-wise details of gross energy generated and consumed within the State are given in Annexure III. The relative picture of generation per KW installed is given in Annexure IV. From these annexures it will be observed that in 1976-77, the energy generated per KW. installed (3871 units) stood no comparison to the national output (4115) for this year. This state of affairs has been attributed to the poor performance of hydro-electric projects which were adversely affected by erratic monsoon conditions. Moreover, the hydro-electric projects in this State are for peaking purposes and as such, their contribution towards normal generation is restricted.

Per Capita Generation—

3.3.7. In 1960-61 *per capita* generation in the State was only 17 Kwh as against the national average of 39 Kwh. However, the States of Maharashtra (83 Kwh) Tamil Nadu (66 Kwh), West Bengal (66 Kwh), Punjab (including Haryana (49 Kwh), Karnataka (45 Kwh) were way ahead of the national average. With increase in installed capacity and generation, the *per capita* generation in the State reached 64 Kwh during 1973-74 against the Nation's average of 116 Kwh. During the same year the State of Punjab forged ahead of all States with *per capita* generation of 250 Kwh. followed by Haryana with 230 Kwh. The States of Maharashtra (185 Kwh.), Gujarat (165 Kwh.)

and Karnataka (149 Kwh.) were ahead of the national level. In 1975-76 the *per capita* generation of U. P. increased to 84 Kwh. but the corresponding national average rose to 132 Kwh. The State of Punjab reached the highest level of 262 Kwh. Haryana continued immediately behind Punjab with 234 Kwh., while Maharashtra, Gujarat, Karnataka and Orissa remained above national average. The State-wise details are given in Annexure V from which it will be seen that in 1974-75, this State reached the *per capita* generation level equal to national average of 1965-66, clearly indicating a leeway of 9 years.

Consumption of Power

3.3.8. The consumption of power in the country during 1960-61 was 13953 million units of which 976 million units or seven per cent was utilised in Uttar Pradesh. By 1973-74, the national consumption of electricity went up by 260 per cent over 1960-61 and reached 50246 million units, while in this State the consumption of electric power in 1973-74 was 4152 million units showing an increase of 325 per cent over 1960-61. The increase in 1976-77 over 1973-74 was 70 per cent as against the national average of 33 per cent. The State's consumption in 1976-77 was 7072 million units, which though second to Maharashtra's consumption of 10802 million units was only 10.6 per cent of the national consumption of 66609 million units.

Per capita consumption of electricity

3.3.9. The *per capita* consumption of electricity, which is one of the accepted indicators of economic growth, was 15 Kwh in Uttar Pradesh as against the All-India average of 38 Kwh in 1960-61. The States of Andhra Pradesh (19 Kwh), Bihar (42 Kwh), Gujarat (52 Kwh), Karnataka (44 Kwh), Kerala (29 Kwh), Madhya Pradesh (20 Kwh), Maharashtra (52 Kwh), Orissa (43 Kwh), Punjab including Haryana (33 Kwh), Tamil Nadu (51 Kwh), and West Bengal (84 Kwh) were ahead of this State. Only the States of Assam (4 Kwh), Jammu and Kashmir (14 Kwh) and Rajasthan (12 Kwh) were behind this State. In fact the *per capita* consumption in this State in 1960-61 was lower than the All-India average of 18 Kwh a decade earlier in 1951. This leeway of a decade in relative level of development has remained

unbridged as will be seen from the table below :

TABLE III—*Per Capita Consumption*
(Kwh)

Year	U.P.	India
1	2	3
1951 ..	N.A.	17.80
1956 ..	8.72	26.40
1960-61 ..	15.10	38.20
1965-66 ..	29.90	61.30
1968-69 ..	49.04	77.88
1973-74 ..	57.85	97.48
1974-75 ..	60.88	98.99
1975-76 ..	73.75	109.95
1976-77 ..	85.88	119.38

It is clear from the above data that since 1960-61, massive efforts have been made to increase power production with the result that the *per capita* consumption in the State during 1976-77 increased to about 86 Kwh, showing an increase of 469 per cent as against the All-India average of 213 percent during the same period. The State-wise details of *per capita* consumption are given in Annexure VI which shows that all the States except Andhra Pradesh, Assam, Haryana (174Wwh), Karnataka (148 Kwh), and Rajasthan, were ahead of this State in 1976-77. On the other hand, the *per capita* consumption in Gujarat (192 Kwh), Haryana (174 Kwh), Karnataka (148 Kwh), Maharashtra (199 Kwh), Punjab (242 Kwh), Tamil Nadu (146 Kwh) and West Bengal (125 Kwh) was more than the national average. In order to raise the standard of living of our people and to bring it at par with other advanced States, a tremendous leap forward is needed. Since the development of power generation and reduction in the inter-State imbalances are a matter of common interest between the Centre and the State, it is expected that the Union Government would accord priority to backward States not only in the matter of clearing their projects but also in the matter of determining supply schedule for plant and accessories. Allocation of resources for power development would, it is assumed, also be weighted in favour of such States.

Power consumption in Agriculture

3.3.10. Uttar Pradesh has a predominantly agricultural economy with about

80 per cent of its population living in villages where the living and working conditions are far from satisfactory. By 1976-77, 29.4 per cent of villages were electrified covering 40.3 per cent of rural population of the State.

3.3.11. The average growth rate per annum of power consumption in agriculture during the last one and a half decades has been 52 per cent for U. P. as against 66 per cent for the country. For a State predominantly dependant on agriculture, this is a matter of grave concern. Besides the chronic power shortage, another reason for this state of affairs seems to be the preponderance of small and marginal farmers in the State who cannot afford mechanisation of irrigation and agriculture at their present level of income. With special emphasis on the betterment of the economic condition of small and marginal farmers and other weaker sections of society, the demand for power is bound to grow in the agriculture sector. As far as the State's own priorities are concerned, the agriculture sector is not being ignored in respect of electricity supply. This would be clear from the fact that while in 1960-61 about 21 per cent of the total power consumption was being used for agriculture, the corresponding proportion increased to 26 per cent by 1976-77. The State-wise details are given in Annexure VII. With increased trend for energisation of pumping sets, the demand of a large proportion of power being earmarked for Agriculture is bound to gather momentum.

Energy consumption for Industries

3.3.12. Despite the average growth rate of 43 per cent per annum in the consumption of power for industries during the last one and half decades as against 21 per cent at the national level, the consumption of power for industries at the State level is still only 9.6 per cent of the national consumption. Low consumption of electricity has created stagnation in the proper growth of industries with the result that the State has remained industrially backward. Low power consumption has been one of the factors responsible for declaring 39 out of 56 districts industrially backward.

3.3.13. In 1960-61 about 52 per cent of the total power was being consumed by industries. This percentage at 52.9 in

1976-77 has remained almost static over a decade and a half. There appears to be no prospects of a major shift in the distribution of power supply during the 1978-83 Five-Year Plan period.

Gap between power generation and consumption

3.3.14. The gap between gross generation and consumption within the State is mostly due to auxiliary consumption and system losses. These are described in the subsequent paragraphs.

Auxiliary Consumption

3.3.15. The auxiliary consumption takes place in two ways—firstly, through power used in unit generation and secondly, in the shape of power used in station auxiliaries. The steam system has a much higher consumption in comparison to hydro electric or diesel systems. The data given in Annexure VIII shows that steam auxiliary consumption in this State is around 10 per cent which is comparable to the norm adopted by the CEA in its 10th Annual Power Survey. Similarly, the norm adopted for hydro system is 0.5 per cent. This State is, however, below this level. In spite of this satisfactory situation, it is considered necessary to minimise the auxiliary consumption since it will increase the net availability of power.

System Losses

3.3.16. Line losses are no doubt inherent in any power system. Nonetheless it is desirable to keep these to the minimum level so as to have the maximum possible power available for consumption. According to CEA, this State was losing 29.8 per cent of energy generated during 1973-74 as against the national average of 20.5 per cent. During 1976-77, however, the percentage of system losses came down to 24.0 as against national average of 19.8 per cent. Comparative State-wise details are given in Annexure IX.

3.3.17. One of the reasons for high percentage of system losses in this State has been large scale pilferage of energy. That stern measures are being taken to remedy this situation would be evident from the fact that as many as 34,624* inspections were carried out during 1976-77 resulting in detection of thefts to the extent of 36.54 million units. All out efforts are also being made to reduce line losses by instal-

ling capacitors and strengthening the existing lines and sub-stations. In the Five-Year Plan for 1978-83, it is proposed to reduce the losses by 1.36 per cent. The measures contemplated or enforced would not only check further increases in line losses but would also save energy and add to revenues. This programme is expected to cost Rs. 30 crores during the 1978-83 period.

Load Growth

3.3.18. Load forecasting provides a crucial link between planning for the power sector and planning for the rest of the economy. It also provides the essential frame of reference for assessing the investment resources that should be allocated to the power sector. It is, therefore, important that the load forecast should have a realistic base and should be consistent with the plan for the development of other sectors of the economy. With this end in view, the Central Electricity Authority conducts Annual Power Survey in the country. Peak demands as envisaged in the various Annual Power Surveys for different years as well as the corresponding actual peak demands of U. P. System are given in Annexure X. From the data presented, it will be observed that the forecasts have generally proved quite reliable. The latest survey, which is 10th in the series, was started in November, 1975.

3.3.19. In the 10th Annual Power Survey the forecast for the period ending 1982-83 has been made on the basis of a micro study of various sectors using electricity. The study has attempted to correlate the production targets of end products with the computed energy requirements per unit of end-product production, specially in the case of core industries such as steel, aluminium, fertilizer, caustic soda etc. In respect of other industries, where the production function is different between small, medium and large units, it has not been possible to make such a study. The estimate of energy requirement in respect of industries with a demand of one megawatt and above is based on the returns received from individual industrial units and subsequent verification by the Planning Commission and

*CEA General Review, 1976-77—Table 4.1.18.

Directorate General of Technical Development of the Ministry of Industries. Since the period of forecast covered by this study is about seven years and the gestation period for the materialisation of industry would take about five years on an average, adequate provision has been made for the industries which would be set up hereafter and would be materialising before the end of the Five-Year Plan for 1978-83. A lump sum provision has been made in the survey for meeting the needs of such industries. The energy requirements in respect of irrigation sector have been computed on the basis of large lift irrigation schemes proposed to be undertaken by the State Government and other authorities. While the information regarding the number of pump sets required to be energised during the current Five-Year Plan period has been furnished by the Irrigation Department the projections in respect of other categories i.e., domestic, commercial, water supply, industries supplied at low tensions etc. are based on the growth in the past, after making allowance for the details regarding the restrictions on the peak demand and energy consumption. The rate of growth is applied to the base year 1973-74. A pragmatic attitude has been taken while determining the extent to which line losses could be reduced in the system. It has been stipulated that by the end of 1983-84, the line losses could, for the country as a whole, be reduced from 20.3 per cent to 18.5 per cent. The national average load factor of 63.5 per cent has been adopted in the calculation of load demand. The National average of growth rate of energy for public utilities has been assumed on a tapering basis at the rate of 10.1 per cent, 9.6 per cent and 9.1 per cent for the periods from 1983-84 to 1988-89, 1988-89 to 1993-94 and 1993-94 to 1995-96, respectively.

3.3.20. In the 10th Annual Power Survey, while working out the requirement of power generation the following criteria have been adopted:

(a) *Peaking capability for thermal units*

3.3.21. The peaking capability of thermal units has been taken as 69 per cent of the stabilised capacity on the basis of standard practice followed by Central Electricity Authority. The factor of 69

per cent was obtained as a product of $0.90 \times 0.90 \times 0.90 \times 0.95 = 0.69$, by taking the following margins:

(i) Forced outages	10%
(ii) Partial outages	10%
(iii) Consumption in auxiliaries ..	10%
(iv) Spinning reserve	5%

For working out peaking capability of existing thermal units, Central Electricity Authority has considered the derated capacity of said units. The capability factor of 69 per cent is applied to the stabilised capacity to find out peaking capability of the new and existing thermal units in December.

(b) *Stabilised capacity for thermal units*

3.3.22. Past experience shows that full peaking capability from new thermal units is not available for a few months after the commissioning. Therefore, the stabilised capacity has been worked out, for the new thermal units for the month of December (peak demand month), on the following general norms:

(i) For first three months after commissioning	Nil.
(ii) For subsequent nine months of the first year of commissioning	50%
(iii) Second year and onwards ..	100%

(c) *Peaking capability for hydel units*

3.3.23. As per the standard practice, peaking capability from the run off river hydro schemes has been worked out on the basis of water availability in the month of December. It has been assumed that the margin available between such water availability and the installed capacity would account for any forced outages of generation units at peak time for run-off river hydro stations. However, in order to provide for the contingency of forced outages of generation units in the reservoir hydro schemes, one of the largest size units under operation has been considered unavailable for working out peaking capability from reservoir hydro stations.

(d) *Peaking capability for Nuclear and Gas Turbine Units*

3.3.24. The peaking capability of Nuclear and Gas Turbine units has been adopted at 85 per cent of stabilised capacity in December.

(e) *Energy availability from Thermal/Nuclear Units*

3.3.25. The Central Electricity Authority have adopted the following criteria in the 10th Annual Power Survey (APS) for estimating generation from newly commissioned thermal/nuclear units :

	Kwh./Kw./Year
(i) During first year of commissioning	2,500
(ii) During second year of commissioning	4,000
(iii) During Third year of commissioning	5,000
(iv) During Fourth and subsequent year of commissioning	5,350

It has been observed that the performance of new indigenous thermal units in the State is far below the stipulated figures. Therefore, it has been assumed that only 75 per cent of the estimated generation figures will be achieved during the first five years.

(f) *Energy availability form Hydro Units*

3.3.26. According to past experience, the average energy generation from various hydro schemes in the State over the last ten years from 1968-69 works out to be about 86 per cent of their designed generation capability. However, the actual

average generation from Rihand Reservoir alone over the above period works out to 85 per cent of the designed capacity. Accordingly, the energy availability from hydro units has been assumed at 85 per cent of their designed capability.

(g) *Energy availability from Gas Turbine Units*

3.3.27. The energy availability from Gas Turbines has been worked out at the rate of 2500 Kwh per KW per annum.

(h) *Auxiliary consumption in Hydro, Thermal, Nuclear and Gas Turbine Units*

3.3.28. The energy consumption in auxiliaries has been assumed as follows :

(i) Hydro units	0.5%
(ii) Thermal/Nuclear units	10%
(iii) Gas Turbine units	2%

(i) *Plant retirement*

3.3.29. The Central Electricity Authority in the 10th APS have adopted plant retirement at the rate of one per cent of the capacity of both hydro and thermal units available in each year.

On the above assumptions, the peaking capability and energy availability against the forecast made in the 10th APS works out as follows :

TABLE IV *Peaking Energy forecast and availability*

Year	Demand forecast	On the basis of total addition of 2606 MW from continuing and new schemes		On the basis of addition of 1726 MW from continuing and Central projects	
		Anticipated availability	Gap	Anticipated availability	Gap
1	2	3	4	5	6
(A) Peaking Capability (MW) :					
1978-79	2552	2199	(-)353	2199	(-)353
1979-80	2859	2351	(-)508	2351	(-)508
1980-81	3190	2468	(-)722	2443	(-)747
1981-82	3639	2964	(-)675	2713	(-)926
1982-83	4042	3323	(-)719	3015	(-)1027
(B) Energy Availability (Million Kwh) :					
1978-79	13420	10625	(-)2795	10525	(-)2795
1979-80	14935	11354	(-)3581	11354	(-)3581
1980-81	16605	13310	(-)3295	13114	(-)3491
1981-82	18950	15422	(-)3528	14834	(-)4116
1982-83	20963	18129	(-)2834	17001	(-)3962

It is thus clear that the demand for power would outstrip both peak and availability, with the result that energy shortages would continue throughout the Plan period to be a bottleneck in the development of the State's economy. It is also clear from the above that if physical benefits do not accrue from the new projects of the 1978-83 Plan the position would become very difficult.

3.3.30. Power shortage during 1978-83 would be restricted to the above estimates subject to the condition that—

- (i) completed projects contribute according to their capability ;
- (ii) spillover projects are completed according to their latest schedule ;
- (iii) new projects are completed and physical benefits derived therefrom as programmed; and

(iv) auxiliary consumption and system losses are kept at the minimum level.

Financial requirement for generation projects

3.3.31. The projects which are proposed to be brought to completion

along with the projects from which partial benefits could be derived during 1978-83 are estimated to cost Rs.709.33 crores during 1978-83, of which Rs.113.14 crores are expected to be utilised during 1978-79. Another Rs.121.39 crores are required during 1979-80 as detailed below:

TABLE V—Outlays for projects which are to be fully or partially completed during 1978-83

Project	Latest estimated cost	Expenditure up to end of 1977-78	1978-83 Plan		
			1978-79 Anticipated	1979-80 Proposed outlay	Five Year total outlay
1	2	3	4	5	6
A—Completed Projects					
1. Ramganga-Power share**	4531	3890	302	169	471
Irrigation share	11719	12569	15	(—)300	(—)850
Total	16250	16459	317	(—)131	(—)379
2. Panki Extension	7000	6361	243	..	243
3. Harduaganj V and VI	8246	9168	436	..	436
Sub-Total*	19777	19419	981	169	1150
B. Projects to be completed during 1978-83					
1. Yamuna Stage II	13504	10974	656	836	2337
2. Maneri Bhali Part I	6719	2500	831	937	3035
3. Garhwal Rishikesh Chilla	9341	6331	1781	1086	3010
4. Obra Extension Stage II and III	35569	25142	4500	4380	12298
5. Parichha Thermal	8372	362	450	1400	7852
Sub-Total	73505	46309	8218	8639	28532
C. New Projects					
1. Gas-Turbines at Muradnagar	7505	..	..	500	7505
Sub-Total	7505	..	..	500	7505
Total (A+B+C)	100787	65728	9199	9308	37187
D. Projects to be partially completed during 1978-83					
1. Tanda Thermal	15256	200	855	1331	14286
2. Anparal 'A'	23656	300	1260	1500	19460
Sub-Total	38912	500	2115	2831	33746
Total*	139699	66228	11314	12139	70933

*Does not include irrigation share

**Tentative

3.3.32. The Tenth Annual Power Survey carried out by the Central Electricity Authority gives a forecast of peak load of 7474 MWs. and energy requirement of 38890 million Kwh during 1988-89. This gives a development rate of 10.9 per cent per annum for peak load and 11 per cent per annum for energy requirement during the period 1984-89. Since the power generation projects are of longer gestation period, it has become imperative to take note of these forecasts and plan accordingly.

3.3.33. During 1978-83, the State would have to depend mainly on additional thermal generation so as to achieve quick benefits. This approach would result in a somewhat non-optimal development resulting in a proportionately higher thermal installation as compared to hydro capacity. It is anticipated that the ratio of hydro to thermal capability in the system would be reduced from 34 : 66 in 1978-79 to as much as 27 : 73 by the end of the year 1982-83. It is well recognised that for optimal operation of a power system, a

hydro to thermal capability ratio around 40 : 60 is desirable. Accordingly, efforts would have to be initiated to bring about correction in the hydro thermal ratio of generating capacity in the U. P. grid during the 1983-88 Plan period. Since hydro projects take about 7-13 years to complete, there seems to be no choice but to

start work on a number of new hydel projects during 1978-83 so that these fructify during 1983-88. The compulsions of the situation, therefore, require that work should be started on the following schemes, with financial outlay as indicated during the 1983-88 Plan.

TABLE VI—Details of the benefits and outlays for new projects to be taken for implementation during the 1978-83 Plan period

Project	Installed capacity (MW)	Benefits during 1978-83	Benefits during 1983-88	Total cost	Expenditure upto the end of 1977-78	Outlay for		
						1978-79 Anticipated	1979-80 Proposed	1978-83 Total
1	2	3	4	5	6	7	8	9
A—Thermal Projects—								
1. Tanda	4×110	220	220	15,256	200	855	1,331	14,286
2. Anpara 'A'	3×210	420	210	23,656	300	1,260	1,500	19,460
3. Anpara 'B'	2×500	..	1000	35,636	..	..	1,200	91,00
4. Unchahar	2×210	..	420	15,170	..	505	1,200	87,00
5. Central U.P.	2×210	..	420	15,256	..	..	..	4,836
6. Western U.P.	2×210	..	420	15,256	..	..	..	4,836
7. Dohrighat	2×210	..	420	15,621	..	..	..	4,836
8. Anpara 'C'	3×500	..	500	53,454	..	..	..	4,900
9. Parichha Extension	2×210	..	420	15,256	..	..	..	4,835
Sub-Total (A)		640	4030	2,04,561	500	2,620	5,231	75,789
B.—Hydro Projects—								
1. Lakhwar Vyasi :								
Power share	2×150	..	420	11,254	299	765	600	8,365
Irrigation share	2×60	..	..	5,463	121	300	200	1,000
Total				16,717	420	1065	800	9365
2. Vishnu Prayag	4×65.5	..	262	10,451	..	144	251	4,031
3. Maneri Bhali II	3×52.	..	156	8,263	90	263	515	3,676
4. Pala Maneri	3×47.5	..	143	7,150	..	..	..	600
5. Koteshwar Dam	4×45	..	180	5,825	..	..	..	600
6. Khara	3×27	..	81	6,074	..	45	500	2,895
Sub-Total (B)*		..	1,242	49,017	389	1,217	1,866	20,167
Sub-Total (A+B)*		640	5272	2,53,578	889	3,837	7,097	95,956
C—Central Projects—								
1. Share in Singrauli Super Thermal	2×210 + 2×500	252	568	..	..	..	..	..
2. Share in Narora : Atomic Power Station,	2×235	100	100	..	..	..	..	..
Sub-Total (C)		352	668	..	..	..	..	..
Total*		992	5,490	2,53,578	889	3,837	7,097	95,956

*Does not include irrigation share

It will be observed that only Rs.959.56 crores are proposed to be invested on initiating action under schemes which are to contribute 5,272 MW during 1983-88. This constitutes 38 per cent of the total cost of these projects.

3.3.34. On the above basis, the total installed capacity in U. P. Grid System is anticipated to rise from 5,236 MW at the end of 1982-83 to 10,508 MW in 1987-88. Keeping these developments in view, the

peaking capability and energy availability is expected to be as follows:

TABLE VII—Peak/Energy forecast and availability during 1983—88

Year	Peaking capability (MW)			Energy availability (MKwh)		
	Peak load as per 10th APS	Peaking capability (estimated)	Gap	Energy demand as per 10th APS	Energy availability (estimated)	Gap
1	2	3	4	5	6	7
1983-84	4457	4070	(—)387	23082	19992	(—)3090
1984-85	4942	4871	(—)71	25621	23045	(—)2576
1985-86	5480	5104	(—)376	28439	25559	(—)2880
1986-87	6077	5872	(—)205	31567	30247	(—)1320
1987-88	6739	6637	(—)102	35039	34635	(—)404

The above table reveals that energy deficits would continue in all the years of the 1983—88 Plan period. From this, one can justifiably conclude that the various schemes included in the Plan period 1978—83 are fully justified. At the same time, the persistence of shortage against peaking demand throughout the 1983—88 Plan period, despite a massive hydro generation programme, not only confirms the necessity for the inclusion of these new hydro schemes but also indicates the need for taking up more projects for meeting peak-load.

3.3.35. The tenth APS forecasts a peak demand of 12236 MW during 1993-94 which works out to a development rate of 10.36 per cent per annum over the year 1988-89. In this context the requirement of hydro capacity for maintaining an opti-

mal hydro thermal ratio of 40 :60 assumes importance as some financial provision for some of the schemes which would fructify even beyond 1987-88 would have to be made in the Five-Year Plan for 1978—83, because of long gestation period of such schemes. Under this category Tehri Dam Project is already being implemented and it is proposed to initiate some action on Lohari Nag Pala, Kishau Dam and Kotli Bhel Dam. The completion of these schemes during 1988—93 would be possible only if these are initiated in the current Five-Year Plan for 1978—83. In these circumstances there is no choice but to provide Rs.165.40 crores for these schemes during 1978—83 Plan of which Rs.8.69 crores are expected to be utilised during 1978-79 and Rs.26.66 crores during next year. The project-wise details are as follows:

TABLE VIII—Details of projects which are to fructify beyond 1937-88

Projects	Megawatt	Rupees in lakhs				
		Installed capacity envisaged	Estimated cost	Expenditure up to end of 1977-78	Outlay for	
1	2	3	4	5	6	7
1 Tehri Dam	4×150	30,516	1,457	1,853	3,632	19,440
(a) Power Share	..	15,242	722	869	1,916	10,440
(b) Irrigation Share	..	15,274	735	984	1,716	9,000
2. Lohari Nag Pala ..	3×96	6319	..	..	..	300
3. Kishau Dam (U.P.'s share 75%)	..	45984*	..	300	1,250	11,600
Power Share	..	..	..	..	750	5,600
Irrigation share	4×150	..	..	..	..	..
4. Kotli Bhel	..	..	500	..	500	6,000
Power Share	..	60000*	..	300	300	3,200
Irrigation share	4×260	..	..	..	300	3,000
Total, Power share ..	2528	..	722	869	2,666	16,540

*Total cost includes Irrigation share.

3.3.36. On the basis of the details furnished in the foregoing paragraphs, the total requirement for generation schemes works out as follows:

TABLE XI—Requirement of funds for generation projects during 1978-83

Projects	(Rs. in lakhs)		
	1978-83 Proposed outlay	1978-79 Anticipated expenditure	1979-80 Proposed outlay
1	2	3	4
1 Projects completed, proposed to be completed or partially completed during 1978-83.	37,187	9,199	9,308
2 Projects to be completed or partially completed during 1983-88	95,956	3,837	7,097
3 Projects to be completed beyond 1987-88	16,540	869	2,666
Total	1,49,683	13,905	19,071

Transmission and Distribution

3.3.37. Development of transmission lines in a power system is as important as the development of generation schemes, because proper utilization of generated power is possible only if there exists a transmission system capable of transmitting power from the generating stations to load centres efficiently and reliably. The loss of power in transmission is also dependent upon the efficiency of the system. From all angles the growth of transmission system has to keep pace with the growth of power generation

TABLE X—Growth of Transmission Lines during 1974-79

Category of lines	As at the end of 1973-74	Target for Fifth Plan (1974-79)	Achievements during					1974-79 (Anticipated)	
			1974-75	1975-76	1976-77	1977-78	1978-79 (Anticipated)	1978-79 (Anticipated)	
1	2	3	4	5	6	7	8	9	
400 kV lines	..	1,165	..	..	..	375	..	375
220 kV lines	2,281	1,170	118	87	229	143	52	629	
132 kV lines	4,840	2,391	11	503	309	65	1,556	2,444	
66 kV lines	2,789	330	1	4	89	80	45	219	
Total	9,910	5,056	130	594	627	663	1,653	3,667	
Secondary lines of 37.5/33 kV	16,342	6,278	675	503	693	572	1,400	3,843	

It is clear that progress during the first four years of the Fifth Plan has not been to the expectations but this will be made

and spatial and functional patterns of demand. The Indian Electricity Rules have classified lines into three categories viz. low and medium voltage (up to 600 V), high voltage (up to and including 33 kV) and extra high voltage (above 33 kV). On the distribution side, the standard voltages are 33kV, 22 kV, 11 kV and 400/230 V besides 13.2 kV, 6.6 kV, 4.6 kV, 3.3 kV and 2.2 kV. On the low voltage side, three phase four wire system giving 400/420 V between phase and 230/240 V between phase and neutral have been universally adopted throughout the country except in areas where D. C. supply is still there.

