



**GOVERNMENT OF MEGHALAYA**

# **FIFTH FIVE YEAR PLAN**

**DRAFT PROPOSALS**

**VOLUME—II**

**SECTORAL PROGRAMMES**

**PLANNING DEPARTMENT**

# FIFTH FIVE YEAR PLAN

## DRAFT PROPOSAL

### VOLUME—II—SECTORAL PROGRAMME

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# VOLUME II

## CHAPTER I

### AGRICULTURAL PROGRAMME

#### 1. Agricultural Production Research and Education

1. The population of Meghalaya was about 10.12 according to the 1971 Census and is expected to reach 12.54 lakhs by the end of the Fifth Five Year Plan. The requirement of food for the population at the end of the Fifth Five year Plan will be about 1,82,000 tons. In view of agriculture constituting the main source of the hill economy, the programme of agricultural production has been given utmost priority. The total geographical area of the State of Meghalaya is 22,500 sq. kms. of which 2,04,306 ha. is cultivable and the net area under cultivation is 1,37,695 ha. Keeping in view the prevalence of the large scale traditional method of cultivation and slow of adaptability of cultivators in the State to mechanised methods of cultivation, there are limitation in stepping up the agricultural production to the desired extent. Meghalaya's very potential for development and diversification of agriculture is great and promising but the progress of agriculture has not been able to match the rise in population so far. The decennial growth of population in Meghalaya is 31.50 per hundred as against the all-India average of 22.70 per hundred. The target of food production for 1972-73 was 170,000 tons where as the anticipated production was 1,50,000 tones. The shortfall could be attributed to various factors including natural calamities which were not foreseen. Due to unusually heavy monsoon, seed sown on the Jhum slopes was completely washed away leading to shortfall in production.

2. The farmers are being educated with regard to high yielding variety seeds by having more than one crop in a year (*i. e.* multiple cropping), adoption and use of optimum doses of fertilizer, by providing more irrigation facilities and also by increasing the cultivated land by way of reclaiming the virgin lands. The control of pests and diseases is an important factor for augmenting the production of food-grains. Technical assistance and supplies are being made available to the farmers progressively. Strong base organisation of co-operatives and community development is being built with orientation increased towards agriculture.

### Physical Achievement

3. Meghalaya as a full-fledged State came into being only on 21st January, 1972 and prior to that it was a part of the Assam. Since all details for the Districts which now comprise part of Meghalaya were then maintained by the Assam Government, the figures are not complete for the first two years of the 4th Plan. The total production of food-grain during 1970-71 was 122,400 tonnes. The total production during 1971-72 was about 117,000 tonnes. There is a short fall in the production was due to natural calamities. The anticipated production during 1972-73 was 150,000 tonnes which gives an increase of 27 per cent.

4. The production of oil seeds for the years 1970-71 and 1971-72 was 2.20 thousand tonnes and 2.4 thousand tonnes respectively. The target for 1972-73 was set at 2.50 thousand tonnes; actual figures are awaited from the districts. The target for 1973-74 is 2.75 thousand tonnes as agreed to by the working group of the Planning Commission.

5. **Cotton**.—The production of Cotton for the year 1969-70, 70-71, 71-72 was 3.60, 4.10, 4.10 thousand bales respectively. The target for 1972-73 was set at 4.40 thousand bales; the figures of actual production have not yet been received from the Districts. The target for 1973-74 has been agreed to at 4.30 thousand bales by the working group of the Planning Commission. This target will form the basis for the 5th Five Year Plan.

6. **Jute**.—The production of jute for the years 1969-70, 1970-71 and 1971-72 was 39.00, 37.50, 39.00 thousand bales. The target for 1972-73 was set at 53.00 thousand bales and anticipated production was 50.00 thousand bales; the figures of actual production have not yet been received. The target for 1973-74 is 54.00 thousand bales which has been approved by the working group of the Planning Commission.

7. From the above it appears that production of food-grains, oil seeds, cotton and jute is maintaining a steady progress. The coverage under potato has gone up to a certain extent. The programme of potato cultivation under Small Farmers Development Agency in Mawryngkneng Block is likely to have its popular repercussion in other areas of the State

also. Moreover, the availability of good seed produced under aforesaid programme is likely to give-rise to a chain reaction leading to stepping up potato cultivation.

8. The area anticipated to be covered under high yielding varieties by the end of 1973-74 is 3.50, 1.00, 4.00 thousand hectares for paddy, wheat, maize respectively. The coverage under Multiple Cropping is expected to be 0.60 thousand hectares in the whole State. The coverage under plant protection for 1969-70, 1970-71, 1971-72 was 6.00, 10.00, 18.00 thousand hectares respectively. The target for 1972-73 under plant protection was 30,000 hectares of which 25,000 hectares has been anticipated to be achieved. The proposed target for 1973-74 is 32.00 thousand hectares. 1.00, 2.25, 1.73 thousand hectares was irrigated under minor irrigation during the years 1969-70, 1970-71, 1971-72. The target for 1972-73 was 3.00 thousand hectares for which 2.96 thousand was anticipated to be achieved. During the years 1969-70, 1970-71, 1971-72, land reclamation programme was extended to 0.95, 0.37, 0.89 thousand hectares respectively. The target for 1972-73 was set at 6.00 thousand hectares of which 1.50 thousand hectares was anticipated to be achieved. The proposed target for 1973-74 is 2.00 thousand hectares which will work as a base for the Fifth Five Year Plan. Consumption of fertilizers has increased from 550 tonnes in 1971-72 to 970 tonnes in 1972-73 which speaks for its popularity with the farmers.

#### BREAKUP OF INPUTS

3. The following is the break up of inputs for the achievement of the proposed targets :—

Crops	Production lakh tonnes	Area
(1)	(2)	(3)
1. Rice (General) ...	1.80	for 1.5 lakhs hectares calculated at 1.2 tonnes per hectare.
2. Maize (General) ...	0.10	for 20,000 hectares calculated at 0.5 tonnes per hectare.

#### High Yielding Varieties

(a) Rice	0.07	for 6,000 hectares calculated at 1.125 tonnes per hectare.
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(b) Maize	...	0.05	for 5,500 hectares calculated at 1.125 tonnes per hectare.
(c) Wheat	...	0.02	for 2,300 hectares calculated at 1.125 tonnes per hectare.
(3) Land Reclamation		0.11	for 10,000 hectares calculated at 1.12 tonnes per hectare.
(4) Irrigation	...	0.04	for 24,000 hectares calculated at 0.18 tonnes per hectare.
(5) Plant Protection		0.01	for 40,000 hectares calculated at 0.025 tonnes per hectare.
(6) Fertilizers	...	0.22	for 6,000 ha $N_2$ 5500 ha $P_2O_5$ and 1500 ha $K_2O$ .
(7) Pulses	...	0.05	
(8) Other General		0.03	
	Total	<u>2.50</u>	

### 1.1. AGRICULTURAL EDUCATION AND RESEARCH

The outlay on programmes of agricultural education and agricultural research in the Fourth Plan was Rs.18.38 lakhs. The anticipated expenditure is Rs.21.83 lakhs. The expenditure during 1973-74 is programmed at Rs.7.00 lakhs. For the Fifth Plan, an outlay of Rs.36.00 lakhs is proposed. The requirement during 1974-75 works out at Rs.7.34 lakhs.

The programmes, objectives and progress are described briefly below :

#### 1. Agricultural Research

1.1.1. Two Research Stations and Laboratories have been established, one in high altitude area in Khasi Hills at Shillong and another in lower altitude area in Garo Hills at Tura. These institutions undertake research on crops to evolve suitable varieties for the different agro-climatic areas. In addition, these stations will undertake research on diseases and pests and also on problems of horticulture. The stations will also carry out analysis of soils *vis a vis* use of fertilizers.

1.1.2. Another Research Station has been established in the sub-montane region of Khasi Hills at an altitude of 800 metres to deal with the crops and other fruit plants of the sub-tropical belts.

1.1.3. The expenditure incurred during the first 4 years (1969-73) was Rs.14.02 lakhs mainly, on the construction of buildings and purchase of equipment. The outlay for 1973-74 is Rs.6.00 lakhs and is meant for the maintenance of the above centres and for the operation of a mobile soil testing van recently received from the Government of India.

1.1.4. In the Fifth Plan the programme will be collection and analysis of soil and fertilizer samples; isolation and identification of different crops' diseases and pests, and other aspects with special emphasis on citrus die-back infested orchards; and for conducting other researches through trials and experiment of different crops.

1.1.5. A Seed Testing Laboratory will be established with special attention to the production of healthy seed potatoes for export.

1.1.6. The provision for the Fifth Plan will be Rs.31.00 lakhs.

### **Agricultural Education**

1.1.7. The schemes provide for scholarships and book grants to the students in Degree Courses in agricultural sciences. The expenditure incurred on scholarship and book grants upto 1972-73 was Rs.0.81 lakhs. A provision of 1.00 lakhs has been made for 1973-74 for meeting the requirement of another 20 students.

1.1.8. For the Fifth Five Year Plan the provision is Rs.5.00 lakhs.

## **2. AGRICULTURAL PRODUCTION**

1.2.1. The Fourth Plan outlay on programmes of Agricultural Production excluding Applied Nutrition was Rs.258.71 lakhs against which an expenditure of Rs.257.77 lakhs is anticipated. The expenditure during 1973-74 would be reaching the level of Rs.71.62 lakhs. For the Fifth Plan, an outlay of Rs.588 lakhs is proposed. An amount of Rs.120 lakhs is required during 1974-75. The programmes are briefly described below.



### **Extension Training and Farmers Education**

1.2.2. The Gram Sevak Training Centre at Upper Shillong imparts institutional stipendiary training of two years in Agricultural Extension Courses in order to meet the requirement of trained Gram Sevaks and agricultural demonstrators of the blocks. There are also two Farmers' Institutes, one at Upper Shillong and the other at Satsangiri, Tura. These Institutes provide only short practical training courses to the progressive farmers. In addition, these centres run Refreshers' Courses and organised conducted tours for officials and non-officials within and outside the State. The Gram Sevak Training Centre has produced 232 students in the last four years while the Farmers' Institutes organised 8 courses for 140 progressive farmers. An amount of Rs. 7.08 lakhs was spent during 1969-73. For 1973-74, Rs. 3.30 lakhs has been provided for training 70 students in Gram Sevak Training Centre and 40 progressive farmers in the Farmers' Institutes.

1.2.3. During the 5th Plan it is proposed to expand the training capacity to meet the increased requirement and also to upgrade the Gram Sevak Training to college level in order to meet the special requirements of this part of the country. An outlay of Rs. 26.45 lakhs is required in the 5th Five Year Plan.

### **3. General Demonstration for Crops in Farmers Fields**

1.2.4. Under this scheme, demonstration plots are set up for trials side by side the fields of the cultivators in order to educate the farmers on the spot regarding various improved agricultural practices including the application of fertilizers, pesticides and the use of HXV seeds.

1.2.5. The expenditure incurred during the first four years was Rs. 11.62 lakhs. For the year 1973-74, expenditure of Rs. 2.00 lakhs is anticipated in setting up 80 demonstration plots covering an area of 800 hectares. Distribution of improved varieties of seeds also is included in the same programme.

1.2.6. During the 5th Five-Year Plan, Rs. 21.05 lakhs is proposed for expansion of the programme to enable larger coverage.

#### 4. Multiple Cropping Demonstration

1.2.7. The demonstration of intensive cultivation by way of multiple cropping in the same plot every year has been taken up to encourage the farmers to adopt scientific crop rotation by use of inputs where irrigation facilities are available. This programme provides for supply of high yielding varieties seeds, fertilizers and other inputs including fencing materials. The expenditure incurred in the first four years of the 4th Plan was Rs.1.69 lakhs. The provision in 1973-74 is Rs.0.80 lakhs with a target of setting up 80 demonstration plots covering 60 hectares. For the Fifth Plan, a provision of Rs.4.25 lakhs is proposed.

#### 5. Agricultural Information

1.2.8. Under this scheme, information materials such as leaflets, pamphlets, posters and other media in different languages will be brought out for distribution to the progressive farmers and field workers. The expenditure incurred during the first four years of the 4th Plan was Rs.0.74 lakhs and the provision for the current year 1973-74 is Rs.0.57 lakhs.

For the 5th Five Year Plan, Rs.5.20 lakhs is proposed.

#### 6 Land use Survey

1.2.9. Under this scheme, survey of land is taken up with a view to identifying suitable lands for immediate reclamation and development. This programme is taken up on the basis of a Quick Reconnaissance Survey and Studies to find out compact blocks of areas suitable for permanent agriculture and other types of permanent farming operations. A technical team has already been constituted consisting of Agronomists, Soil Conservation Officers, Assistant Engineers and other field workers.

1.2.10. The expenditure incurred in the first four years of the 4th Plan was Rs.3.67 lakhs and 40 projects have been surveyed covering an area of 1500 hectares. The provision in the year 1973-74 is Rs.1.60 lakhs.

1.2.11. The requirement in the 5th Five Year Plan works out to Rs.8.25 lakhs.

## 7. Soil testing Laboratories

1.2.12. To make the activities of the Land Use Survey Team more effective and of scientific value, another set up for inclusion of Soil Testing Laboratories and Soil Mobile Vans has been created for which a provision of Rs.30.46 lakhs has been included in the 5th Five Year Plan.

## II. Improved Seeds Programme

1.2.13. **Seed Saturation**:—The scheme provides for procurement and distribution of improved seeds to the cultivators at subsidized rate. The expenditure during 1969-73 was Rs.4.06 lakhs and the provision during 1973-74 is Rs.1.38 lakhs.

For the 5th Five Year Plan, a sum of Rs.7.59 lakhs is proposed for expansion of the programme.

1.2.14. **Seed Farms and Nurseries**:—The scheme provides for continuing and expansion of the existing regional *Seed-cum* Demonstration Farms and Nurseries numbering 15 in the State. Rs.6.70 lakhs was incurred during 1969-73. The provision for current year 1973-74 is Rs.2.00 lakhs which also includes the expansion and establishment of the new nurseries. During the 5th Five Year Plan, a sum of Rs.11.90 lakhs has been provided:

1.2.15. **Potato Seed Production Farm**:—One potato seed production farm at 2000 metres was established in 1971 for disease free seed potatoes and also for the production of high yielding varieties for multiplication in order to expand the seed potato trade of Meghalaya. At present, the farm has an area of 24 hectares with 9 hectares under cultivation. The seeds produced in this farm during the last four years was 106.70 tonnes.

1.2.16. The expenditure incurred upto 1972-73 was Rs.3.10 lakhs and in the year 1973-74 an outlay of Rs.1.45 lakhs is provided for the maintenance and expansion of the farm.

1.2.17. During the 5th Five Year Plan, additional farms will be opened in other districts where suitable climatic factors are favourable for the production of seed potato particularly in Jaintia Hills and in the subdivision of Nongstoin. The outlay for the next 5th Five Year Plan is Rs.12.70 lakhs,

### III. Fertilizers and Manures

1.2.18. **Fertilizer Distribution** :—The scheme provides for payment of transport subsidy to effect quick distribution of fertilizers in the interior areas with a view to making the same available to the farmers at the price which is within their reach and at a uniform pool price in all the centres. This scheme also provides for supply of fertilizers at a subsidised cost as special measure for some specific crops. Under this scheme, construction of fertilizers godowns in the interior centres will also be taken up to facilitate better movement of fertilizers. During 1969-73, a sum of Rs.15.30 lakhs has been spent for distribution of 36234 tonnes of fertilizers. For 1973-74, a sum of Rs.6.60 lakhs is provided for distribution of 12,000 tonnes.

1.2.19. During the 5th Five Year Plan, the outlay required worked out at Rs.50.20 lakhs for further expansion in order to bring all the important areas under the programme.