3.3.38. Before the Planning era this State had a net work of transmission lines of 66 kV and below. There were only 473 Ckt. Km. lines of 66 kV and 1,426 Ckt. Km. of secondary lines. During the First Plan, lines of 132 kV were introduced. At the end of Second Plan there were 346 Ckt. Km. lines of 132 kV, 1,654 Ckt. Km. of 66 kV and 3,462 Ckt. Km. of secondary lines. The 220 kV transmission lines were taken up in the State during the three Annual Plans (1966-69). At the end of Fourth Plan the State had 2,281 Ckt. Km. lines of 220 kV, 4,840 Ckt. Km. lines of 132 kV, 2,789 Ckt. Km. lines of 66 kV and 16,342 Ckt. Km. of secondary lines.

3.3.39. In the first four years of the Fifth Plan a tension line of 400 kV was introduced for the first time in Uttar Pradesh and in the country as well. The achievements during 1974-79 have been as follows:

good to some extent after the targets set for 1978-79 are achieved. The Plan-wise achievements are given in Annexure XI.

3.3.40. According to CEA's General Review of 1976-77, there were 18.93 lakh Ckt. Km. lines in the country of which 17.94 lakh Ckt. Km. were of 33 kV and below and 0.99 lakh Ckt. Km. of 66 kV and above. Of this, Tamil Nadu had the greatest length of 2.77 lakh Ckt. Km. of 33 kV (including 2.15 lakh Ckt. Km. of lines up to 500 V) and 0.11 Ckt. Km. of 66 kV and above. This State with the total length of 2.41 lakh Ckt. Km. of lines had the largest transmission and distribution network with 2.30 lakh Ckt. Km. lines of 33 kV and below (including 0.69 lakh Ckt. Km. of lines up to 500 V), and 0.11 lakh Ckt. Km. of lines of 66 kV and above. On the distribution side also U. P. had the largest net work of 11 kV lines i.e. 95,021 km. as compared to 1,17,018 Ckt. Km. of low voltage lines (below 11 kV). It compares favourably with the national level of 5.72 lakh Ckt. Km. of 11 kV lines and 10.85 lakh Ckt. Km. of below 11 kV lines. However, if these achievements are viewed against the size of the State it would appear that the State has to further accelerate its pace of extending transmission and distribution lines. The situation becomes clear from the perusal of Annexure XII.

3.3.41. The 10th APS forecast gives a system demand of 4042 MW for this State by the end of 1982-83. With the growth of generation and of transmission lines of higher and higher voltages, the power system becomes more and more complicated. The alternatives for studying the numerous possible situations are so many and so varied that to arrive at any logical conclusion the various alternatives have to be considered from time to time. For building power system for this State transmission proposals which have been worked out on the basis of computer studies to cater for the anticipated load demand and the proposed generation, takes the following aspects into consideration:

(a) Requirement of lines for evacuating power from proposed generation stations.

(b) Requirement of lines for bulk power transfer.

(c) Requirement of feeder lines.

(d) Provision for outages of lines and generating units.

(e) Additional requirements from transient stability considerations.

While framing the proposals for 1978-83, cognizance has been taken of the fact that the construction of lines, specially in difficult terrains, also takes considerable time. In order to initiate work on lines as are required in early or middle of 1983-88 Plan, necessary provision for such lines has been kept in the 1978-83 Plan.

3.3.42. With the increase in power transmission requirements, the level of voltage of transmission has to be stepped up. Considerable construction activity in respect of 400 kV lines which was started during the Fifth Plan will continue during the Five-Year Plan for 1978-83. Simultaneously, it is proposed to develop expertise for the introduction of 765 kV lines, in subsequent plans. A parallel study is also proposed for introduction of EHV D. C. system. Since fast and reliable communication is an essential pre-requisite for the efficient operation of the transmission system, micro-wave communication system has been introduced in Uttar Pradesh which would entail considerable work during 1978-83 period as well.

3.3.43. After taking into consideration all aspects of generation and transmission, it is considered necessary to have the following targets for Transmission and Distribution during the Five-Year Plan of 1978-83 :

TABLE XI—Transmission and Distribution Programme for 1978-83

Category of lines	(Ckt. Km.)			
	As at the end of 1977-78	1978-83 Total addition	1978-79 Addition anticipated	1979-80 Proposed addition
1.	2	3	4	5
400 kV lines	375	1,920	..	790
220 kV lines	2,858	2,156	52	693
132 kV lines	5,728	4,570	1,556	680
66 kV lines	2,963	160	45	40
Total	11,924	8,806	1,653	2,203
Secondary lines of 37.5/33 kV	18,785	15,000	1,400	2,300

The details of lines of 220 and higher kV, which would contribute towards the achievement of the targets mentioned in table XI above are given in Statement PR-VI.

3.3.44. Most of these lines and associated sub-stations have already been approved by the CEA/Planning Commission through following projects:

(a) Project estimate costing Rs.168.09 crores for Transmission and Transformation works (66 kV and above) in U. P. during Fifth Plan period.

(b) project estimate costing R.112.09 crores for 400 kV system in U. P. during Fifth Plan period;

(c) proposals technically cleared by

CEA and to be incorporated in a supplementary project estimate for Fifth Plan works.

The proposals for new works for the 1978-83 Plan period have already been submitted to the CEA for their technical clearance.

3.3.45. The programmes as detailed below chalked out for 1978-83 is estimated to cost Rs.719.40 crores, of which Rs.97.54 crores are anticipated to be utilised during 1978-79 and Rs.120.17 crores during 1979-80:

TABLE XII—Transmission and Distribution—Outlays for 1978-83

(Rupees in lakhs)

Category of lines	Estimated cost		Expenditure upto the end of 1977-78	1978-83 Outlay		1978-79 Anticipated		1979-80 Proposed	
	Total	Spill over schemes		Total	Spill-over	Total	Spill-over	Total	Spill-over
1	2	3	4	5	6	7	8	9	10
400 kV works ..	29,806	10,371	4,810	16,559	5561	2608	2558	2695	2085
220 kV works ..	17,873	5,582	2,217	9,904	3352	1568	1568	1923	1385
132 kV works ..	25,644	10,644	4,407	15,977	6237	2878	2878	2799	2600
66 kV works ..				400		100		100	
33 kV works ..				15,250		1450		2300	
11 kV works ..				7,150		800		1050	
L.T. works ..				3,700		350		550	
Works connected with reduction of T & D losses				3,000				600	
Total ..				71940		9754		12017	

(Since, at this stage details of spillover works of 66 kV and below cannot be supplied, the columns concerning them have been left blank)

Rural Electrification

3.3.46. One of the principal objectives of the Government's economic policy is the development of backward areas in the country. These areas are inhabited by the poorest sections of the country's population. In the absence of economic development, people of these areas have no means of improving their lot. The Government have, therefore, launched a nation wide programme for the uplift of such areas.

Electricity, unlike many other sources of energy, is a versatile input. It helps in increasing agricultural production by energising pump-sets and thereby bringing more area under irrigation. It can also be used as an essential input for the development of agro-based industries for processing increased agricultural production. These processing industries and other rural industrial establishments help farmers,

particularly the ones falling in the small and marginal categories and the agricultural labourers, to supplement their income during lean agricultural seasons. Electricity, by mechanising household industries and handicrafts, in which quite a substantial portion of the rural population is engaged, makes it possible for the village artisans to improve the quality of products and increase production to take advantage of growth in demand which would otherwise be appropriated by larger industrial establishments. By facilitating rural industrialisation, electricity augments employment to a very large proportion of unemployed rural population. It also helps in the growth of other essential services like education, water supply and health services, which in turn improve the general quality of life. Rural electrification is, therefore, beyond any doubt, not only an economic necessity but also, a powerful vehicle for social transformation.

3.3.47. According to 1971 census, there were 5,75,936 villages in the country of which 19.5 per cent or 1,12,561 villages were located in Uttar Pradesh. Provision of electricity to all the villages of the State requires huge investments. Because of resource constraints, the development of rural electrification programme in U. P. has not taken place on scale comparable with those States where the total number of villages is below 20,000. U. P.'s situation can, if at all, be compared with Madhya Pradesh having second highest number of villages (70,883) or with Bihar with third highest number of villages (67,566). This State is much ahead of these two States as will be clear from Annexure XIII.

3.3.48. At the commencement of planning era, U. P. had only 110 electrified villages which constituted 3.6 per cent of the total 3061 villages electrified in the country. The States of Andhra Pradesh, Karnataka Kerala, Tamil Nadu and West Bengal were then ahead of this State. At the end of Second Plan the number of electrified villages rose to 1,082 which constituted about 5 per cent of the total of 21,754 villages electrified in the country. It was only after a severe drought in the year 1965 that a crash programme was undertaken for rural electrification with the result that the number of electrified villages in this State increased to 29,765 by the end of the Fourth Plan bringing the State percentage to 19 against the total of 1,56,729 villages electrified in the country.

3.3.49. In the Fifth Plan it was proposed to electrify 13,617 villages raising the total number of electrified villages to 43,382. In the first four years the achievements are as follows:

TABLE XIII—Electrification of villages during 1974-78 (Numbers)

Year	Achievements				
	REC	MNP	Normal	Total	
1	2	3	4	5	
1974-75 ..	818	..	215	1,033	
1975-76 ..	319	32	713	1,064	
1976-77 ..	696	300	240	1,236	
1977-78 ..	824	268	836	1,928	
Total ..	2,657	600	2,004	5,261	
Cumulative total to end of 1977-78	3,679	600	30,747	35,026

Even if the target of electrification of 4,870 villages during 1978-79 is taken into account the achievement for the five years would reach only 10,131 villages which is considerably less than the Fifth Plan target.

3.3.50. According to REC Bulletin of July 1978, in the whole country, as on March 31, 1978, 2,16,500 villages or 37.6 per cent of the total number, had been electrified. This included 35,026 villages electrified in U. P. The plan-wise details of the progress of electrification of villages are given in Annexure XIV. In relation to the total villages in the State itself, these 35,026 villages constituted 31.1 per cent of the total inhabited villages. This State in the light of the above data, is behind the national average. The States of Andhra Pradesh (53.8 per cent), Gujarat (44.4 per cent), Haryana (100 per cent), Himachal Pradesh (45.9 per cent), Jammu & Kashmir (60 per cent), Karnataka (56.5 per cent), Kerala (96.5 per cent), Maharashtra (60 per cent), Punjab (100 per cent) and Tamil Nadu (98.6 per cent) are well ahead of Uttar Pradesh.

3.3.51. On the basis of data given in CEA's general review for 1976-77 the percentage of rural population covered by village electrification in U. P. comes to 40.3 as against the national average of 57.3 per cent. The comparative figures of States, which were ahead of this State, are as follows:

Serial no.	State	Percentage
1	2	3
1	Haryana	100
2	Punjab	100
3	Tamil Nadu	99.6
4	Kerala	97.1
5	Andhra Pradesh	77.6
6	Maharashtra	74.6
7	Karnataka	71.4
8	Gujarat	60.7
9	Himachal Pradesh	57.8
10	Manipur	50.7
11	Orissa	47.6
12	West Bengal	45.9
13	Bihar	43.4
14	Rajasthan	41.6

3.3.52. In view of poor achievements during the Fifth Plan period and also because of heavy demand for this facility it is proposed to electrify 26,460 villages

during the 1978-83 Plan. Of this, as detailed below, 4870 villages will be electrified during 1978-79 and 4,900 villages during 1979-80.

TABLE XIV—*Electrification of villages during 1978-83*

Programme	Additions during					Total 1978-83
	1978-79	1979-80	1980-81	1981-82	1982-83	
	1	2	3	4	5	6	7
REC	945	1,550	1,780	1,940	1,683	7,898
RMNP	875	1,090	1,550	2,000	2,987	8,502
Normal	3,050	2,260	1,690	1,710	1,350	10,060
Total	4,870	4,900	5,020	5,650	6,020	26,460
Cumulative Total	39,896	44,796	49,816	55,466	61,486	61,486

At the end of 1977-78, 31.1 per cent of the inhabited villages had been electrified. This is expected to go up to 35.4 per cent in 1978-79 and 39.8 per cent in 1979-80. The programme for 1978-83 is to raise the percentage of electrified villages to 54.6. This would cover about 63 per cent of the total rural population of the State.

3.3.53. Under rural electrification programme, energisation of pumping sets is by far the most important activity. In 1951, there were only 635 electrically run private pump sets in this State. This number rose to 3566 at the end of Second Plan. At the end of Fourth Plan, the number of electrically operated pumping sets reached 2,16,446, which was 8.9 per cent of the pump sets energised in the country. The Statewise details are given in Annexure XV. The details of pump sets energised vis-a-vis, electrified villages are given in Annexure XVI from which it will be observed that most of the States have a large number of electrically operated pump sets per electrified village than this State.

3.3.54. In the Fifth Plan it was proposed to energise 79,133 private pumping sets. Against this, the achievement in the first four years and the target for 1978-79 are given in the table XV.

TABLE XV—*Energisation of Private Pumping Sets during Fifth Plan Period.*

Year	Achievements			
	REC	MNP	Normal	Total
	2	3	4	5
1974-75	2,182	..	17,645	1,9827
1975-76	1,284	11	9,298	10,593
1976-77	1,832	103	9,918	11,853
1977-78	3,842	301	20,745	24,888
Sub-Total	9,140	415	57,606	67,161
1978-79 (Target)	5,000	1,800	33,200	40,000
Total	14,140	2,215	90,806	1,07,161
Cumulative total up to end of 1978-79 (Anticipated)	19,134	2,215	3,02,258	3,23,607

3.3.55. This State has been bestowed with tremendous ground water resources which have as yet not been tapped fully. Keeping this potential in view and also the target of energisation of 20 lakh pump sets fixed for the whole country for the Five-Year Plan of 1978-83, it is proposed to

energise three lakh pump sets in U. P. during this period. The year-wise and programme-wise phasing is given in the following table :

TABLE XVI—*Energisation of private pump sets during 1978—83*

(Numbers)

Programme	1978-79 Anticipa- ted	1979-80 proposed	Estimates for			
			1980-81	1981-82	1982-83	1978—83
1	2	3	4	5	6	7
REC	5,000	11,760	13,160	15,110	10,485	55,515
RMNP	1,800	2,870	4,470	5,020	9,425	23,585
Normal	20,000	25,570	33,370	40,870	51,090	1,70,900
ARDC	12,200	8,800	8,000	8,000	8,000	45,000
Deposit works	1,000	1,000	1,000	1,000	1,000	5,000
Total	40,000	50,000	60,000	70,000	80,000	3,00,000
Private pump sets to be installed ..	1,10,000	1,20,000	1,30,000	1,40,000	1,50,000	6,50,000

3.3.56. The above figures show that because of certain limitations, the energisation programme will lag far behind the installation programme even during 1978—83 period. The following table indicates that roughly only one-third of the pump sets installed would be energised :

TABLE XVII—*Pump sets to be installed and energised during 1978—83*

Year	Cumulative number of Pump sets to be		
	installed	energised	%
1978-79 ..	10,58,580	3,23,607	30.6
1979-80 ..	11,78,580	3,73,607	31.7
1980-81 ..	13,08,580	4,33,607	33.1
1981-82 ..	14,48,580	5,03,607	34.8
1982-83 ..	15,98,580	5,83,607	36.5

It is, however, noteworthy that the gap between the pump sets installed and energised will stand reduced if moveable pump sets which cannot be run electrically, are excluded. It is evident that only 46 per cent of the pumping sets to be installed during 1978—83 are to be energised and the rest will be allowed to run on diesel. The Plan-wise details of energisation of pumping sets are given in Annexure XVII. Considering the magnitude of the problem, the target of energisation of three

lakh pump sets during 1978—83 is a modest one as it constitutes only 15 per cent of the national target.

Electrification of Harijan Bastis—

3.3.57. One of the objectives of development is to remove socio-economic disparities and attack the problem of backwardness on a priority basis. Harijans and Tribals are the weakest links of rural society. Electrification of harijan *bastis* not only brings light to their doors but also allows them access to many other facilities based upon electricity. Although this programme is not remunerative, it has to be taken up as a social programme. This programme was started in U. P. during the Fourth Plan period with electrification of 5960 harijan *bastis* in the first four years of the Fifth Plan, this number, as will be seen from the following table, was almost doubled :

TABLE XVIII—*Electrification of Harijan Bastis during 1974-75*

(Nos.)

Year	Additional	Cumulative
1974-75 ..	351	6,311
1975-76 ..	1,390	7,701
1976-77 ..	1,304	9,005
1977-78 ..	1,991	10,996

If the target of electrification of 4170 harijan *bastis* of 1978-79 is included, the achievement of five years would come to 9206 electrified *bastis* and the cumulative total will come to 15,166 electrified *bastis*.

3.3.58. In the current Five-Year Plan for 1978-83 highest priority has been given to the accelerated development of the weaker sections in the rural areas. It is, therefore, proposed to accelerate the programme of electrification of harijan *bastis* by adopting a target of 25,300 *bastis*, for which the year-wise phasing is given below :

TABLE XIX—*Electrification of Harijan Bastis during 1978-83*

Year	Number of harijan <i>bastis</i> to be electrified	
	1	2
1978-79	..	4,170
1979-80	..	4,440
1980-81	..	5,020
1981-82	..	5,650
1982-83	..	6,020
Total	..	25,300
Cumulative total at the end of 1982-83 36,296		

3.3.59. The rural electrification programme during 1978-83 is estimated to cost Rs.248.46 crores as per details below :

TABLE XX—*Rural electrification Programme—Outlays during 1978-83*

Programme	(Rupees in lakhs)						Total 1978-83 Proposed
	1978-79 Anticipated	1979-80 Proposed	1980-81 Estimated	1981-82 Estimated	1982-83 Estimated	7	
1	2	3	4	5	6	7	
REC	780	1,225	1,370	1,515	1,155	6,045	
RMNP	500	657	936	1,206	1,802	5,101	
Normal	2,500	2,115	2,555	3,015	3,515	13,700	
Total	3,780	3,997	4,861	5,736	6,472	24,846	

If the programme of energisation of pumping sets and electrification of harijan *bastis* is taken as an essential complement of the programme, the cost of electrification per village in the State comes to Rs.0.94 lakh as against an average of Rs.1.45 lakhs

for the country as a whole. It will thus be clear that the proposed outlay for rural electrification even on the basis of targets is fully justified. However, the norms adopted for working out the outlays are enumerated in the table below :

TABLE XXI—*Norms on the basis of which outlays for R.E. programme have been worked out for 1978-83 Plan*

Item	Five year Plan (1978-83) Target	Cost per Unit (Rs. in lakhs)	Outlay required (Rs. in lakhs)
1	2	3	4
A. Revised-Minimum Needs Programme—			
(i) Village electrification including harijan <i>bastis</i> by LT Mains :			
Plains	5317	0.350	1860.95
Hills	2961	0.550	1628.55
Tribals	224	1.000	224.00
Sub Total			3713.50
(ii) Energisation of pump sets	23,585	0.060	1415.10
Total (A)			5128.60

TABLE XXI—(Concl'd.)

Item	Five Year Plan (1978—83) Target	Cost per unit Rs. in lakhs)	Outlay required (Rs in lakhs)
1	2	3	4
B. Other Programmes :			
(i) Village electrification by LT Mains :			
Plains	14923	0.300	4476.90
Hills	1365	0.450	614.25
Tribals	210	1.000	210.00
	Sub Total 16498		5301.15
(ii) Electrification of Harijan Bastis	16798	0.025	419.95
(iii) Energisation of Pump Sets	38200	0.080	3056.00
	Sub Total (iii)	0.060	14292.90
			17348.90
Total (B)			23070.00
Total (A+B)			28198.60

Survey and Investigation

33.60. The Survey and Investigation, Project Formulation, Appraisal and Monitoring Organisation of the State Electricity Board along with the Irrigation Department, who are looking after survey, investigation and formulation of hydro-electric projects, are concentrating on the preparation of a sizeable shelf of projects. The project reports of Tanda, Anpara-A, Anpara-B, Unchahar, Dohrihat, Gas Turbines at Muradnagar, Maneri Bhali Part II, Pala Maneri, Koteshwar Dam, Kishau Dam, and Khara have already been submitted to the Planning Commission for clearance. The projects for which investigation is in hand, are :

- (1) Parichha Extension
- (2) Central U. P. Project
- (3) Western U. P. Project
- (3) Anpara 'C'
- (5) Kotli Bhel
- (6) Lohari Nag Pala.

The State has ample hydro-electric potential in the Himalayas and abundant coal reserves in the Southern belt for generating adequate electricity. For reasons already discussed earlier in the chapter, hydro-electric power generation needs to be given concentrated attention, particularly in the context of current fuel shortage. In order to tap the available potential, it has become necessary to accelerate the work of survey and investigation. Accordingly, an outlay of Rs.33.51 crores has been proposed for this work, of which Rs.28.21 crores would be utilised by the Irrigation Department for hydro-electric projects and the remaining Rs.5.30 crores by U. P. State Electricity Board for thermal projects. In the total outlay of Rs.33.50 crores, Rs.1.25 crores is expected to be utilised in 1978-79 and Rs.4.15 crores in 1979-80.

Financial Progress and Programme

3.3.61. The importance of power in the economic development of the State has always been recognised by the State Government and it has been accorded the highest priority in the State Plans from the

Second Plan onwards. This will be clear from the table below :

TABLE XXII—Planwise details of outlay/expenditure

(Rupees in Crores)

Period	India			Uttar Pradesh			Col. 6 as % age of col. 3
	Total	Power sector	%	Total	Power sector	%	
1	2	3	4	5	6	7	8
First Plan	1960	149	7.6	153.37	23.31	15.2	15.6
Second Plan	4672	452	9.7	233.36	56.75	24.3	12.6
Third Plan	8577	1252	14.6	560.63	157.01	28.0	12.5
Three Annual Plans (1966—69)	6604	1210	18.3	451.63	175.36	38.8	14.5
Fourth Plan	15902*	2448*	15.4	1162.59	446.24	38.4	18.2
Fifth Plan (Anticipated) ..	39322*	7016*	17.8	2882.31	1109.34	38.5	15.8

3.3.62 In the National Draft Five-Year Plan for 1978—83, an outlay of Rs.15,750 crores has been tentatively provided for power programmes out of the total outlay of Rs.693.80 crores proposed for the Public Sector. This gives a percentage of 22.7. The State Plans have no doubt to be framed within the broad priorities of the National Plan but, for obvious reasons, the sectoral priorities of the State Plan will differ from the overall sectoral priorities at the National level. Considering the importance of the power programme in the economic development of the State, an outlay of Rs.2,500 crores has been included for the Power sector in the total Five-Year Plan of about Rs.7,800 crores proposed for the State. This gives a percentage of 32.1 per cent for Power in the State's total Plan which is somewhat lower than the percentage of outlays assigned to this sector in the Fourth and Fifth Five-Year Plans.

3.3.63. The comparative programme-wise details for Uttar Pradesh and the whole country are presented in the following abstract :

*Outlays

TABLE XXIII—Comparative programme-wise outlay for Power for 1978—83 Plan

(Rupees in Crores)

Programme	Outlay 1978-83		Col. 3 an %age of col. 2
	India	Uttar Pradesh	
1	2	3	4
Generation ..	8,750	1,497	17
Transmission and Distribution.	5,300	719	14
Rural Electrification.	1,450	249	17
Survey, Investi- gation and others.	250	35	14
Total ..	15,750	2,500	16

3.3.64. It is anticipated that in the outlay proposed for 1978—83, an amount of Rs.275.89 crores would be utilised during 1978-79 and Rs.355.35 crores during 1979-80. The outlay for 1979-80 includes Rs.113.24 crores for spill-over works under generation and Rs.60.69 crores for spill-over works of transmission and distribution. If the requirements of rural electrification and survey and investigation are added to the spillover works, the demand for new works of generation, transmission and distribution will come to Rs.136.95 crores. It will thus be clear that the proposed outlay of Rs.355.35 crores for Power programmes, which is about 30 per cent of the State's proposed total outlay for 1979-80, is based on the minimum requirements of the sector and the competence of the State Government to utilize it gainfully.

ANNEXURE I

Installed Capacity—Station-wise achievements during Fifth Plan (1974-78)

(Megawatts)

Serial no.	Name of Scheme	Fifth Plan Revised Target	Achievements				1974-78 Total
			1974-75	1975-76	1976-77	1977-78	
1	2	3	4	5	6	7	8
1.	Yamuna Hydrel, Stage-II						
	(a) Chhibro Power Station ..	240	3x60	1x60	..	..	240
	(b) Khodri Power Station ..	120	..	..	..	..	..
2	Yamuna Hydrel, Stage-IV, Part-I ..	30	1x10	2x10	..	..	30
3	Ramganga Hydrel ..	198	..	1x66	2x66	..	198
4	Maneri Bhali Hydrel, Part-I ..	..	..	..	..	..	..
5	Garhwal-Rishikesh-Chilla Hydrel ..	108	..	..	..	..	..
6	Obra Thermal Extension, Stage-I ..	200	1x100	1x100	..	..	200
7	Obra Thermal Extension, Stage-II ..	600	..	..	..	1x200	200
8	Obra Thermal Extension, Stage-III	200	..	..	..	..	..
9	Panki Thermal Extension ..	220	..	..	2x110	..	220
10	Harduaganj Thermal Stage-V ..	110	..	..	..	1x110	110
11	Harduaganj Thermal Stage-VI ..	110	..	..	1x60*	1x60*	120
	Total ..	2,016	290	246	412	370	1,318

*Harduaganj Stage-VI units earlier being reckoned at 55 MW each have been lately confirmed by BHEL to be rated as 60 MW.

Source : U.P.S.E.B.

Second Plan onwards. This will be clear from the table below :

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3.3.62 In the National Draft Five-Year Plan for 1978—83, an outlay of Rs.15,750 crores has been tentatively provided for power programmes out of the total outlay of Rs.693.80 crores proposed for the Public Sector. This gives a percentage of 22.7. The State Plans have no doubt to be framed within the broad priorities of the National Plan but, for obvious reasons, the sectoral priorities of the State Plan will differ from the overall sectoral priorities at the National level. Considering the importance of the power programme in the economic development of the State, an outlay of Rs.2,500 crores has been included for the Power sector in the total Five-Year Plan of about Rs.7,800 crores proposed for the State. This gives a percentage of 32.1 per cent for Power in the State's total Plan which is somewhat lower than the percentage of outlays assigned to this sector in the Fourth and Fifth Five-Year Plans.

3.3.63. The comparative programme-wise details for Uttar Pradesh and the whole country are presented in the following abstract :

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(Megawatts)

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3	Ramganga Hydel	198	..	1x66	2x66	..	198	
4	Maneri Bhali Hydel, Part-I	
5	Garhwal-Rishikesh-Chilla Hydel ..	108	
6	Obra Thermal Extension, Stage-I ..	200	1x100	1x100	200	
7	Obra Thermal Extension, Stage-II ..	600	1x200	200	
8	Obra Thermal Extension, Stage-III	200	
9	Panki Thermal Extension ..	220	2x110	..	220	
10	Harduaganj Thermal Stage-V ..	110	1x110	110	
11	Harduaganj Thermal Stage-VI ..	110	1x60*	1x60*	120	
	Total ..	2,016	290	246	412	370	1,318	

*Harduaganj Stage-VI units earlier being reckoned at 55 MW each have been lately confirmed by BHEL to be rated as 60 MW.

Source : U.P.S.E.B.

ANNEXURE II

Statement showing the relative picture of Installed Capacity of Uttar Pradesh vis-a-vis other States

(Megawatts.)

Serial no.	Name of State	Achievement by the end of										Addition during 1977-78
		12/51	12/56	3/61	3/66	3/69	3/74	3/75	3/76	3/77		
1	2	3	4	5	6	7	8	9	10	11	12	
1	Andhra Pradesh	59	132	270	299	625	670	890	990	1,200	320	
2	Assam	3	5	19	160	158	197	197	167	160	..	
3	Bihar	47	204	351	672	239	604	604	604	712	110	
4	Gujarat	142	224	333	651	662	954	1,173	1,361	1,595	..	
5	Haryana	8	14	11	280	504	504	557	617	617	..	
6	Himachal Pradesh .. .. .	..	..	..	..	5	51	53	53	53	60
7	Jammu and Kashmir	6	13	13	31	40	82	94	102	101	35	
8	Karnataka	115	190	191	456	799	967	967	1,056	1,056	..	
9	Kerala	33	90	137	197	547	625	625	755	1,013	..	
10	Madhya Pradesh	39	82	268	311	699	777	776	895	895	240	
11	Maharashtra	339	533	760	1,305	1,639	1,822	2,070	2,480	2,600	200	
12	Orissa	5	34	136	315	502	684	803	863	923	..	
13	Punjab	58	156	336	433	682	771	886	999	976	110	
14	Rajasthan	31	44	71	247	498	583	581	581	581	..	
15	Tamil Nadu	154	250	517	1,314	1,471	1,654	1,654	1,764	1,764	60	
16	Uttar Pradesh	179	288	370	910	1,185	1,549	1,832	2,078	2,490	370	
17	West Bengal	546	539	754	1,292	1,209	1,333	1,279	1,399	1,385	..	
<i>All India—</i>												
	Utilities	1,712	2,695	4,653	9,027	12,957	16,664	18,317	20,117	21,468	1,957	
	Non-Utilities	588	723	1,001	1,146	1,340	1,792	2,028	2,132	2,287		
	Total	2,300	3,418	5,654	10,173	14,297	18,456	20,345	22,249	23,755		

Source: (i) CEA General Review 1975-76 and 1976-77.

(ii) CEA Monthly-Bulletin, April, 1978.

(iii) UPSEB.

Statement showing the relative picture of gross energy

Serial no.	State	1950-51		1955-56		1960-61		1965-66		
		Energy		Energy		Energy		Energy		
		Generated	Sold	Generated	Sold	Generated	Sold	Generated	Sold	
1	2	3	4	5	6	7	8	9	10	
1	Andhra Pradesh	..	104	98	239	177	900	502	1,320	1,048
2	Assam	..	9	6	11	9	36	29	98	71
3	Bihar	..	132	119	603	353	1,597	889	3,227	1,933
4	Gujarat	..	374	329	791	694	1,271	984	2,207	1,796
5	Haryana	..	10	NA	11	NA	8	NA	1,101	NA
6	Himachal Pradesh	..	..	..	..	..	..	..	..	..
7	Jammu and Kashmir	..	26	17	24	18	44	51	NA	NA
8	Karnataka	..	539	384	826	632	1,058	935	1,936	1,382
9	Kerala	..	154	168	350	269	582	486	842	750
10	Madhya Pradesh	..	73	58	169	140	477	406	1,208	1,028
11	Maharashtra	..	1,541	1,314	2,249	1,927	3,268	2,720	5,635	4,717
12	Orissa	..	7	5	21	15	490	488	1,156	977
13	Punjab	..	173	103	414	236	982	580	1,819	2,350
14	Rajasthan	..	64	47	90	65	108	99	729	326
15	Tamil Nadu	..	720	547	1,084	831	2,214	1,665	4,209	3,222
16	Uttar Pradesh	..	570	458	743	586	1,252	976	3,033	2,372
17	West Bengal	..	1,207	1,034	1,779	1,755	2,319	2,493	4,041	4,065
<i>All India—</i>										
	Utilities	..	5,858	4,793	9,662	7,959	16,937	13,953	32,990	26,735
	Non-utilities	..	1,656		2,210		3,186		3,835	
Total		..	7,514		11,872		20,123		36,825	

Source: CEA General Review 1975-76 and 1976-77.

ANNEXURE II

Statement showing the relative picture of Installed Capacity of Uttar Pradesh vis-a-vis other States

(Megawatts.)

Serial no.	Name of State	Achievement by the end of										Addition during 1977-78
		12/51	12/56	3/61	3/66	3/69	3/74	3/75	3/76	3/77		
1	2	3	4	5	6	7	8	9	10	11	12	
1	Andhra Pradesh	59	132	270	299	625	670	890	990	1,200	320	
2	Assam	3	5	19	160	158	197	197	167	160	..	
3	Bihar	47	204	351	672	239	604	604	604	712	110	
4	Gujarat	142	224	333	651	662	954	1,173	1,361	1,595	..	
5	Haryana	8	14	11	280	504	504	557	617	617	..	
6	Himachal Pradesh .. .. .	..	..	..	..	5	51	53	53	53	60
7	Jammu and Kashmir	6	13	13	31	40	82	94	102	101	35	
8	Karnataka	115	190	191	456	799	967	967	1,056	1,056	..	
9	Kerala	33	90	137	197	547	625	625	755	1,013	..	
10	Madhya Pradesh	39	82	268	311	699	777	776	895	895	240	
11	Maharashtra	339	533	760	1,305	1,639	1,822	2,070	2,480	2,600	200	
12	Orissa	5	34	136	315	502	684	803	863	923	..	
13	Punjab	58	156	336	433	682	771	886	999	976	110	
14	Rajasthan	31	44	71	247	498	583	581	581	581	..	
15	Tamil Nadu	154	250	517	1,314	1,471	1,654	1,654	1,764	1,764	60	
16	Uttar Pradesh	179	288	370	910	1,185	1,549	1,832	2,078	2,490	370	
17	West Bengal	546	539	754	1,292	1,209	1,333	1,279	1,399	1,385	..	
<i>All India—</i>												
	Utilities	1,712	2,695	4,653	9,027	12,957	16,664	18,317	20,117	21,468	1,957	
	Non-Utilities	588	723	1,001	1,146	1,340	1,792	2,028	2,132	2,287		
	Total	2,300	3,418	5,654	10,173	14,297	18,456	20,345	22,249	23,755		

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Source: (i) CEA General Review 1975-76 and 1976-77.

(ii) CEA Monthly-Bulletin, April, 1978.

(iii) UPSEB.

Statement showing the relative picture of gross energy

Serial no.	State	1950-51		1955-56		1960-61		1965-66		
		Energy		Energy		Energy		Energy		
		Generated	Sold	Generated	Sold	Generated	Sold	Generated	Sold	
1	2	3	4	5	6	7	8	9	10	
1	Andhra Pradesh	..	104	98	239	177	900	502	1,320	1,048
2	Assam	..	9	6	11	9	36	29	98	71
3	Bihar	..	132	119	603	353	1,597	889	3,227	1,933
4	Gujarat	..	374	329	791	694	1,271	984	2,207	1,796
5	Haryana	..	10	NA	11	NA	8	NA	1,101	NA
6	Himachal Pradesh	..	..	..	..	..	..	..	..	..
7	Jammu and Kashmir	..	26	17	24	18	44	51	NA	NA
8	Karnataka	..	539	384	826	632	1,058	935	1,936	1,382
9	Kerala	..	154	168	350	269	582	486	842	750
10	Madhya Pradesh	..	73	58	169	140	477	406	1,208	1,028
11	Maharashtra	..	1,541	1,314	2,249	1,927	3,268	2,720	5,635	4,717
12	Orissa	..	7	5	21	15	490	488	1,156	977
13	Punjab	..	173	103	414	236	982	580	1,819	2,350
14	Rajasthan	..	64	47	90	65	108	99	729	326
15	Tamil Nadu	..	720	547	1,084	831	2,214	1,665	4,209	3,222
16	Uttar Pradesh	..	570	458	743	586	1,252	976	3,033	2,372
17	West Bengal	..	1,207	1,034	1,779	1,755	2,319	2,493	4,041	4,065
<i>All India—</i>										
	Utilities	..	5,858	4,793	9,662	7,959	16,937	13,953	32,990	26,735
	Non-utilities	..	1,656		2,210		3,186		3,835	
Total		..	7,514		11,872		20,123		36,825	

Source: CEA General Review 1975-76 and 1976-77.

URE III

generated and sold within State by Uttar Pradesh vis-a-vis other States

(Million Kwh)

1968-69		1973-74		1974-75		1975-76		1976-77	
Energy		Energy		Energy		Energy		Energy	
Generated	Sold	Generated	Sold	Generated	Sold	Generated	Sold	Generated	Sold
11	12	13	14	15	16	17	18	19	20
2,346	1,638	3,290	2,473	3,489	2,569	3,791	2,797	4,938	3,433
249	190	524	380	570	424	449	436	586	531
627	1,584	1,990	2,687	2,153	2,881	2,135	3,765	2,465	4,095
3,280	2,680	4,678	4,045	5,530	4,793	5,588	5,012	6,361	5,500
1,674	655	2,421	1,401	1,839	1,239	2,565	1,602	2,914	1,866
16	67	173	200	169	209	182	221	189	235
134	131	225	209	303	261	305	291	308	357
2,518	1,915	4,578	3,634	4,703	3,641	5,389	4,414	5,381	4,684
1,623	1,320	2,561	1,793	2,659	1,829	2,783	1,997	3,151	2,130
2,030	1,572	3,268	2,541	3,624	2,779	4,140	3,386	4,459	3,736
7,665	6,390	9,823	8,812	10,795	9,371	10,787	9,491	12,713	10,802
1,383	1,250	2,142	1,558	2,331	1,630	3,235	2,095	3,094	2,147
2,447	2,256	3,528	2,773	2,690	2,210	3,841	3,380	4,216	3,585
1,311	652	2,153	1,328	2,135	1,560	2,433	1,821	2,456	2,107
5,661	4,354	4,868	5,513	5,076	5,559	5,722	6,205	4,929	6,379
5,326	4,255	5,889	4,152	6,204	4,682	8,020	5,925	9,640	7,072
4,016	4,129	4,509	5,064	4,492	5,095	4,685	5,503	5,165	5,856
47,433	7,352	65,689	59,246	70,190	52,632	79,231	60,246	88,333	66,609
4,208		6,107		6,488		6,695		7,282	
51,641		72,796		76,678		85,926		95,615	

ANNEXURE IV

Statement showing the relative picture of number of units (Kwh) generated per kilowatt (KW) installed

(Kwh)

Serial no.	State	1950-51	1955-56	1960-61	1965-66	1968-69	1973-74	1974-75	1975-76	1976-77
1	2	3	4	5	6	7	8	9	10	11
1	Andhra Pradesh	1,763	1,811	3,333	4,415	3,754	4,910	3,920	3,829	4,115
2	Assam	3,000	2,200	1,895	613	1,576	2,660	2,893	2,689	3,663
3	Bihar	2,809	2,956	4,550	4,802	2,623	3,295	3,565	3,535	3,462
4	Gujarat	2,634	3,531	3,817	3,390	4,955	4,904	4,714	4,106	3,988
5	Haryana	1,250	786	727	3,932	3,321	4,804	3,302	4,157	4,723
6	Himachal Pradesh .. ..	..	..	..	..	3,200	3,392	3,189	3,434	3,566
7	Jammu and Kashmir	4,333	1,846	3,385	NA	3,350	2,744	3,223	2,990	3,050
8	Karnataka	4,687	4,347	5,539	4,246	3,151	4,734	4,863	5,103	5,096
9	Kerala	4,667	3,889	4,248	4,274	2,967	4,098	4,254	3,686	3,111
10	Madhya Pradesh	1,872	2,061	1,780	3,884	2,904	4,206	4,670	4,626	4,982
11	Maharashtra	4,546	4,220	4,300	4,318	4,677	5,391	5,215	4,350	4,890
12	Orissa	1,400	618	3,603	3,670	2,755	3,132	2,903	3,749	3,352
13	Punjab	2,983	2,654	2,923	4,201	3,588	4,576	3,036	3,845	4,320
14	Rajasthan	2,065	2,045	1,521	2,952	2,633	3,693	3,675	4,188	4,227
15	Tamil Nadu	4,675	4,336	4,282	3,203	3,848	2,943	3,069	3,244	2,794
16	Uttar Pradesh	3,184	2,580	3,384	3,333	4,495	3,802	3,386	3,859	3,871
17	West Bengal	2,211	3,301	3,076	3,128	3,322	3,383	3,512	3,349	3,729
All India—										
	Utilities	3,422	3,585	3,640	3,655	3,661	4,002	3,832	3,939	4,115
	Non-utilities	2,816	3,057	3,183	3,346	3,140	3,408	3,199	3,140	3,184
	Total	3,267	3,473	3,559	3,620	3,612	3,944	3,769	3,862	4,025

ANNEXURE V
Per Capita Power Generation—State-wise Details

(Kwh)

State	1960-61	1965-66	1968-69	1973-74	1974-75	1975-76
1	2	3	4	5	6	7
Andhra Pradesh	25	40	56	72	75	80
Assam	3	7	20	31	32	26
Bihar	34	61	11	34	36	35
Gujarat	62	93	129	165	190	188
Haryana s .. ..	..	..	175	230	171	234
Himachal Pradesh .. ..	..	..	..	49	48	50
Jammu and Kashmir	12	NA	34	46	61	60
Karnataka	45	70	89	149	150	169
Kerala	35	44	80	114	116	118
Madhya Pradesh	15	35	52	74	80	89
Maharashtra	83	124	160	185	199	195
Orissa	28	48	67	93	99	135
Punjab	49	143	174	250	197	262
Rajasthan	5	7	52	79	77	85
Tamil Nadu	66	114	148	113	116	128
Uttar Pradesh	17	37	61	64	66	84
West Bengal	66	100	94	96	94	95
<i>All India</i>	39	66	90	116	119	132

Source—Arthic Samiksha, 1977-78.

ANNEXURE VI

Statement showing the relative picture of per capita consumption of power in Uttar Pradesh vis-a-vis other States

(Kwh.)

Serial. no.	Name of State	Per capita power consumption during									
		1951	1956	1960-61	1965-66	1968-69	1973-74	1974-75	1975-76	1976-77	
1	2	3	4	5	6	7	8	9	10	11	
1	Andhra Pradesh	..	N.A.	5.55	19.20	30.90	43.06	60.58	62.00	65.78	77.44
2	Assam	..	..	0.91	3.60	7.80	14.90	25.60	26.59	28.46	33.82
3	Bihar	..	..	8.28	41.50	57.70	60.96	71.03	70.81	84.11	88.69
4	Gujarat	..	..	..	52.01	85.30	116.11	153.60	177.30	179.93	192.31
5	Haryana	..	..	..	..	..	75.22	140.78	124.88	152.87	173.98
6	Himachal Pradesh	..	..	..	N.A.	9.36	16.02	56.96	58.79	61.27	64.49
7	Jammu and Kashmir	..	..	N.A.	N.A.	14.25	33.18	42.96	52.73	57.65	69.37
8	Karnataka	..	..	..	63.72	44.20	55.10	69.82	120.95	122.35	141.89
9	Kerala	..	..	..	N.A.	28.75	41.80	67.58	84.75	83.12	89.67
10	Madhya Pradesh	..	..	..	..	19.59	37.79	48.68	68.42	70.51	82.98
11	Maharashtra	..	..	..	N.A.	52.00	85.30	137.07	169.60	177.18	177.80
12	Orissa	..	..	..	0.98	42.80	79.40	88.51	92.85	91.30	109.39
13	Punjab	..	..	..	18.20	32.90	101.60	164.97	196.51	155.22	231.59
14	Rajasthan	..	..	..	3.33	11.50	21.40	32.79	61.13	64.98	72.68

15	Tamil Nadu	..	..	..	21.03	50.50	88.70	115.00	133.25	133.14	142.06	146.47
16	Uttar Pradesh	..	..	..	8.72	15.10	29.90	49.04	57.85	60.88	73.35	85.88
17	West Bengal	..	..	..	66.40	83.90	114.30	118.27	115.85	113.87	119.34	125.19
	<i>All India</i>	..	..	17.80	26.40	38.20	61.30	77.88	97.48	98.99	109.95	119.38
	U.P. as percentage to All India.				33.0	39.5	48.8	63.0	59.3	61.5	66.7	71.9

N.A. : Not available..

Source—CEA General Review 1975-76 and 1976-77.

ANNEX
Category-wise consumption of

Serial no.	State	1960-61			
		Domestic	Commercial	Industrial	Public lighting
1	2	3	4	5	6
1	Andhra Pradesh	1 (0.2)	30 (6.0)	393 (78.3)	15 (3.0)
2	Assam	10 (34.5)	4 (13.8)	12 (41.4)	2 (6.9)
3	Bihar	44 (5.0)	30 (3.3)	776 (87.3)	4 (0.4)
4	Gujarat	71 (7.3)	32 (3.2)	806 (81.9)	15 (1.6)
5	Haryana	..	..	..	..
6	Himachal Pradesh	..	..	..	..
7	Jammu and Kashmir	23 (45.1)	1 (2.0)	22 (43.1)	1 (2.0)
8	Karnataka	75 (8.0)	21 (2.3)	732 (78.3)	19 (2.1)
9	Kerala	51 (10.5)	4 (0.8)	397 (81.6)	8 (1.7)
10	Madhya Pradesh	46 (11.3)	21 (5.1)	301 (74.3)	9 (2.2)
11	Maharashtra	260 (9.5)	198 (7.3)	1,853 (68.1)	20 (0.7)
12	Orissa	18 (3.7)	8 (1.6)	458 (93.9)	1 (0.2)
13	Punjab	70 (12.0)	61 (10.6)	356 (61.3)	9 (1.6)
14	Rajasthan	21 (21.2)	16 (16.2)	34 (34.3)	5 (5.1)
15	Tamil Nadu	153 (9.2)	157 (9.4)	910 (54.6)	34 (2.0)
16	Uttar Pradesh	123 (12.6)	75 (7.7)	504 (51.6)	14 (1.4)
17	West Bengal	354 (14.2)	116 (4.6)	1808 (72.5)	23 (0.9)
	<i>All India</i>	1492 (10.7)	848 (6.1)	9697 (69.5)	193 (1.4)

Note—Figures in brackets are of percentage consumption against total consumption.

URE VII

power in Uttar Pradesh vis-a-vis other States

(Million Kwh)

1973-74									
Traction	Agricultural	Public Water Works and Sewage Pumping	Misc.	Total	Domestic	Commercial	Industrial	Public lighting	Traction
7	8	9	10	11	12	13	14	15	16
..	55 (11.0)	8 (1.5)	..	502 (100.0)	211 (8.5)	243 (9.8)	1337 (54.1)	29 (1.2)	..
..	..	1 (3.4)	..	29 (100.0)	44 (11.6)	78 (20.5)	185 (48.6)	4 (1.1)	..
5 (0.5)	18 (2.1)	12 (1.4)	..	889 (100.0)	110 (4.1)	117 (4.4)	2007 (74.7)	6 (0.2)	323 (12.0)
..	20 (2.0)	40 (4.0)	..	984 (100.0)	317 (7.8)	146 (3.6)	2,779 (68.7)	46 (1.2)	..
..	..	..	..	..	88 (6.3)	77 (5.5)	698 (49.8)	5 (0.4)	..
..	..	..	..	..	39 (19.5)	20 (10.0)	31 (15.5)	2 (1.0)	..
..	1 (2.0)	3 (5.8)	..	51 (100.0)	74 (35.4)	21 (10.1)	72 (34.4)	5 (2.4)	..
..	29 (3.0)	59 (6.3)	..	935 (100.0)	305 (8.4)	76 (2.1)	2,813 (77.4)	78 (2.2)	..
..	18 (3.8)	8 (1.6)	..	486 (100.0)	155 (8.6)	90 (5.0)	1,402 (78.2)	30 (1.7)	..
..	4 (0.9)	25 (6.2)	..	406 (100.0)	163 (6.4)	139 (5.5)	1,957 (77.0)	28 (1.1)	58 (2.3)
339 (12.5)	15 (0.6)	35 (1.3)	..	2,720 (100.0)	830 (9.4)	562 (6.4)	6,081 (69.1)	82 (0.9)	505 (5.7)
..	1 (0.2)	2 (0.4)	..	488 (100.0)	47 (3.0)	41 (2.6)	1,1357 (87.1)	7 (0.4)	50 (3.2)
75 (12.9)	9 (1.6)	..	..	580 (100.0)	209 (7.5)	97 (3.6)	1,661 (59.9)	9 (0.3)	..
..	4 (4.1)	19 (19.1)	..	99 (100.0)	94 (7.1)	76 (5.7)	764 (57.5)	13 (1.0)	..
15 (0.9)	382 (23.0)	14 (0.9)	..	1,665 (100.0)	390 (7.1)	478 (8.7)	2,714 (49.2)	78 (1.4)	78 (1.4)
..	200 (20.5)	60 (6.2)	..	976 (100.0)	404 (9.7)	125 (3.0)	2,445 (58.9)	27 (0.6)	167 (4.0)
95 (3.8)	1 (0.1)	96 (3.9)	..	2,493 (100.0)	704 (13.9)	277 (5.5)	3,519 (69.5)	38 (0.7)	351 (6.9)
454 (3.2)	833 (6.0)	436 (3.1)	..	13,953 (100.0)	4645 (9.3)	2,987 (6.0)	32,481 (64.6)	553 (1.1)	1531 (3.0)

ANNEXURE VII—(Concl.d.)

Serial no,	State	1973-74			
		Agricultural	Public Water Works and Sewage Pumping	Misc.	Total
1	2	17	18	19	20
1	Andhra Pradesh	588 (23.8)	52 (2.1)	13 (0.5)	2,473 (100.0)
2	Assam	2 (0.5)	7 (1.8)	60 (15.9)	380 (100.0)
3	Bihar	74 (2.7)	42 (1.6)	8 (0.3)	2,687 (100.0)
4	Gujarat	628 (15.6)	111 (2.7)	18 (0.4)	4,045 (100.0)
5	Haryana	528 (37.6)	..	5 (0.4)	1,401 (100.0)
6	Himachal Pradesh.. .. .	1 (0.5)	12 (6.0)	95 (47.5)	200 (100.0)
7	Jammu and Kashmir	16 (7.6)	21 (10.1)	..	209 (100.0)
8	Karnataka	259 (7.1)	103 (2.8)	..	3,634 (100.0)
9	Kerala	92 (5.2)	17 (0.9)	7 (0.4)	1,793 (100.0)
10	Madhya Pradesh	126 (4.9)	70 (2.8)	..	2,541 (100.0)
11	Maharashtra	488 (5.5)	158 (1.8)	106 (1.2)	8,812 (100.0)
12	Orissa	8 (0.5)	22 (1.4)	26 (1.8)	1,558 (100.0)
13	Punjab	710 (25.6)	5 (0.2)	82 (2.9)	2,773 (100.0)
14	Rajasthan	281 (21.2)	80 (6.0)	20 (1.5)	1,328 (100.0)
15	Tamil Nadu	1,605 (29.1)	46 (0.8)	124 (2.3)	5,513 (100.0)
16	Uttar Pradesh	841 (20.3)	90 (2.2)	53 (1.3)	4,152 (100.0)
17	West Bengal	30 (0.6)	145 (2.9)	..	5,064 (100.0)
	<i>All India</i>	6,310 (12.6)	1,117 (2.2)	622 (1.2)	50,246 (100.0)

Note—Figures in brackets are of percentage consumption against total consumption.