1.2.20. **Local Manurial Resources**.—Under this scheme, purchase and supply of green manure seeds is made at subsidised rate with a view to improving the structure and physics of the soil as to maintaining its fertility and also for giving sufficient organic matter to protect soil deterioration. Construction of pucca pits for compost making will be taken up by the cultivators by subsidising the expenditures. In respect of night-soil, the work is being taken up in collaboration with the Municipalities and Town Committees. The expenditure in the first four years of the Fourth Plan was Rs.3.45 lakhs and 12,500 tonnes of compost was produced. The provision made in current year 1973-74 is Rs.1.03 lakhs with the target of 5,500 tonnes of compost production.

1.2.21. For the Fifth Five Year Plan, Rs.8.08 lakhs is required for expansion of the programme.

### IV. Plant Protection

1.2.22. Under this scheme the purchase and supply of sprayers and chemicals are to be made so that adequate stocks are available in all the Blocks to meet the requirements of the farmers. Provision is also made for the distribution of sprayer and chemicals to the cultivators at subsidised rate. The object of the scheme is to control the crop epidemic and other pests and diseases. The expenditure incurred in the first four years of

the Fourth Plan was Rs.7.39 lakhs for covering 59,000 hectares under the operation. For 1973-74, a provision of Rs.2.30 lakhs has been made and the expected coverage is 32,000 hectares.

1.2.23. For the Fifth Five Year Plan, a sum of Rs.17.67 lakhs is proposed.

## **V. Agricultural Implements Machinery, Workshop and Reclamation**

1.2.24. In consistence with the recommendation of the Working Group of the Central Team of experts and also to meet the special needs of Meghalaya, a scheme has been drawn up to re-organised the engineering set up to enable taking up the the work on a more realistic and effective pattern. The scheme includes the maintenance of workshops to expedite land reclamation as well as for servicing, repair and replacement of departmental machineries. The scheme also provides facilities to set up other units in the form of machinery hire-cum-service centres in each district. The expenditure incurred during 1969-73 was Rs.14.12 lakhs and the provision for 1973-74 is Rs.6.27 lakhs.

1.2.25. For the 5th Five Year Plan, a provision of Rs. 79.05 lakhs is proposed.

## **VI. Intensive Agricultural Area Programme and high yielding variety**

1.2.6. The scheme provides for intensive cultivation on modern and scientific lines in selected Blocks where there is potentiality. Facilities are created for effective training and demonstration to the farmers of the selected areas so that they can take up package of practices. To intensify the cultivation of high yielding varieties, 3 Blocks have already been established. The expenditure incurred in the first four years of the 4th Plan was Rs.10.03 lakhs and the area brought under high yielding varieties of paddy, maize, and wheat has come up to 4,900 hectares. In the current year 1973-74, a provision of Rs.2.20 lakhs has been made. It is proposed to bring 6,500 hectares of additional area under high yielding varieties.

1.2.27. In the Fifth Plan, a sum of Rs.22.40 lakhs is provided to bring more lands under intensive cultivation with high yielding varieties.

## VII. Commercial crops

1.2.28. Under this programme, introduction of a number of cash crops that are suitable to the different areas of Meghalaya has been taken up. Production of cereals so far is mainly for the local needs while in the case of cash crops it is taken up also for demands in areas outside Meghalaya. Crops of commercial importance so far include Ginger and Turmeric, oilseeds, Arecas and spices, Jute, black pepper, sugarcane, cotton, potato and vegetables. The last two items are of special importance in order to meet the needs of populous centres in the North Eastern Region. The scheme puts special emphasis on the distribution of high quality seeds, healthy seedlings and other plant materials at subsidised cost. In respect of Jute crop, assistance is also being given for the excavation of retting tanks. Such assistance also is extended for plantations of sugarcane, including supply of sets and crushers with boiling pans to the cultivators at subsidised cost. A sum of Rs.22.13 lakhs was spent during 1969-73 and in the year (1973-74) an amount of Rs. 7.33 lakhs was provided. During the 5th Five Year Plan, a sum of Rs.56.68 lakhs is being provided for.

### Commercial Crops of Special Importance

1.2.29 Among the commercial crops in Meghalaya, potato at present is the most important. In addition to use as food in the State, the seed tubers have a very good market in the neighbouring areas, namely, Assam, N. Bengal and other parts of the North Eastern Region. Therefore, potato occupies a special place in the economy of Meghalaya. Potato seed production in Meghalaya therefore, has to increase substantially. The temperature, the growing seasons and soil condition have provided good cardinal factors for the increase of seed potato production in Meghalaya. This requires to be developed in the right lines with the necessary research support and other infra-structure.

1.2.30. In the 5th Five Year Plan, it will be necessary to have a separate full-fledged division to look only after potato development. Under the prevailing conditions in Meghalaya, the potato crop can be raised up to 3 and 4 times a year. Such a situation is unparalleled anywhere in India. This important project will have to be handled by competent personnel as is the case of Himachal Pradesh.

## VIII. Agricultural Statistics and Agricultural Census Operation

1.2.31. The provision on the scheme is limited only to meeting the pay and allowances of the officers and staff under the Statistical Cell of the State Department of Agriculture which is to deal with the collection, maintenance, etc., of agricultural statistics required for the formulation of the various plans. The Cell has been recently established and the expenditure incurred for the last two years was Rs.0.19 lakhs. The provision made for the year 1973-74 is Rs.0.40 lakhs.

1.2.32. A provision of Rs.11.95 lakhs is necessary in 5th Five Year Plan to strengthen this organisation to undertake collection of statistics in a more systematic and comprehensive manner.

## IX. Horticulture

1.2.33. The scheme provides for development of Horticulture on a bigger scale by expanding the area under fruits and other horticultural crops through the supply of healthy planting materials to the farmers at subsidised rates. To support this programme, two Fruit Preservation Centres have been established, one at Shillong and the other at Dainadubi in Garo Hills. The establishment of Progeny Orchards and training of gardeners will also be taken up. During the 1969-73, the expenditure was Rs.12.46 lakhs. The provision for the current year of 1973-74 is Rs.6.85 lakhs.

1.2.34. Substantial expansion of Horticulture Development Scheme will be taken up in the 5th Five Year Plan for which a sum of Rs.57.27 lakhs is required.

## X. Agricultural Marketing

1.2.35. An organisation has been set up to survey the market potentialities and to collect and compile market intelligence. The scheme also provides for training of growers in improved packing and grading and processing of the produce to secure better prices. Besides, the organisation also maintains a small fleet of transport vehicles to assist farmers in taking their produce from the villages to the road head markets. The expenditure incurred in the first four years 1969-73 was Rs. 4.38 lakhs. The provision for the year 1973-74 is Rs. 2.35 lakhs.

1·2·36. In the Fifth Plan, it is proposed to strengthen and expand the marketing wing to make it more effective in assisting the various marketing agencies engaged in disposing the agriculture surplus as also to promote better quality produce that would compete successfully with the produce elsewhere. This will involve reorganisation of the marketing wing to make it more effective.

1·2·37. The requirement in the Fifth Five Year Plan works out to Rs. 14·30 lakhs.

## **XI. Others**

1·2·38. **Agricultural Administration and Transport:—** This is mainly a staff scheme. The provision is made to meet the expenses in respect of the staff entertained for implementation and supervision of the plan Schemes. It provides also for purchase and maintenance of vehicles required for the inspection duties. Construction of quarters for staff also will have to be taken up under this scheme. The expenditure incurred during 1969-73 was Rs.14·88 lakhs. The provision for the year 1973-74 is Rs.6·80 lakhs.

For the Fifth Five Year Plan a sum of Rs.25·05 lakhs has been provided in order to make possible the required strength of the staff and to provide other facilities necessary.

### **2. Incentives to farmers and Grant-in-aid to Field Management Committees**

1·2·39. Under this scheme, competitions are organised amongst farmers and also local institutions. The scheme provides also for financial aid as grants to Field Management Committees for organising competitions, selection of farmers and to take up departmental projects, etc. The expenditure incurred in 1969-73 was Rs.2·19 lakhs. The provision made in the year 1973-74 was Rs.0·25 lakhs.

1·2·40. During the Fifth Five Year Plan a sum of Rs.2·78 lakh has also to be provided to make the programme more effective to enable a wider coverage.



## DRAFT FIFTH FIVE YEAR PLAN

STATE MEGHALAYA

### PROGRAMME WISE OUTLAY AND EXPENDITURE

Rs. in lakhs

Serial No.	Head of Development Programme	Sub-head	Scheme	Approved 4th Plan outlay	Approved outlay for 1973-74	Anticipated Expenditure for 1973-74	Anticipated Expenditure for 4th plan	Fifth plan outlay proposed	
								5th plan total outlay	1974-75
1	2	3	4	5	6	7	8	9	10
1	Agriculture Research and Education	Agril. Research	a) District and Local Research Station and Laboratories for crop and horticulture including soil testing and analyses and seed testing.	17.00	6.00	6.00	20.02	31.00	6.34
		Agril. education	b) Training of candidates in Agril. sciences with provision of scholarships and book grants.	1.38	1.00	1.00	1.81	5.00	1.00
<b>Total</b>				18.38	7.00	7.00	21.83	36.00	7.34

Serial No.	Head of Development Programme	Sub-head	Scheme	Rs. in lakhs						
				Approved 4th Plan outlay	Approved outlay for 1973-74	Anticipated Expenditure for 1973-74	Anticipated Expenditure for 4th plan	Fifth plan outlay proposed		
								5th plan total outlay	1974-75	
1	2	3	4	5	6	7	8	9	10	
2	Agricultural Extension Training and Farmer's education.		a) Farmer Institute	...	2.15	0.30	0.30	1.97	4.45	0.79
			b) Up-Graded Training Centres and Strengthening of Training Centre for Meghalaya up to College.		9.00	3.00	3.00	10.08	22.00	6.00
			c) Demonstration in Farmer's fields.		22.50	2.00	2.00	13.62	21.05	4.10
			d) Multiple cropping Demonstrations.		0.95	0.80	0.80	2.49	4.25	0.81
			e) Agricultural Informations.		2.49	0.57	0.57	1.31	5.20	0.95
			f) Land Use Soil Survey.		3.93	1.60	1.60	5.22	6.25	1.25
			g) Soil Testing Laboratories and Soil Mobile Vans.		...	..	...	...	30.46	10.83
			<b>Total</b>	...	<b>41.02</b>	<b>8.27</b>	<b>8.27</b>	<b>34.69</b>	<b>93.66</b>	<b>24.73</b>

Sl. No.	Head of Development Programmes	Sub-head	Scheme	Approved 4th Plan outlay	Approved outlay for 1973-74	Anticipated expenditure for 1973-74	Anticipated expenditure for 4th Plan	Rs. in lakhs	
								5th Plan total outlay	Fifth Plan outlay proposed 1974-75
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Improved Seeds	(a) Seed Saturation Subsidy for improved seeds.	6.07	1.38	1.38	5.44	7.59	1.41
			(b) Seed Farm and Nurseries	10.14	2.00	2.00	8.70	11.90	2.20
			(c) Potato seed Production Farm	4.95	1.45	1.45	4.54	12.70	2.50
			Total	21.16	4.83	4.83	18.68	32.19	6.11
		Fertilizers and Manures.	(a) Fertilizer distribution and transport subsidy.	16.86	10.13	10.13	25.43	50.20	9.60
			(b) Local manures resources including rural compost and green manures.	2.14	1.03	1.03	4.48	8.08	1.42
			Total	19.00	11.16	11.16	29.91	58.28	11.02
		Plant Protection	(a) Plant Protection including epidemic control.	7.43	2.30	2.30	9.69	17.66	3.02
		Agricultural Implements and machineries and workshop.	(a) Agricultural Implements and Machineries.	9.48	...	...	5.05	7.30	1.26
			(b) Purchase of power tillers for demonstration.	6.00	0.50	0.50	3.19	0.75	0.15
			(c) Agricultural Workshop	9.92	4.49	4.49	10.87	52.50	9.50
			(d) Establishment of Subdivision, Land reclamation and Workshop.	...	1.78	1.78	1.78	18.50	3.00
			Total	25.40	6.77	6.77	20.89	79.05	13.91

Serial No.	Head of Development Programme	Sub-head	Scheme	Approved 4th plan outlay.	Approved outlay for 1973-74	Anticipated Expenditure			
						for 1973-74	for 4th plan	Fifth plan outlay proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	5th plan total outlay	1974-75
				(5)	(6)	(7)	(8)	(9)	(10)
		Horticulture	(a) Fruit Processing and Strengthening of Fruit Preservation Centres.	12.04	2.95	2.95	8.41	37.00	5.00
			(b) Supply of Plants, grafts seedling, etc., on subsidy basis.	9.43	...	...	7.00	12.62	2.16
			(c) Establishment of a model progeny orchards and Nursery.	...	3.90	3.90	3.90	5.31	1.30
			(d) Training of horticultural gardeners.	..	...	...	..	2.34	0.46
			Total	21.47	6.85	6.85	19.31	57.27	8.92
		Agriculture Statistics.	(a) Maintenance of Agriculture statistical cell and agriculture census operation.	0.11	1.48	1.48	1.67	11.95	2.39
		High Yielding Varieties Programme.	(a) Intensive Agricultural Areas Programme.	11.89	2.20	2.20	12.23	23.40	3.52
		Land Development.	(a) Land Reclamation	18.28	11.31	11.31	37.43	82.20	16.24
			(b) Mechanized farming	..	...	...	...	25.00	5.00
			Total	18.28	11.31	11.31	37.43	107.20	21.24

Serial No.	Head of Development Programme	Sub-head	Scheme	Approved 4th Plan outlay	Approved outlay for 1973-74	Anticipated Expenditure for 1973-74	Anticipated Expenditure for 4th Plan	Fifth plan outlay proposed	
								5th Plan total outlay	1974-75
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	Agricultural Marketing Storage & Ware Housing.	(a)	Agricultural Marketing ...	14.10	2.35	2.35	6.73	14.30	2.50
	OTHERS—	(a)	Agricultural Administration and Transport.	32.49	6.80	6.80	21.68	31.28	5.43
		(b)	Incentive to farmers ...	1.76	0.25	0.25	1.37	2.14	0.39
		(c)	Grant-in-aid to F.M.C. ...	3.31	...	..	1.11	0.64	0.12
		(d)	Construction of Godowns	5.38	1.10	1.10	3.28	3.30	0.62
		(e)	Ginger and Turmeric Development.	4.50	1.15	1.15	3.62	8.95	1.65
		(f)	Oil and Seed Development	0.84	0.21	0.21	0.84	1.66	0.27
		(g)	Development of arecanut and Spice.	3.16	1.22	1.22	3.31	8.12	1.52
		(h)	Soyabean Development ..	0.60	..	...	..	...	...
		(i)	Jute Development ...	1.53	0.30	0.30	1.26	2.50	0.40
		(j)	Sugarcane Development..	1.25	0.40	0.40	1.11	3.00	0.50
		(k)	Potato Development ...	15.50	2.60	2.60	14.06	21.15	3.91
		(l)	Development of Maize ..	1.00	0.30	0.30	0.70	2.35	0.42
		(m)	Cotton Development ...	2.62	0.50	0.50	1.99	3.50	0.60
		(n)	Vegetable Development...	2.88	0.65	0.65	2.57	5.45	1.03
	Total ..	...	Total ..	76.82	15.48	15.48	56.86	94.04	16.86
	Total-2-Agricultural Production			256.68	73.00	73.00	248.09	589.00	114.22

# DRAFT FIFTH FIVE YEAR PLAN

## Physical Programme—Crop Production Targets and Achievement

Serial No.	Items	Units	1968-69 Level	Fourth Plan		Level expected during 73-74	Fifth Plan targets	
				Target	Likely achievement		Total	
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Food grain ... ..	0 0' (tonnes)	..	200.00	160.00	160.00	250.00	178.00
2	Sugarcane .. ..	Do	..	2.39	0.73	0.70	3.00	1.23
3	Oil-seeds ... ..	Do	..	9.52	2.75	2.75	10.00	4.50
4	Cotton .. ..	Do (000' Bale)	..	8.00	4.30	4.30	15.00	7.00
5	Jute ... ..	Do	..	55.90	54.00	54.00	65.00	56.00
6	High Yielding Varieties ... ..							
	(a) Paddy .. ..	000 (Hect.)	..	15.00	3.50	3.50	18.00	6.00
	(b) Wheat .. ..	100	..	2.00	1.50	1.50	5.00	2.30
	(c) Maize .. ..	Do	..	5.00	4.00	4.00	10.00	5.50
7	Multiple Cropping ... ..	Do	..	1.00	0.60	0.60	3.00	1.50
8	Consumption of Fertilizers:—							
	(a) Nitrogen as N2 .. ..	000 (Tonnes)	..	3.00	2.00	2.00	8.00	4.00
	(b) Phosphate as P2 O5 .. ..	Do	..	3.00	2.00	2.00	5.00	2.90
	(c) Potassic as K2 .. ..	100	..	2.25	0.50	0.50	4.00	1.50
9	Plant Protection .. ..	000 (Hectares)	..	30.00	32.00	32.00	60.00	38.00

### 1.3. LAND REFORMS

#### Introduction

Meghalaya consists of 3 districts. The tribal population forms over 80 per cent of the population of the State. As the area is inhabited by tribal people having their own custom and tradition relating to land tenure, occupation, use etc., of land, settlement and survey operations were not carried out in these districts except in small areas in the plains portion of the Garo Hills. Excepting the plain areas portion of the Garo Hills, other areas in Meghalaya have not been cadastrally surveyed. There is no record of rights of the different land holders in unsurveyed areas. As a result, the facilities extended to the cultivators and other persons in the matter of obtaining credit from the various credit institutions could not be availed of by them. Keeping in view with modern trend of development, the survey and preparation of records of rights is of first priority.

1.3.2. In view of these considerations, it is proposed to undertake survey and preparation of records of rights on a crash basis. To achieve the above objectives, a Land Reforms Commission has been set up recently to go into the details of the various land tenure system prevailing in various regions of the State, to consider modification of the existing rules and procedures and to suggest any modification required in the light of the changed circumstances which will ensure a better development in the society.

#### Strategy for the Plans

1.3.3. **Programme for Institutional changes.**—The administration and regulation of tenancy are vested in the District Councils under the Sixth Schedule of the Constitution. The various legislative measures required for plugging the gaps and weaknesses in the existing tenancy system to ensure complete security of tenure and conferment of ownership rights on cultivators would be considered in the light of the recommendation of the Land Reform Commission.

1.3.4. **Operational Programme.**—It is proposed to take up cadastral survey of the entire State and also preparation of

records and rights as a first step of Land Reforms in the State. This programme has to be taken up on a crash basis. To achieve this objective within a minimum period, a School for imparting training in survey would be set up. Simultaneously, steps are proposed to recruit personnel for the training, so that they can be sent to the field of operation to undertake the work smoothly.

**1·3·5. Implementation Machinery.**—For speedy and efficient implementation of Land Reforms, the technical staff provided for in the Survey Scheme will cover the first phase of the programme. At the headquarters, a cell would be created for the implementation of the proposal. Subsequently, a separate organisation would be set up for co-ordination of the programme at different levels.

**1·3·6. Land Reform Tribunals.**—Setting up of Land Reforms Tribunals would be considered at appropriate time along with enactment on Land Reforms, etc.

#### **Grant to District Councils**

**1·3·7.** The grant-in-aid to the District Councils would be continued to strengthen their land revenue staff set up for the purpose of cadastral survey of the agricultural lands and also for preparation of records of rights. This was the only scheme of land reforms so far taken up in the State and would continue till the recommendations of the Land Reforms Commission are accepted and implemented in the State. In the first four years of the Fourth Plan, Government have released Rs. 7·30 lakhs as grant-in-aid under the scheme. The provision for the current year is Rs. 2·00 lakhs. In the Fifth Plan, an amount of Rs. 20·00 lakhs is proposed under the scheme.

#### **Outlay for the Fifth Plan**

**1·3·8.** The requirement of funds to continue the work of the District Councils, to set up a survey school and for implementing machinery and to meet the expenditure on account of



the Land Reforms Commission and to implement its recommendations is estimated at Rs. 126 lakhs in the Fifth Plan as below :

(1)	(Rs. lakhs)					
	4th Plan	1973-74	Fifth Plan		1974-75	
			Total	Capital	Total	Capital
(2)	(3)	(4)	(5)	(6)	(7)	
1. Grant to District Councils ...	9.30	2.00	20.00	...	2.00	...
2. Establishment of Survey School ...	...	..	6.00	...	2.00	...
3. Land Reforms Commission ...	...	...	10.00	..	3.00	...
4. Implementation of the recommendation of L.R.C.	...	...	70.00	...	...	...
5. Implementing Machinery ...	...	...	20.00	..	2.00	...
<b>Total</b> ...	<b>9.30</b>	<b>2.00</b>	<b>126.00</b>	<b>...</b>	<b>9.00</b>	<b>...</b>

#### 1.4. MINOR IRRIGATION

1.4.1. Irrigation in Meghalaya so far has been done by means of minor schemes. In fact due to the topography of the land, there is no scope for bigger projects except in two or three areas. A largest compact flat land hardly exceeds 2000 hectares in the State. But there are numerous flat stretches in the table lands and small valleys by the side of the streams with varying sizes. Added together, these lands would constitute a substantial cultivable area and hold great promise of pushing up the agricultural production in the State. A number of these stretches are now lying waste for want of irrigation while others have been brought under one or other form of cultivation. The potential, both in term of extensive and intensive cultivation, with the help of irrigation therefore exists in these lands. A survey in this regard is being undertaken to locate and catalogue these stretches. A comprehensive plan would be drawn up to irrigate these lands by different types of flow and lift irrigation projects. A scheme to dovetail some of the projects already identified with electrification would be taken up in the Fifth Plan.

1.4.2. In most of the areas, the Fifth Plan would concentrate on construction of small check dams, weirs, bunds, headwater dams, small reservoirs, embankments and channels. In some of the areas, piping by gravity from sources to the crops in the slopes would be undertaken while in some the power pump programmes would continue. Replacement of the temporary with permanent structures and channels and drainage improvement would also continue as major works in the Fifth Plan.

1.4.3. Minor irrigation works in the State hitherto have been undertaken largely as a subsidized scheme implemented by the farmers themselves with technical guidance of the Government. From 1973-74, a new approach is being adopted with departmental execution in a larger number of projects especially those requiring higher technical competence and outlays. This approach will continue in much larger measure in the Fifth Plan and will necessitate adequate strengthening of the engineering wing in the State Department of Agriculture.

1.4.4. The allocation in the Fourth Plan was Rs.111.00 lakhs which is expected to be fully utilized. The expenditure in the final year of the plan would be reaching the level of Rs.40.70 lakhs. The additional area benefited over the first four years of the current Plan has been reported at 7940 hectares. The target for 1973-74 has been put at 3200 hectares and so far there has been no indication that this target will not be realized. The outlay required in the Fifth Plan works out at Rs.275 lakhs.

**PROGRAMME-WISE OUTLAY AND EXPENDITURE**

**Minor Irrigation**

(Rupees in lakhs)

Scheme	Approved Fourth Plan Outlay	Approved outlay for 1973-74	Anticipated expenditure for 1973-74	Anticipated expenditure for the Fourth Plan	Fifth Plan total Outlay 1974-79	Annual Plan Outlay 1974-75
(2)	(3)	(4)	(5)	(6)	(7)	(8)
Flow Irrigation ... ..	67.34	21.00	21.00	70.50	174.00	25.00
Lift Irrigation ... ..	27.86	7.13	7.13	22.80	25.00	4.00
Scheme for setting up of Engine- ering Wing (State Level).	...	1.40	1.74	1.74	8.00	1.50
Establishment of Division and Sub- division (flow, lift, research and investigation).	...	10.83	10.83	10.83	60.50	12.00
Installation of diesel pump } Installation of electric pump }	15.80	...	...	...	7.50	0.60
<b>Total ..</b>	<b>111.00</b>	<b>40.36</b>	<b>40.70</b>	<b>105.87</b>	<b>275.00</b>	<b>43.10</b>

## 1.5 SOIL CONSERVATION AND REHABILITATION OF SHIFTING AGRICULTURISTS

1.5.1. The total forest-covered area in the State is about 8,513 sq. km. and of this, only 700 sq. km. is Government Reserved Forest. The entire rural area of the State including the non-Government Forest land is either community or privately owned. These lands are subject to jhumming or shifting agriculture (Shag) which is a primitive practice. About 42 per cent of the States' tribal population or roughly 3.5 lakhs depend on Shag for livelihood. Approximately 76,000 hectares of land on the hill slopes annually are put under Shag.

1.5.2. As is well known, the State contains the heaviest rainfall belt of the world. The annual precipitation varies from 1,300 to 1,500 centimetres in the southern face of the Khasi Hills. Rainfall as high as 2,200 cms. and higher in this belt is also on record. The average rainfall of the State as a whole is over 381 cms. The rainfall intensities of as high as 12.7 cm/hour and 3.2 cm/mts., in places within the State are on record.

1.5.3. The high intensity rainfall causes serious splash erosion on the naked slopes of abandoned Shag. The damage is maximum in the area under crop and immediately in the year following the harvest. Thereafter, because of very conducive and humid climate, the shrubs come up quickly to give some cover. But because of the population pressure, the jhumming cycle has progressively declined and is now much below the desired time of 7-8 years to allow vegetation regrowth. As the rotation period gets shorter, more area has to be cleared to get the crop required to sustain a Shag family. The progressive erosion has become so serious that many of the slopes are now devoid of topsoil and this process is continuing. On top of this, uncontrolled grazing by professional breeders causes further damage

severely limiting the scope for the vegetation regrowth. The bare slopes in turn give rise to land slides which have become common in the State.

1.5.4. No systematic survey has yet been conducted to assess the magnitude of the problem. Nor are the basic data required for improved land use planning available. These deficiencies have handicapped the effort to identify and delineate the areas suitable for permanent agriculture based on accepted conservation practices.

## 2. Progress expected by the end of Fourth Plan

1.5.6. The seriousness of the problem of soil erosion in the hill areas was realized some time back but no systematic or adequate effort could yet be undertaken to arrest the damage of Shag. The Assam Government started a pilot project for controlling jhumming in the fifties and a full-fledged Department of Soil Conservation came into being in 1959. Initially, the aim was to control shifting cultivation mainly indirectly by encouraging the people dependent on Shag to take up alternative means of cultivation, such as cash crops plantations. As this did not produce the required result, development of land by reclaiming valley bottom lands and terracing of the gentle slopes were taken up gradually. Afforestation of barren hills and catchment areas was also started. These were followed up by utilisation programmes on terraced lands and irrigation. These measures were taken up departmentally wherever the response of other agencies was not forthcoming.

1.5.7. Thus in the 4th Plan, development of land, irrigation and follow-up programme in agricultural lands and development of cash crops, pasture lands and afforestation in non-agricultural lands formed the main plank of the task undertaken. Towards the end of the 4th Plan, a package programme of land development and follow-up measures including irrigation was also taken up in some areas as a further step to wean villagers away from Shag. Afforestation in such areas has been found successful and is gradually gaining acceptance.

1.5.8. The progress under the above mentioned works in the 4th Plan is shown in the statement given below :—

(Rs. in lakhs and Area in hectares)

Item of works	4th Plan Targets upto 1973-74				Achievements Anticipated during 1973-74		Total expected to be achieved at end of 4th Plan	
	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Rs.		Rs.		Rs.		Rs.	
<b>1. Soil Conservation Works on Agricultural lands—</b>								
(a) Land Development (terracing, contour bunding, reclamation, etc.)	52.50	6,070	36.89	5 77	15.13	1,966	52.02	714
(b) Water distribution ...	4.60	..	2.22	..	1.43	..	3.65	..
(c) Follow-up programmes	..	..	2.49	..	1.52	..	4.01	..
<b>2. Soil Conservation Works on non-Agricultural lands—</b>								
(a) Afforestation ..	8.75	1,228	5.76	1,086	3.49	620	9.25	170
(b) Cash Crop Development	10.50	448	7.82	436	2.65	24	10.47	46
(c) Pasture Development	0.80	101	0.57	78	0.21	62	0.78	14

1.5.9. In addition, from 1972-73 protection works of the flat lands in the foothills and of the valleys were undertaken. A pilot project for meeting the Shag problem in an integrated manner has been started from 1973-74. The increasing acceptance of these measures by the people has encouraged Government to think in terms of more progressive steps for the years ahead.

### Objective and approach

1.4.10. In the Fifth Plan, the State proposes to tackle the problem of Shag mainly in two new directions in addition to consolidation and expansion in spheres already undertaken. One is to rehabilitate the people now on Shag in lands made suitable for permanent cultivation. The other is to assess the extent of Shag and identify the areas for rehabilitation by carrying out a systematic land use and capability survey. To a certain extent, a start in this direction has been made during 1973-74 as part of the National Resources Survey Programme which requires to be made much more comprehensive to enable formulation of a programme of longer perspective.

1.5.11. In the Fifth Plan, a scheme will be taken up to arrest Shag in selected vulnerable areas. In these areas, land development and creation of other facilities will be undertaken as part of a package programme. Under the scheme, each family would be given 2 hectares of developed land initially (partly for wet and partly for dry cultivation). Seeds, plants, manures and fertilizers would be supplied to enable initial inputs for the rehabilitated families. Irrigation will be provided wherever possible and it is expected that in at least 25 per cent of the areas this facility would be available. Besides the family will be given a pair of bullocks and construction materials for a dwelling house (roughly at Rs.2,000) in the new site. In later stages, power tillers would be introduced and this would be met by the normal programmes of crop husbandry. For a cluster (village or hamlet) of 100 households or families, a school would be required and where necessary a school building would be provided under the programme. No provision for teachers and equipment have been made as it is expected that this requirement would be covered by the general programme of free and universal education. Likewise, steps would be taken in regard to water supply under the programme to provide the minimum need calculated at Rs.5,000 per 100 households. Wherever possible, work



under the rehabilitation programme would be dovetailed with those of other sectors of the Plan. The areas of work where such coordination is possible would become known once the actual rehabilitation gets started. By about the middle of the Plan it will become possible to know such areas ahead with the progress made in the Survey mentioned above.

1.5.12 In the first year of the scheme the agricultural operations of the settled families would be under the direct guidance of Government. Payment of direct wages would be made during this period. This is preferable to the grant of subsistence allowances in many ways and necessary for moulding the right attitudes for the success of the programme on a sustained basis.

1.5.13 From the second year, the families are expected to live on the yield of the crops. For their cash requirement, afforestation, road construction and other off-season work would be taken up as part of the programme or attracted to the areas from other sectors of the Plan. Requirements of credit is expected to be met by the co-operatives and other normal sources available.