(Million Kwh)

1976-77

Domestic	Commer- cial	Industrial	Public lighting	Traction	Agricul- tural	Public Water Works and Sewage Pumping	Misc.	Total
21	22	23	24	25	26	27	28	29
311 (9.0)	357 (10.4)	1,870 (54.5)	33 (1.0)	..	771 (22.4)	61 (1.8)	30 (0.9)	3,433 (100.0)
48 (9.0)	19 (3.6)	286 (53.8)	3 (0.6)	..	2 (0.4)	8 (1.5)	165 (31.1)	531 (100.0)
146 (3.6)	113 (2.7)	2,922 (71.3)	6 (0.1)	449 (11.0)	399 (9.8)	49 (1.2)	11 (0.3)	4,095 (100.0)
467 (8.5)	222 (4.0)	3,555 (64.6)	57 (1.0)	103 (1.9)	923 (16.8)	146 (2.7)	27 (0.5)	5,500 (100.0)
138 (7.4)	102 (5.5)	878 (47.0)	8 (0.4)	..	720 (38.6)	20 (1.1)	..	1,866 (100.0)
46 (19.6)	23 (9.8)	60 (25.5)	2 (0.8)	..	3 (1.3)	..	101 (43.0)	235 (100.0)
127 (35.6)	36 (10.1)	116 (32.5)	8 (2.2)	..	27 (7.6)	36 (10.1)	7 (1.9)	357 (100.0)
461 (9.8)	134 (2.9)	3,455 (73.7)	55 (1.2)	..	396 (8.5)	183 (3.9)	..	4,684 (100.0)
234 (11.0)	131 (6.1)	1,590 (74.7)	37 (1.7)	..	103 (4.8)	23 (1.1)	12 (0.6)	2,130 (100.0)
212 (5.7)	173 (4.6)	2,897 (77.5)	29 (0.8)	98 (2.6)	227 (6.1)	96 (2.6)	4 (0.1)	3,736 (100.0)
1,170 (10.8)	880 (8.1)	6,709 (62.1)	118 (1.1)	777 (7.2)	919 (8.5)	223 (2.1)	6 (0.1)	10,802 (100.0)
73 (3.4)	56 (2.6)	1,855 (86.4)	9 (0.4)	79 (3.7)	15 (0.7)	27 (1.3)	33 (1.5)	2,147 (100.0)
280 (7.8)	177 (4.9)	2,128 (59.4)	10 (0.3)	..	973 (27.1)	7 (0.2)	10 (0.3)	3,585 (100.0)
134 (6.4)	106 (5.0)	1,239 (58.8)	15 (0.7)	..	430 (20.4)	103 (4.9)	80 (3.8)	2,107 (100.0)
541 (8.5)	523 (8.2)	3,378 (52.9)	77 (1.2)	49 (0.8)	1,694 (26.5)	61 (1.0)	56 (0.9)	6,379 (100.0)
673 (9.5)	88 (1.2)	3,996 (56.5)	32 (0.5)	261 (3.7)	1,855 (26.2)	101 (1.5)	66 (0.9)	7,072 (100.0)
655 (11.2)	598 (10.2)	3,874 (66.2)	43 (0.7)	400 (6.8)	68 (1.2)	158 (2.7)	60 (1.0)	5,856 (100.0)
6,336 (9.5)	4,142 (6.2)	41,606 (62.5)	594 (0.9)	2,168 (3.3)	9,621 (14.4)	1,444 (2.2)	698 (1.0)	66,609 (100.0)

ANNEXURE VII-A

Percentage increase in different usages of electricity during 1976-77 over 1960-61 and 1973-74

Serial no.	State	Percentage increase in electric consumption during 1976-77 over 1960-61					Percentage increase in electric consumption during 1976-77 over 1973-74				
		Domestic	Commer- cial	Industrial	Agricul- tural	Total	Domestic	Commer- cial	Industrial	Agricul- tural	Total
1	2	3		5	6	7	8	9	10	11	12
1	Andhra Pradesh	31000.0	1090.0	375.8	1301.8	583.9	47.4	46.9	39.9	31.1	38.8
2	Assam	380.0	375.0	2283.3	..	1731.0	9.1	(-75.6	54.6	0.0	39.7
3	Bihar	231.8	276.7	276.5	2122.2	360.6	32.7	(-3.4	45.6	440.5	52.4
4	Gujarat	557.8	593.8	341.1	4515.0	459.0	47.3	52.1	27.9	47.0	36.0
5	Haryana	..	..	..	..	..	56.8	32.5	25.8	36.4	33.2
6	Himachal Pradesh	..	..	..	..	..	18.0	15.0	93.5	200.0	17.5
7	Jammu and Kashmir	452.2	3500.0	427.3	2600.0	600.0	71.6	71.4	61.1	68.8	70.8
8	Karnataka	514.7	538.1	372.0	1265.5	401.0	51.2	76.3	22.8	52.9	28.9
9	Kerala	358.8	3175.0	300.5	472.2	338.3	51.0	45.6	13.4	12.0	18.8
10	Madhya Pradesh	360.9	723.8	862.5	5575.0	820.2	30.1	24.5	10.3	80.2	47.0
11	Maharashtra	350.0	344.4	262.1	6026.7	297.1	41.0	56.6	36.7	88.3	22.6
12	Orissa	305.6	600.0	305.0	1400.0	340.0	55.3	36.6	48.0	87.5	37.8
13	Punjab	300.0	190.2	497.8	10711.1	518.1	34.0	82.5	28.1	37.1	29.3

14	Rajasthan	..	538.1	562.5	3544.1	10650.0	2028.3	42.6	39.5	62.2	53.0	58.7
15	Tamil Nadu	..	253.6	233.1	271.2	343.5	283.1	38.7	9.4	24.5	5.6	15.7
16	Uttar Pradesh	..	447.2	17.3	692.9	827.5	624.6	66.6	(-)29.6	63.4	120.6	70.3
17	West Bengal	..	85.0	415.5	114.3	6700.0	134.9	(-)7.0	115.9	10.1	126.7	15.6
	<i>All-India</i>	..	324.7	388.4	329.1	1055.0	377.4	36.4	38.7	28.1	52.5	32.6

ANNEXURE VIII
Statement Showing State-wise Auxiliary Consumption

(Percent)

Serial No.	State	Total				Steam				Hydro				Diesel				
		1973-74	1974-75	1975-76	1976-77	1973-74	1974-75	1975-76	1976-77	1973-74	1974-75	1975-76	1976-77	1973-74	1974-75	1975-76	1976-77	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	Andhra Pradesh.	..	5.40	7.00	8.00	7.14	7.98	8.92	11.02	10.99	0.25	0.33	0.25	0.40	..	..	..	..
2	Assam	..	2.45	2.15	3.02	2.86	7.71	9.89	4.87	3.65	0.77	0.35	..	..	4.82	3.42	6.00	6.67
3	Bihar	..	11.52	11.78	13.21	13.03	11.51	11.80	13.23	13.07	4.58	4.75	7.80	5.00	19.02	7.75	8.33	5.26
4	Gujarat	..	7.43	7.38	7.14	6.99	7.50	7.78	7.65	8.83	..	4.60	5.21	0.20	15.64	19.35	15.79	8.33
5	Haryana	..	1.76	2.60	2.56	3.27	8.44	8.59	9.25	9.14	0.23	0.32	0.17	0.31	..	..	..	..
6	Himachal Pradesh.	..	0.54	0.45	0.43	0.40	..	..	..	..	0.54	0.45	0.43	0.40	..	5.56	..	..
7	Jammu and Kashmir.	..	0.67	1.67	2.01	2.19	1.78	18.10	10.79	27.24	0.47	0.53	1.00	0.52	4.66	4.36	..	8.09
8	Karnataka	..	0.32	0.29	0.28	0.29	..	..	..	..	0.32	0.29	0.28	0.29	..	..	..	..
9	Kerala	..	0.91	0.88	0.80	0.70	..	..	..	..	0.91	0.88	0.80	0.70	..	..	..	..
10	Madhya Pradesh.	..	7.55	7.14	7.45	7.61	9.62	9.36	9.36	9.48	0.12	0.11	0.12	0.12	..	7.69	..	..
11	Maharashtra	..	4.31	4.15	4.61	5.00	7.75	7.57	7.83	8.40	0.53	0.45	0.51	0.53	10.53	6.81	..	..
12	Orissa	..	3.28	4.17	2.65	3.56	11.50	10.20	10.14	10.30	0.44	0.65	0.51	0.52	4.65	..	..	..
13	Punjab	..	0.31	0.89	1.28	1.98	15.94	9.23	9.88	9.50	0.24	0.33	0.18	0.31	3.21	3.18	3.07	3.93
14	Rajasthan	..	2.49	2.90	2.85	2.82	9.20	8.86	9.20	9.42	0.18	0.20	0.14	0.21	3.76	7.03	4.84	4.53
15	Tamil Nadu	..	3.34	3.76	3.57	5.93	13.11	14.34	14.63	12.98	0.25	0.30	0.27	0.36	..	..	..	..
16	Uttar Pradesh	..	6.35	7.54	6.77	6.11	9.46	10.03	9.97	10.05	0.28	0.39	0.34	0.18	2.84	14.47	31.25	20.00
17	West Bengal	..	8.19	8.61	8.76	8.62	8.30	8.78	8.91	8.73	2.91	1.79	1.46	2.41	2.99	3.23	2.49	3.50
	All-India	..	5.42	5.88	5.75	6.04	9.35	9.53	9.74	9.84	0.39	0.49	0.49	0.38	5.53	4.02	3.43	4.98

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Source—CEA's Annual General Reviews.

ANNEXURE IX
Statement showing State-wise System Losses

(Percent)

Serial no.	State	System losses during									
		1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	
1	2	3	4	5	6	7	8	9	10	11	
1	Andhra Pradesh	25.62	24.42	25.41	26.84	28.46	25.42	26.15	25.54	25.04	
2	Assam	20.54	12.05	17.71	16.87	15.56	19.43	18.85	16.50	19.08	
3	Bihar	17.80	19.80	22.87	15.22	20.60	24.68	20.27	18.41	19.81	
4	Gujarat	13.85	14.70	14.57	16.04	19.20	20.75	18.48	18.47	18.31	
5	Haryana	30.90	28.65	27.96	28.52	24.57	27.68	24.40	23.19	21.54	
6	Himachal Pradesh	15.32	19.94	12.00	12.06	17.56	17.25	15.86	19.62	25.91	
7	Jammu and Kashmir	29.29	23.34	21.49	18.50	30.28	28.66	23.49	23.34	23.77	
8	Karnataka	15.84	19.26	14.69	15.86	16.72	18.65	18.72	17.21	16.34	
9	Kerala	16.92	15.72	12.99	17.29	15.35	16.86	15.51	16.79	14.40	
10	Madhya Pradesh	15.84	13.78	14.70	19.24	14.85	18.81	20.22	18.80	18.75	
11	Maharashtra	13.17	12.57	13.67	12.66	12.34	16.35	16.26	17.09	17.56	
12	Orissa	9.96	7.88	6.17	4.75	9.30	10.48	11.39	13.92	15.36	
13	Punjab	18.96	18.71	22.37	24.19	21.96	18.90	19.11	15.08	17.51	
14	Rajasthan	24.96	23.89	13.06	23.62	30.21	26.30	30.56	25.79	24.50	
15	Tamil Nadu	18.92	17.89	17.68	19.05	20.98	18.66	21.06	18.53	18.42	
16	Uttar Pradesh	19.74	19.94	24.48	26.14	29.32	29.76	24.51	22.03	24.03	
17	West Bengal	9.98	10.68	10.17	13.39	11.87	11.11	9.83	11.87	11.20	
	<i>All India</i>	17.0	16.8	17.5	18.8	19.9	20.5	20.2	19.4	19.8	

Source—CEA General Review 1976-77—Table 6.1.8.

ANNEXURE X

Peak demands envisaged in various Annual Power Surveys (APS) and actual achievements for different years

(Mega watts)

Year	First A.P.S. 1963	Second A.P.S. 1964	Third A.P.S. 1965	Fourth A.P.S. 1966	Fifth A.P.S. 1968	Sixth A.P.S. 1970	Seventh A.P.S. 1972	Eighth A.P.S. 1973	Ninth A.P.S. 1975	Tenth A.P.S.	Actual Peak Demand
1	2	3	4	5	6	7	8	9	10	11	12
1963-64	420	..	..	..	..	..	..	..	..	..	..
1964-65	487	551	..	..	..	..	..	..	..	..	..
1965-66	735	708	679	..	..	..	..	..	..	..	560
1966-67	830	869	893	712	..	..	..	..	..	..	675
1967-68	930	1,023	1,118	899	..	..	..	..	..	..	675
1968-69	1,040	..	1,394	1,022	970	..	..	..	..	..	989
1969-70	1,180	..	..	1,167	1,230	1,202	..	..	..	..	1,138
1970-71	1,430	..	..	1,538	1,500	1,400	..	..	..	..	1,281 (1351)*
1971-72	..	..	..	..	1,670	1,587	1,416	..	..	..	1,267 (1,397)*
1972-73	..	..	..	..	1,860	1,785	1,605	1,641	..	..	1,279 (1,588)*
1973-74	..	..	..	..	2,050	2,056	1,814	1870	..	..	1,269 (1,735)*
1974-75	..	..	..	..	..	..	2,061	2,151	2,039	..	1,217 (2,000)*
1975-76	..	..	..	..	..	..	..	2,411	2,250	..	1,744 (2,157)*
1976-77	..	..	..	..	..	..	..	2,703	2,493	2,063	1,911 (2,345)*
1977-78	..	..	..	..	..	..	..	..	..	2,284	1,795 (2,197)*

*Un-restricted Peak Demand.

ANNEXURE XI

Transmission and Distribution—Plan-wise Details

(In Ckt. Km.)

Period	400 kV.	220 kV.	132 kV.	66 kV.	Total 66 kV. and above	Secondary lines
1	2	3	4	5	6	7
<i>At the end of—</i>						
Pre-Plan	473	473	1,426
First Plan	168	1,028	1,196	2,264
Second Plan	346	1,654	2,000	3,462
Third Plan	2,154	2,114	4,268	6,736
Three Annual Plans (1966—69)	..	1,785	4,086	2,443	8,314	9,828
Fourth Plan	2,281	4,840	2,789	9,910	16,342
1974-75	2,399	4,851	2,790	10,040	17,017
1975-76	2,486	5,354	2,794	10,634	17,520
1976-77	2,715	5,663	2,883	11,261	18,213
1977-78 ..	375	2,858	5,728	2,963	11,924	18,785

ANNEX
Transmission and Distribution

Serial no.	State	Area in '000 Sq. kms.	Distribution lines up to 500 V.	2.2/3.3/5/6.6 kV	Below 11 kV lines	11/15 kV lines	20/22/33 kV lines	33kV and below lines
1	2	3	4	5	6	7	8	9
i	Andhra Pradesh ..	276.81	79,444	..	79,444	50,901	8,651	1,38,996
2	Assam ..	78.52	4,394	..	4,394	5,538	2,896	12,828
3	Bihar ..	173.88	46,863	NA	46,863	36,328	8,643	91,834
4	Gujarat ..	195.98	N.A.	N.A.	49,832	40,032	10,478	1,00,342
5	Haryana ..	44.22	52,317	..	52,317	31,680	2,692	86,689
6	Himachal Pradesh ..	55.66	12,054	147	12,201	4,611	2,605	19,417
7	Jammu and Kashmir	222.24	10,524	550	11,074	3,963	659	15,696
8	Karnataka ..	191.77	123,990	1,663	1,25,653	54,539	2,880	1,83,072
9	Kerala ..	38.86	36,024	154	36,178	11,814	..	47,992
10	Madhya Pradesh ..	442.82	70,983	59	71,042	37,358	16,377	1,24,777
11	Maharashtra ..	307.76	1,15,011	1,099	1,16,110	52,126	16,801	1,85,037
12	Orissa ..	155.78	13,612	..	13,612	17,039	5,548	36,199
13	Punjab ..	50.36	49,376	..	49,376	29,159	2,438	80,973
14	Rajasthan ..	342.21	41,897	109	42,006	28,572	10,375	80,953
15	Tamil Nadu ..	130.07	2,14,641	93	2,14,734	41,752	20,639	2,77,125
16	Uttar Pradesh ..	294.41	68,509	48,509	1,17,018	95,021	18,213	2,30,252
17	West Bengal ..	87.85	21,543	2,424	23,967	23,994	4,230	52,191
	<i>All-India</i> ..	3280.45	10,29,453	55,395	10,84,848	5,72,321	1,36,792	17,93,961

URE XII

Lines at the end of 1976-77

(Ckt. Km.)

66/78kV lines	90/110/132 kV lines	220/230 kV lines	66 kV and above lines	Total	Length of lines per '000 Sq. Km.				
					Below 11 kV	11/15 kV	20/22/ 33 kV	66 kV and above	Total
10	11	12	13	14	15	16	17	18	19
2,933	3,848	1,947	8,728	1,47,724	287	184	31	32	534
680	572	93	1,345	14,173	56	71	37	17	181
..	2,792	683	3,475	95,309	270	209	50	20	548
4,805	2,829	1,789	9,423	1,09,765	254	204	53	48	560
815	994	..	1,809	88,498	1,183	716	61	41	2,001
87	117	..	204	19,621	219	83	47	4	353
274	519	124	917	16,613	50	18	3	4	75
2,915	4,059	2,698	9,672	1,92,744	655	284	15	50	1,005
1,811	1,403	504	3,718	51,710	931	304	..	96	1,331
362	4,940	2,093	7,395	1,32,172	160	84	37	17	298
2,461	5,970	1,914	10,345	1,95,382	377	169	55	34	635
341	1,565	1,848	3,754	39,953	87	109	36	24	256
1,540	2,011	1,452	5,003	85,976	980	579	48	99	1,707
415	3,355	1,081	4,851	85,804	123	83	30	14	251
3,250	5,737	1,679	10,666	2,87,791	1,651	321	159	82	2,213
2,883	5,663	2,715	11,261	2,41,513	397	323	62	38	820
495	1,843	700	3,038	55,229	273	273	48	35	629
26,209	51,597	21,506	99,312	18,93,273	331	174	42	30	577

ANNEXURE XIII

Statement showing the relative picture of villages electrified in Uttar Pradesh vis-a-vis. other States

(Numbers)

Serial no.	Name of State	Total number of villages as per census 1971	Achievement at the end of										Villages electrified on 3/78 as %age of total villages
			12/51	12/56	3/61	3/66	3/69	3/74	3/75	3/76	3/77	3/78 *	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Andhra Pradesh ..	27,221	119	517	2,433	4,099	5,535	10,262	10,262	11,358	13,470	14,652	53.8
2	Assam ..	21,995	..	..	13	66	331	1,146	1,544	1,769	1,997	2,267	10.3
3	Bihar ..	67,566	4	300	2,305	3,744	6,350	9,775	13,375	16,565	18,160	18,695**	27.7
4	Gujarat ..	18,275	37	130	678	1,671	2,869	5,638	6,026	6,307	7,108	8,121	44.4
5	Haryana ..	6,731	..	99	570	1,179	1,464	6,669	6,731	6,731	6,731	6,731	100.0
6	Himachal Pradesh ..	16,916	9	93	670	1,438	2,191	4,500	6,276	6,721	7,246	7,753	45.9
7	Jammu and Kashmir	6,503	..	..	32	383	614	1,380	1,741	2,196	2,829	3,899**	60.0
8	Karnataka ..	26,826	551	1,570	2,920	4,627	7,225	12,644	13,730	14,209	14,703	15,160	56.5
9	Kerala ..	1,268	159	381	872	1,083	1,137	1,173	1,182	1,202	1,212	1,224	96.5
10	Madhya Pradesh ..	70,883	9	47	373	1,133	2,754	10,703	11,304	11,822	13,829	16,350	23.1
11	Maharashtra ..	35,778	33	237	764	4,273	9,450	16,933	18,643	19,309	20,206	21,480	60.0
12	Orissa ..	46,992	..	25	118	534	821	8,466	10,128	11,507	13,061	13,297†	28.3
13	Punjab ..	12,188	42	369	1,712	3,697	5,018	7,078	7,717	9,926	12,126	12,126‡	100.0
14	Rajasthan ..	33,305	2	5	46	1,115	2,075	5,778	6,326	7,053	8,361	10,009	30.1
15	Tamil Nadu ..	15,735	1,495	2,430	5,919	7,830	9,472	13,805	15,416	15,509	15,516	15,522	98.6
16	Uttar Pradesh ..	1,12,561	110	420	1,082	5,855	12,926	29,765	30,798	31,862	33,098	35,026	31.1
17	West Bengal ..	38,074	386	553	920	1,594	2,433	8,708	9,257	9,825	10,981	11,669	30.6
	All-India ..	5,759,36	3,061	7,294	21,754	45,148	73,739	1,56,729	1,72,169	1,85,808	2,02,843	2,16,500	37.6
	U.P. as percentage to All-India	19.51	3.56	5.8	5.0	13.0	17.5	19.0	17.9	17.2	16.3	16.2	

*As published in REC bulletin of July, 1978

**Figures provisional.

†As on 28-2-78.

‡62 villages have been declared un-inhabited.

Source—CEA General Reviews 1975-76 and 1976-77.

ANNEXURE XIV

Rural Electrification Programme—Electrification of Villages

(Numbers)

Period	Normal		REC		MNP		Total	
	Addi- tional	Cumu- lative	Addi- tional	Cumu- lative	Addi- tional	Cumu- lative	Addi- tional	Cumu- lative
1	2	3	4	5	6	7	8	9
Pre-Plan ..	110	110	..	..	..	..	110	110
First Plan ..	310	420	..	..	..	..	310	420
Second Plan ..	662	1,082	..	..	..	..	662	1,082
Third Plan ..	4,773	5,855	..	..	..	..	4,773	5,855
Three Annual Plans (1966—69) ..	7,071	12,926	..	..	..	..	7,071	12,926
Fourth Plan ..	15,817	28,743	1,022	1,022	..	..	16,839	29,765
1974-75 ..	215	28,958	818	1,840	..	..	1,033	30,798
1975-76 ..	713	29,671	319	2,159	32	32	1,064	31,862
1976-77 ..	240	29,911	696	2,855	300	332	1,236	33,098
1977-78 ..	836	30,747	824	3,679	268	600	1,928	35,026
Total (1974—78) ..	2,004	30,747	2,657	3,679	600	600	5,261	35,026

ANNEXURE XV

Statement showing the State-wise number of pumping sets energised

(Numbers)

Serial no.	Name of State	Achievement at the end of									
		12/51	12/56	3/61	3/66	3/69	3/74	3/75	3/76	3/77	
1	2	3	4	5	6	7	8	9	10	11	
1	Andhra Pradesh	N.A.	N.A.	17,968	57,225	1,23,167	2,61,989	2,84,614	2,94,017	3,06,795	
2	Assam .. ..	..	..	..	..	55	705	867	1,012	1,054
3	Bihar	47	697	3,200	10,600	50,005	96,922	1,04,034	1,18,055	1,32,322	
4	Gujarat	910	2,825	6,963	14,155	42,085	1,02,683	1,13,723	1,21,854	1,37,916	
5	Haryana	N.A.	743	3,526	15,220	45,385	1,27,947	1,34,953	1,41,885	1,53,679	
6	Himachal Pradesh .. ..	..	2	20	88	306	1,032	1,202	1,320	1,415
7	Jammu and Kashmir	N.A.	10	85	104	162	402	417	744	789	
8	Karnataka	2,460	8,003	16,888	42,371	91,826	1,89,688	2,08,009	2,24,910	2,42,471	
9	Kerala	N.A.	N.A.	2,666	6,957	13,909	37,661	41,549	47,525	53,148	
10	Madhya Pradesh .. ..	..	30	1,822	7,314	24,631	1,15,560	1,33,295	1,46,739	1,80,282
11	Maharashtra	142	2,166	7,219	44,978	1,24,981	3,42,665	3,80,844	4,12,068	4,48,796	
12	Orissa	N.A.	N.A.	N.A.	N.A.	477	2,759	3,515	4,524	5,428	
13	Punjab	N.A.	3,095	8,514	25,296	59,112	1,29,566	1,38,902	1,46,475	1,67,815	

14	Rajasthan	..	..	30	47	1,038	6,861	18,362	74,696	86,793	93,826	1,08,080
15	Tamil Nadu	..	..	14,373	32,440	1,17,695	2,56,594	4,10,119	6,81,258	7,06,914	7,42,746	7,80,816
16	Uttar Pradesh	..	..	635	1,429	3,566	9,283	65,513	2,16,446	2,36,273	2,46,866	2,58,719
17	West Bengal	..	..	N.A.	N.A.	56	437	1,199	6,535	7,694	10,701	17,132
	<i>All-India</i>	..	..	21,010	56,050	1,98,890	5,12,730	10,88,750	24,41,550	26,11,660	27,85,873	30,29,163
	U.P. as percentage to All-India			3.0	2.5	1.8	1.8	6.0	8.9	9.0	8.9	8.5

ANNEXURE XVI

Statement showing State-wise energised pump-sets per electrified village

(Numbers)

Serial no.	Name of State	Total no. of villages as per census 1971	1960-61			1965-66			1968-69			1973-74			1976-77		
			Villages electrified	PTW/PS energised	PTW/PS per village electrified	Villages electrified	PTW/PS energised	PTW/PS per electrified village	Villages electrified	PTW/PS energised	PTW/PS per electrified village	Villages electrified	PTW/PS energised	PTW/PS per electrified village	Villages electrified	PTW/PS energised	PTW/PS per electrified village
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Andhra Pradesh	27,221	2,433	17,968	7.4	4,099	57,225	14.0	5,535	1,23,167	22.3	10,262	2,61,989	25.5	13,470	3,06,795	22.8
2	Assam	21,995	13	..	..	66	..	..	331	55	0.2	1,146	705	0.6	1,997	1,054	0.5
3	Bihar	67,566	2,305	3,200	1.4	3,744	10,600	2.8	6,350	50,005	7.9	9,775	96,922	9.9	18,160	1,32,322	7.3
4	Gujarat	18,275	678	6,963	10.3	1,671	14,155	8.5	2,869	42,085	14.7	5,638	1,02,683	18.2	7,108	1,37,916	19.4
5	Haryana	6,731	570	3,526	6.2	1,179	15,220	12.9	1,464	45,385	31.0	6,669	1,27,947	19.2	6,731	1,53,679	22.8
6	Himachal Pradesh	16,916	670	20	0.0	1,438	88	0.1	2,191	306	0.1	4,500	1,032	0.2	7,246	1,415	0.2
7	Jammu and Kashmir	6,503	32	85	2.7	383	104	0.3	614	162	0.3	1,380	402	0.3	2,829	789	0.3
8	Karnataka	26,826	2,920	16,888	5.8	4,627	42,371	9.2	7,225	91,826	12.7	12,644	1,89,688	15.0	14,703	2,42,471	16.5
9	Kerala	1,268	872	2,666	3.1	1,083	6,957	6.4	1,137	13,909	12.2	1,173	37,661	32.1	1,212	53,148	43.9
10	Madhya Pradesh	70,883	373	1,822	4.9	1,133	7,314	6.5	2,754	24,631	8.9	10,703	1,15,560	10.8	13,829	1,80,282	13.0
11	Maharashtra	35,778	764	7,219	9.4	4,273	44,978	10.5	9,450	1,24,981	13.2	16,933	3,42,665	20.2	20,206	4,48,796	22.2
12	Orissa	46,992	118	N.A.	N.A.	534	N.A.	N.A.	821	477	0.6	8,466	2,759	0.3	13,061	5,428	0.4
13	Punjab	12,188	1,712	8,514	5.0	3,697	25,296	6.8	5,018	59,112	11.8	7,078	1,29,566	18.3	12,126	1,67,815	13.8
14	Rajasthan	33,305	46	1,038	22.6	1,115	6,861	6.2	2,075	18,362	8.8	5,778	74,696	12.9	8,361	1,08,080	12.9
15	Tamil Nadu	15,735	5,919	1,17,695	19.9	7,830	2,56,594	32.8	9,472	4,10,119	43.3	13,805	6,81,258	49.3	15,516	7,80,816	50.3
16	Uttar Pradesh	1,12,561	1,082	3,566	3.3	5,855	9,283	1.6	12,926	65,513	5.1	29,765	2,16,446	7.3	33,098	2,58,719	7.8
17	West Bengal	38,070	920	56	0.1	1,594	437	0.3	2,433	1,199	0.5	8,708	6,535	0.8	10,981	17,132	1.6
	All-India	5,75,936	21,754	1,98,890	9.1	45,148	5,12,730	11.4	73,739	10,88,750	14.8	1,56,729	24,41,550	15.6	2,02,843	30,29,163	14.9

ANNEXURE—XVII

Rural Electrification Programme-Energisation of Private Tube-wells/Pump-sets

(Numbers)

Period	REC	MNP	Normal	Total	Cumulative Total
1	2	3	4	5	6
Pre-Plan .. .. .	..	..	635	635	635
First Plan .. .. .	..	..	794	794	1,429
Second Plan .. .. .	..	..	2,137	2,137	3,566
Third Plan .. .. .	..	..	5,717	5,717	9,283
Three Annual Plans (1966-69)	..	..	56,230	56,230	65,513
Fourth Plan	4,994	..	1,45,939	1,50,933	2,16,446
1974-75	2,182	..	17,645	19,827	2,36,273
1975-76	1,284	11	9,298	10,593	2,46,866
1976-77	1,832	103	9,918	11,853	2,58,719
1977-78	3,842	301	20,745	24,888	2,83,607
Total, 1974-78	9,140	415	57,606	67,161	2,83,607
To end of 1977-78	14,134	415	2,69,058	2,83,607	2,83,607

Major Head of Development : 3. WATER AND POWER DEVELOPMENT**Sub-Major Head of Development : 3.3 Power.**

Name of Scheme	Estimated Cost		Fifth Plan (1974-78) Actuals	
	As per investment approved by Planning Commission	Revised cost (Latest)	Total 1974—78	1977-78 (Pre-final)
1	2	3	4	5
I—Generation :				
(A) Approved and on-going schemes				
(1) Multi-purpose Projects— (Power share)				
(i) Ramganga	3,267	4,531	906	15
(ii) Tehri Dam	13,240	15,242	650	350
(iii) Lakhwar Vyasi	13,197	11,254	289	137
Sub-Total (1)	29,704	31,027	1,845	502
(2) Power Projects :				
(a) Hydro Projects—				
(i) Yamuna Stage-II	5,245	13,504	3,113	523
(ii) Maneri Bhali, Part-I	1,778	6,719	2,442	755
(iii) Garhwal Rishikesh Chilla	4,099	9,341	6,325	2,669
(iv) Others .. .. .	..	..	418	1
Sub-Total 2(a)	11,122	29,564	12,298	3,948
(b) Thermal Projects—				
(i) Obra Extension, Stage-II and III	15,790	35,569	22,677	5,843
(ii) Panki Extension	3,520	7,000	4,544	182
(iii) Harduaganj Extension, Stage-V and VI	4,188	8,246	6,404	1,373
(iv) Parichha	8,372	8,372	362	360
(v) Others .. .. .	..	..	937	144
Sub-Total 2(b)	31,870	59,187	34,924	7,902
Sub-Total 2 (Power Projects)	42,992	88,751	47,222	11,850
Sub-Total (A) Continuing Schemes	72,696	1,19,778	49,067	12,352

*Figures of expenditure up to 3/78 are being reconciled.