1.5.15 During the Fifth Plan 13,500 families are proposed to be rehabilitated in 27,000 hectares of developed land, including about 1000 hectares developed earlier, under the integrated scheme. The amount required is Rs.1143 lakhs as follows:—

Name of schemes	Physical target	Amount
	ha.	Lakhs
(1) Land development ... .. Follow Up	26,000	351
(a) Seeds/plants, etc. at Rs.150 per ha	27,000	41
(b) Manures and fertilizers, etc. @ Rs.300 per ha.	27,000	81
(c) Cultivation at ... Rs.300 per ha	27,000	81
(2) Irrigation ... ..	6,000	90
(3) Camps for staff, survey cost equip- ments and miscellaneous.	...	48
		Total 693

Bullocks	..	...	...	13,500 prs.	Rs 135.
Houses	...	...	...	13,500 Nos.	270
School building	...	...	...	135 ,,	4
Drinking water	...	...	...	135 ,,	7
Link Roads	...	...	...	84 kms.	35
				Total	439
				Grand Total	1,143

1.5.16. No separate staff or organisation is proposed for this scheme. The State Department of Soil Conservation proposed to be adequately strengthened in the Fifth Plan will be able to carry out the work of this scheme in addition to its general plan scheme work. The additional requirement would be only for camps, survey cost, stores and equipment.

1.5.17. Besides this new scheme for rehabilitation, work in different fields initiated earlier in respect of terracing, contour bunding, gully control, water distributions stream bank erosion control, afforestation of degraded slopes and abandoned jhums, pasture development, cash crop development, etc., will continue and would be stepped up. To carry out these schemes it will be necessary to provide buildings for the field staff, approach roads, purchase of stores and equipments. The amounts provided in this regard takes care also of the requirement of the rehabilitation programmes described earlier. Publicity and propaganda would be carried out to ensure success of the schemes.

### Programme for the Fifth Plan

1.5.18. Under afforestation, regular plantation on the existing pattern would be undertaken by Government. It is also proposed to continue to encourage the Shag families to plant trees in the abandoned jhum lands. For this purpose, seeds/seedlings/ cuttings of fast growing tree species would be supplied to them free of cost with a small subsidy for maintenance of the plants for a limited period. This is essential to

accelerate the afforestation of the bare hills slopes. But because of the several limitations, a cautious approach will be adopted. A small target of 700 hectares for the Plan is aimed at initially which could be revised as the Plan progresses.

15.5.19. Under buildings, 70 new units would be required for the new Divisions and some of existing divisions to be strengthened. The outlay works out at Rs.15 lakhs. Provision has also been made for equipments for carrying out the field works, vehicles to enable mobility of the supervising staff and stores essential for the new divisions.

**The estimates are as follows :—**

	Rs.
Bull dozers (D4 type) 5 Nos. ... ..	10.00 lakhs
Wheeled tractors 20 ,, ... ..	12.00 ,,
Power tillers ... 20 ,, ... ..	4.00 ,,
Other equipments ... ..	2.00 ,,
Vehicles ... ..	5.00 ,,
Stores and Misc. ... ..	3.00 ,,
Total	36.00 lakhs

1.5.20. For the implementation of the rehabilitation scheme as well as other soil conservation schemes, adequate public relations for extension and publicity work is very essential. An amount of Rs.4.00 lakhs has been provided for this purpose.

• 1.5.21. **Research and Training.**—Efficient execution of the schemes depends upon the staff trained to carry out the work correctly. The need for trained staff will be felt increasingly as the plan gathers momentum. Due to climate and difficult terrain, the State does not sufficiently attract the technical people available outside especially for work in the interior areas of the State. Besides, as the work to be done is at the village level, reasonable knowledge of the language and the custom of the tribal people is very essential for the work to be successful. Therefore, it is proposed to recruit and train the local youths

especially for jobs at lower levels for which there is sufficient surplus of educated youths. Training of higher grade staff (rangers and above) would continue in the suitable institutions.

1.5.22. The complexity of soil and water conservation problems of the State with high rainfall and steep slopes has been recognised on more than one occasion. But no research based information is yet available for this State. It is, therefore, only essential that research work related to the problems faced in this State should be taken up. It is therefore, proposed to take up this work along with the training centre.

1.5.23. The requirement of additional technical staff of grade below Ranger is estimated at 100 during the Fifth Plan in addition to filling up the normal vacancies. There is no centre to train the subordinate staff in the disciplines especially required for this area. It is, therefore, proposed to start a Research-cum-Training Centre at Burnihat within this State. For this purpose the buildings, etc., of the Soil Conservation Research Centre of the Assam Government at Bornihat will be readily available as these are being transferred to Meghalaya. Only some additional buildings would require to be constructed for the hostel and instructors' quarters on account of the training programme. This could be taken up later. The buildings now available are sufficient for starting the centre and to pull on for some time.

1.5.24. Training will be given to a minimum of 20 trainees each year with provision to increase to 30 trainees. A limited number of trainees from other States could also be accommodated.

1.5.26. The centre would have a Principal of the rank of Joint Director with 4 senior scientists-cum-instructors—one each for Soil, Civil Engineering, Agriculture Engineering and Agronomy/Forestry—and 4 research assistants one in each of the disciplines.

1.5.27. The Training-cum-Research Centre would require Rs. 38 lakhs in the Fifth Plan. The non-recurring expenditure works out at Rs.18.00 lakhs and the recurring cost at Rs.4 lakhs annually as follows:

Non-Recurring—

A. Buildings (Additional)—

	Rs. in lakhs.
1. Hostel Building for 30 trainees ... 1	0.75
2. Kitchen-cum-Dining Hall for 30 trainees ... 1	0.25

				Rs. in lakhs	
3.	Senior Scientists, Residence	...	...	3	1.20
4.	Research Assistants, Residence	...	...	4	1.20
5.	Guest House	...	...	1	0.30
6.	Grade IV Quarters	...	...	6 units	0.60
7.	Godown-cum-workshop	...	...	1	0.30
	<b>Total</b>	...	...		4.60
<b>B. Stores—</b>					
<b>(a) Training Section—</b>					
(i)	Vehicles—Bus	...	...	1	0.85
	Truck	...	...	1	0.75
	Jeep pickup	...	...	1	0.40
	Tractor	...	...	1	0.50
	Power tiller	...	...	1	0.20
(ii)	Survey instruments	...	...	15 sets	0.50
(iii)	Camping equipments	...	...		0.30
(iv)	Kitchen utensils, crockeries cutleries, etc.				0.10
(v)	Library	...	...		0.10
(vi)	Training aids, audio visual aids, etc.	...			0.25
(vii)	Laboratory instruments, chemicals, etc.				0.20
<b>(b) Research Section—</b>					
(i)	Vehicles—Jeep Wagon	...	...	1	0.60
	Jeep pickup	...	...	1	0.40
(ii)	Laboratory equipment and chemicals	...			5.00
(iii)	Field research equipments	...	...		3.00
(iv)	Library (Research)	...	...		0.25
	<b>Total—Non-recurring</b>				18.00

## Recurring—

## C. Pay and allowances—

				Rs. per yr.
Principal (Rs.1,000—1,300)	...	...	1	0·15
Senior Scientists-cum-instructors (Rs.550—1100)			4	1·48
Research Assistants (Rs.250—600)	...	...	4	0·18
Laboratory Assistant (soil section) (Rs.110—165).			2	0·05
Field Assistants (Rs.110—165)	...	...	8	0·19
Electrician and Plumber	...	...	2	0·05
Pump operator (Rs.100—150)	...	...	1	0·02
Draftsman (Rs.175—300)	...	...	1	0·04
Drivers	...	...	7	0·18
Helpers	...	...	3	0·06
Grade IV	...	...	10	0·24
				<hr/> 1·64
<b>Ministerial—</b>				
Superintendent,			1	0·06,
Head Assistant (one each for Research and Training wings).			2	0·07
U. D. Assistant	...	...	2	0·06
L. D. Assistant	...	...	4	0·10
Typist	...	...	2	0·05
Stenographers	...	...	1	0·10
Statistical computer	...	...	1	0·05
Duftry	...	...	1	0·02
				<hr/> 0·51
<b>Total pay and allowances</b>				<hr/> 2·15
Travelling allowance				0 10
<b>Total per year</b>				<hr/> <del>2·25</del>

Recurring—Contd.			Rs. per yr.
D. Stores and Vehicle maintenance	...	...	0.70
E. Field research works	...	...	0.50
F. Building maintenance	...	...	0.30
G. Contingencies (rent, telephone/telegraph, medical, etc.)			0.25
	Recurring	...	Rs.4.00 per year.
	For five years	...	Rs.20.00 lakhs
	Total for the scheme (Recurring + N. R.)	...	Rs.38.00 lakhs.

1.5.28. The research centre will take up research on :

- (i) loss of topsoil and fertility due to shifting cultivation ;
- (ii) effect of length and degree of slope on soil loss in shifting cultivation ;
- (iii) optimum length of cycles of shifting cultivation ;
- (iv) effect of shifting cultivation on water regimes ;
- (v) various crops and soil loss ;
- (vi) optimum cropping pattern and most suitable crop or crops that can be grown in the newly developed lands for permanent agriculture ;
- (vii) time lag for restoration of fertility (retain) of the land under rainfed condition under various systems of management like green manuring, application of chemical fertilisers and manure, etc ;
- (viii) effect of continuous cropping on developed lands in rainfed condition ;

- (ix) the effect of various engineering and vegetative measures for control of stream banks and gully erosion ;
- (x) optimum spacing for contour bunding under high rainfall condition ; and
- (xi) best cropping method and pattern under such conditions ; etc.

1.5.29 The Centre will also take up hydrological studies of the effect of different vegetative covers towards run off, water penetration and evapotranspiration in small water sheds under varied climatic conditions. Studies will also be taken up to find out suitable species for grazing land management and optimum rotation. The Centre will also take up studies regarding the effect of road construction towards contribution of silt load on the streams in the areas through which the road passes to evolve suitable measures for establishing the road cuttings.

1.5.30 **Nature Conservation** :—With development of the State and the consequent urbanisation, townships and building are springing up in a random manner. The existing towns are also rapidly expanding and as a result, the green belts in and around them are fast disappearing. This not only lowers the aesthetic value, but also brings in erosion problems, specially in the hills.

1.5.31 Rapid increase of mechanical transport and industrialisation also pollutes the air in urban areas. The absence of trees makes the situation worse since trees help in purifying the air.

1.5.32 Government therefore, proposes to create green belts and parks in and around the towns to conserve nature to improve the aesthetic value as well as to help check pollution and ensures maintaining a salubrious climate. A provision of Rs.5 lakhs is made for this work during the Fifth Plan to take up work in at least five urban areas of the State.

#### 4. Infra-structure required

1.5.33 The Soil Conservation Department requires substantial strengthening for efficient implementation of works proposed in the Fifth Plan. From foregoing paragraphs, the main works of the Department will be execution of the schemes on rehabilitation, soil conservation measures and survey of areas on land capability. Besides, the training and research

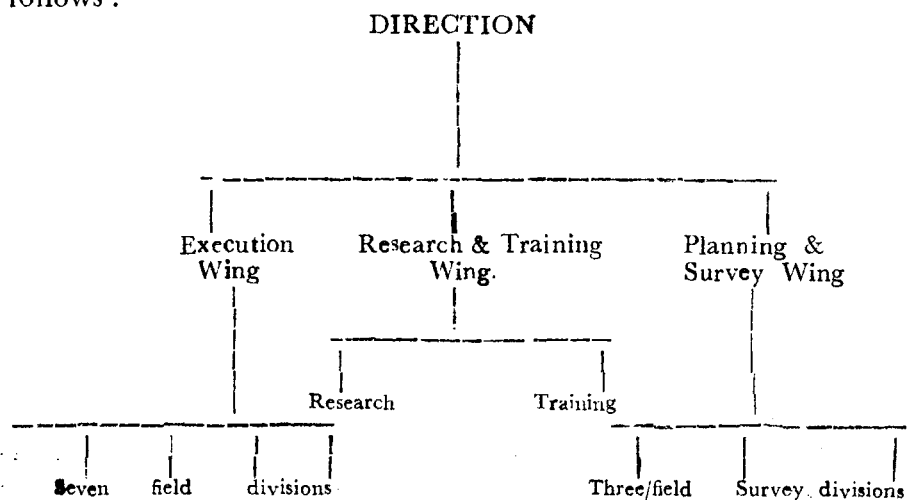


programmes would demand adequate attention of the administration. The State Department will, therefore, be strengthened and reorganized. There will be three wings under the overall charge of the Director. Each wing will be headed by a Joint Director longer-one for execution of schemes, one for the Research and Training Centre and one for the Survey and Planning. To look after the various engineering works of the Department, a small cell comprising a divisional officer (engineering), one cartographer, one statistical officer, one computer and two draftsmen will also be created.

1.5.34 Shifting cultivation is practised by about 70 per cent of the tribal population in Garo Hills district and in western Khasi Hills. The type of Shag practised by the Khasi tribes differs from that in the Garo Hills. At present, one division looks after the whole of Garo Hills and another for Khasi Hills. This is totally inadequate against the task required to face the problem of Shag in the State. It is, therefore, proposed to create three more field divisions, one each in Garo Hills, Jaintia Hills and Khasi Hills, to enable carrying out the programme envisaged.

1.5.36 A wing in the Department is being created under the Centrally Sponsored Scheme during 1973-74. This will continue and will be strengthened under the State Plan. The wing will be under the charge of a Joint Director and will have three field units. This is necessary to assess the magnitude of the problem of Shag and to survey and identify the problem areas and areas with potential for permanent settlement.

1.5.37 The Department will thus have three wings as follows :



1:5:38 A separate note on the Land use and Capability Survey Wing is given in para 8 of this note. In the seven field scheme execution divisions, the personnel will be as follows for each division. These divisions will execute the general schemes as also the new scheme of rehabilitation.

**Technical—**

Divisional officer	...	...	...	1
ASCO/ACF	...	...	...	2
Assistant Engineer	...	...	...	1
Agricultural Engineer	...	...	...	1
Conservation Asst./Forest Ranger	...	...	...	5 (each in charge of Subdivision or Range).
Demonstrator (Senior)/Dy. Ranger	...	...	...	5
Demonstrator (Junior)	...	...	...	15
Field Workers	...	...	...	15
Surveyor	...	...	...	5
<b>Ministrial—</b>				
Head Assistant	...	...	...	1
Accountant	...	...	...	1
U. D. Assistant	...	...	...	2
L. D. Assistant	...	...	...	4
Typist	...	...	...	1

1:5:39 In addition, tractor drivers, vehicle drivers, Dak runners, chowkidars and Grade IV staff will be recruited according to the need. Taking this also into account, the manpower requirement in the Fifth Plan is worked out as follows :

Scientific/Technical		Non Technical		Total
Degree/Diploma	Others	Skilled/Unskilled		
22	120	95	88	325

**5. BENEFITS EXPECTED**

1:5:40 As stated earlier, Shag is not only a primitive method but is also suicidal if continued further. A declining yield rate requires larger area and more labour input to yield

a given output. As the population is also increasing, the decline becomes more progressive. This has to stop at some stage and the earlier the better, otherwise all the effort to improve the living standard in the State becomes meaningless. Rehabilitation of Shag families on developed lands would immediately give an additional yield as follows :

Terracing	...	...	...	0.50 tonnes per ha.
Contour bunding and Reclamation.				1.02 ,, ,, ,,

1.5.41. In addition, the hill slopes are saved from further deterioration. These slopes would be available for terracing and contour bunding and for horticulture and afforestation depending on the capability of the land. Apart from arresting the decline in the yield rate and reversing the trend, the programme is labour intensive and over a longer run development of forest-based industries becomes possible out of afforestation today.

1.5.42. As stated earlier, the rehabilitated families will be induced to plant trees of the fast growing species in the abandoned Shag areas to accelerate the reverse process. Seed plants of fast growing species, capable of being harvested on short rotation, would be given to the jhumias. Side by side, improvement of pasture lands would be undertaken both by restrictive and positive measures. Fodder development by the graziers would be encouraged. These measures would not only check migratory grazing but would also enable programmes of cattle development on improved lines and would reduce social tensions arising out of damage to crops by cattle.

1.5.43. Expansion of cash crops and horticulture would become possible and introduction of new or improved varieties of ginger, cotton, black pepper, etc., would have more meaning. These would give better returns to the farmers.

## 6. FIFTH PLAN TARGETS OUTLAYS

1.5.44. The fifth plan targets and outlays are briefly as below under the general and the rehabilitation scheme ;

Items of works (1)	Target	
	Physical (2)	Financial (Rs. in lakhs) (3)
<b>A. Soil Conservation Schemes:</b>		
1. Organisation and Establishment ...	325	67
2. Land Development ... ..	4,000 ha	34

3. Water distribution	...	...	290 ha	4
4. Gully control	...	...	600 ha	5
5. Stream bank erosion control	...	...	1,000 RM	4
6. Protective Afforestation	...	...	5,700 ha	49
7. Pasture Development	...	...	400 ha	4
8. Cash Crop Development	...	...	100 ha	15
9. Nature Conservation	...	...	5 areas	5
Total works—(1 to 8)			.....	<u>120</u>
10. Buildings, stores, equipment contingencies and publicity.			.....	55
11. Supporting programme—				
Research and Training	...	...	.....	38
Total—A (1 to 11)			.....	<u>Rs. 280 lakhs</u>
<b>B. Rehabilitation Scheme—</b>				
1. Land Development	...	...	26,900 ha	351
2. Follow up	...	...	27,000 ha	203
3. Irrigation	...	...	6,000 ha	90
4. Camps, survey, equipments etc	...	...		48
Total—(1 to 4)			.....	<u>692</u>
5. Supply of bullocks	...	...	13,500 prs	135
6. Dwelling houses	...	...	13,500 Nos	270
7. School building	...	...	135 Nos	4
8. Drinking water supply	...	...	135 Nos	7
9. Link roads	...	...	84 kms	35
Total—(5 to 9)			.....	<u>451</u>
Total—B			.....	<u>1,143</u>
Grand total			.....	<u>1,423</u>

## 7. Employment Potential

1.5.45. Soil Conservation schemes are by nature highly labour intensive. It is estimated that during the Fifth Plan, 142 technical persons and 183 non-technical persons will be on regular payroll of the Government.

1.5.46 Besides, the scheme will provide employment for 608 thousand mandays of skilled and 14 million mandays of unskilled labour either directly in the scheme or through contractors engaged for execution of these schemes. The statement below shows the employment potential in the Fifth Plan. In addition, the programmes will also open avenues of employment for the educated unemployed as contractors for execution of work or supply of materials.

Items	Fifth plan targets		Employment potential in thousand mandays	
	Physical	Financial Rs. in lakhs	Skilled	Unskilled
	(1)	(2)	(3)	(4)
<b>A. GENERAL SCHEME—</b>				
Land development ...	4,000 ha	34	...	86
Water distribution ...	290 ha	4	12	52
Protective afforestation ...	5,700 ha	49	...	913
Pasture development ...	400 ha	4	..	75
Cash crop development ..	100 ha	15	...	187
Gully control .. ..	600 ha	5	10	75
Stream bank erosion ...	1,000 RM	4	10	25
Buildings and roads ...	70	15	45	75
Research and training ...	150	38	15	25
<b>Total ...</b>	...	...	92	1,613
<b>B. REHABILITATION SCHEME—</b>				
Land development ...	26,000 ha	351	260	8,740
Follow up .. ..	27,000 ha	203	..	2,000
Irrigation .. ..	6,000 ha	90	230	1,170
Camps for staff, surveys etc. ...	...	48	..	12 <sup>a</sup>

Dwelling houses	...	..	13,500 Nos	270	...	...
School building	...	...	135 Nos	4	8	26
Drinking water supply	..	...	135	7	18	11
Link Roads	..	..	84 kms	35	608	120
Grand total (A) & (B)	...	...	...	...	14,000	

### 8. Land Capability Survey

1.5.47. As stated earlier, the State of Meghalaya has a total geographical area of 22,459 sq. km of which 8,513 sq. km is under forests, but only 700 sq. km of the forest area is Government Revenue Forest. The entire rural land of the State including the non-Government forest areas is either community or privately owned and is subject to Shag.

1.5.48 There are yet no precise data to throw light on different aspects of jhumming (shifting cultivation). According to "A study on the problem of agricultural development in the hill areas of North East India" published by the Agro-Economic Research Centre for North East India, Jorhat, Assam, it is estimated that about 25 per cent of the tribal population in Khasi and Jaintia Hills and about 67 per cent in Garo Hills District are dependent on shifting cultivation. These estimates have been based on a survey sample covering only a few villages in these districts. On these data, at least 42 per cent of the total tribal population of the State depend mainly on jhumming. This works out to over 70,000 rural households.

1.5.49 The State falls within the region of the heaviest rainfall in the world, where annual rainfall is in the tune of 1,300—2,200 cm and of intensity of 12.7 cm/hour and 3.2 cm/5 mts. This heavy and high intensity rainfall causes serious splash erosion specially on slopes made bare of the vegetative cover for jhumming.

1.5.50 Therefore, for proper development of agriculture and for improving of the living condition of the people, a way has to be found to replace shifting cultivation by permanent type of agriculture suitable to the geophysico and social conditions of these areas.

1.5.51. In order to provide data for the formulation of the scheme to deal with the problem of shifting agriculture on a long term basis, a comprehensive survey covering the entire State will be carried out. The aim of the survey is :—

- (i) to identify and delineate the main problem areas of the State where the erosion hazard is most acute and to assign priorities to them ;
- (ii) to assess the quantitative need of the population for agro-horticultural land with a proper perspective view ;
- (iii) to identify and demarcate the areas fit for permanent agricultural use and to suggest the optimum use for the areas not considered fit for crop husbandry or horticulture. These uses may be for forest, pasture and range land, wild life or recreation ; and
- (iv) to assess and suggest conservation practices necessary for the land classified as fit for agro-horticultural use.

1.5.52. The State of Meghalaya will be divided into 3 strata and each district will form a stratum and will be subdivided into watersheds (or well-defined sub watersheds in the case of large rivers) which will form units for survey work. A reconnaissance type of survey will first be taken up to assign priorities to the whole unit. This will take two working seasons. Thereafter, the watersheds will be taken up for detailed survey according to the priority assigned. The detailed survey is expected to be completed by the end of the Sixth Plan period.

#### **Man-power Requirement**

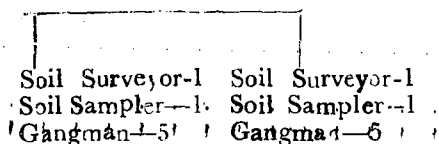
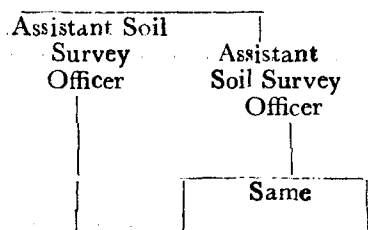
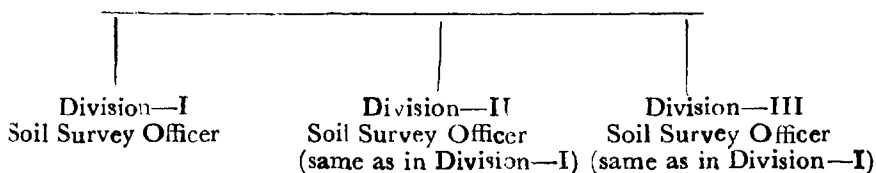
1.5.53. The following organisational set up would be necessary for the survey. A Joint-Director (Land Capability Survey) will organise and supervise the work at State level. He would be assisted by one cartographer (gazetted rank as ASCO.) and one draftsman. Each division (stratum) will be headed by a Soil Survey Officer who will be assisted by two assistant soil survey officers (same as ASCO.) who will each have two field parties. Thus in

each division there will be 4 parties for field work. The organisational pattern is as follows:—

Joint-Director (Land Capability Survey)

Cartographer—1

Draftsman —1



1.5.54. Each division would have a ministerial staff as follows:—

Head Assistant-cum-Accountant	...	...	...	1
Upper Division Assistant	...	...	...	2
Lower Division Assistant	...	...	...	3
Typist	...	...	...	1
Grade IV	...	...	...	5

1.5.55. Each division will also have one Jeep and one Jeep Pickup.

1.5.56. The total manpower requirement is therefore as follows:—

Scientific/Technical—				
1. Degree or Diploma	...	...	...	14
2. Others	...	...	...	18



## Non-Technical—

1. Skilled	...	...	...	...	...	43
2. Unskilled	...	...	...	...	...	77
Total	...	...	...	...	...	153

1.5.57. Initially, all the higher technical personnel required may not be available within the State. Recruitment on deputation or on contract basis will be done from outside the State to make up such gaps. At the same time qualified local people will be sent for training to continue the survey in later years.

**Estimated Cost**

1.5.58. The estimated cost of the survey in the Fifth Plan period is as follows.—

<i>Non-recurring</i>						(Rs. in lakhs)
1. Office equipments	...	...	...	...	...	0.48
2. Field equipments	...	...	...	...	...	0.42
3. Camps equipments	...	...	...	...	...	0.64
4. Vehicles—	3 Jeeps					
	3 Pickups	...	...	...	...	2.83
	1 wagonner					
Total	...	...	...	...	...	4.34

<i>Recurring</i>						(Rs. in lakhs)
1. Establishment—	Pay and allowances	(average)	...	5.05	per year	
2. Maintenance of stores and equipments	(average)	...	0.67	,,	,,	
3. Miscellaneous contingencies	(average)	...	0.10	,,	,,	
Total	...	...	...	5.82		
	for five years	...	...	29.10		
GRAND TOTAL (N & R)	...	...	...	33.44		

**SOIL CONSERVATION DEPARTMENT : MEGHALAYA**

# SOIL CONSERVATION DEPARTMENT: MEGHALAYA

(Rs. in lakhs—Areas in hectares)

Name of the Schemes and other details	4th Plan		5th Plan				Regular No.	Casual No. of mandays in thousand	Manpower requirement technical (Regular)		Non-technical			
	Financial	Physical	Financial	Physical	Addl. yield expected in thousand M. tonnes	Degree			Others	Regular		Casual		
										Skilled	Unskilled	Skilled	Unskilled	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
												thousand mandays.		
A. Scheme for Control of Shifting Agriculture (6000 families)—														
1. Land Development .. .. .	..	..	322.80	29912 ha.	16.0	Shown in Estt. in General Scheme.	9000	..	..	..	..	260	8740	
2. Follow-up programme ... ..	..	..	223.36	29787 ha.	10.0	Do	2200	..	..	..	..	..	2200	
3. Water Distribution in developed lands (Irrigation).	..	..	111.68	7449 ha.	8.0	Do	1400	..	..	..	..	230	1170	
4. Camps and Misc. contingencies.	..	..	45.77	..	..	Do	120	..	..	..	..	..	120	
5. Bullocks .. .. .	..	..	148.92	14645 prs.	..	Do	..	..	..	..	..	..	..	
6. Houses .. .. .	..	..	247.85	14645	..	..	..	..	..	..	..	..	..	
7. Drinking water .. .. .	..	..	4.95	72 Nos.	..	..	29	..	..	..	..	18	11	
8. School Building .. .. .	..	..	2.46	95 ,,	..	Do	34	..	..	..	..	8	26	
9. Link Roads .. .. .	..	..	34.73	84 Kms.	..	Do	120	..	..	..	..	..	120	
<b>Total</b> .. .. .	..	..	<b>1175.86</b>	<b>..</b>	<b>34.0</b>	<b>..</b>	<b>12903</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>516</b>	<b>12387</b>	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
												in thousand mandays.	
<b>B. OTHER SOIL CONSERVATION.</b>													
(a) Pay and allowances of staff.	12.08	...	66.50	...	...	325	...	22	120	95	88	...	...
(b) Training	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>2. Works—</b>													
(i) Land Development	52.62	7143ha	34.60	4.00	3.04	shown in Estt.	85.00	...	...	...	...	...	85.00
(ii) Water Distribution in development lands.	3.65	..	4.40	0.29ha	0.34	Do	64.00	...	...	...	...	12.00	52.00
(iii) Gully Control	0.66	..	5.10	0.6ha	0.3	Do	85.00	...	...	...	...	10.00	75.00
(iv) River and stream banks erosion control.	0.71	...	4.00	10.00	...	Do	35.00	...	...	...	...	10.00	25.00
(v) Afforestation	2.25	...	49.00	5.70	..	Do	912.50	...	...	...	...	...	912.50
(vi) Pasture Development	0.78	M-78ha C-62,,	4.00	0.04ha	...	Do	75.00	...	...	...	...	...	75.00
(vii) Cash Crop Development	10.47	M-45140 C-24,,	15.00	0.1	...	Do	187.50	..	...	..	...	...	187.50
(viii) Nature Conservation	...	...	5.00	5 Urban areas.	..	Do	...	...	...	...	...	10.00	25.00
<b>3. Buildings, Roads, Stores and Contingencies.</b>													
(a) Buildings and Roads	...	10.10	15.00	70 Nos	...	Do	120.00	...	...	...	...	45.00	75.00
(b) Store, Equipments and Misc. Contingencies.	11.90	...	36.00	...	...	Do	...	...	...	...	...	...	...
(c) Extension and publicity	...	...	...	...	...	...	...	...	...	...	...	...	...
(d) Misc. Soil Conversation	2.63	...	4.00	...	...	...	...	...	...	...	...	...	...
<b>4. Supporting Schemes Research and Training.</b>													
	...	...	38.00	...	...	57	40.00	5	9	29	14	15.00	25.00

**SOIL CONSERVATION**  
**A. GENERAL SOIL.**

Sl. No.	Name of Scheme Items	Expected Achievement during 4th Plan		Fifth Plan targets (Rs. in		
		Physical	Financial	Physical	Financial	Physical
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>1. Establishment—</b>						
	(a) Pay and allowances of staff.	...	12.08	...	11.50	...
	(b) Training cost of staff	...	...	...	0.50	...
	Total of 1 :—	...	12.08	...	12.00	...
<b>2. Soil Conservation Works—</b>						
<b>(i) Land Developments</b>						
	(a) Terracing	...	...	400 ha	4.80	400 ha
	(b) Contourbuilding	7143 ha	52.02	400 ha	2.00	400 ha
	(c) Other works for developed lands.	...	...	...	...	...
	Total (i) Land Dev	...	52.02	...	6.80	...
	(iii) Water distribution in developed lands.	...	3.65	50 ha	0.75	50 ha
	(iv) Gully control	...	0.66	120 ha	1.02	120 ha
	(v) River and stream banks erosion control.	...	0.71	200 RM	0.80	200 RM
	<b>(vi) Afforestation</b>					
	(a) Directly by Deptt.	15.94 ha	9.25	C-1,000 ha M-1128 ha	7.12	C-1,000 ha M-2025 ha
	(b) Form freshly by grants-in-aid.	...	...	C-67 ha	0.20	C-100 ha
	Total afforestation	...	9.25	...	7.32	...