POWER PROGRAMME—OUTLAYS AND EXPENDITURE

(Rupees in lakhs)

Cumulative expenditure to end of 1977-78	1978-79		1979-80	Estimated outlay			1978-83	Spill-over beyond 1982-83	1983-84 Estimated requirement	Completion schedule	
	Outlay	Anticipated expenditure	Proposed outlay	1980-81	1981-82	1982-83	Proposed outlay			As per 1978-79 Plan discussions	As now anticipated
6	7	8	9	10	11	12	13	14	15	16	17
3,890*	302	302	169	..	..	..	471	..	..	Already completed.	
722	869	869	1,916	2,170	3,310	2,175	10,440	4,080	2,405	1988-89	1988-89
299	765	765	600	2,000	2,500	2,500	8,365	2,590	1,490	1983-85	1984-85
4,911	1,936	1,936	2,685	4,170	5,810	4,675	19,276	6,670	3,895		
10,974	656	656	836	676	169	..	2,337	..	..	1980-81	1,2,3,4,/ 82
3,500	831	831	937	562	506	199	3,035	184	184	1981-83	10,11,12/ 81
6,331	1,781	1,781	1,086	143	..	..	3,010	..	..	1979-81	3,5,7,9/ 80
..		
20,805	3,268	3,268	2,859	1,381	675	199	8,382	184	184		
25,142*	4,500	4,500	4,380	2,680	738	..	12,298	..	..	1977-81	12/77,12/ 78, 8/79, 10/80, 3/81
6,361*	243	243	..	..	..	..	243	..	..	Already completed.	
9,168*	436	436	..	..	..	..	436	..	..	Already completed.	
362	450	450	1,400	2,600	2,200	1,202	7,852	158	158	1981-83	3, 9/82
..		
41,033	5,629	5,629	5,780	5,280	2,938	1,202	20,829	158	158		
61,838	8,897	8,897	8,639	6,661	3,613	1,401	29,211	342	342		
66,749	10,833	10,833	11,324	10,831	9,423	6,076	48,487	7,012	4,237		

Major Head of Development : 3. WATER AND POWER DEVELOPMENT

Sub-Major Head of Development : 3.3 Power.—(Contd.)

Name of Scheme	Estimated Cost		Fifth Plan (1974—78) Actuals	
	As per investment approved by Planning Commission	Revised cost (Latest)	Total 1974—78	1977-78 (Pre-final)
1	2	3	4	5
<i>(B) New Schemes Proposed to be started from 1978-79 and thereafter—</i>				
<i>(1) Multi-purpose Projects—</i>				
(i) Kishau Dam	45,984**	..	..
(ii) Kotli Bhel Dam	60,000**	..	..
Sub-Total (1)	1,05,984	..	..
<i>(2) Power Projects—</i>				
<i>(a) Hydro Project—</i>				
(i) Vishnu Prayag	10,451	..	..
(ii) Maneri Bhali Stage-II	3,263	90	90
(iii) Pala Maneri	7,150	..	..
(iv) Lohari Nag Pala	6,319	..	..
(v) Koteshwar Dam	5,825	..	..
(vi) Khara	6,074	..	..
Sub-Total, 2(a)	44,082	90	90
<i>(b) Thermal and Gas Projects—</i>				
(i) Tanda	15,256	200	200
(ii) Anpara 'A'	23,656	300	300
(iii) Anpara 'B'	35,636	..	..
(iv) Unchahar	15,170	..	..
(v) Dohrihat	15,621	..	..
(vi) Anpara 'C'	53,454	..	..
(vii) Central U.P.	15,256	..	..
(viii) Western U.P.	15,256	..	..
(ix) Parichha Extension	15,256	..	..
(x) Gas Turbines	7,505	..	..
Sub-Total, 2 (b)	2,12,066	500	500
Sub-Total, 2 Power Projects	2,56,148	590	590
Sub-Total (B)	3,62,132	590	590
Total—I—Generation (A+B)	4,81,910	49,657	12,942

**Total cost. Allocation between irrigation and Power not yet decided.

(Rupees in lakhs)

Cumulative expenditure to end of 1977-78	1978-79		1979-80 Proposed outlay	Estimated outlay			1978-83 Proposed outlay	Spill-over beyond 1982-83	1983-84 Estimated requirement	Completion schedule	
	Outlay	Anticipated expenditure		1980-81	1981-82	1982-83				As per 1978-79 Plan discussions	As now anticipated
6	7	8	9	10	11	12	13	14	15	16	17
..	..	..	750	1,400	1,600	1,850	5,600	40,384	2,500	..	1991-92
..	..	..	..	..	50	150	200	59,800	500	..	1992-94
..	..	..	750	1,400	1,650	2,000	5,800	1,00,184	3,000		
..	144	144	251	890	1,142	1,604	4,031	6,420	1,714	..	1987-88
90	263	263	515	741	1,055	1,102	3,676	4,497	1,145	..	1985-86
..	..	..	..	100	200	300	600	6,550	500	..	1987-88
..	..	..	..	..	100	200	300	6,019	500	..	1989-90
..	..	..	..	100	200	300	600	5,225	500	..	1987-88
..	45	45	500	800	900	650	2,895	3,179	1,000	..	1984-85
90	452	452	1,266	2,631	3,597	4,156	12,102	31,890	5,359	..	
200	855	855	1,331	3,000	4,600	4,500	14,286	770	770		6,12/82, 6,12/83
300	1,260	1,260	1,500	5,000	6,100	5,600	19,460	3,896	3,600	..	6,12/82, 6/83
..	..	..	1,200	1,500	2,600	3,800	9,100	26,536	5,500	..	1985-87
..	505	505	1,200	1,000	2,000	3,995	8,700	6,470	4,000	..	6,12/83
..	..	..	..	1,200	1,136	2,500	4,836	10,785	3,500	..	3,9/86
..	..	..	..	1,200	1,200	2,500	4,900	48,554	5,000	..	1987-89
..	..	..	..	1,200	1,136	2,500	4,836	10,420	3,500	..	1985-86
..	..	..	..	1,200	1,136	2,500	4,836	10,420	3,500	..	1985-86
..	..	..	..	1,200	1,135	2,500	4,835	10,421	3,500	..	1985-86
..	..	..	500	6,500	505	..	7,505	..	..	..	9,11/80, 1,3/81
500	2,620	2,620	5,731	23,000	21,548	30,395	83,294	1,28,272	32,870		
590	3,072	3,072	6,997	25,631	25,145	34,551	95,396	1,60,162	38,229		
590	3,072	3,072	7,747	27,031	26,795	36,551	1,01,196	2,60,346	41,229		
67,339	13,905	13,905	19,071	37,862	36,218	42,627	1,49,683	2,67,358	45,466		

Major Head of Development : 3 WATER AND POWER DEVELOPMENT

Sub-Major Head of Development : 3.3 Power.—(Concl'd.)

Name of Scheme	Estimated Cost		Fifth Plan (1974—78) Actuals	
	As per investment approved by Planning Commission	Revised cost (Latest)	Total 1974—78	1977-78 (Pre-final)
-1	2	3	4	5
II. Transmission and Distribution :				
(a) 400 kV. Works	29,806		
(b) 220 kV. Works	17,873		
(c) 132 kV Works	25,644		
(d) 66 kV Works }				
(e) 33 kV Works }				
(f) 11 kV Works }	38,500	27,086	8191
(g) L.T. Works }				
(h) Works for reduction in transmission losses				
Total, II (T & D)	1,11,823	27,086	8,191
III. Rural Electrification				
(a) State Normal	2,925	999
(b) Rural Electrification Corporation Programme	1,821	588
(c) Revised Minimum Needs Programme	941	662
Total, III (RE)	5,687	2,249
IV. Others				
(a) Survey and Investigation	173	85
(b) Small Hill Schemes	98	71
(c) Others	644	..
Total, IV (Others)	915	156
Grand Total for 3.3. Power	83,345	23,538

*Includes foreign exchange component of Rs. 2.29 crores.

**Includes foreign exchange component of Rs. 34.37 crores.

(Rupees in lakhs)

Cumulative expenditure to end of 1977-78	1978-79		1979-80	Estimated outlay			1978-83	Spill-over beyond 1982-83	1983-84 Estimated requirement	Completion schedule	
	Outlay	Anticipated expenditure	Proposed outlay	1980-81	1981-82	1982-83	Proposed outlay			As per 1978-79 Plan discussions	As now anticipated
6	7	8	9	10	11	12	13	14	15	16	17
4,810	2,608	2,608	2,695	3,659	3,732	3,865	16,559	8,437	3,800		
2,217	1,568	1,568	1,923	2,013	2,100	2,300	9,904	5,738	2,500		
4,407	2,878	2,878	2,799	2,900	3,600	3,800	15,977	5,260	3,900		
..	100	100	100	70	70	60	400	9,000	50		
..	1,450	1,450	2,300	3,200	3,900	4,400	15,250		4,500		
..	800	800	1,050	1,500	1,750	2,050	7,150		2,150		
..	350	350	550	800	950	1,050	3,700		1,150		
..	..	..	600	700	800	900	3,000		950		
11,434	9,754	9,754	12,017	14,842	16,902	18,425	71,940	28,435	19,000	..	..
..	2,500	2,500	2,115	2,555	3,015	3,515	13,700	..	3,600		
..	780	780	1,225	1,370	1,515	1,155	6,045	..	1,160		
..	500	500	657	936	1,206	1,802	5,101	..	1,805		
..	3,780	3,780	3,997	4,861	5,736	6,472	24,846	..	6,565		
..	125	125	415	665	960	1,186	3,351	..	1,455		
..	25	25	35	35	40	45	180	..	45		
..		
..	150	150	450	700	1,000	1,231	3,531	..	1,500		
..	27,589	27,589	35,535*	58,265	59,856	68,755	2,50,000**	..	72,531		

STATEMENT FY—I./AP—PR 1—POWER PROGRAMME—OUTLAYS AND EXPENDITURE—HILL AREAS

Major Head of Development : 3 Water and Power Development

Sub-Major Head of Development : 3.3 Power

(Rupees in lakhs)

Serial no.	Name of Scheme	Fifth Plan (1974—78) actual expenditure	1977-78 Actual expenditure	Five-Year Plan 1978—83 Proposed outlay			1978-79		1979-80			1980-81 Estimated	1981-82 Estimated	1982-83 Estimated
				Total	Capital	Foreign Exchange	Approved outlay	Anticipated expenditure	Total	Foreign exchange content of total outlay	Capital content of total outlay			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Transmission and Distribution	305	104	2,010	2,010	..	100	100	320	..	320	450	540	600
2	Rural Electrification:													
	(a) State Normal Programme	..	..	466	466	..	75	75	84	..	84	98	101	108
	(b) Rural Electrification Corporation	418	111	484	484	..	70	70	155	..	155	150	85	24
	(c) Revised Minimum Needs Programme.	236	87	1,764	1,764	..	80	80	269	..	269	339	540	536
	Sub-Total (2)	654	198	2,714	2,714	..	225	225	508	..	508	587	726	668
3	Others—Small Hill Schemes	34	3	180	180	..	25	25	35	..	35	35	40	45
	Total	993	305	4,904	4,904	..	350	350	863	..	863	1,072	1,306	1,331

STATEMENT : FY-II/AP-PR II
Power : Generation Projects-Phasing of Benefits

(Megawatt)

Name of the Scheme	Approved capacity	Capacity added up to end of 1977-78	Capacity additions						Total 1978-83	Spillover beyond 1982-83	1983-84 Target	Schedule of completion beyond 1982-83
			1978-79		Target							
			Target	Anticipated	1979-80	1980-81	1981-82	1982-83				
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>A—Approved on-going Schemes</i>												
<i>(a) Hydro—</i>												
(i) Ramganga ..	3×66	198	..	..	..	..	..	..	..	..	..	..
(ii) Tehri Dam ..	4×150	..	..	..	..	..	..	..	..	600	..	1988-89
(iii) Lakhwar—Vyasi	2×150	..	..	..	..	..	..	..	..	420	..	(6,12/84)
	+2×60											
(iv) Yamuna Stage-II Part I and II	4×60 +4×30	240	..	..	..	..	3×30 (1,2,3/82)	1×30 4/82	120	..	..	..
(v) Maneri Bhali Stage-I	3×30	..	..	..	..	..	3×30 (10,11,12/81)	..	90	..	..	..
(vi) Garhwal-Rishikesh Chilla	4×36	..	..	..	1×36 (3/80)	3×36 (5,7,9/80)	..	..	4	..	..	..
Sub-Total (a)	1812	438	..	..	36	108	180	30	354	1,020	..	..
<i>Thermal—</i>												
(i) Obra Extension Stage II and III.	5×200	200	1×200 (8/78)	1×200 (12/78)	1×200 (8/79)	2×200 (10/80; 3/81)	..	..	800	..	..	..
(ii) Panki Extension	2×110	220	..	..	..	..	..	..	..	..	..	..
(iii) Harduaganj Extension, Stage V and VI	1×110	230	..	..	..	..	..	..	..	..	..	..
	+2×60											
(iv) Parichha	2×110	..	..	..	..	..	1×110 (3/82)	1×110 (9/82)	220	..	..	..
Sub-Total (b)	1,670	650	200	200	200	400	110	110	1,020	..	..	..
Total (A) Continuing schemes	3,482	1,088	200	200	236	508	290	140	1,374	1,020	..	..

Power : Generation Projects-Phasing of Benefits

STATEMENT : FY-II/AP-PR-II—(Concl'd)

(Megawatt)

Name of the Scheme	Approved capacity	Capacity added up to end of 1977-78	Capacity additions					Total 1978—83	Spillover beyond 1983-83	1983-84 Target	Schedule of completion beyond 1982-83	
			1978-79		1979-80	1980-81	1981-82					1982-83
			Target	Anticipated								
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>B—New schemes</i>												
<i>(a) Hydro</i>												
(i) Kishau Dam**	450	..	..	..	..	..	..	..	..	450	..	1991-92
(ii) Kotli Bhel Dam	4×260	..	..	..	..	..	..	..	..	1040	..	1992-94
(iii) Vishnu Prayag ..	4×65.5	..	..	..	..	..	..	..	..	262	..	1987-88
(iv) Maneri Bhali Stage-II	3×52	..	..	..	..	..	..	..	..	156	..	1985-86
(v) Pala Maneri	3×47.5	..	..	..	..	..	..	..	..	142.5	..	1987-88
(vi) Lohari Nag Pala	3×96	..	..	..	..	..	..	..	..	288	..	1989-90
(vii) Koteshwar Dam	4×45	..	..	..	..	..	..	..	..	180	..	1987-88
(viii) Khara ..	3×27	..	..	..	..	..	..	..	..	81	..	1984-85
Sub-Total (a)	2599.5	..	..	..	..	..	..	..	..	2,599.5	..	
<i>(b) Thermal and Gas—</i>												
(i) Tanda	4×110	..	..	..	..	..	..	2×110 (6,12/82)	220	220	2×110 (6,12/83)	1983-84

(ii) Anpara (A)	3×210	..	..	..	..	..	..	2×210 (6,12/82)	420	210	1×210 (6/83)	1983-84
(iii) Anpara (B)	2×500	..	..	..	..	..	..	..	..	1,000	..	1985-87
(iv) Unchahar	2×210	..	..	..	..	..	..	..	..	420	2×210 (6,12/83)	1983-84
(v) Dohrighat	2×210	..	..	..	..	..	..	..	..	420	..	3, 9/86
(vi) Anpara (C)	3×500	..	..	..	..	..	..	..	..	1,500	..	1987-89
(vii) Central U.P.	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(viii) Western U.P. ..	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(ix) Parichha Extension	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(x) Gas Turbine	4×60	..	..	..	..	4×60 (9, 11/80, 1, 3/81)	..	..	240	..	..	..
Sub-Total (b)		..	5,910	240	..	640	880	5 030	850	..	
Total (B) New schemes		..	8509.5	240	..	640	880	7629.5	850	..	
Total, Generation		..	11991.5	1088	200	200	236	748	290	780	2,254	8649.5	850	..
Cumulative installed capacity at the end of the period.*			2982.35	3182.35	3182.35	3418.35	4166.35	4456.35	5236.35	5236.35	..	6086.35	..	

*Installed capacity of Uttar Pradesh includes Renusagar but excludes Central Sector projects.

**U.P.'s share.

STATEMENTS FY-III/AP-PR VI
220 kV and above Lines and Sub-Stations
Transmission System—Outlay, Expenditure Targets and Achievements

Financial (Rupees in lakhs)

Name of Scheme	Total cost		Expenditure to end of 1977-78	1978-79		1979-80 Proposed	Estimate for			Total 1978—83	Spillover beyond 1982-83
	As per Investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
I—Continuing works											
Lines and sub-stations.											
(a) 400 kV works :											
(i) Lines—											
1. Obra-Kanpur ..	2251.00	2251.00	1220.00	650.00	650.00	364.00	17.00	..	..	1031.00	..
2. Kanpur-Muradnagar	2200.33	2200.33	1232.00	550.00	550.00	400.00	18.33	..	..	968.33	..
3. Muradnagar-Rishikesh	996.98	996.98	86.00	150.00	150.00	400.00	350.00	10.98	..	910.98	..
4. Moradabad-Rishikesh	958.78	958.78	..	150.00	150.00	400.00	400.00	8.78	..	958.78	..
Sub-Total (i) ..	6407.09	6407.09	2538.00	1500.00	1500.00	1564.00	785.33	19.76	..	3869.09	..
(ii) Sub-stations—											
1. Sultanpur ..	858.44	858.44	694.00	130.00	130.00	34.44	..	..	..	164.44	..
2. Lucknow ..	878.48	878.48	717.00	135.00	135.00	26.48	..	..	..	161.48	..
3. Kanpur ..	1140.70	1140.70	500.00	388.00	388.00	200.00	52.70	..	..	640.70	..
4. Muradnagar ..	1085.82	1085.82	361.00	405.00	405.00	260.00	59.82	..	..	724.82	..
Sub-Total (ii)	3963.44	3963.44	2272.00	1058.00	1058.00	520.92	112.52	..	..	1691.44	..
Total, 400 kV Continuing Works	10370.53	10370.53	4810.00	2558.00	2558.00	2084.92	897.85	19.76	..	5560.53	..

Name of Scheme	Financial require- ment for 1983-84 (Rs. in Lakhs)	Total length (Ckt. Km.)	Com- ple- ted to end of 1977-78	Physical programme (in Circuit Km.)									Target date of comple- tion	Remarks
				1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84		
				Target	Antici- pated achieve- ment									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(a) 400 kV works														
(i) Lines														
1. Obra-Kanpur	..	400	..	..	..	400	..	..	..	400	..	..	6/79	
2. Kanpur-Muradnagar	..	390	..	..	..	390	..	..	..	390	..	..	6/79	
3. Muradnagar-Rishikesh	..	180	..	..	..	180	..	..	..	180	..	..	6/80	
4. Moradabad-Rishikesh	..	170	..	..	..	170	..	..	..	170	..	..	6/80	
Sub-Total	..	1,140	..	..	..	790	350	..	..	1,140	..	..	..
(ii) Sub-stations														
1. Sultanpur	1 No.	..	..	..	1 No.	..	..	10/79	
2. Lucknow	1 No.	..	..	..	1 No.	..	..	11/79	
3. Kanpur	1 No.	..	..	..	1 No.	..	..	6/79	
4. Muradnagar	1 No.	..	..	..	1 No.	..	..	6/79	
Sub-Total	4 No.	..	..	..	4 Nos.	..	..	..
Total, 400 kV Continuing works.	..	1,140	..	..	..	790	350	..	..	1,140	..	..	..

Power : Generation Projects-Phasing of Benefits

STATEMENT : FY-II/AP-PR-II—(Concl'd)

(Megawatt)

Name of the Scheme	Approved capacity	Capacity added up to end of 1977-78	Capacity additions					Total 1978—83	Spillover beyond 1983-83	1983-84 Target	Schedule of completion beyond 1982-83	
			1978-79		1979-80	Target						
			Target	Anticipated		1981-82	1982-83					
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>B— New schemes</i>												
<i>(a) Hydro</i>												
(i) Kishau Dam**	450	..	..	..	..	..	..	..	..	450	..	1991-92
(ii) Kotli Bhel Dam	4×260	..	..	..	..	..	..	..	..	1040	..	1992-94
(iii) Vishnu Prayag ..	4×65.5	..	..	..	..	..	..	..	..	262	..	1987-88
(iv) Maneri Bhali Stage-II	3×52	..	..	..	..	..	..	..	..	156	..	1985-86
(v) Pala Maneri	3×47.5	..	..	..	..	..	..	..	..	142.5	..	1987-88
(vi) Lohari Nag Pala	3×96	..	..	..	..	..	..	..	..	288	..	1989-90
(vii) Koteshwar Dam	4×45	..	..	..	..	..	..	..	..	180	..	1987-88
(viii) Khara ..	3×27	..	..	..	..	..	..	..	..	81	..	1984-85
Sub-Total (a)	2599.5	..	..	..	..	..	..	..	..	2,599.5	..	
<i>(b) Thermal and Gas—</i>												
(i) Tanda	4×110	..	..	..	..	..	..	2×110 (6,12/82)	220	220	2×110 (6,12/83)	1983-84

(ii) Anpara (A)	3×210	..	..	..	..	..	..	2×210 (6,12/82)	420	210	1×210 (6/83)	1983-84
(iii) Anpara (B)	2×500	..	..	..	..	..	..	..	..	1,000	..	1985-87
(iv) Unchahar	2×210	..	..	..	..	..	..	..	..	420	2×210 (6,12/83)	1983-84
(v) Dohrighat	2×210	..	..	..	..	..	..	..	..	420	..	3, 9/86
(vi) Anpara (C)	3×500	..	..	..	..	..	..	..	..	1,500	..	1987-89
(vii) Central U.P.	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(viii) Western U.P. ..	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(ix) Parichha Extension	2×210	..	..	..	..	..	..	..	..	420	..	1985-86
(x) Gas Turbine	4×60	..	..	..	..	4×60 (9, 11/80, 1, 3/81)	..	..	240	..	..	..
Sub-Total (b)		..	5,910	240	..	640	880	5 030	850	..
Total (B) New schemes		..	8509.5	240	..	640	880	7629.5	850	..
Total, Generation		..	11991.5	1088	200	200	236	748	290	780	2,254	8649.5	850	..
Cumulative installed capacity at the end of the period.*			2982.35	3182.35	3182.35	3418.35	4166.35	4456.35	5236.35	5236.35	..	6086.35

*Installed capacity of Uttar Pradesh includes Renuagar but excludes Central Sector projects.

**U.P.'s share.

STATEMENTS FY-III/AP-PR VI
220 kV and above Lines and Sub-Stations
Transmission System—Outlay, Expenditure Targets and Achievements

Financial (Rupees in lakhs)

Name of Scheme	Total cost		Expenditure to end of 1977-78	1978-79		1979-80 Proposed	Estimate for				Spillover beyond 1982-83
	As per Investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure		1980-81	1981-82	1982-83	Total 1978-83	
1	2	3	4	5	6	7	8	9	10	11	12
I—Continuing works											
Lines and sub-stations.											
(a) 400 kV works :											
(i) Lines—											
1. Obra-Kanpur ..	2251.00	2251.00	1220.00	650.00	650.00	364.00	17.00	..	..	1031.00	..
2. Kanpur-Muradnagar	2200.33	2200.33	1232.00	550.00	550.00	400.00	18.33	..	..	968.33	..
3. Muradnagar-Rishikesh	996.98	996.98	86.00	150.00	150.00	400.00	350.00	10.98	..	910.98	..
4. Moradabad-Rishikesh	958.78	958.78	..	150.00	150.00	400.00	400.00	8.78	..	958.78	..
Sub-Total (i) ..	6407.09	6407.09	2538.00	1500.00	1500.00	1564.00	785.33	19.76	..	3869.09	..
(ii) Sub-stations—											
1. Sultanpur ..	858.44	858.44	694.00	130.00	130.00	34.44	..	..	..	164.44	..
2. Lucknow ..	878.48	878.48	717.00	135.00	135.00	26.48	..	..	..	161.48	..
3. Kanpur ..	1140.70	1140.70	500.00	388.00	388.00	200.00	52.70	..	..	640.70	..
4. Muradnagar ..	1085.82	1085.82	361.00	405.00	405.00	260.00	59.82	..	..	724.82	..
Sub-Total (ii)	3963.44	3963.44	2272.00	1058.00	1058.00	520.92	112.52	..	..	1691.44	..
Total, 400 kV Continuing Works	10370.53	10370.53	4810.00	2558.00	2558.00	2084.92	897.85	19.76	..	5560.53	..

Name of Scheme	Financial requirement for 1983-84 (Rs. in Lakhs)	Total length (Ckt. Km.)	Completed to end of 1977-78	Physical programme (in Circuit Km.)									Target date of completion	Remarks
				1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84		
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(a) 400 kV works														
(i) Lines														
1. Obra-Kanpur	..	400	..	..	..	400	..	..	..	400	..	..	6/79	
2. Kanpur-Muradnagar	..	390	..	..	..	390	..	..	..	390	..	..	6/79	
3. Muradnagar-Rishikesh	..	180	..	..	..	180	..	..	..	180	..	..	6/80	
4. Moradabad-Rishikesh	..	170	..	..	..	170	..	..	..	170	..	..	6/80	
Sub-Total	..	1,140	..	..	..	790	350	..	..	1,140	..	..	..
(ii) Sub-stations														
1. Sultanpur	1 No.	..	..	..	1 No.	..	..	10/79	
2. Lucknow	1 No.	..	..	..	1 No.	..	..	11/79	
3. Kanpur	1 No.	..	..	..	1 No.	..	..	6/79	
4. Muradnagar	1 No.	..	..	..	1 No.	..	..	6/79	
Sub-Total	4 No.	..	..	..	4 Nos.	..	..	..
Total, 400 kV Continuing works.	..	1,140	..	..	..	790	350	..	..	1,140	..	..	..

STATEMENT—FY-III/AP-PR—VI (Contd.)

Name of Scheme	Financial (Rupees in lakhs)										
	Total Cost		Expendi- ture to end of 1977-78	1978-79		1979-80 Propo- sed	Estimate for			Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Antici- pated expendi- ture		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(b) 220 kV works											
(i) Lines—											
1. Rishikesh-Uttarkashi (I Ckt.)	291.41	291.66	215.25	53.00	53.00	23.41	..	..	..	76.41	..
2. Chhibro-Saharanpur (II Ckt)	185.90	205.90	79.00	85.00	85.00	41.90	..	..	..	126.90	..
3. Mughalsarai-Azamgarh	} 513.50	513.50	92.00	119.00	119.00	45.75	..	..	..	164.75	..
4. Azamgarh-Gorakhpur			..	55.00	55.00	89.00	112.75	..	..	256.75	..
5. Lucknow-Sitapur-Sahjahanpur	395.45	395.45	69.00	172.00	172.00	154.45	..	..	..	326.45	..
6. Rishikesh-Maneri-Bhali-I and II	292.29	292.29	..	137.00	137.00	155.29	..	..	..	292.29	..
7. Merrut-Muradnagar	81.83	81.83	70.00	5.83	5.83	..	..	..	..	5.83	..
8. Harduaganj-Agra-II	190.00	190.00	87.00	95.00	95.00	8.00	..	..	..	103.00	..
9. Khurja Tapping	9.34	27.34	23.00	4.34	4.34	..	..	..	..	4.34	..
10. Sultanpur-Gonda (Operated at 132 kV)	374.41	374.41	..	93.50	93.50	150.00	130.91	..	..	374.41	..
11. Gorakhpur-Basti (Operated at 132 kV)	151.99	151.99	..	57.00	57.00	65.00	29.99	..	..	151.99	..
12. NAPP-Khurja ..	150.00	150.00	..	..	..	25.00	60.00	65.00	..	150.00	..
Sub-Total (i)	2636.12	2674.37	635.25	876.67	876.67	757.80	333.65	65.00	..	2033.12	..