DEPARTMENT, MEGHALAYA  
CONSERVATION SCHEME

lakhs-area in hectares)								
1976	1976-77		1977-78		1978-79		Total 5th Plan	
Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
12.00	...	12.50	...	13.60	...	13.50	...	62.50
0.75	...	0.75	...	1.30	...	1.00	...	4.06
12.75	...	13.25	...	14.00	...	14.50	...	66.50
4.80	400 ha	4.80	400 ha	4.80	400 ha	4.80	2,000 ha	24.00
2.00	400 ha	2.00	400 ha	2.00	400 ha	2.00	2,000 ha	10.00
6.80	...	6.80	...	6.80	...	6.80	...	34.00
0.75	60 ha	0.90	60 ha	0.90	70 ha	1.10	290 ha	4.40
1.02	120 ha	1.02	120 ha	1.02	120 ha	1.02	600 ha	5.10
0.80	200 RM	0.80	200 RM	0.80	200 RM	0.80	1,000 RM	4.00
8.75	C-1,000 ha M-2,741 ha	9.84	C-1,000 ha M-3,600 ha	10.47	C-1,000 ha M-4,000 ha	10.67	5,000 ha	46.85
0.30	C-150 ha	0.45	C-200 ha	0.60	C-200 ha	0.60	C-717 ha	2.15
9.05	...	10.29	...	11.07	...	11.27	...	49.00

Sl. No.	Name of Scheme Plans	Expended Achievement during 4th Plan		Fifth Plan targets (Rupees)		1975-
		Physical	Financial	Physical	Financial	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(vii)	Pasture Dev.	... M-78 ha C-62 ha	0.78	80 ha	0.80	80 ha
(viii)	Cash crop Dev.	... M-451 40 ha	10.47	...	3.00	...
(vix)	Nature conservation	... C-24 ha	...	C-2,147 M-1,128	1.00	...
	Total—2	...	81.55		21.49	
<b>3. Buildings, Roads, Stores and contingencies—</b>						
	(a) Buildings and Roads	...	10.10	...	3.00	...
	(b) Equipments and Stores	}	11.90	...	5.00	...
	(d) Misc. contingencies		...	12.63	...	0.80
	(c) Extension and Publicity	}	...	...	...	...
	(d) Misc. S—C. Works		...	34.63	.	8.80
	Total—3	...	...		...	...
<b>4. Supporting Schemes—</b>						
	(a) Training and Research	...	...	...	17.40	...
	Total—4	...	...	...	17.40	...
	<b>GRAND TOTAL</b>	...	128.26	...	59.69	...
<b>Centrally Sponsored—</b>						
	(a) Land capability Survey	...	1.00	...	9.34	...

in lakhs—area in hectares)

76	1976-77		1977-78		1978-79		Total	5th Plan
Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
0.80	80 ha	0.80	80 ha	0.80	80 ha	0.80	400 ha	4.00
3.00	...	3.00	...	3.00	...	3.00	100 „	15.00
1.00	...	1.00	...	1.00	...	1.00	...	5.00
23.22	...	24.61	...	25.39	...	25.79	...	120.50
3.00	...	3.00	...	3.00	...	3.00	...	15.00
10.00	...	10.00	...	5.00	...	6.00	...	36.00
0.80	...	0.80	...	0.80	...	0.80	...	4.00
13.80	...	13.80	...	13.80	...	9.80	...	55.0
8.60	...	4.00	...	4.00	...	4.00	...	38.00
8.60	...	4.00	...	4.00	...	4.00	...	38.00
58.37	...	55.66	...	52.19	...	54.09	...	280.00
5.45	...	5.80	...	5.15	...	6.60	...	33.34



## SOIL CONSERVATION DEPARTMENT, MEGHALAYA

(Area in thousand

Sl. No.	Name of scheme/item	1974-75		1975-76		1976-
		Financial	Financial	Physical	Financial	Physical
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. Soil Conservation Works—</b>						
<b>(i) Land Development Works</b>						
(a)	Terracing ...	3.0 ha	48.00	3.5 ha	36.80	4.0 ha
(b)	Reclamation ...	1.0 ha	6.0	1.0 ha	9.00	1.0 ha
<b>Total Land Development</b>		<b>4.0 ha</b>	<b>54.00</b>	<b>5.0 ha</b>	<b>65.00</b>	<b>5.0 ha</b>
<b>2. Follow-up—</b>						
(a)	Seeds, Plants, etc., ...	5.9 ha	7.50	5.0 ha	7.50	5.0 ha
(b)	Masure, fertilizor, etc., ...	5.3 ,,	15.00	5.0 ,,	15.00	5.0 ,,
(c)	Cultivation cost, etc., ..	5.0 ,,	15.00	5.0 ,,	15.00	5.0 ,,
<b>Total Follow-up</b>		<b>5.0 ha</b>	<b>37.50</b>	<b>5.0 ha</b>	<b>37.50</b>	<b>5.0 ha</b>
3.	Irrigation ... ..	0.0 ha	15.50	1.1 ha	17.50	1.1 ha
4.	Camps, staff, survey, machiner, and Misc. ..	..	15.00	..	15.00	..
<b>Total A. S. C Works</b>		<b>..</b>	<b>120.00</b>	<b>..</b>	<b>134.00</b>	<b>..</b>
<b>B. Facilities—</b>						
5.	Bullocks ... ..	2,600 prs.	25.00	2,500 prs.	25.00	2,500 prs
6.	Dwelling houses ... ..	2,500 Nos.	50.00	2,500 Nos.	50.00	2,500 ,,
7.	School building ... ..	25 ,,	0.75	25 ,,	0.75	25 nos.
8.	Drinking Water ... ..	25 ,,	1.25	25 ,,	1.25	25 ,,
9.	Lika Roads ... ..	17 Km	6.50	16 Km	6.50	16 Km.
<b>Total facilities</b>		<b>..</b>	<b>83.50</b>	<b>..</b>	<b>83.50</b>	<b>..</b>
<b>GRAND TOTAL</b>		<b>..</b>	<b>203.50</b>	<b>..</b>	<b>217.50</b>	<b>..</b>

# DRAFT FIFTH FIVE YEAR PLAN, SHIFTING CULTIVATION CONTROL SCHEME

Hectares : Rs. in lakhs)

77	1977-78		1978-79		Total Fifth Plan	
Financial	Physical	Financial	Physical	Financial	Physical	Financial
(8)	(9)	(10)	(11)	(12)	(13)	(14)
64.00	4.5 ha	72.03	4.5 ha	72.00	19.5 ha	312.00
6.00	1.5 "	9.00	1.5 "	9.00	6.5 "	39.00
70.00	6.0 ha	81.00	6.0 ha	81.00	26.0 ha	351.00
7.50	6.0 ha	9.00	6.0 ha	9.00	27.0 ha	40.50
15.00	6.9 "	18.00	6.0 "	18.00	27.0 "	81.00
15.00	6.0 "	18.00	6.0 "	18.00	27.0 "	81.00
37.50	6.0 ha	45.00	6.0 ha	45.00	27.0 ha	202.50
18.00	1.4 ha	21.00	1.4 ha	21.00	6.0 ha	90.00
6.00	...	6.00	...	6.00	...	40.00
141.50		153.00		153.00		601.00
25.00	3,000 prs	30.00	3,000 prs	30.00	13,500	135.00
50.00	3,000 "	60.00	3,000 "	60.00	13,500 Nos,	270.00
0.75	30 nos.	0.90	30 nos.	0.90	135 "	4.05
1.25	30 "	1.50	30 "	1.50	135 "	6.75
6.50	16 Km	6.50	23 Km	9.00	84 Km	35.00
83.50	...	98.90	...	101.40	...	450.80
215.00	...	251.90	...	254.40	...	1,142.30

## 1.6. ANIMAL HUSBANDRY

1.6. **Introduction.**—There is considerable scope for development of livestock in Meghalaya. Some headway in this regard has been made in the preceding Plans but the quality of the bulk of the Livestock is still very poor and considerable effort will have to be made to improve the stock.

1.6.2. According to available information the Livestock population in Meghalaya is as below—

				No. in lakhs 1966	1972
Cattle	...	...	...	4.79	4.22
Buffaloes	...	...	...	0.51	0.47
Sheep	...	...	...	0.21	0.18
Goat	...	...	...	0.61	0.96
Horses and Ponies	...	...	...	0.10	0.05
Pigs	...	...	...	1.12	1.44
Poultry	...	...	...	9.00	9.65

1.6.3. According to provisional figures of 1972 Livestock Census, the number of breedable cows was 2.78 lakhs and breedable buffaloes 0.37 lakhs.

1.6.4. The current level of production of livestock products and the requirement of these products by 1978-79 are indicated below—

	1972-73	1973-74	1978-79 (Requirement)
Milk ('000 tonnes)	41.0	42.0	100.4
Meat ('000 tonnes)	15.6	16.0	36.1
Eggs (millions)	17	19	402

1.6.5. At current level of production, the *per capita* availability of milk in the State is only 126 grams per day, of meat 46 grams per day and 20 eggs per year. The requirements for a balanced diet are 250 grams of milk, 90 grams of meat and 1 egg per head per day. The target of production fixed at the national level for the State are 52500 tonnes of milk,

18400 tonnes of meat and 33.25 million eggs by 1978-79. These targets fall much short of the requirements for a balanced diet. In order to enable a balanced diet, the production of meat has to increase many times. This is a stupendous task and calls for a multi-pronged attack and a huge outlay for programmes to reduce the gap in availability of protective foods. It will be necessary to expand and continue the various schemes for scientific breeding, feeding, management, marketing, disease control, etc., to achieve the above targets.

1.6.6. The outlay required in the 5th Plan is Rs.2.28 crores as against Rs.1.12 crores in the Fourth Plan. This is a necessary minimum if the gap between production and requirement is to be reduced as also to harness the several advantageous factors off climate, etc. It has been recognised by Government of India that Meghalaya offers tremendous potential in view of its favourable natural conditions and the most progressive outlook of the people with regard to livestock development. As over 80 per cent of the population comprises the tribals and the most backward people, the programme fits well with the objective of helping the weaker sections and ensures its absorption in much larger measure necessary to achieve the targets. The step up of outlay also is in line with the trend of thinking in the Ministry of Agriculture and the Planning Commission as expressed in the recent meetings of the Ministers at New Delhi in which it was emphasized that animal husbandry and dairying should form a protected sector.

## II. Review of progress under Fourth Plan

1.6.7. The outlay in Fourth Five Year Plan was Rs.112.00 lakhs. During 1969-72, a sum of Rs.52.67 lakhs was spent. In 1972-73 the expenditure was Rs.20.44 lakhs. In 1973-74, the approved outlay is Rs.32.00 lakhs. The total expenditure in the Fourth Plan thus may come to Rs.105.11 lakhs. The short fall in expenditure was due to dearth of technical staff to implement various schemes. The administrative machinery has now gradually been strengthened by filling up the important posts.

1.6.8. The increase in outlay for 1973-74 was mainly due to inclusion of new schemes and expansion of important schemes such as the Indo-Danish Project, Livestock Farms at Tura and Kyrdem Kulai, Slaughter House, expansion of ICDP Key Village Schemes and Poultry Farms, etc.

1.6.9. During Fourth Plan, 6 veterinary dispensaries and 10 veterinary aid centres, 18 stockman centres under ICDP and 9 stockman centres under Key Village Blocks have been established.

1.6.10. One Bull-Calf Rearing Centre has been established at Mawnai to rear young he-calves.

1.6.11. The existing Fodder Farm and Feed Mill have expanded. One Sheep Farm and one Sheep Extension Unit have been established to study the adaptability of the sheep in this heavy rainfall area.

1.6.12. The existing Poultry Farm including Hatchery has been expanded and one Poultry Farm has been established at Mawryngkneng. Distribution of poultry and chicks to the farmers at 75 per cent subsidised rate is continuing. Six Applied Nutrition Programme Blocks have been covered with poultry distribution programme where farmers in turn are supplying 50 per cent of eggs produced to the block agencies to feed children and expectant mothers.

1.6.13. The Pig Farms at Tura and Shillong have been expanded with additional stocks of pigs of different breeds such as Berkshire and Saddle-back to meet the local demand. Distribution of pigs to the farmers at 75 per cent subsidy is continuing.

1.6.14. Training of poultry farmers at the District Poultry Farm is continuing. Besides, about 25 farmers have been sent to the Dairy Plant at Anand, Arey Colony and Indo-Danish Project at Bangalore to study the cattle and dairy development work. Sixteen students have been sent to the Assam Veterinary College to study B. V. Sc. course. Another 10 students will join the course during 1973-74. Eighteen VFAs have been trained upto 1972-73. Another 20 students will be sent for training in VFA course during 1973-74.

1.6.15. The Organisation has been strengthened both at Directorate and District levels with additional staff to cope with the increased volume of work. This would be further strengthened with experienced staff.

### **III. Objective, Strategy and Outlay in the Fifth Plan**

1.6.16. It has been indicated in the earlier paragraphs that production of milk, meat and eggs is to increase many

times. During the Fifth Five Year Plan, an increase of milk by about 25 per cent, meat by 23 per cent and egg by 74 per cent is necessary to achieve national targets in Fifth Five Year Plan in the State.

1.6.17. In Fifth Plan, it would be necessary to complete the continuing schemes and take up new schemes in order to step up production of protective foods. As the infrastructure is still weak, training of veterinary personnel would be intensified to implement various schemes. Schemes for cattle development, pig development and poultry development would be expanded. Schemes under animal health also require expansion. Livestock production programme under SFDA requires expansion to step up production of protective foods and enlarge employment opportunities in the rural sector.

1.6.18. In the field of milk production, cross breeding of cattle in ICDP and Key Village Blocks areas would be intensified. There are about 10,000 cross bred cows in Khasi Hills whose performance is quite good. In an average the Shillong cow gives 10 litres of milk daily. The yield can be improved by intensifying artificial insemination and improving the supply of fodder and concentrate feed along with health cover. The semen required for the purpose would be collected from pedigree bulls of Holstein, Freisian and Jersey breeds. The number of pedigree bulls is to be increased and semen should be used judiciously. The areas outside ICDP and Key Village area would be covered by natural service. A large number of bulls along with supply of feed will be required for the purpose. As a result of cross breeding programme, the number of cross bred cows would increase to 20,000. During the Fifth Plan period, it is proposed to take up cross breeding of 80,000 cows in successive years. Besides, buffalo bulls would be supplied to breeders for natural service as artificial insemination is not possible in remote areas. Cattle development programme is linked with fodder development. This requires special attention as feeding of cattle is becoming a problem due to extension of shifting agriculture. Fodder cultivation, conservation of fodder as hay and silage is to be intensified.

1.6.19. In the field of meat production, piggery development programme requires intensification by establishing Piggery Development Blocks in the vicinity of the towns. Establishment of Sheep Farm is also essential to meet the requirement of mutton and wool. For improving the quality of beef, establishment of a Slaughter House is essential and the animals would be lifted in transport from the points of collection to minimise their suffering and loss of weight.

1.6.20. For the backward areas distribution of sheep, poultry and pig units at 25 per cent subsidy will be intensified. One third of the outlay for distribution of pig, sheep and poultry units is earmarked for these area. Besides in border area, separate programme of pig distribution is being also taken up. Under Rinderpest Eradication Scheme, the vigilance unit is functioning.

1.6.21. An outlay of Rs. 2.28 crores is proposed for animal husbandry during Fifth Five Year Plan. The step up is due to the taking up of some major schemes, namely, Intensive Cattle Development Project, Key Village Scheme, Indo-Danish Project, Slaughter House, establishment of Livestock Farms at Kyrdem Kulai and Tura. In addition, some schemes will be expanded substantially to meet the requirement of breeding stock and livestock products.

1.6.22. The scheme-wise outlay is shown in the attached statement. The break up of outlays for the districts and State sector is indicated.

1.6.23. It is to be contended that Animal Husbandry and Dairying are the main sectors of activities which directly help the poor farmers to improve their economy and to provide much needed employment. In a Backward State like Meghalaya where the large section of the population belongs to the weakest section of the society, this sector has to play a dynamic role to fulfil the national objectives.

#### **IV. PROGRAMME FOR THE FIFTH PLAN**

##### **Cattle Development**

##### **1. Establishment and expansions of Key Village Block**

1.6.24. This scheme envisages the continuation of 2 Key Village Blocks in Jaintia Hills and in Garo Hills. The work of the scheme is handicapped due to dearth of qualified personnel. During Fourth Plan, 5 sub-centres in Jaintia Hills and 4 sub-centres in Garo Hills have been established. In the Fifth Plan, 5 sub-centres in Jaintia Hills and 6 sub-centres in Garo Hills will be established.

##### **2. Intensive Cattle Development Project**

1.6.25. This scheme envisages the establishment of 50 stockman centres in Khasi Hills to cover 50,000 breedable

cows by artificial insemination and natural service. Cross breeding with Holstein, Friesian and Jersey bulls has been started in this area. About 10,000 cross bred cows are available in the area and the requirement of milk at Shillong and Gauhati is met from this source.

1.6.26. A Central Semen Bank has been established at Upper Shillong where semen from Holstein and Friesian bulls is collected. In remote areas, bulls have been distributed for natural services. During Fourth Five Year Plan 18 stockman centres have been established. The remaining 32 stockman centres will be established during the Fifth Five Year Plan. The target of milk production in the Fifth Five Year Plan is fixed at 52,500 metric tons. To achieve the target of milk production, intensification of artificial insemination and natural service of cattle and fodder cultivation is necessary.

### 3. Re-Organisation of Livestock Farm

1.6.27. The existing cattle farm at Upper Shillong requires re-organisation. Most of the stock in the farm have deteriorated resulting in poor production of milk. The stock requires replacement. Besides, the Farm should be shifted to a new site as the present site is congested due to transfer of land to the Air Force and basing the Indo-Danish Project there.

### Establishment of Bull Rearing Centres.

1.6.28. One Bull-Calf Rearing Centre has been established at Mawnai and 3 cattle breeding centres have been established at Mawryngkneng, Mawkdok and Sunapahar. The existing bull-Calf rearing centre at Mawnai has not got sufficient cultivable land to grow fodder for the growing stocks. Besides, the land for this farm will no longer be available as the lease of the land is not being renewed by the owners. As such, it is proposed to shift the bull-calf rearing centre to Kyrdem Kulai where sufficient land is available for grazing. It is also proposed to establish 2 bull-calf rearing centres in Garo and Jaintia Hills along with maintenance of existing centres in Khasi Hills.

### 5. Purchase of improved bulls for distribution

1.6.29. In the Hills areas of Meghalaya there are many difficult places where artificial insemination is not possible.



It is, therefore, proposed to distribute improved bulls including buffaloes and feed to the progressive cattle breeders to improve their stock for enhancing production of milk. It is proposed to distribute 100 improved bulls along with feed to the breeders in the Fifth Five Year Plan.

#### **6. Establishment of Slaughter House**

1.6.30. During Fourth Plan, the required land for establishment of Slaughter House will be arranged. During Fifth Plan the project will be taken up with Central Government through the Danish assistance.

#### **7. Establishment of Indo-Danish Project**

1.6.31. During the latter part of Fourth Plan, the project was taken up at Upper Shillong in collaboration with Danish Government to establish Friesian herd of cattle to create a pure breed foundation stock to meet a part of requirements of breeding stock in the State. This project will be continued in Fifth Plan as only the preliminaries have been done in the Fourth Plan. The project will take up extension works for development of dairy cattle through artificial insemination and scientific fodder production.

#### **8. Establish of Livestock Farm at Kyrдем Kulai**

1.6.32. During Fourth Plan, about 320 hectares of land have been acquired at Kyrдем Kulai. It is proposed to established cattle breeding farm at Kyrдем Kulai with the Jersey herd expected from Denmark during Fifth Plan to meet the requirement of breeding stock in the area. Since extensive land is available, it is proposed to establish other livestock units such as pig, poultry, sheep and fodder seeds multiplication during Fifth Plan.

#### **9. Establishment of a composite Livestock Breeding Farm**

1.6.32. During Fourth Plan, the land for the establishment of the Farm will be arranged. During the Fifth Plan, the required stock will be purchased to build the foundation stock and also to supply milk in the town. Besides, breeding stock will also be supplied to farmers to upgrade the local catlet

## **Feed and Fodder Development**

### **10. Establishment of Food Mill:**

1.6.33. The existing Feed Mill at Bhoi will continue in the Fifth Plan and will be expanded as the requirement of livestock and poultry feed will increase due to rapid expansion of livestock and pultry production programme.

### **11. Establishment of Fodder Demonstration Farm at Upper Shillong**

1.6.34 The Farm will continue to study the adaptibility of different varieties of feeders at high altitude during the Fifth Plan. Besides intensification of fodder cultivation is necessary to meet the requirement of fodder for Indo-Danish Project.

### **12. Raising of cross breeding female calves by subsidised food and supplement**

1.6.35. With the intensification of cross breeding programme, the farmers will face the problem of raising female calves upto calving stage. Due to poverty, they cannot afford to meet the raising cost of feed and supplements. Cross bred she-calves will have to be supplied with concentrated feeds and supplements for their proper growth and maturity. This is highly essential for the production of milk. It is, therefore, proposed to supply the concentrated feed and supplements at subsidised rates ( $\frac{1}{2}$  subsidy and  $\frac{1}{2}$  loan).

### **13. Subsidy to the farmers for cultivation of fodder**

1.6.36. With the intensification of cattle development work, the requirement of fodder will increase. Farmers require fencing materials, fodder seeds and fertilizers. These will be supplied to the farmers at subsidised rate.

### **14. Establishment of fodder seed production farm at low altitude**

1.6.37. It is proposed to establish a fodder seed production farm at Kyrdem Kulai during Fifth Plan to meet the

requirement of fodder seed of the farmers to some extent. About 200 hectares of land will be brought under cultivation of fodder during Fifth Five Year Plan.

#### **15. Fodder demonstration in cultivators' field**

1.6.38. This scheme is essential to educate the farmers regarding fodder cultivation. The farmer will be assisted by supplying tractor, fencing material, fodder seed and fertilizer to cultivate fodder in selected field. The scheme will be dovetailed with other agricultural schemes. The cultivation will be supervised by stockmen and fieldsmen and selected fields will be utilised as demonstration to farmers.

### **SHEEP AND GOAT DEVELOPMENT**

#### **16. Sheep and Goat Farms**

1.6.39. The existing sheep farm at Jowai will continue in Fifth Five Year Plan for further expansion. The adaptability of sheep to this region will be studied. The breeding stock requirement of the area will be met from this farm.

#### **17. Distribution of Sheep and Goat**

1.6.40. To encourage the farmers in sheep and goat breeding, sheep and goat will be distributed to the farmers at 75 per cent subsidy.

#### **18. Sheep Extension Unit**

1.6.41. This unit will be shifted to Kyrdem Kulai where grazing field is available. The number of sheep will be increased as the present flock is limited.

### **POULTRY DEVELOPMENT**

1.6.42. The existing poultry farms at Bhoi, Tura, Upper Shillong and Jowai require expansion. The Central Hatchery needs expansion to meet the requirement of birds

which is increasing every year due to rapid expansion of poultry development programme. The new poultry farms will be established at Nongstoin and Simsang-giri. It is also proposed to establish a broiler production farm in Khasi Hills. The distribution of poultry units and chicks units under various programmes including ANP Blocks and SFDA Area will be increased.

1.6.43. The establishment of poultry extension cell is also essential to educate the farmers and evaluate the progress of the programme. The proposed outlay will not be adequate to reach the target. An amount of Rs. 59.00 lakhs is proposed in Fifth Plan against an allocation of Rs. 27.67 lakhs in Fourth Plan. It is proposed to achieve the production of 33.25 millions of eggs in Fifth Five Year Plan.

#### **PIGGERY DEVELOPMENT**

1.6.44. The existing pig farms at Tura and Shillong will be expanded in Fifth Plan to meet the requirement of breeding stock. Besides, 2 pig farms will be established at Nongstoin and Simsang-giri. Distribution of pigs in border and other areas will be intensified. It is also proposed to establish an 'Intensive Piggery Development Block' in Bhoi area to meet their requirement of breeding stock to help in the production of pork in the area. The target of production of meat in the Fifth Plan is about 18400 metric tons. Piggery is a household vocation and pork is an every day diet of the Meghalayans. The production of pork in the Fifth Plan should be about 6100 metric tons. An outlay of Rs. 12.00 lakhs is proposed in Fifth Plan against Rs. 4.23 lakhs in Fourth Plan.

#### **ANIMAL HEALTH AND DISEASE CONTROL**

1.6.45. With the introduction of cross breeding programme, preventive vaccination against foot and mouth disease, Rinderpest, Haemorrhagic Septicaemia, Anthrax, etc., and treatment against Bacterial Viral, parasitic diseases has to be

intensified by establishing more veterinary dispensaries, aid centres and mobile veterinary dispensaries. The existing Clinical Laboratory at Shillong will be expanded. One Clinical Veterinary Laboratory will be established at Tura.

1.6.46. Six veterinary dispensaries and 20 Veterinary Aid Centres will be established during Fifth Five Year Plan. 2 Mobile Veterinary Dispensaries will be established along with the maintenance of existing mobile veterinary dispensaries. Provision for purchase of prophylactics vaccines, particularly foot and mouth diseases and swine fever vaccine, is made during the Fifth Five Year Plan. It is also proposed to establish a Disease Investigation Section and Biological Products Section to manufacture various vaccines.

1.6.47. To train the farmers in improved management of livestock, it is proposed to establish a cadre of Livestock Health Visitors. It is also proposed to introduce milk and meat inspection services to ensure supply of good quality milk and meat to the consumers.

#### **VETERINARY EDUCATION AND RESEARCH**

1.6.48. It is proposed to train 200 farmers in poultry farming and one hundred farmers in cattle and dairy development work in the Fifth Year Plan. Since, there is dearth of trained personnel, it is proposed to train 80 students in B. V. Bc., course and 100 students in VFA course during the Fifth Five Year Plan. It is also proposed to train 20 officers in specialised fields during the Fifth Five Year Plan and to establish a Veterinary Training Institute to train the local boys in elementary veterinary science and animal health. The allocation of Rs. 4.23 lakhs in the 4th plan in this regard has been meagre. An amount of Rs. 10.00 lakhs would be required in the Fifth Plan to fulfil the target in these fields.

#### **OTHER SCHEMES**

1.6.49. Strengthening of the Directorate and administrative staff in the Districts is essential due to expansion of animal husbandry programme. It is, therefore, proposed to recruit a number of specialist staff as necessary to supervise and improve the quality of work.

1.6.50. It is also proposed to organise Livestock Shows in the districts to bring home to the farmers about the benefit of livestock and poultry farming. A veterinary information unit will also be established for the general information of the public. A Survey and Statistical Cell will be created to carry out evaluation of animal husbandry work. For all these schemes an outlay of Rs. 12.00 lakhs is proposed in the Fifth Plan as against allocation of Rs. 5.65 lakhs in Fourth Plan.

**DRAFT FIFTH FIVE-YEAR PLAN**

**STATE: MEGHALAYA**

**Programmewise outlay and Expenditure**

Serial No.	Programme	Fourth Plan Approved Outlay	Approved Outlay for 1973-74	Likely expenditure 1973-74	Likely expenditure during Fourth Plan	(Rs. Lakhs).		Annual Plan 1974-75 Outlay	Remarks
						Fifth Plan Total Outlay	(8)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
I.	'A' CATTLE DEVELOPMENT:—								
1.	(a) Establishment of Key Village Block 6	3.48	1.10	1.10	2.90	3.50	0.60		
	(b) Expansion of Key Village Block	2.50	0.20	0.20	1.31	3.50	0.60		
2.	Intensive Cattle Development Block ...	15.25	5.00	5.00	14.74	30.00	5.50		
3.	Re-Organisation of Livestock Farm ...	5.00	0.20	0.20	4.31	5.00	1.00		
4.	Establishment of Bull Rearing Centre	5.00	0.70	0.70	4.04	5.00	1.00		
5.	Purchase of Improved Bulls for distribution	1.00	0.13	0.13	0.17	2.00	0.40		
6.	Expansion of Cross Breeding Scheme ...	0.19	0.10	0.10	0.34	..	..		
7.	Establishment of Slaughter House ...	6.00	1.00	1.00	1.00	12.00	2.00		
8.	Establishment of Indo-Danish Project	..	4.00	4.00	8.08	15.00	3.00		
9.	Establishment of Livestock Farm at Kyrdem Kulai.	4.00	2.00	2.00	6.00	5.00	1.00		
10.	Establishment of Livestock Cattle Breeding Farm.	..	1.00	1.00	1.00	5.00	1.00		
Total—'A' Cattle Development		42.42	15.43	15.43	43.89	86.00	16.10		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>2. 'B' FODDER AND FEED DEVELOPMENT—</b>								
1.	Establishment of Food Mill Bhoi	4.00	0.70	1.00	3.34	6.00	1.00	...
2.	Estt. of Fodder Demonstration Farm	2.80	0.40	0.40	2.20	3.00	0.60	...
3.	Raising of Cross Bred Female Calves by subsidised feed and supplement.	...	...	...	...	1.50	0.30	...
4.	Subsidy to the farmers for the cultivation of Fodder.	...	...	...	...	1.00	0.20	...
5.	Estt. of Fodder Seed production Farm at low altitude.	...	...	...	...	3.00	0.50	...
6.	Fodder Demonstration in the cultivation field	...	...	...	...	0.50	0.10	...
<b>Total 'B' Fodder and Feed Development</b>		<b>6.80</b>	<b>1.10</b>	<b>1.40</b>	<b>5.54</b>	<b>15.00</b>	<b>2.70</b>	<b>...</b>
<b>3. 'C' SHEEP AND GOAT DEVELOPMENT—</b>								
1.	Establishment of Sheep Farm ...	2.50	0.50	0.50	1.34	3.00	0.50	...
2.	Distribution of Sheep and Goat ...	0.60	...	...	0.32	0.50	0.10	...
3.	Establishment of Sheep Extension Unit	...	0.10	0.10	0.10	0.50	0.10	...
<b>Total 'C' Sheep and Goat Development</b>		<b>3.10</b>	<b>0.60</b>	<b>0.60</b>	<b>1.76</b>	<b>4.00</b>	<b>0.70</b>	<b>...</b>
<b>4. 'D' POULTRY FARM DEVELOPMENT—</b>								
1.	Expansion of Poultry Farm and Hatchery	17.20	4.00	4.00	16.50	38.50	6.70	...
2.	Establishment of Poultry Farm	5.00	0.83	0.83	4.25	10.00	1.75	...
3.	Distribution of Poultry Unit ...	1.50	0.16	0.16	0.98	3.00	0.16	...
4.	Distribution of Ghicks Units ...	0.75	...	...	0.30	1.50	0.30	...
5.	Applied Nutrition Programme ...	3.22	0.84	0.84	3.36	...	...	...
6.	Estt. of Boiler Demonstration Farm	...	...	...	...	5.00	1.00	...
7.	Estt. of Poultry Extension Cell ...	...	...	...	...	1.00	0.20	...
<b>Total 'D' Poultry Farm Development</b>		<b>27.67</b>	<b>5.83</b>	<b>5.83</b>	<b>25.39</b>	<b>59.00</b>	<b>10.55</b>	<b>...</b>