Name of Scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Physical Programme (in Circuit Km)										Target date of completion	Remarks
			Completed to end of 1977-78	1978-79 Target	1979-80 Anticipated Achievement	1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84		
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(b) 220 kV works														
(i) Lines—														
1. Rishikesh-Uttarkashi (I Ckt.)	..	103	..	..	..	103	..	..	..	103	..	..	12/79	
2. Chhibro-Saharanpur (II Ckt.)	..	100	..	..	..	100	..	..	..	100	..	..	6/79	
3. Mughalsaraj-Azamgarh	..	105	..	..	..	105	..	..	..	105	..	..	6/79	
4. Azamgarh-Gorakhpur	..	105	..	..	..	..	105	..	..	105	..	..	12/80	
5. Lucknow-Sitapur-Shahjahanpur	..	165	..	..	..	165	..	..	..	165	..	..	6/79	
6. Rishikesh-Maneri Bhali-I and II	..	125	..	125	..	125	..	..	..	125	..	..	1979-80	
7. Meerut-Muradnagar	..	44	..	44	44	..	..	..	..	44	..	..	12/78	
8. Harduaganj-Agra-II	..	95	..	95	..	95	..	..	..	95	..	..	1979-80	
9. Khurja Tapping	..	8	..	8	8	..	..	..	..	8	..	..	6/78	
10. Sultanpur-Gonda (Operated at 132 kV).	..	156	..	..	..	..	156	..	..	156	..	..	6/80	
11. Gorakhpur-Basti (Operated at 132 kV).	..	65	..	..	..	..	65	..	..	65	..	..	6/80	
12. NAPP-Khurja	..	70	..	..	..	..	..	70	..	70	..	..	1981-82	
Sub-Total (i)	..	1,141	..	272	52	693	326	70	..	1141	..	..	..

STATEMENT FY—III/AP-PR-VI—(Contd.)

Name of Scheme	Financial (Rupees in lakhs)										
	Total cost		Expendi- ture to end of 1977-78	1978-79		Estimate for				Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Antici- pated expendi- ture	1979-80 Proposed	1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(ii) 220 kV Sub-stations											
1. Agra ..	362.82	362.82	72.00	152.92	152.92	137.90	..	..	..	290.82	..
2. Khurja ..	182.09	218.09	173.00	12.00	12.00	33.09	..	..	..	45.09	..
3. Sultanpur ..	210.16	244.16	224.77	19.39	19.39	..	..	..	..	19.39	..
4. Gorakhpur ..	180.56	180.56	157.49	15.07	15.07	..	..	..	..	15.07	..
5. Rishikesh ..	161.05	225.23	186.23	25.00	25.00	14.00	..	..	..	39.00	..
6. Sahapuri ..	158.34	158.34	109.00	41.34	41.34	8.00	..	..	..	49.34	..
7. Azamgarh ..	166.20	166.20	15.00	125.00	125.00	26.20	..	..	..	151.20	..
8. Lucknow ..	169.19	169.19	139.00	15.00	15.00	15.19	..	..	..	30.19	..
9. Sitapur ..	188.62	188.62	..	80.00	80.00	108.62	..	..	..	188.62	..
10. Shahjahanpur ..	175.54	175.54	11.00	80.00	80.00	84.54	..	..	..	164.54	..
11. Panki ..	113.39	132.50	130.00	2.50	2.50	..	..	..	..	2.50	..
12. Muradnagar ..	63.52	103.02	84.00	19.02	19.02	..	..	..	..	19.02	..
13. Saharanpur ..	219.60	269.30	213.00	56.30	56.30	..	..	..	..	56.30	..
14. Mainpuri ..	115.33	115.33	37.00	7.50	7.50	70.83	..	..	..	78.33	..
15. Moradabad ..	171.36	171.36	20.00	27.00	27.00	124.36	..	..	..	151.36	..

Name of Scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Physical programme (in Circuit Km.)											Target date of completion	Remarks
			Completed to end of 1977-78	1878-79 Target	1979-80 Anticipated achievement	1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84			
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
(ii) 200 kV Sub-stations															
1. Agra	1 No.	1 No.	..	..	..	..	1 No.	..	..	6/78		
2. Khurja	1 No.	..	..	..	..	..	..	..	..	..	3/78		
3. Sultanpur	1 No.	..	..	..	..	..	..	..	..	..	12/77		
4. Gorakhpur	1 No.	1 No.	..	..	..	..	1 No.	..	..	3/79		
5. Rishikesh	1 No.	1 No.	..	..	..	..	1 No.	..	..	3/79		
6. Sahupuri	1 No.	..	..	..	..	..	..	..	..	..	3/78		
7. Azamgarh	1 No.	..	..	..	1 No.	..	..	6/79		
8. Lucknow	1 No.	..	..	..	1 No.	..	..	6/79		
9. Sitapur	1 No.	..	..	..	1 No.	..	..	6/79		
10. Shahjahanpur	1 No.	1 No.	..	..	..	..	1 No.	..	..	3/79		
11. Panki	1 No.	..	..	..	..	..	..	..	..	..	6/77		
12. Muradnagar	1 No.	..	..	..	..	..	..	..	..	3/78		
13. Saharanpur	1 No.	1 No.	..	..	..	..	1 No.	..	..	3/79		
14. Mainpuri	1 No.	..	..	..	1 No.	..	..	1979-80		
15. Moradabad	1 No.	..	..	..	1 No.	..	..	1979-80		

Name of Scheme	Financial (Rupees in lakhs)										
	Total cost		Expenditure to end of 1977-78	1978-79		1979-80 Proposed	Estimate for			Total 1978-83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(ii) 220 kV Sub-station											
16. Shamli	27.69	27.69	10.00	13.69	13.69	4.00	..	..	..	17.69	..
Sub-Total (ii)	2665.46	2907.95	1581.49	691.73	691.73	626.73	..	..	..	1318.46	..
Total, 220 kV Continuing Works ..	5301.58	5582.32	2216.74	1568.40	1568.40	1384.53	333.65	65.00	..	3351.58	..
(c) 132 kV Continuing Works	10644.27	10644.27	4407.74	2878.00	2878.00	2600.00	599.00	159.53	..	6236.53	..
(d) 66 kV and below Continuing Works	700.00	700.00	..	700.00	700.00	..	..	..	..	700.00	..
Total, Continuing Works ..	27016.38	27297.12	11434.48	7704.40	7704.40	6069.45	1830.50	244.29	..	15848.64	..
New Works											
(a) 400 kV Works											
(i) Lines—											
1. Lucknow-Moradabad (SC)	..	2,093	..	..	..	50.00	704.00	850.00	489.00	2093.00	..
2. Kanpur-Lucknow (SC)	..	447	..	..	..	25.00	110.00	200.00	112.00	447.00	..
3. Anpara-Azamgarh (SC)	..	1,684	..	..	..	25.00	459.00	700.00	500.00	1684.00	..
4. Azamgarh-Sultanpur (SC)	..	928	..	..	..	25.00	135.00	368.00	400.00	928.00	..
5. Anpara-Kanpur (SC)	..	2,628	..	..	..	..	..	..	250.00	250.00	2,378

Name of Scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Completed to end of 1977-78	Physical programme (in Circuit Km.)										Target date of completion	Remarks
				1978-79 Target	1979-80 Anticipated achievement	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84				
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
(ii) 220 kV Sub-Station															
16. Shamli	1 No.	..	..	..	1 No.	..	..	1979-80		
Sub-Total (ii)	5 Nos.	5 Nos.	5 Nos.	6 Nos.	..	..	..	11 Nos.	..	..	..
Total 220 kV Continuing Works	..	1141	..	272	52	693	326	70	..	1141	..	..	..
(c) 132 kV Continuing Works	..	3,070	..	1556	1556	680	579	255	..	3070	..	..	..
(d) 66 kV and below Continuing Works.	..	400	..	400	400	..	..	..	..	400	..	..	..
Total, Continuing Works.	..	5751	..	2228	2008	2163	1255	325	..	5751	..	..	..
II. New Works															
(a) 400 kV Works															
(i) Lines—															
1. Lucknow-Moradabad (SC)	..	320	..	..	..	..	..	..	..	320	320	..	6/82	Main grid-line.
2. Kanpur-Lucknow (SC)	..	65	..	..	..	..	..	..	..	65	65	..	6/82	Ditto.
3. Anpara-Azamgarh	..	260	..	..	..	..	..	..	..	260	260	..	6/82	Evacuation line
4. Azamgarh-Sultanpur (SC)	..	135	..	..	..	..	..	..	..	135	135	..	6/82	Do.
5. Anpara-Kanpur (SC)	650.00	410	..	..	..	..	..	..	..	..	410	..	Beyond 1983-84	Do.

STATEMENT: FY-III/AP-PR VI—(Contd.)

Name of Scheme	Financial (Rupees in lakhs)										
	Total cost		Expendi- ture to end of 1977-78	1978-79		1979-80 Proposed	Estimate for			Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Antici- pated expenditure		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(i) 400 kV Lines											
6. Kanpur-Muradnagar (SC)	..	2,500	..	..	..	..	..	..	250.00	250.00	2,250
7. Tehri-Rishikesh (SC)	..	1,038	..	..	..	..	..	..	150.00	150.00	888
8. Dakpathar-Rishikesh (SC)	..	513	..	..	..	..	..	..	62.00	62.00	551
Sub-Total (i)	..	11,831	..	..	..	125.00	1408.00	2118.00	2213.00	5864.00	5967
(ii) 400 kV Sub-stations											
1. Rishikesh	1,271	..	25.00	25.00	200.00	325.00	470.00	251.00	1271.00	..
2. Moradabad	..	1,261	..	25.00	25.00	200.00	325.00	470.00	241.00	1261.00	..
3. Azamgarh	1,255	..	..	..	35.00	430.00	400.00	390.00	1255.00	..
4. Muradnagar (Extn.)	..	200	..	..	..	25.00	130.00	35.00	10.00	200.00	..
5. Sultanpur (Extn.)	..	213	..	..	..	..	20.00	100.00	93.00	213.00	..
6. Lucknow (Extn.)	..	280	..	..	..	20.00	100.00	90.00	70.00	280.00	..
7. Kanpur (Extn.)	..	74	..	..	..	5.00	23.00	29.00	17.00	74.00	..
8. Tehri	..	1,250	..	..	..	..	..	..	225.00	225.00	102500
9. Dakpathar	..	1,150	..	..	..	..	..	..	225.00	225.00	92500
10. Rishikesh (Extn.)	..	300	..	..	..	..	..	..	60.00	60.00	24000
11. Kanpur (Extn.)	..	200	..	..	..	..	..	..	50.00	50.00	15000

Name of scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Completed to end of 1977-78	Physical programme (in Circuit Km.)								Target date of completion	Remarks	
				1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83			1983-84
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(i) 400 kV Lines—														
6. Kanpur-Muradnagar (SC) ..	650.00	390	..	..	..	..	..	..	..	..	390	..	Beyond 1983-84	Evacuation line
7. Tehri-Rishikesh (SC) ..	500.00	162	..	..	..	..	..	..	..	..	162	..	Do.	Do.
8. Dakpathar-Rishikesh(SC) ..	300.00	80	..	..	..	..	..	..	..	..	80	..	Do.	Do.
Sub-Total (i) ..	2100.00	1,822	..	..	..	..	..	..	780	780	1,042	..		
(ii) 400 kV Sub-stations—														
1. Rishikesh ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
2. Moradabad ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
3. Azamgarh ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
4. Muradnagar (Extn.) ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
5. Sultanpur (Extn.) ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
6. Lucknow (Extn.) ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
7. Kanpur (Extn.) ..	..	..	..	..	..	..	..	..	1 No.	1 No.	..	..	6/82	
8. Tehri ..	700.00	..	..	..	..	..	..	..	..	..	..	..	Beyond 1983-84	
9. Dakpathar ..	650.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
10. Rishikesh (Extn.) ..	150.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
11. Kanpur (Extn.) ..	100.00	..	..	..	..	..	..	..	..	..	..	..	Do.	

STATEMENT: F.Y.—III/AP-PR VI—(Contd.)

Financial (Rupees in lakhs)

Name of Scheme	Total cost		Expenditure to end of 1977-78	1978-79		1979-80 Proposed	Estimate for			Total 1978—83	Spillover beyond 1982-83
	As per investment Approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(iii) 400 kV Sub-station											
12. Muradnagar (Extn.)	..	150	..	..	..	..	..	..	20.00	20.00	130.00
Sub-Total (ii)	..	7,604	..	50.00	50.00	485.00	1353.00	1594.00	1652.00	5134.00	2470.00
Sub-Total (a) 400 kV Works.	..	19,435	..	50.00	50.00	610.00	2761.00	3712.00	3865.00	10998.00	8437.00
(b) 220 kV Works											
(i) Lines—											
1. Parichha-Mainpuri-(DC)	..	1048	..	..	..	100.00	600.00	348.00	..	1048.00	..
2. Muradnagar-Meerut-(SC)	..	109	..	..	..	25.00	50.00	34.00	..	109.00	..
3. Mainpuri-Shikohabad-Agra-(SC)	..	326	..	..	..	50.00	150.00	100.00	26.00	326.00	..
4. Rishikesh-Nehtaur-(SC)	..	232	..	..	..	25.00	100.00	60.00	47.00	232.00	..
5. Sultanpur-Jaunpur-(SC)	..	139	..	..	..	25.00	50.00	50.00	14.00	139.00	..
6. Meerut-Simbhali-ANPP-(SC)	..	256	..	..	..	25.00	150.00	51.00	30.00	256.00	..
7. Vishnuprayag-Srinagar-(SC)	..	232	..	..	..	..	100.00	100.00	32.00	232.00	..
8. Bussing of Rishikesh-Meerut line at Muzaffarnagar-(DC).	..	4	..	..	..	..	4.00	..	..	4.00	..
9. Bussing of Muradnagar Patpur-Ganj line at Sahibabad (DC).	..	13	..	..	..	..	..	10.00	3.00	13.00	..

Physical programme (in Circuit Km.)

Name of Scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total Length (Ckt. Km.)	Completed to end of 1977-78	1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84	Target date of completion	Remarks
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(ii) 400 kV Sub-station														
12. Muradnagar (Extn.)	100.00	..	..	..	..	..	..	..	..	..	..	..	..	Beyond 1983-84
Sub-total (ii)	1700.00	..	..	..	..	..	..	..	7 Nos.	7 Nos.	..	..
Sub-Total (a) 400 kV Works	3800.00	1822	..	..	..	..	..	..	780	780	1042	..		
(b) 200 kV Works														
(i) Lines—														
1. Parichha-Mainpuri-(DC)	..	450	..	..	..	..	..	450	..	450	..	..	1981-82	Evacuation line.
2. Muradnagar-Meerut-(SC)	..	47	..	..	..	..	..	47	..	47	..	..	1981-82	Feeder Line.
3. Mainpuri-Shikohabad-Agra-(SC.)	..	140	..	..	..	..	..	..	140	140	..	..	1982-83	Do.
4. Rishikesh-Nehtaur-SC	..	100	..	..	..	..	..	..	100	100	..	..	1982-83	Do.
5. Sultanpur-Jaunpur-(SC)	..	60	..	..	..	..	..	..	60	60	..	..	1982-83	Do.
6. Meerut-Simbhali-ANPP-(SC)	..	110	..	..	..	..	..	..	110	110	..	..	1982-83	Do.
7. Vishnuprayag-Srinagar-(SC)	..	100	..	..	..	..	..	..	100	100	..	..	1982-83	Evacuation Line.
8. Bussing of Rishikesh-Meerut Line at Muzaffarnagar-(DC)	..	2	..	..	..	..	..	2	..	2	..	..	1981-82	Feeder Line.
9. Bussing of Muradnagar-Patpur-Ganj Line at Sahibabad (DC.)	..	6	..	..	..	..	..	..	6	6	..	..	1982-83	Do.

Statement : FY-III/AP-PR—VI—(Contd.)

Financial (Rupees in lakhs)

Name of Scheme	Total cost		Expenditure to end of 1977-78	1978-79		Estimate for					
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure	1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Spillover beyond 1982-83
1	2	3	4	5	6	7	8	9	10	11	12
(i) 220 kV Lines											
10. Bussing of Sultanpur-Gorakhpur line at Tanda-(DC)	..	46	..	..	..	..	..	..	25.00	25.00	21.00
11. Shamli-Muradnagar-(SC)	..	244	..	..	..	..	..	10.00	50.00	60.00	184.00
12. Shamli-Saharanpur-(SC)	..	163	..	..	..	..	..	10.00	50.00	60.00	103.00
13. Sultanpur-Phoolpur-(SC)	..	233	..	..	..	..	..	10.00	75.00	85.00	148.00
14. Azamgarh-Ghazipur-(SC)	..	168	..	..	..	..	..	10.00	50.00	60.00	108.00
15. Dohrihat-Kasia-(SC)	..	186	..	..	..	..	..	..	25.00	25.00	161.00
16. Bussing of Panki-Mainpuri line at Chibramau-(DC)	..	46	..	..	..	..	..	..	25.00	25.00	21.00
17. Bussing of Panki-Rawa Road line at Fetehpur-(SC)	..	93	..	..	..	..	..	..	25.00	25.00	68.00
18. Bussing of Harduaganj-Mainpuri line at Etah-(DC)	..	56	..	..	..	..	..	..	25.00	25.00	31.00
19. Bussing of Vishnuprayag-Rishikesh at Karanprayag (DC)	..	233	..	..	..	..	..	..	75.00	75.00	158.00
20. Moradabad-Bisauli-SC	..	209	..	..	..	..	..	10.00	75.00	85.00	124.00

Name of Scheme	Financial requirement for 1983-84 (Rs. in Lakhs)	Total length (Ckt. Km.)	Physical programme (in Circuit Km.)									Target date of completion	Remarks	
			Completed to end of 1977-78	1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83			1983-84
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(i) 220 kV Lines—														
10. Bussing Sultanpur-Gorakhpur line at Tanda-(D.C.)	21.00	20	..	..	..	..	..	..	..	..	20	20	1983-84	Evacuation Line.
11. Shamli-Muradnagar-(S.C.)	75.00	105	..	..	..	..	..	..	..	..	105	..	Beyond 1983-84	Feeder Line.
12. Shamli-Saharanpur-(S.C.)	75.00	70	..	..	..	..	..	..	..	..	70	..	Do.	Do.
13. Sultanpur-Phoolpur-(S.C.)	75.00	100	..	..	..	..	..	..	..	..	100	..	Do.	Do.
14. Azamgarh-Ghazipur-(S.C.)	75.00	70	..	..	..	..	..	..	..	..	70	..	Do.	Do.
15. Dohrihat-Kasia-(S.C.)	50.00	80	..	..	..	..	..	..	..	..	80	..	Do.	Do.
16. Bussing of Panki-Mainpuri line at Chhibramau-(D.C.)	21.00	20	..	..	..	..	..	..	..	..	20	20	1983-84	Do.
17. Bussing of Panki-Rawa Road line at a Fatehpur-(S.C.)	50.00	40	..	..	..	..	..	..	..	..	40	..	Beyond 1983-84.	Do.
18. Bussing of Harduagani-Mainpuri Line at Etah-(D.C.)	25.00	24	..	..	..	..	..	..	..	..	24	..	Do.	Do.
19. Bussing of Vishnuprayag-Rishikesh at Karanprayag-D.C.	80.00	100	..	..	..	..	..	..	..	..	100	..	Do.	Do.
20. Moradabad-Bisauli-(S.C.)	78.00	90	..	..	..	..	..	..	..	..	90	..	Do.	Do.

STATEMENT : FY-III/AP-PR—VI—(Contd.)

Financial (Rupees in lakhs)

Name of Scheme	Total cost		Expenditure to end of 1977-78	1978-79			Estimate for				Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure	1979-80 Proposed	1980-81	1981-82	1982-83			
1	2	3	4	5	6	7	8	9	10	11	12	
(i) 220 kV Lines—												
21. Sultanpur-Tanda-(S.C.)	..	163	..	..	..	..	..	10.00	50.00	60.00	103.00
22. Tanda-Basti-(S.C.)	..	93	..	..	..	..	..	10.00	25.00	35.00	58.00
23. Unchahar-Lucknow-(D.C.)	..	536	..	..	..	..	..	10.00	175.00	185.00	351.00
24. Unchahar-Raebareli-(S.C.)	..	70	..	..	..	..	..	..	30.00	30.00	40.00
25. Dohrighat-Azamgarh-Jaunpur (S.C.)	..	256	..	..	..	..	..	..	50.00	50.00	206.00
26. Bussing of Azamgarh Line at Dohrighat-(D.C.)	..	46	..	..	..	..	..	..	..	..	46.00
27. Vishnuprayag-Rishikesh-(S.C.)	..	466	..	..	..	..	..	..	78.00	78.00	388.00
28. Rishikesh-Srinagar-(S.C.)	..	233	..	..	..	..	..	..	50.00	50.00	183.00
29. Pala Maneri-Tehri-(D.C.)	..	228	..	..	..	..	..	..	50.00	50.00	178.00
30. Pala Maneri-Maneri Bhali-I-(S.C.)	..	30	..	..	..	..	..	..	..	..	30.00
31. Lakhwar-Vyasi-Rishikesh-(S.C.)	..	405	..	..	..	..	..	..	50.00	50.00	355.00
32. Lakhwar-Vyasi-Saharanpur (S.C.)	..	442	..	..	..	..	..	..	50.00	50.00	392.00
Sub-Total, (i) 220 kV. Lines.	..	7,004	..	..	..	250.00	1204.00	833.00	1260.00	3547.00	3457.00

Name of scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Physical programme (in Circuit Km.)										Target date of completion	Remarks
			Completed to end of 1977-78	1978-79		1979-80	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84		
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(i) 220 kV Lines—														
21. Sultanpur-Tanda-(S.C.)	75.00	70	..	..	..	..	..	..	..	..	70	..	Beyond 1983-84.	Evacuation Line.
22. Tanda-Basti-(S.C.)	50.00	40	..	..	..	..	..	..	..	..	40	..	Do.	Do.
23. Unchahar-Lucknow-(D.C.)	200.00	230	..	..	..	..	..	..	..	..	230	..	Do.	Do.
24. Unchahar-Reabareli-(S.C.)	30.00	30	..	..	..	..	..	..	..	..	30	..	Do.	Do.
25. Dohrighat-Azamgarh-Jaunpur (S.C.)	75.00	110	..	..	..	..	..	..	..	..	110	..	Do.	Do.
26. Bussing of Azamgarh Line at Dohrighat-(D.C.)	10.00	20	..	..	..	..	..	..	..	..	20	..	Do.	Do.
27. Vishnuprayag-Rishikesh-(S.C.)	125.00	200	..	..	..	..	..	..	..	..	200	..	Do.	Do.
28. Rishikesh-Srinagar-(S.C.)	100.00	100	..	..	..	..	..	..	..	..	100	..	Do.	Fedder Line.
29. Pala-Maneri-Teheri-(D.C.)	100.00	98	..	..	..	..	..	..	..	..	98	..	Do.	Evacuation Line.
30. Pala-Maneri-Maneri Bhali-I-(S.C.)	10.00	13	..	..	..	..	..	..	..	..	13	..	Do.	Do.
31. Lakhwar-Vyasi-Rishikesh-(S.C.)	100.00	174	..	..	..	..	..	..	..	..	174	..	Do.	Do.
32. Lakhwar-Vyasi-Sahawanpur (S.C.)	100.00	190	..	..	..	..	..	..	..	..	190	..	Do.	Do.
Sub-Total, (i) 220 kV.Lines	1600.00	3,009	..	..	..	..	..	499	516	1,015	1,994	40	..	..

STATEMENT : FY-III/AP-PR—VI—(Contd.)

Name of scheme	Financial (Rupees in lakhs)										
	Total cost		Expenditure to end of 1977-78	1978-79		Estimate for					Spillover beyond 1982-83
	As per Investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure	1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	
1	2	3	4	5	6	7	8	9	10	11	12
(ii) 220 kV Sub-stations —											
1. Chhamba	97	..	..	..	39.00	50.00	8.00	..	97.00	..
2. Shikohabad	127	..	..	..	35.00	50.00	40.00	2.00	127.00	..
3. Nehtaur	194	..	..	..	45.00	65.00	75.00	9.00	194.00	..
4. Muzaffarnagar	190	..	..	..	45.00	85.00	60.00	..	190.00	..
5. Sahibabad	189	..	..	..	45.00	60.00	75.00	9.00	189.00	..
6. Simbhali	138	..	..	..	35.00	50.00	50.00	3.00	138.00	..
7. Mainpuri (Extn.)	..	85	..	..	..	25.00	25.00	30.00	5.00	85.00	..
8. Muradnagar (Extn.)	..	25	..	..	..	..	10.00	10.00	5.00	25.00	..
9. Meerut (Extn.)	..	60	..	..	..	20.00	20.00	15.00	5.00	60.00	..
10. Agra (Extn.)	45	..	..	..	..	20.00	20.00	5.00	45.00	..
11. Rishikesh (Extn.)	..	45	..	..	..	..	20.00	20.00	5.00	45.00	..
12. Sultanpur (Extn.)	..	35	..	..	..	..	20.00	10.00	5.00	35.00	..
13. Phoolpur	240	..	..	..	..	..	50.00	70.00	120.00	120.00
14. Ghazipur	110	..	..	..	..	..	30.00	35.00	65.00	45.00
15. Kasia	110	..	..	..	..	..	30.00	35.00	65.00	45.00
16. Chibramau	130	..	..	..	..	..	35.00	35.00	70.00	60.00
17. Fatehpur	300	..	..	..	..	..	55.00	75.00	130.00	170.00
18. Etah	110	..	..	..	..	..	20.00	30.00	50.00	60.00

Name of scheme	Physical programme (in Circuit Km.)											Target date of completion	Remarks	
	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Completed to end of 1977-78	1978-79		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83			1983-84
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(ii) 220 kV Sub-stations—														
1. Chhamba ..	..	..	..	..	..	..	1No.	..	..	1No.	..	..	1980-81	
2. Shikohabad ..	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
3. Nehtaur ..	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
4. Muzaffarnagar ..	..	..	..	..	..	..	..	1No.	..	1No.	..	..	1981-82	
5. Sahibabad ..	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
6. Simbhali ..	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
7. Mainpuri (Extn)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
8. Muradnagar (Extn.)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
9. Meerut (Extn.)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
10. Agra (Extn.)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
11. Rishikesh (Extn.)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
12. Sultanpur (Extn.)	..	..	..	..	..	..	..	..	1No.	1No.	..	..	1982-83	
13. Phoolpur ..	30.00	..	..	..	..	..	..	..	..	..	..	..	Beyond 1982-83.	
14. Ghazipur ..	10.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
15. Kasia ..	10.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
16. Chibramau ..	30.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
17. Fatehpur ..	75.00	..	..	..	..	..	..	..	..	..	..	..	Do.	
18. Etah ..	25.00	..	..	..	..	..	..	..	..	..	..	..	Do.	

STATEMENT : FY-III/AP-PR—VI—(Contd.)

Name of scheme	Financial (Rupees in lakhs)										
	Total cost		Expenditure to end of 1977-78	1978-79		Estimate for				Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure	1979-80 Proposed	1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(ii) 220 kV Sub-stations—											
19. Karan Prayag	97	..	..	..	..	..	20.00	25.00	45.00	52.00
20. Bisauli	..	150	..	..	..	..	..	30.00	40.00	70.00	80.00
21. Basti	110	..	..	..	..	..	20.00	30.00	50.00	60.00
22. Rae Bareli	110	..	..	..	..	..	20.00	30.00	50.00	60.00
23. Tehri											
24. Sultanpur (Extn.)											
25. Shamli (Extn.) ..											
26. Muradnagar (Extn. II)											
27. Saharanpur (Extn.)	..	2,590	..	..	..	..	..	479.00	582.00	1061.00	1529.00
28. Azamgarh (Extn.)											
29. Moradabad (Extn.)											
30. Lucknow (Extn.)											
31. Rishikesh (Extn. II)											
32. Gonda ..											
33. Others											
Sub-Total, (ii)	..	5,287	..	..	..	289.00	475.00	1202.00	1040.00	3006.00	2281.00
Sub-Total, (b) 220 kV Works	..	12,291	..	..	..	539.00	1679.00	2035.00	2300.00	6553.00	5738.00

Name of Scheme	Financial requirement for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Completed to end of 1977-78	Physical programme (in Circuit Km.)									Target date of completion	Remarks
				1978-79		1979-80	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83	1983-84		
				Target	Anticipated achievement									
1	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(ii) 220 kV Sub-stations—														
19. Karan Prayag ..	35.00	..	..	..	..	..	..	..	..	..	..	..	Beyond 1982-83.	..
20. Bisauli ..	30.00	..	..	..	..	..	..	..	..	..	..	..	..	..
21. Basti ..	15.00	..	..	..	..	..	..	..	..	..	..	..	Do.	..
22. Raebareli ..	20.00	..	..	..	..	..	..	..	..	..	..	..	Do.	..
23. Tehri	620.00	..	..	..	..	..	..	..	..	..	..	..	..	..
24. Sultanpur (Extn.)														
25. Shamli (Extn.)														
26. Muradnagar (Extn. II)														
27. Saharanpur (Extn.)														
28. Azamgarh (Extn.)														
29. Moradabad (Extn.)														
30. Lucknow (Extn.)														
31. Rishikesh (Extn.)														
32. Gonda														
33. Others														
Sub-Total, (ii)	900.00	..	..	..	..	..	1 No.	1 No.	10 Nos.	12 Nos.	..	..	..	..
Sub-Total, (b) 220 kV Works	2500.00	3,009	..	..	..	..	..	499	516	1,015	1,994	40	..	..

STATEMENT: FY-III/AP—PR—VI—(Concl.d.)

Name of Scheme	Financial (Rupees in lakhs)										
	Total cost		Expenditure to end of 1977-78	1978-79		1979-80 Proposed	Estimates for			Total 1978—83	Spillover beyond 1982-83
	As per investment approved by Planning Commission	Revised cost (Latest)		Approved outlay	Anticipated expenditure		1980-81	1981-82	1982-83		
1	2	3	4	5	6	7	8	9	10	11	12
(C)— 132 kV New works	..	15,000	..	..	..	199.00	2301.00	3440.00	3800.00	9740.00	5260.00
(D)— Other L.V. lines	..	37,800	..	2000.00	2000.00	4600.00	6270.00	7470.00	8460.00	28,800.00	9000.00
Total, (II) New works	..	84,526	..	2050.00	2050.00	5948.00	13011.00	16657.00	18,425.00	56,091.00	28,435.00
Grand Total (I+II)	..	111823.12	11,434.48	9754.40	9754.40	12017.45	14841.50	16901.29	18,425.00	71,939.64	28,435.00
III—Inter State Lines (Centrally Sponsored Programme).											
<i>(a) On-going schemes</i>											
(i) 220 kV Mughalsarai-Dehri	117.26	117.26	74.25	1.00	1.00	..	..	..	..	1.00	..
(ii) 400 kV Muradnagar-Panipat	547.77	547.77	..	5.00	5.00	30.00	212.77	300.00	..	547.77	..
Sub-total, (a)	665.03	665.03	74.25	6.00	6.00	30.00	212.77	300.00	..	548.77	..
<i>(b) New works not yet indentified</i>	291.23	291.23	..	..	..	..	21.23	30.00	50.00	101.23	..
Total III, Inter State Lines	956.26	956.26	74.25	6.00	6.00	30.00	234.00	330.00	50.00	650.00	..

Name of Scheme	Financial require- ment for 1983-84 (Rs. in lakhs)	Total length (Ckt. Km.)	Physical programme (in Circuit Km.)										Estima- ted 1983-84	Target date of comple- tion	Remarks
			Com- pleted to end of 1977-78	1978-79 Target Antici- pated achieve- ment		1979-80 Proposed	1980-81	1981-82	1982-83	Total 1978-83	Beyond 1982-83				
I	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
(C) 132 kV New works	3900.00	2,533	..	..	..	..	..	600	900	1,500	1,033	1,000	..	..
(D) Other L. V. Lines	8,800.00	19,300	..	1,045	1,045	2,340	3,225	3,825	4,325	14,760	4,540	4,540	1983-84	..	
Total, (II) New Works ..	19,000.00	26,664	..	1,045	1,045	2,340	3,225	4,924	6,521	18,055	8,609	5,580	..	..
Grand Total, (I+II) ..	19,000.00	32,415	..	3,273	3,053	4,503	4,480	5,249	6,521	23,806	8,609	5,580	..	..
III—Inter State Lines (Centrally Spon- sored Programme).															
<i>(a) On-going schemes—</i>															
(i) 220 kV Mughalsarai Dehri	..	37	37	..	..	..	..	..	..	..	..	..	..	..
(ii) 400 kV Muradnagar-Panipat	..	90	..	..	..	..	..	90	..	90	..	..	..	..
Sub-Total, (a)	..	127	37	..	..	..	..	90	..	90	..	..	..	..
(b) New works not yet identified	50.00	..	..	..	..	..	..	..	..	..	..	..	..	..
Total—III, Inter State Lines	50.00	127	37	..	..	..	..	90	..	90	..	..	..	..

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-89 (Quantity)		Programme (Quantity) in					Target date of completion	Remarks
			Target	Anticipated.	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12
Obra-Kanpur 400 kV line (400 km.)											
<i>Progress of work—</i>											
1. Survey (Km.)	400	400	..	..	..	..	..	..	..	..	..
2. Land and right of way ..	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance .. ..	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance .. ..	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	1050	1050	..	..	..	..	..	..	..	..	..
6. Towers erected (Nos.) ..	1050	610	440	440	..	..	..	..	..	..	..
7. Earthing (Nos.)	115	..	..	..	115	..	..	..	..	..	..
8. Stringing of conductors (Km)	400	40	300	300	60	..	..	..	..	..	..
9. Stringing of earth-wire (Km) ..	400	40	300	300	60	..	..	..	..	..	..
10. Testing and commissioning ..	..	..	..	..	400	..	..	..	..	6/79	..
Kanpur-Muradnagar 400 kV line (390 Km)											
<i>Progress of work—</i>											
1. Survey (Km.)	390	390	..	..	..	..	..	..	..	..	..
2. Land and right of way ..	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance .. ..	..	..	..	..	..	..	..	..	..	..	Submitted for approval.

4. Railway Clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	..	1036	1033	3	3	..	..	..	..	..	..
6. Towers erected (Nos.)	..	1036	1030	6	6	..	..	..	..	..	..
7. Earthing (Nos.)	..	124	113	11	11	..	..	..	..	..	..
8. Stringing of conductors(Km.)	..	390	112	250	250	28	..	..	..	..	..
9. Stringing of earth-wire (Km)	..	390	112	250	250	28	..	..	..	..	..
10. Testing and commissioning	..	..	..	..	..	390	..	..	..	..	6/79

Muradnagar-Rishikesh 400 kV. line. (180 Km.)

Progress of work—

1. Survey (Km.)	..	180	140	40	40	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	..	475	44	260	260	171	..	..	..	..	..
6. Towers erected(Nos.)	..	475	..	150	150	225	100	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductor (kms.)	..	180	..	..	..	100	80	..	..	..	..
9. Stringing of earth-wire (km.)	..	180	..	..	..	100	80	..	..	..	..
10. Testing and commissioning	..	..	..	..	..	..	180	..	..	..	6/80

Moradabad-Rishikesh 400 kV. line. (170 Km.)

Progress of Work—

1. Survey (Km.)	..	170	126	44	44	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..

STATEMENT : AP-PR VII—(Contd.)

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-89 (Quantity)		Programme (Quantity in)					Target date of completion	Remarks
			Target	Anticipated.	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway Clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	410	68	200	200	142	..	..	..	..	..
6. Towers erected (Nos.)	410	..	175	175	200	35	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	170	..	..	30	100	40	..	..	..	..
9. Stringing of earth-wire (Km.)	170	..	..	30	100	40	..	..	..	..
10. Testing and commissioning	..	..	..	..	..	170	..	..	..	6/80	
Lucknow—Moradabad 400 kV. (SC) line (320 Km.)											
<i>Progress of work—</i>											
1. Survey (Km.)	320	..	..	..	50	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	880	..	..	..	50	400	430	..	..	..
6. Towers erected (Nos.)	880	..	..	..	..	350	480	50	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..

8. Stringing of conductors (Km.)	320	..	..	..	..	20	240	60	..	..
9. Stringing of earth-wire (Km.)	320	..	..	..	..	20	240	60	..	..
10. Testing and commissioning	..	..	..	..	..	..	..	320	..	6/82

Lucknow—Kanpur 400 kV. (S.C.) line (65 km.)

Progress of work—

1. Survey (Km.)	65	..	..	..	65	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	.. Yet to be submitted.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	170	..	..	..	..	170	..	..	..	..
6. Towers erected (Nos.)	170	..	..	..	..	70	100	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	65	..	..	..	..	..	65	..	..	..
9. Stringing of earth-wire (Km.)	65	..	..	..	..	..	65	..	..	..
10. Testing and commissioning	65	..	..	..	..	..	..	65	..	6/82

Anpara-Azamgarh 400 kV. (S.C.) line. (260 Km.)

Progress of Work—

1. Survey (Km.)	260	..	..	..	130	130	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	.. Yet to be submitted.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	685	..	..	..	200	400	85	..	..	..
6. Towers erected (Nos)	685	..	..	..	..	450	235	..	..	..

Items	Total quantity	Progres to end of 1977-78 (Quantity)	Progress in 1978-79 (Quantity)		Programme (Quantity) in					Target date of completion	Remarks
			Target	Anticipated.	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	260	..	..	..	..	90	160	10	..	..	..
9. Stringing of earth-wire (Km.)	260	..	..	..	..	90	160	10	..	..	..
10. Testing and commissioning	260	..	..	..	..	..	..	260	..	6/82	..
Azamgarh-Sultanpur 400 kV. (S.C.) line. (135 Km.)											
<i>Progress of work—</i>											
1. Survey (Km.)	135	..	..	..	30	105	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	..
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	340	..	..	..	50	200	90	..	..	..	..
6. Towers erected (Nos.)	340	..	..	..	..	140	200	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	135	..	..	..	..	..	65	70	..	..	..
9. Stringing of earth-wire (Km.)	135	..	..	..	..	..	65	70	..	..	..
10. Testing and commissioning	135	..	..	..	..	..	..	135	..	6/82	..
Rishikesh-Uttarkashi 220 kV. (S.C.) line. (103 Km.)											
<i>Progress of work—</i>											
1. Survey (Km.)	103	103	..	..	..	..	..	..	..	..	..

2. Land and right of way	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	276	270	6	6	..	..	..	..	..	..
6. Towers erected (Nos.)	276	15	100	100	161	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	103	..	..	..	103	..	..	..	..	..
9. Stringing of earth-wire (Km.)	103	..	..	..	103	..	..	..	..	..
10. Testing and commissioning	103	..	..	..	103	..	..	..	..	12/79

Chibro—Saharanpur 220 kV. (II Ckt.) line (100Km.)

Progress of work—

1. Survey (Km.)	100	100	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	261	157	104	104	..	..	..	..	..	..
6. Towers erected (Nos.)	261	44	200	200	17	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	100	..	40	40	60	..	..	..	..	..
9. Stringing of earth-wire (Km.)	100	..	40	40	60	..	..	..	..	..
10. Testing and commissioning	100	..	..	..	100	..	..	..	..	6/79

STATEMENT AP—PR VII.—(Contd.)

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-79 (Quantity)		Programme (Quantity) in					Target date of completion.	Remarks
			Target	Anticipated.	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12
Mughalsarai—Azamgarh 220 kV. line (105 km.)											
<i>Progress of work—</i>											
1. Survey (Km.)	105	60	45	45	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Approved
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	325	44	281	281	..	..	..	..	..	..	..
6. Towers erected (Nos.)	325	..	250	250	75	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	105	..	25	25	80	..	..	..	..	..	..
9. Stringing of earth-wire (Km)	105	..	25	25	80	..	..	..	..	..	..
10. Testing and commissioning	105	..	..	..	105	..	..	..	..	6/79	..

Azamgarh—Gorakhpur 220 kV. line (105 Km.)*Progress of work—*

1. Survey (Km.)	105	..	..	..	105	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..

3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Approved
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	310	..	..	..	75	235	..	..	..	..	..
6. Towers erected (Nos.)	310	..	..	..	15	295	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	105	..	..	..	..	105	..	..	..	..	..
9. Stringing of earth-wire (Km.)	105	..	..	..	..	105	..	..	..	..	..
10. Testing and commissioning	105	..	..	..	..	105	..	..	..	..	12/80

Lucknow-Sitapur-Shahjahanpur 220 kV. line. (165 km.)

Progress of work—

1. Survey (Km.)	165	165	..	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Approved
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	555	348	207	207	..	..	..	..	..	..	..
6. Towers erected (Nos.)	555	..	250	250	305	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	165	..	..	..	165	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	165	..	..	..	165	..	..	..	..	..	..
10. Testing and commissioning	165	..	..	..	165	..	..	..	..	..	6/79

STATEMENT : AP-PR VII—(Contd.)

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-89 (Quantity)		Programme (Quantity) in					Target date of completion.	Remarks
			Target	Anticipated.	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12

Rishikesh—Maneri Bhali I—II—220 kV. line. (125 Km.)*Progress of work—*

1. Survey (Km.) ..	125	125	..	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	305	44	200	200	61	..	..	..	..	..	..
6. Towers erected (Nos.)	305	..	150	250	155	..	..	..	..	..	..
7. Earthing (Nos.) ..	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	125	..	40	40	85	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	125	..	40	40	85	..	..	..	..	..	..
10. Testing nad commissioning	125	..	..	..	125	..	..	..	..	1979-80	..

Meerut-Muradnagar—220 kV. line. (44 Km.)*Progress of work—*

1. Survey (Km.) ..	44	44	..	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..

3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Approved
4. Railway clearance	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	132	123	9	9	..	..	..	..	..	..
6. Towers erected (Nos.)	132	78	54	54	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	44	..	44	44	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	44	..	44	44	..	..	..	..	..	..
10. Testing and commissioning	44	..	44	44	..	..	..	..	..	..	12/78

Harduaganj—Agra II—220 kV. line. (95 km.)

Progress of work—

1. Survey (Km.)	95	95	..	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	280	209	71	71	..	..	..	..	..	..	..
6. Towers erected (Nos.)	280	..	280	200	80	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	95	..	95	60	35	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	95	..	95	60	35	..	..	..	..	..	..
10. Testing and commissioning	95	..	95	..	95	..	..	..	..	..	1979-80

STATEMENT AP—PR VII—(contd.)

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-79 (Quantity)		Programme (Quantity) in					Target date of completion	Remarks
			Target	Anticipated	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12

Khurja Tapping —200 kV (D.C.) line (4-Km)*Progress of work :*

1. Survey (Km.) ..	4	4	..	..	..	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance ..	..	..	..	..	..	..	..	..	..	..	.. Approved
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	9	..	9	9	..	..	..	..	..	..	..
6. Towers erected (Nos.)	9	..	9	9	..	..	..	..	..	..	..
7. Earthing (Nos.) ..	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	4	..	4	4	..	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	4	..	4	4	..	..	..	..	..	..	..
10. Testing and commissioning	4	..	4	4	..	..	..	..	..	..	6/78

Sultanpur-Gonda—200 kV line operated at 130 kV (156-km.)*Progress of work*

1. Survey (Km.) ..	156	..	..	..	100	56	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..

3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	..	Yet to be submitted.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	436	..	..	..	125	311	..	..	..	..	..
6. Towers erected (Nos.)	436	..	..	..	50	386	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	156	..	..	..	..	156	..	..	..	..	..
9. Stringing of earth-wire (Km.)	156	..	..	..	..	156	..	..	..	..	..
10. Testing and commissioning	156	..	..	..	..	156	..	..	..	..	6/80	

Gorakhpur—Basti 220 kV line operated at 130 kV (65 km)

Progress of work :

1. Survey (Km.)	..	65	..	..	..	65	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..	..	Submitted for approval.
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	..	..
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	186	..	..	..	100	86	..	..	..	..	..	..
6. Towers erected (Nos.)	186	..	..	..	60	126	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	65	..	..	..	10	55	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	65	..	..	..	10	55	..	..	..	..	..	..
10. Testing and commissioning	65	..	..	..	..	65	..	..	..	..	..	6/80	

Items	Total quantity	Progress to end of 1977-78 (Quantity)	Progress in 1978-79 (Quantity)		Programme (Quantity) in					Target date of completion	Remarks
			Target	Anticipated	1979-80	1980-81	1981-82	1982-83	1983-84		
1	2	3	4	5	6	7	8	9	10	11	12

NAPP-Khurja—220 kV(DC) line (35 Km.)*Progress of work*

1. Survey (Km.)	35	..	35	35	..	..	..	..	..	..	..
2. Land and Right of way	..	..	..	..	..	..	..	..	..	..	..
3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	.. Yet to be submitted.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	130	..	100	100	30	..	..	..	..	..	..
6. Towers erected (Nos.)	130	..	25	25	105	..	..	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	35	..	..	..	35	..	..	..	..	..	..
9. Stringing of earth-wire (Km.)	35	..	..	..	35	..	..	..	..	..	..
10. Testing and commissioning	35	..	..	..	..	35	..	..	..	6/80	..

Parichha-Mainpuri 220 kV (DC) line (225 Km.)*Progress of Work :*

1. Survey (Km.)	225	..	150	150	75	..	..	..	..	..	..
2. Land and right of way	..	..	..	..	..	..	..	..	..	..	..

3. PTCC clearance	..	..	..	..	..	..	..	..	..	..	..	Yet to be submitted.
4. Railway clearance	..	..	..	..	..	..	..	..	..	..	..
5. Stub-setting (Nos.)	675	..	100	100	350	225	..	..	..	..	..
6. Towers erected (Nos.)	675	..	..	..	300	350	25	..	..	..	..
7. Earthing (Nos.)	..	..	..	..	..	..	..	..	..	..	..
8. Stringing of conductors (Km.)	225	..	..	..	50	100	75	..	..	..	..
9. Stringing of earth-wire (Km.)	225	..	..	..	50	100	75	..	..	..	..
10. Testing and Commissioning	225	..	..	..	..	..	225	..	..	..	6/81	

STATEMENT : AP-PR VIII : SUB.STATIONS—PROCUREMENT OF MATERIAL ETC/ TARGETS AND ACHIEVEMENTS

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of com- pletion	
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81			
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost		
	1	2	3	4	5	6	7	8	9	10	11	12		13	14
<i>Name of sub-station : SULTANPUR—</i>														
<i>Voltage and Transformer's Capacity : 2×240 MVA—400 kV-Obra and Lucknow Feeder Bay</i>													10/77	
1. Land Acquisition
2. Civil Works	..	44.40	..	44.40	..	..	..	..	..	..	..	..	..	..
3. Transformers (Nos.)	..	2 320.00	1	233.00	1	87.00	1	87.00	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	..	12 137.50	10	115.50	1	12.00	1	12.00	1	10.00	..	..	..	..
5. Isolators (Nos.)	..	76 103.60	68	94.00	3	3.60	3	3.60	5	6.00	..	..	..	..
6. Lightning Arresters (Nos.)	..	26 34.00	20	18.00	3	8.00	3	8.00	3	8.00	..	..	..	..
7. Switchgear	..	141.44	..	127.10	..	11.40	..	11.40	..	2.94	..	..	..	..
8. Erection of :														
(a) Structures	..	8.50	..	7.00	..	..	..	..	..	1.50	..	..	..	..
(b) Transformers	..	16.00	..	14.00	..	2.00	..	2.00	..	..	..	..	..	..
(c) Switchgear	..	6.00	..	6.00	..	..	..	..	..	..	..	..	..	..
(d) Circuit Breakers	..	5.00	..	5.00	..	..	..	..	..	..	..	..	..	..
(e) Other equipments	..	4.00	..	4.00	..	..	..	..	..	..	..	..	..	..
9. Establishment etc	..	38.00	..	26.00	..	6.00	..	6.00	..	6.00	..	..	..	..
Total	..	858.44	..	694.00	..	130.00	..	130.00	..	34.44	..	..	..	..

Name of Sub-Station : LUCKNOW

Voltage and Transformer's Capacity : 400 kV, 2×240-MVA—Sultanpur Bay

11/77

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works	..	..	41.80	..	35.80	..	4.50	..	4.50	..	1.50	..	..
3. Transformers (Nos.)	..	2	380.00	1	293.00*	1	87.00	1	87.00	..	..	..	..
4. Circuit Breakers (Nos.)	..	10	117.00	8	100.50	1	6.50	1	6.50	..	10.00	..	..
5. Isolators (Nos.)	..	74	97.50	67	88.50	7	9.00	7	9.00	..	..	..	..
6. Lightning Arrestors (Nos.)	..	26	23.00	20	18.00	6	5.00	6	5.00	..	..	..	..
7. Switchgear	..	..	141.68	..	129.20	..	8.00	..	8.00	..	4.48	..	..
8. Erection of :													
(a) Structures	..	..	8.50	..	5.00	..	2.00	..	2.00	..	1.50	..	..
(b) Transformers	..	..	16.00	..	15.00	..	1.00	..	1.00	..	..	..	..
(c) Switchgear	..	..	6.00	..	4.00	..	2.00	..	2.00	..	..	..	..
(d) Circuit Breakers	..	..	5.00	..	4.00	..	1.00	..	1.00	..	..	..	..
(e) Other equipments	..	..	4.00	..	4.00	..	..	..	..	..	..	..	..
9. Establishment etc.	..	..	38.00	..	20.00	..	9.00	..	9.00	..	9.00	..	..
Total	..	..	878.48	..	717.00	..	135.00	..	135.00	..	26.48	..	..

Name of Sub-station : KANPUR

Voltage and Transformer's Capacity ; 400 KV, 2×240 MVA Obra and Muradnagar Bays

6/82

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works.													
(a) Buildings	..	..	23.00	..	..	..	21.00	..	21.00	..	2.00	..	..
(b) Staff Quarters	..	..	25.70	..	25.70	..	..	..	..	..	..	..	..

*240 MVA Transformer, 50 MVA Reactor and 200 Tonne Tractor.

STATEMENT : AP-PR VIII (Contd.)

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81		
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost	
					6	7	8	9	10	11	12	13		14
3. Transformers and Reactors (Nos.)	2	384.00	..	148.00	1	161.00	1	161.00	1	75.00	..	..
4. Circuit Breakers (Nos.) ..	10	127.50	4	48.75	4	52.75	4	52.75	2	26.00	..	..
5. Isolators (Nos.)	81	113.90	38	50.15	31	45.25	31	45.25	12	15.00	..	3.50	
6. Lightning Arrestors (Nos.)	29	29.15	19	16.15	10	13.00	10	13.00	..	..	..	..
7. Switchgear ..	..	292.45	..	162.25	..	40.00	..	40.00	..	52.00	..	38.20	
8. Erection of :													
(a) Structures ..	..	30.00	..	12.00	..	11.00	..	11.00	..	5.00	..	2.00	
(b) Transformers ..	..	17.00	..	5.00	..	6.00	..	6.00	..	6.00	..	..
(c) Switchgear ..	..	25.00	..	4.00	..	14.00	..	14.00	..	7.00	..	..
(d) Circuit Breakers ..	..	22.00	..	4.00	..	15.00	..	15.00	..	3.00	..	..
(e) Other Equipment ..	..	4.00	..	4.00	..	..	..	..	..	..	..	..
9. Establishment etc. ..	..	47.00	..	20.00	..	9.00	..	9.00	..	9.00	..	9.00	
Total ..	..	1140.70	..	500.00	..	388.00	..	388.00	..	200.00	..	52.70	

Name of Sub-station : Muradnagar—

Voltage and Transformer's Capacity ; 400 kV, 2×240 MVA Kanpur Feeder Bay.

1. Land Acquisition ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works ..	..	73.50	..	26.50	..	37.00	..	37.00	..	6.00	..	4.00	

3. Transformers (Nos.)	..	2	296.00	..	128.00	1	93.00	1	93.00	1	75.00	..	..
4. Circuit Breakers (Nos.)	..	10	131.75	5	62.75	4	48.00	4	48.00	1	21.00	..	..
5. Isolator (Nos.)	..	81	108.35	4	5.35	57	75.00	57	75.30	10	14.00	10	14.00
6. Lightning Arrestors (Nos.)	..	30	25.05	24	20.55	6	4.50	6	4.50	..	..	..	..
7. Switchgear	..	..	293.67	..	68.85	..	111.00	..	111.00	..	88.00	..	25.82
8. Erection of :													
(a) Structures	..	..	46.00	..	12.00	..	16.00	..	16.00	..	16.00	..	2.00
(b) Transformers	..	..	23.50	..	5.00	..	2.50	..	2.50	..	14.00	..	2.00
(c) Switchgear	..	..	27.00	..	4.00	..	8.00	..	8.00	..	13.00	..	2.00
(d) Circuit Breakers	..	..	10.00	..	4.00	..	1.00	..	1.00	..	4.00	..	1.00
(e) Other Equipments	..	..	4.00	..	4.00	..	..	..	..	..	..	..	..
9. Establishment etc.	..	..	47.00	..	20.00	..	9.00	..	9.00	..	9.00	..	9.00
Total	..	..	1085.82	..	361.00	..	405.00	..	405.00	..	260.00	..	59.82

Name of Sub-station : AGRA

Voltage and Transformers Capacity : 220 kV

6/78

1. Land Acquisition	..	..	2.00	..	2.00	..	..	..	..	..	..	..	..
2. Civil Works	..	..	27.82	..	5.00	..	11.92	..	11.92	..	10.90	..	..
3. Transformers (Nos.)	..	5	152.00	1	20.00	2	66.00	2	66.00	2	66.00	..	..
4. Circuit Breakers (Nos.)	..	25	46.00	8	12.00	9	18.00	9	18.00	8	16.00	..	..
5. Isolators (Nos.)	..	54	32.00	11	5.00	22	15.00	22	15.00	21	12.00	..	..
6. Lightning Arrestors (Nos.)	..	42	11.00	12	3.00	15	5.00	15	5.00	15	3.00	..	..
7. Switchgear and other equipments	..	..	62.50	..	18.50	..	24.00	..	24.00	..	20.00	..	..

STATEMENT : AP-PR VIII (Contd.)

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81		
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
8. Erection of equipments	23.00	..	5.00	..	10.00	..	10.00	..	8.00	..	..	..
9. Establishment etc.	6.50	..	1.50	..	3.00	..	3.00	..	2.00	..	..	..
Total	362.82	..	72.00	..	152.92	..	192.92	..	137.90	..	..	..

Name of Sub-station : KHURJA

Voltage and Transformer's Capacity: 220kV

1. Land Acquisition .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works .. ..	..	5.09	..	2.50	..	1.00	..	1.00	..	1.59	..	..	..
3. Transformers (Nos.)	2	92.00	2	92.00	..	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	15	32.00	13	26.00	1	2.00	1	2.00	1	4.00	..	..	..
5. Isolators (Nos.)	36	18.50	28	14.00	4	2.00	4	2.00	4	2.50	..	..	..
6. Lightning Arrestors (Nos.)	22	7.00	16	5.00	3	1.00	3	1.00	3	1.00	..	..	..
7. Switchgear and other equipments	..	56.50	..	30.00	..	4.50	..	4.50	..	22.00	..	..	..

3/78

8. Erection of :

(a) Structures	..	..	..	..	..	..	..	..	..	..	..	..
(b) Transformers	..	..	..	..	..	..	..	..	..	..	..	..
(c) Swithgears	..	..	5.00	..	2.50	..	1.00	..	1.00	..	1.50	..
(d) Circuit Breakers	..	..	..	..	..	..	..	..	..	..	..	..
(e) Other equipments	..	..	..	..	..	..	..	..	..	..	..	..
9. Establishment etc.	..	..	2.00	..	1.00	..	0.52	..	0.50	..	0.50	..
Total	..	..	218.09	..	173.00	..	12.00	..	12.00	..	33.09	..

Name of Sub-station : SULTANPUR

Voltage and Trans former's Capacity: 220kV

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	12/77
2. Civil Works :													
(a) Buildings	..	..	2.00	..	2.00	..	..	..	..	..	..	..	..
(b) Staff quarters	..	..	6.00	..	6.00	..	..	..	..	..	..	..	..
3. Transformer's (Nos.)	..	4	132.00	4	132.00	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	..	20	27.00	20	27.00	..	..	..	..	..	..	..	..
5. Isolators (Nos.)	..	51	10.00	51	10.00	..	..	..	..	..	..	..	..
6. Lightning Arrestors (Nos.)	..	60	5.00	60	5.00	..	..	..	..	..	..	..	..
7 Switchgear including panels +CT/PT etc.	..	..	30.00	..	30.00	..	..	..	..	..	..	..	..
8. Erection of :													
(a) Structures	..	..	10.00	..	5.00	..	5.00	..	5.00	..	..	..	..
(b) Transformers	..	..	7.00	..	3.00	..	4.00	..	4.00	..	..	..	..

8. Erection of equipment	..	..	10.47	..	..	..	10.47	..	10.47	..	..	..	..
9. Establishment etc.	..	..	17.60	..	5.00	..	4.60	..	4.60	..	..	..	..
Total	..	..	180.56	..	157.49	..	15.07	..	15.07	..	..	..	..

Name of Sub-stations : RISHIKESH

Voltage and Transformer's Capacity ; 220 kv

3/79

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil works	..	..	6.23	..	3.23	..	2.00	..	2.00	..	1.00	..	..
3. Transformers (Nos.)	..	2	92.00	2	92.00	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	..	17	36.00	15	32.00	1	2.00	1	2.00	1	2.00	..	..
5. Isolators (Nos.)	..	39	19.00	31	15.00	4	2.00	4	2.00	4	2.00	..	..
6. Lightening Arrestors (Nos.)	..	23	7.00	17	5.00	3	1.00	3	1.00	3	1.00	..	..
7. Switchgear and other equipments	..	..	56.00	..	34.50	..	15.00	..	15.00	..	6.50	..	..
8. Erection of equipment	..	..	6.00	..	2.50	..	2.50	..	2.50	..	1.00	..	..
9. Establishment etc.	..	..	3.00	..	2.00	..	0.50	..	0.50	..	0.50	..	..
Total	..	..	225.23	..	186.23	..	25.00	..	25.00	..	14.00	..	..

STATEMENT AP-PR-VIII (Contd.)

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of com- ple- tion
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81		
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Name of Sub-station : SAHUPURI</i>													
<i>Voltage and Transformer's Capacity : 220 kV</i>													3/78
1. Land Acquisition	..	3.00	..	1.00	..	2.00	..	2.00	..	..	..	..	..
2. Civil Works :													
(a) Buildings	..	4.00	..	2.00	..	2.00	..	2.00	..	..	..	..	..
(b) Staff quarters	..	19.00	..	10.00	..	8.00	..	8.00	..	1.00	..	..	..
3. Transformers (Nos.)	1	25.00	1	25.00	..	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	17	24.50	16	20.50	1	4.00	1	4.00	..	..	..	..	..
5. Isolators (Nos.)	40	7.00	35	6.00	5	1.00	5	1.00	..	..	..	..	..
6. Lightning Arrestors (Nos.)	51	3.50	51	3.50	..	..	..	..	..	..	..	..	..
7. Switchgear	..	37.00	..	30.00	..	7.00	..	7.00	..	..	..	..	..
8. Erection of :													
(a) Structures	..	8.50	..	2.50	..	5.00	..	5.00	..	1.00	..	..	..
(b) Transformers	..	1.84	..	1.50	..	0.34	..	0.34	..	..	..	..	..
(c) Switchgear (21 Panels+D.C. Dist. Board etc.)	..	8.00	..	2.00	..	5.00	..	5.00	..	1.00	..	..	..
(d) Circuit Breakers	..	5.50	..	2.50	..	2.00	..	2.00	..	1.00	..	..	..

(e) Other equipments	5.50	..	0.50	..	3.00	..	3.00	..	2.00
9. Establishment etc.	6.00	..	2.00	..	2.00	..	2.00	..	2.00

Total	..	158.34	..	109.00	..	41.34	..	41.34	..	8.00
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Name of Sub-station : AZAMGARH

Voltage and Transformer's Capacity : 220 kV

6/79

1. Land Acquisition	..	..	2.00	..	2.00	..	..	..	..	..	..	..	..
2. Civil Works	..	..	23.00	..	13.00	..	10.00	..	10.00	..	..	..	..
3. Transformers (Nos.)	..	1	46.00	..	..	1	46.00	1	46.00	..	..	..	..
4. Circuit Breakers (Nos.)	..	14	19.85	..	..	12	14.10	12	14.10	2	5.75	..	..
5. Isolators (Nos.)	..	44	13.18	..	..	36	10.26	36	10.26	8	2.92	..	..
6. Lightning Arrestors (Nos.)	..	30	3.19	..	..	24	2.20	24	26.59	6	0.99	..	..
7. Switchgear and other equipments	..	..	30.48	..	..	..	26.59	..	26.59	..	3.89	..	..
8. Erection of equipment	15.94	7.02	..	7.02	..	8.92
9. Establishment etc.	12.56	8.83	..	8.83	..	3.73

Total	..	166.20	..	15.00	..	125.00	..	125.00	..	26.20
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STATEMENT : AP-PR VIII (Contd.)

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion	
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81			
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost		
	1	2	3	4	5	6	7	8	9	10	11	12		13	14
<i>Name of Sub-station : LUCKNOW</i>														
<i>Voltage and Transformer's Capacity; 220 kV</i>														
6/79														
1. Land Acquisition
2. Civil Works
3. Transformers (Nos.)	..	3	69.00	3	69.00	..	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	..	8	20.75	5	13.25	1	4.00	1	4.00	2	3.50	..	..	..
5. Isolators (Nos.)	..	32	11.40	20	7.60	4	1.80	4	1.80	8	2.00	..	..	..
6. Lightning Arrestors (Nos.)	..	24	4.29	15	3.00	3	0.60	3	0.60	6	0.69	..	..	..
7. Switchgear and other equipments	40.75	..	32.15	..	4.60	..	4.60	..	4.00	..	..	..
8. Erection of equipment	11.00	..	4.00	..	3.00	..	3.00	..	4.00	..	..	..
9. Establishment etc.	12.00	..	10.00	..	1.00	..	1.00	..	1.00	..	..	..
Total	169.19	..	139.00	..	15.00	..	15.00	..	15.19	..	..	..

Name of Sub-station : SITAPUR

Voltage and Transformer's Capacity: 220 kV

6/79

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works	..	..	..	..	..	..	..	..	..	..	..	..
3. Transformers (Nos.)	..	1	46.00	..	..	..	..	..	1	46.00	..	..
4. Circuit Breakers (Nos.)	..	7	23.25	..	..	7	23.25	7	23.25	..	..	..
5. Isolators (Nos.)	..	25	10.65	..	..	25	10.65	25	10.65	..	..	..
6. Lightening Arrestors (Nos.)	..	15	2.58	..	..	15	2.58	15	2.58	..	..	..
7. Switchgear	..	..	69.14	..	..	..	43.52	..	43.52	..	25.62	..
8. Erection of :												
(a) Structures	..	..	2.00	..	..	..	..	..	..	..	2.00	..
(b) Transformers	..	..	3.00	..	..	..	..	..	..	..	3.00	..
(c) Switchgear	..	..	3.00	..	..	..	..	..	..	..	3.00	..
(d) Circuit Breakers	..	..	6.00	..	..	..	..	..	..	..	6.00	..
(e) Other equipments	..	..	19.00	..	..	..	..	..	..	..	19.00	..
9. Establishment etc.	..	..	4.00	..	..	..	..	..	..	..	4.00	..
Total	..	..	188.62	..	..	..	80.00	..	80.00	..	108.62	..

605

Name of Sub-station : SHAHJAHANPUR

Voltage and Transformer's Capacity: 220 kV

.. 3/79

1. Land Acquisition	..	..	2.00	..	2.00	..	..	..	..	..	..	..
2. Civil Works :												
(a) Buildings	..	..	13.00	..	7.00	..	6.00	..	6.00	..	..	..
(b) Staff quarters	..	..	2.00	..	2.00	..	..	..	..	..	..	..

STATEMENT : AP-PR VIII—(Contd.)

(Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion	
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81			
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost		
	1	2	3	4	5	6	7	8	9	10	11	12		13	14
3. Transformers (Nos.) ..	1	46.00	..	..	..	..	..	..	..	1	46.00	..	..
4. Circuit Brakers (Nos.) ..	9	22.50	..	..	..	..	..	..	..	9	22.50	..	..
5. Isolators (Nos.) ..	26	9.60	..	..	26	9.60	26	9.60	..	..	..	..
6. Lightning Arrestors (Nos.)	26	4.00	..	..	18	2.76	18	2.76	8	1.24	..	..
7. Switchgear ..	..	46.84	..	..	..	46.84	..	46.84	..	..	..	..
8. Erection of :														
(a) Structures ..	..	5.00	..	..	..	2.00	..	2.00	..	3.00	..	..
(b) Transformers ..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Switchgear ..	..	4.00	..	..	..	4.00	..	4.00	..	..	..	..
(d) Circuit Breakers ..	..	..	..	..	..	..	..	..	..	..	..	..
(e) Other equipments ..	..	3.00	..	..	..	..	..	..	..	3.00	..	..
9. Establishment etc. ..	..	17.60	..	..	..	8.80	..	8.80	..	8.80	..	..
Total	..	175.54	..	11.00	..	80.00	..	80.00	..	84.54	..	..

Name of Sub-station: MURADNAGAR—

3/78

Voltage and Transformer's Capacity: 220 kV

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works	..	..	8.32	..	7.00	..	1.32	..	1.32	..	..	..	..
3. Transformers (Nos.)	..	2	47.00	2	47.00	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	..	8	16.00	7	12.00	1	4.00	1	4.00	..	..	..	..
5. Isolators (Nos.)	..	13	6.50	9	4.50	4	2.00	4	2.00	..	..	..	..
6. Lightning Arresters (Nos.)	..	12	2.50	9	1.50	3	1.00	3	1.00	..	..	..	..
7. Switchgear and other equipments	..	..	12.00	..	3.00	..	9.00	..	9.00	..	..	..	..
8. Erection of equipment	..	..	7.20	..	6.00	..	1.20	..	1.20	..	..	..	..
9. Establishment etc.	..	..	3.50	..	3.00	..	0.50	..	0.50	..	..	..	..
Total	..	..	103.02	..	84.00	..	19.02	..	19.02	..	..	..	..

Name of Sub-station : SAHARANPUR

3/79

Voltage and Transformer's Capacity : 220 kV

1. Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Transformers (Nos.)	..	3	102.00	2	56.00	1	46.00	1	46.00	..	..	..	..
4. Circuit Breakers (Nos.)	..	9	34.00	8	30.00	1	4.00	1	4.00	..	..	..	..

STATEMENT AP—PR-VIII—(Contd.)

(Cost in lakh rupees)

Items	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81		
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
5. Isolators (Nos.) ..	22	7.89	19	6.50	3	1.39	3	1.39	..	..	..	..
6. Lightning Arrestors (Nos.)	24	11.10	21	10.50	3	0.60	3	0.60	..	..	..	..
7. Switchgear .. ..	..	81.00	..	81.00	..	..	..	..	..	..	..	..
8. Erection of :													
(a) Structures ..	..	1.00	..	1.00	..	..	..	..	..	..	..	..
(b) Transformers ..	..	4.00	..	3.00	..	1.00	..	1.00	..	..	..	..
(c) Switchgear ..	..	2.00	..	2.00	..	..	..	..	..	..	..	..
(d) Circuit Breakers ..	..	5.00	..	3.00	..	2.00	..	2.00	..	..	..	..
(e) Other equipments ..	..	..	..	..	..	..	..	..	..	..	..	..
9. Establishment etc. ..	..	21.31	..	20.00	..	1.31	..	1.31	..	..	..	..
Total ..	..	269.30	..	213.00	..	56.30	..	56.30	..	..	..	..

Name of Sub-station—MAINPURI

Voltage and Transformer's : Capacity 220 kV.

1979-80

1. Land Acquisition

2. Civil Works	..	..	..	..	..	..	..	..	..	..	..	..
3. Transformers (Nos.)	..	3	69.00	2	23.00	..	..	..	..	1	46.00	..
4. Circuit Breakers (Nos.)	..	5	11.00	2	3.50	1	1.75	1	1.75	2	5.75	..
5. Isolators (Nos.)	..	18	5.25	8	2.00	4	1.00	4	1.00	6	2.25	..
6. Lightning Arrestors (Nos.)	..	5	0.72	2	0.26	1	0.13	1	0.13	2	0.33	..
7. Switchgear and other equipments	..	..	12.36	..	5.74	..	2.12	..	2.12	..	4.50	..
8. Erection of equipment	..	..	7.00	..	..	..	2.00	..	2.00	..	5.00	..
9. Establishment etc.	..	..	10.00	..	2.50	..	0.50	..	0.50	..	7.00	..
Total	..	..	115.33	..	37.00	..	7.50	..	7.50	..	70.83	..

Name of Sub-station : MORADABAD

Voltage and Transformer's capacity 220 kV.

1979-80

1 Land Acquisition	..	..	..	..	..	..	..	..	..	..	..	..
2 Civil Works	..	..	16.50	..	2.00	..	3.50	..	3.50	..	11.0	..
3 Transformers (Nos.)	..	1	46.00	..	..	..	..	..	..	1	46.0	..
4 Circuit Breakers (Nos.)	..	11	26.00	1	2.50	1	2.50	1	2.50	9	21.0	..
5 Isolators (Nos.)	..	23	12.00	4	2.00	4	2.00	4	2.00	15	8.00	..
6 Lightning Arrestors (Nos.)	..	15	3.36	3	1.00	3	1.00	3	1.00	9	1.36	..
7 Switchgear and other equipments	..	..	45.50	..	10.50	..	15.00	..	15.00	..	20.00	..

STATEMENT : AP-PR—VIII—(Concl'd.)

((Cost in lakh rupees)

Item	Total		To end of 31-3-1978		1978-79				Programme in				Target date of completion
	Qty.	Cost	Qty.	Cost	Target		Anticipated		1979-80		1980-81		
					Qty.	Cost	Qty.	Cost	Qty.	Cost	Qty.	Cost	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
8 Erection of equipment	17.00	..	1.50	..	2.50	..	2.50	..	13.00	..	..	..
9 Establishment etc.	5.00	..	0.50	..	0.50	..	0.50	..	4.00	..	..	..
Total	..	171.36	..	20.0	..	27.00	..	27.00	..	124.36	..	..	..

Name of Sub-station : SHAMLI

Voltage and Transforme's : capacity 220 kV.

														1979-80
1. Land Acquisition .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Civil Works .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Transformers (Nos.).. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Circuit Breakers (Nos.)	2	3.50	1	1.75	1	1.75	1	1.75	..	..	..	..	..	..
5. Isolators (Nos.)	8	2.14	4	1.07	4	1.07	4	1.07	..	..	..	..	..	..
6. Lightening Arrestor (Nos.)	6	0.78	3	0.39	3	0.39	3	0.39	..	..	..	..	..	..
7. Switchgear .. ..	..	12.54	..	6.23	..	6.31	..	6.31	..	..	..	..	..	..
8. Erection of :														
(a) Structures .. ..	..	0.70	..	..	..	0.20	..	0.20	..	0.50	..	..	..	..
(b) Transformers .. ..	..	0.38	..	..	..	0.38	..	0.38	..	..	..	..	..	..
(c) Switchgear .. ..	..	0.78	..	..	..	0.28	..	0.28	..	0.50	..	..	..	..
(d) Circuit Breakers .. ..	..	2.65	..	..	..	1.15	..	1.15	..	1.50	..	..	..	..
(e) Other equipments .. ..	..	3.72	..	0.56	..	2.16	..	2.16	..	1.00	..	..	..	..
9. Establishment etc. .. ..	..	0.50	..	..	..	..	..	..	..	0.50	..	..	..	..
Total	..	27.69	..	10.00	..	13.69	..	13.69	..	4.00	..	..	..	..

STATEMENT FY-IV
Transmission and Distribution—Programme for Reducing Losses

1978-79 *Estimate*

(Rupees in lakhs)

Expenditure on equipment and works proposed for reducing transmission losses												
To end of 1977-78		1978-79		1979-80		1980-81		1981-82		1982-83		Remarks
Actual	Percentage losses	Estimate	Percentage losses	Estimate	Percentage losses	Estimate	Percentage losses	Estimate	Percentage losses	Estimate	Percentage losses	
1	2	3	4	5	6	7	8	9	10	11	12	13
*	19.86	*	19.86	600	19.00	700	19.00	800	18.50	900	18.50	

*The programmes for reducing line losses have been covered under the normal T & D programme.

STATEMENT FY-V/AP—PR-IX

Rural Electrification Programme

(For pump set energisation, village electrification and service connections)

(Numbers)

Physical programme/achievement	Achievements		Additions during the year					Total 1978—83	Cumulative total at the end of 1982-83	1983-84 Addition Estimated
	Cumulative at the end of 1977-78	During 1977-78	1978-79 Antici- pated	1979-80 Target	1980-81 Estimate	1981-82 Estimate	1982-83 Estimate			
1	2	3	4	5	6	7	8	9	10	11
<i>(a) Programme of pumpsets/tube-wells ener- gisation under :</i>										
1 Normal State Plan	2,58,640	18,755	20,000	25,570	33,370	40,870	51,090	1,70,900	4,29,540	52,160
2 REC Normal Programme	14,134	3,842	5,000	11,760	13,160	15,110	10,485	55,515	69,649	9,250
3 R.M.N.P.	415	301	1,800	2,870	4,470	5,020	9,425	23,585	24,000	11,630
4 Tribal/Hill Area Plan*:										
State Normal	2,439	104	40	50	50	50	60	250	2,689	60
R.E.C.(Normal)	256	36	60	721	675	365	150	1,971	2,227	..
R.M.N.P.	3	3	..	4	5	10	..	19	22	..
5 Service connections under normal distribu- tion.	..	..	..	..	..	..	..	..	..	..
6 Institutional finances like ARDC/LDB/ Commercial Banks/C.C.B.	10,418	Included in(1)above	12,200	8,800	8,000	8,000	8,000	45,000	55,418	10,960
7 DPAP/SFDA/MFAL .. ..	..	..	..	..	..	..	..	..	..	..
8 Other sources like consumer deposit scheme	Included in(1)above.	1,990	1,000	1,000	1,000	1,000	1,000	5,000	5,000	1,000
9 Total (1 to 8)	2,83,607	24,888	40,000	50,000	60,000	70,000	80,000	3,00,000	5,83,607	85,000
10 Total by end of the year	2,83,607	2,83,607	3,23,607	3,73,607	4,33,607	5,03,607	5,83,607	5,83,607	5,83,607	6,68,607

(b) Village electrification under

1	Normal State Plan	..	..	30,747	836	3,050	2,260	1,690	1,710	1,350	10,060	40,807	1,400
2	R.E.C. Normal programme	..	..	3,679	824	945	1,550	1,780	1,940	1,683	7,898	11,577	1,960
3	R.M.N.P.	-	..	600	268	875	1,090	1,550	2,000	2,987	8,502	9,102	2,560
4	Tribal/Hill Area Plan** :												
	State Normal	..	..	1,280	128	125	1150	175	180	200	830	2,110	200
	R.E.C. (Normal)	..	..	948	149	115	235	235	127	33	745	1,693	110
	R.M.N.P.	-	..	425	214	155	475	610	958	987	3,185	3,610	875
5	Normal distribution programme	..	..	..	..	..	..	..	..	..	..	..	..
6	Institutional finances like ARDC/LDB	..	..	..	..	..	..	..	..	..	..	..	..
7	DPAP/SFDA/MFAL	..	..	..	..	..	..	..	..	..	..	..	..
8	Other sources like consumers deposit scheme	..	..	..	..	..	..	..	..	..	..	..	..
9	Total (1 to 8)	..	..	35,026	1,928	4,870	4,900	5,020	5,650	6,020	26,460	61,486	5,920
10	Total by end of the year	..	..	35,026	35,026	39,896	44,796	49,816	55,466	61,486	61,486	61,486	67,406
11	Rural population benefited according to 1971 census by end of the year.	..	..	40.75%	40.75%	44.25%	48.25%	52.75%	57.75%	63.00%	63.00%	63.00%	68.00%

613

(c) Benefited by end of the year :

1	Small Industries :@												
	(a) No. of connections@..	..	..	770	770	4,025	8,670	13,965	19,945	23,695	23,695	23,695	25,115
	(b) Connected load (MW)@	..	..	3.850	3.850	28.132	62.784	102.285	146.896	174.871	174.871	174.871	185.465
2	Domestic commercial service(Nos.)@	..	..	17,804	17,804	66,229	1,28,014	1,84,704	2,53,349	2,96,029	2,96,029	2,96,029	3,05,749
3	Street light (Nos.)@	..	..	5,603	5,603	19,758	38,033	58,538	82,013	95,518	95,518	95,518	1,00,038
4	Harijan Bastis	..	..	10,996	10,996	15,166	19,606	24,626	30,276	36,296	36,296	36,296	42,216

*These figures are included in a (1), a (2) & a (3) above.

**These figures are included in b (1), b(2) & b(3) above.

@These figures are in respect of R.E.C. (Normal) and R. M. N. P. Schemes only.

STATEMENT FY—VI/AP-PR 'X
Rural Electrification—Financial allocations/expenditure

(Rupees in lakhs)

Programme	1977-78 (Pre-final)	1978-79 (Anticipated)	1979-80 (Proposed)	1980-81 (Estimated)	1981-82 (Estimated)	1982-83 (Estimated)	1978-83 Total	1983-84 (Estimated)
1	2	3	4	5	6	7	8	9
(a) Outlay within the Normal State Plan ..	999	2500	2115	2555	3015	3515	13700	3600
(b) REC normal loans	588	780	1225	1370	1515	1155	6045	1160
(c) R.M.N.P.	662	500	657	936	1206	1802	5101	1805
(d) Tribal/Hill Area Plans* :								
State Normal		75	84	98	101	108	466	114
R.E.C. Normal	198	70	155	150	85	24	484	50
R.M.N.P.		80	269	339	540	536	1764	517
(e) Funds utilised for R.E. works from within the provision under normal development, sub-transmission and distribution.	..	..	..	..	..	..	..	..
(f) Institutional finances from ARDC/LDB	Included in (a) above.	976	528	480	480	480	2944	657
(g) DPAP/SFDA/MFAL .. ..	..	..	..	..	..	..	..	..
(h) Consumer deposit scheme	Included in (a) above.	80	80	80	80	80	400	80
(i) Total (a to h)	2249	4836	4605	5421	6296	7032	28190	7302

*Figures of this programme are included in (a), (b) and (c) above.

STATEMENT IAP-PR XI

Details of tie-up between transmission/sub-station works and pump energisation in respect of programme for 1978-79

Programme	Target of pump energisation in 1978-79 (Number)	Number of pumps energised up to September 1978 (during 1978-79)	Number of pumps for which lines and Sub-stations have been completed but consumers work formalities are not ready (As on 30-9-1978)	Number of pumps ready for connections but for which lines and Sub-station works are not ready. (As on 30-9-1978)
1	2	3	4	5
A.				
(a) Under Normal State Plan Programme	20,000	6,008	225	
(b) REC Schemes	15,000	1,405	18	
(c) M.N.P.	1,800	148	..	
(d) Tribal/Hill Area Plan* :				
(i) State Normal	40	58	..	
(ii) R.E.C. (Normal)	60	10	..	
(iii) M.N.P. .. .. .	..	..	..
(e) For works financed from normal development outlay .. .. .	..	..	..
(f) Institutional Finances from ARDC/LDB	12,200	Included in (a) above.		
(g) DPAP/SFDA/MFAL .. .. .	..	..	..
(h) Consumers deposit scheme	1,000	538	85	
Total	40,000	8,099	328	10,162
B. Backlog carried over from previous years up to period ending 31-3-78		145	..	
C. No. of applications for pump sets/tube-wells pending as on 31-3-78 in respect of which all formalities including test reports etc. stand completed for pump sets connections.				6,249

*Included in (a), (b) and (c) above.

STATEMENT: FY VII—Investigations and Survey

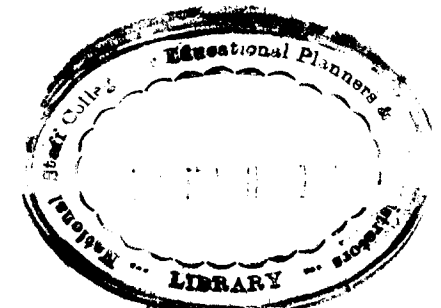
(Rupees in lakhs)

Name of Scheme	Annual Phasing of Outlay						
	1978-79	1979-80	1980-81	1981-82	1982-83	1978—83 Total	1983-84 Outlay
1	2	3	4	5	6	7	8
1. Hydro Electric and Multipurpose Projects	110	350	565	810	986	2821	1155
2. Thermal Projects	15	65	100	150	200	530	300
.. .. Total	125	415	665	960	1186	3351	1455

STATEMENT: AP—PR XII—Tribal sub-Plan 1979-80—Break-up of Outlays and Benefits

Programme	Details Outlay (Rupees in lakhs)										
<i>Financial</i>											
(1) Generation
(2) Transmission and Distribution
(3) Rural Electrification :											
(i) State Normal	25.45
(ii) R.E.C. Normal	14.25
(iii) R.M.N.P.	33.85
											<u>73.55</u>
										Total	73.55
<i>Physical</i>											
(i) No. of villages	84
(ii) No. of pumps
(iii) Others

Sub. National Systems Unit,
National Institute of Educational
Planning and Administration
17-B, Shaheed Nizami Nagar, Delhi-11001
DOC. No.....
Date.....



PSUP—A. P. 17 Sa (Niyojan)—5-12-78—(3027)—1978. 3,000 (M)