Serial No.	Programme	Fourth Plan approved outlay	Approved outlay for 1973-74	Likely outlay for 1973-74	Likely expenditure 1973-74	Fifth Plan total outlay	Annual Plan for 1974-75 outlay	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>5. 'E' PIGGERY DEVELOPMENT—</b>								
1.	Establishment of Pig Farm	..	2.18	0.40	0.40	2.18	4.00	0.65
2.	Expansion of Pig Farm	...	1.90	0.60	0.60	1.51	2.75	0.50
3.	Distribution of Pigs	..	0.15	0.15	0.15	0.30	0.25	0.05
4.	Intensive Piggery Development Flock	...	...	...	...	5.00	1.00	
<b>Total 'E' Piggery Development</b>			<b>4.23</b>	<b>1.15</b>	<b>1.15</b>	<b>3.99</b>	<b>12.00</b>	<b>2.20</b>
<b>6. 'F' ANIMAL HEALTH AND DISEASE CONTROL—</b>								
1.	Establishment of Veterinary Dispensary including improvement.		7.30	1.20	1.20	5.81	10.00	2.00
2.	Establishment of Veterinary Aid Centre	...	4.20	1.28	1.28	3.80	6.00	1.20
3.	Establishment of Mobile Veterinary Dispensary	—	3.30	0.55	0.55	2.88	3.00	1.10
4.	Purchase of Prophylactic Vaccine	...	0.60	...	...	0.17	1.00	0.20
5.	Establishment of Clinical Laboratory	...	2.50	0.35	0.35	2.14	2.50	0.40
6.	Disease Investigation Section	...	...	...	...	1.50	0.30	
7.	Establishment of Biological Products including Swine Fever section.	...	...	...	...	4.00	6.80	
8.	Livestock Health Visitor	...	...	...	...	1.00	0.20	
9.	Veterinary Public Health Services	...	...	...	...	1.00	0.20	
<b>Total 'F' Animal Health and Disease control</b>		...	<b>17.90</b>	<b>3.38</b>	<b>3.38</b>	<b>14.80</b>	<b>30.00</b>	<b>6.40</b>

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>7. 'G' VETERINARY EDUCATION AND RESEARCH—</b>								
1	(a) Training of Farmer in Poultry Farm...	2.03	...	...	1.43	2.00	0.40	...
	(b) Training of Farmer inside and outside the State.	—	0.25	0.25	0.25	0.50	0.10	...
2	Training of Students in Veterinary Science.	2.20	0.50	0.50	1.58	5.00	1.00	...
3	Establishment of V.F.A. Training Institute.	..	...	...	...	2.00	0.10	...
4	Training of In-service Officers in specialised field.	...	...	...	...	0.50	0.40	...
<b>Total 'G' Veterinary Education and Research</b>		<b>4.23</b>	<b>0.75</b>	<b>0.75</b>	<b>3.26</b>	<b>10.00</b>	<b>2.00</b>	<b>...</b>
<b>8. 'H' OTHER SCHEMES—</b>								
1	Esstt. of Directorate of A. H. and Vety. ...	...	1.61	1.61	1.61	5.00	1.00	...
2	Administrative Organisation ... ..	5.00	1.50	1.50	3.57	5.00	1.00	...
3	Livestock Show Etc. ... ..	0.65	0.10	0.10	0.30	1.00	02.0	...
4	Veterinary Information Unit ... ..	...	...	...	...	0.50	0.10	...
5	Survey and Animal Husbandry Statistics ..	...	...	...	...	0.50	0.10	...
<b>Total 'H' other Schemes</b> ...		<b>5.65</b>	<b>3.21</b>	<b>3.21</b>	<b>5.48</b>	<b>12.00</b>	<b>2.40</b>	<b>..</b>
<b>Animal Husbandry Total</b> ...		<b>112.00</b>	<b>32.00</b>	<b>32.00</b>	<b>105.11</b>	<b>228.00</b>	<b>43.05</b>	<b>...</b>

Serial No.	Programme	Fourth Plan Approved Outlay	Approved Outlay for 1973-74	Likely Outlay for 1973-74	Likely Expenditure 1973-74	Fifth Plan Total outlay	Annual Plan for 1974-75 outlay	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>DAIRY DEVELOPMENT—</b>								
1.	Town Milk Supply Scheme	...	14.50	4.50	4.50	11.78	17.50	4.00
2.	Rural Dairy Extension Centre	...	4.50	1.50	1.50	6.22	9.00	1.80
3.	Creamery and Ghee-making Centres	...	1.50	1.50	1.50	3.11	3.00	0.60
4.	Establishment of Milk Colonies and Model Dairy Units.	...	17.50	2.50	2.50	2.50	5.00	1.00
5.	Milk producing enhancement Programme in Milk Shed Area of Dairy Plants.	...	...	...	...	...	2.50	0.50
6.	Assistance to Dairy Co-operatives	...	...	...	...	...	1.00	0.20
7.	Special Area Programme	...	...	...	...	...	5.00	1.00
8.	Survey and Statistics	...	...	...	...	...	2.00	0.40
9.	Man-power Development and In-service Training	...	...	...	...	...	1.00	0.20
10.	Organisation of Dairy Development Staff	...	...	...	...	...	2.00	0.50
	<b>Total Dairy Development</b>	...	<b>38.00</b>	<b>10.00</b>	<b>10.00</b>	<b>23.61</b>	<b>48.00</b>	<b>10.20</b>

## ANNEXURE—I

## STATE MEGHALAYA

Serial No.	Item	Units	Fourth Plan Base-Target Level-1969-74 (assumed) 1968-69	Actual Achievements	
				1968-69	Likely Achievement in 1973-74
(1)	(2)	(3)	(4)	(5)	
1	Milk	Thousand tons	37—42	37	42
2	Meat	Thousand tons	11—16	11	16
3	Eggs	Lakhs No.	130—190	130	190

## ANNEXURE—II

## FOURTH FIVE YEAR PLAN-TARGETS AND ACHIEVEMENTS RELATED TO PHYSICAL PROGRAMME OF ANIMAL HUSBANDRY

(In number)

Serial No.	Items	Fourth Plan Base Target 1968-69		Likely Achievement in 1973-74
		1973-74	1968-69	
1	Intensive Cattle Development Project	...	1	1
2	Key Village Block	...	2	2
3	Cattle Breeding Farm including Indo-Danish Project.	...	1	1
4	Fodder Seed Production	...	1	1 cont.
5	Sheep Breeding Farms	...	1	1
6	Sheep and work extension centres	...	1	1
7	Sheep shearing, wool grading and... marking centres.	...	...	...
8	Bacon Factories	...	...	...
9	Piggery Development Block	...	...	...
0	Poultry Breeding Farms	3	2 (addl)	5 cont.
1	Intensive Egg and Poultry production-cum-marketing centres.	...	...	...
2	Veterinary Hospitals	1	No new	...
3	Veterinary Dispensaries (including C. D. Blocks).	30	3 (new)	3

## ANNEXURE III

## FIFTH FIVE-YEAR PLAN-TARGET OF LIVESTOCK PRODUCTS

Serial No.	Items	Units	Base level	Target
1	Milk	Thousand tons	42	52.5
2	Wool	" "	...	...
3	Eggs	Lakh Nos	190	330.25
4	Meat	Thousand Kg	16,000	18,400

## ANNEXURE IV

## FIFTH FIVE-YEAR PLAN-ANIMAL HUSBANDRY TARGET OF PHYSICAL PROGRAMME

Serial No.	Items	Base level 1973-78	Fifth Plan Target 1978-79
1	Intensive Cattle Development Project	1	1 continued
2	Key village Blocks ...	2	2 continued.
3	Cattle Breeding Farms including Indo-Danish Project.	1	1+2=3
4	Fodder Seed Production Farm ...	1	1+1=2
5	Sheep Breeding Farm ...	1	1 on inued.
6	Sheep and Work expansion Centres ..	1	1 continued
7	Intensive Sheep Development Project	...	...
8	Sheep Shearing, Wool grading cum-marketing centres.	...	...
9	Poultry Breeding Farm ...	5	5+2 No.7
10	Intensive Egg and Poultry Production cum-marketing centres.	...	...
11	Poultry Co-operative	...	...
12	Bacon Factories	...	...
13	Pork Processing Plant	...	...
14	Pig Breeding Farm	2	2+2=4
15	Piggery Development Block	...	1
16	Veterinary Hospitals	1	cont.
17	Veterinary Dispensaries (including C. D. Blocks).	33 old	33+6=39

**ANIMAL HUSBANDRY AND DIARY CENTRALLY SPONSORED  
SCHEMES IN MEGHALAYA DURING FIFTH FIVE-YEAR  
PLAN**

Particulars of Schemes	Allocation in Fourth Plan	Outlay in 5th Plan	Rs. in lakhs.
			Nos. of Units proposed in 5th Plan
<b>A. Cattle Development—</b>			
1. Heifer Raising Project	...	30.00 lakhs	3
<b>B. Fodder Development—</b>			
1. Seed Production Farms	...	20.00 „	2
2. Establishment of Fodder Bank	...	5.00 „	1
3. Input for Fodder Development	...	15.00 „	3
4. Grassland Development Programme	...	12.00 „	3
<b>C. Sheep and Goat Development—</b>			
1. Intensive Sheep and Goat Development Blocks.	...	10.00 „	5
<b>D. Piggery Development—</b>			
7.1 Intensive Piggery Development Project.	...	75.00 „	3
2. Piggery Development in Special Areas	...	200.00 „	3
<b>E. Slaughter House—</b>			
<b>F. Animal Health and Disease Control—</b>			
1. Rinderpest Eradiction Scheme (Check Post, Vigilance Unit).	...	20.00 „	6
2. Organisation of Animal Disease Intelligence Unit.	...	10.00 „	3
3. Systematic Control of T.B. and Brucellosis.	...	5.00 „	1
4. Systematic Control of Rabies	...	5.00 „	1
5. Eradication of Ranikhet Disease	...	25.00 „	1
6. Eradication of Salmonellosis	...	5.00 „	1
7. Eradication of Swine fever	...	50.00 „	1
<b>G. Dairy Development—</b>			
1. Feed subsidy for Small and Marginal Farmers etc.	...	50.00 „	3

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**Total      612.00 lakhs**

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## 1.7 DAIRYING AND MILK SUPPLY

### Progress under the Fourth Plan

1.7.1. The approved outlay for the Fourth Five Year Plan was Rs.38.00 lakhs out of which Rs.13.61 lakhs was spent during the first four years of the Plan. In 1973-74, an amount of Rs.10.00 lakhs provided is expected to be spent. The total expenditure in Fourth Five Year Plan thus comes to Rs.23.61 lakhs, which is about 62 per cent of the plan outlay. The shortfall in expenditure was mainly due to shortage of technical personnel and non-availability of land for the Central Dairy in the earlier period of the Fourth Plan. These difficulties are now being overcome gradually. The buildings for Creamery and Ghee Making Centre in Garo Hills are ready for starting the work. 20 Dairy Farmers have been sent to Anand, Aerey Colony, Bombay and Bangalore to study cattle and dairy development work. During 1973-74, 4 Model Dairy Units are being established to educate the farmers.

1.7.2. The Chilling Plant at Bhoi handles about 4,000 litres regularly as against capacity of 10,000 litres milk daily. The milk is procured through an area co-operative milk union. The holding capacity of the plant is at present only 5,000 litres.

The Rural Dairy Extension Centre at Jowai distributed 2,500 kg. of ghee and 1,000 kg. of butter annually.

### Strategy, targets and outlays for the Fifth Plan

1.7.3. During Fifth Plan, an outlay of Rs.48.00 lakhs is proposed as against allocation of Rs.38.00 lakhs in Fourth Five Year Plan.

1.7.4. The establishment of a Central Dairy, Rural Dairy Extension Centre at Nongstoin, milk producing enhancement programme in the milk shed area, assistance to dairy co-operatives, special Area Programme, survey and statistics, training of personnel and organisation of dairy development staff will be taken up in the Fifth Plan along with continuance of existing schemes to step up production and procurement of milk.

1.7.5. The target of production of milk in the Fifth Plan is 52,500 metric tons as against the achievement of 42,000 metric tons in the Fourth Plan. There has been some fall in the livestock population according to the 1972 census due to migration of

cattle to the neighbouring States. But this will not affect the production of milk. There are many milk pockets in Meghalaya where from fluid milk could not be procured easily. With improved communication, procurement of the milk will be come easier and the producer will get remunerative price. Milk tankers will be necessary to transport milk to the distribution centres.

### **I. Towa Milk Supply Scheme, Shillong :**

1.7.6. This scheme is continuing since the Third Five Year Plan supplying milk to the consumers of Shillong and Gauhati (Assam). About 4,000 litres of milk is chilled daily at Nayabungalow. The bulk of the chilled milk is supplied to the Central Dairy at Gauhati for distribution. About 1,200 litres milk is distributed daily to the consumers of Shillong. Pasteurisation facility is expected to be ready during 1973-74 at the chilling plant in Nayabungalow. Steps have been taken to get a Batch Pasteuriser for Nayabungalow. The land for the establishment of central dairy is being arranged so that pasteurisation plant can be installed during the Fifth Plan.

### **II. Rural Dairy Extension Centre:**

1.7.7. The centre located at Jowai could not function properly as the chilling plant was out of order. Steps have been taken to get some spare parts to restore the working of chilling plant. Cream from different areas is collected for preparation of ghee and butter for distribution at Shillong and Jowai. This Centre will continue to function in the Fifth Plan. The Centre, however, fulfilled its aim of training local people in the techniques of milk trade and use of its products.

1.7.8. It is proposed to establish a Rural Dairy Extension Centre at Nongstoin also where large number of cattle breeders are living. The milk produced in this area could not be marketed properly. This centre will also aim at training of local people in the technique of milk trade and handling of its products.

### **III. Creamery and Ghee Making Centre in Garo Hills**

1.7.9. Necessary buildings for the centre have been constructed. Collection of cream will start in 1973-74 for production of ghee. The centre will continue to function in the Fifth Plan. There are large milk pockets which could not be exploited for the benefit of the consumers. There is also need to educate the indigenous people about the use of milk and its products.



#### **IV. Milk production enhancement programme in the milkshed area of Dairy Plant**

1.7.10. In the milkshed area the farmers are producing milk under difficult conditions. The following facilities will be provided for enhancement of milk production:—

- (a) cattle breeding or stockman centre to assist the farmers in cattle breeding, feeding, management and treatment of cattle;
- (b) fodder seed and fertilizer for cultivation of fodder in compact area. Concentrates will be supplied on no profit no loss basis; and
- (c) to organise co-operative societies of cattle breeders and arrange marketing of milk to the chilling plant at remunerative price. Some centres may be taken up in the Fifth Plan within the outlay of Rs.2.00 lakhs.

#### **V. Model Dairy Unit**

1.7.11. It is proposed to establish 8 Model Dairy Units to educate the farmers in modern dairy farming. They will be supplied with improved cows, dairy utensils and feeds supplements, etc., to raise dairy herd on scientific line.

#### **VI. Assistance to Dairy Co-operatives :**

1.7.12. To augment production of milk, assistance to dairy co-operatives is necessary. This can be done by supplying improved stock, fodder seed, fertilizer and concentrate and veterinary aid, etc. Dairy co-operatives would be assisted within the outlay of Rs.1.00 lakhs.

#### **VII. Special Area Programme**

1.7.13. The economically backward areas of State require special programme for augmenting milk production. They would be assisted in the following ways:—

- (a) supply of improved breeding stock at subsidised rate (50 per cent) one pair of cows—one in milk and one pregnant;
- (b) supply of fodder seeds and concentrates at subsidised rate at 75 percent;

- (c) veterinary aid by sending mobile veterinary dispensary ; and.
- (d) supply of breeding bulls on loan. Three areas may be selected for such programme within an outlay of Rs.5.00 lakhs. 400 farmers will be assisted by this programme.

### **VIII. Survey and Statistics**

1.7.14. This is most essential to make survey about the availability and requirement of milk. Unless this is done, proper planning for production cannot be done. An outlay of Rs.2.00 lakhs is made in the Fifth Plan to recruit specialised staff for the purpose.

### **IX. Man-power Development and Inservice Training**

1.7.15. There is acute shortage of dairy personnel to implement dairy schemes. Besides the existing staff require specialised training. It is, therefore, proposed to depute 10 students in I.D.D. course and 2 students in B.Sc. (Dairy) course. 10 Officers will be sent for specialised training. An outlay of Rs.1.00 lakhs is proposed in the Fifth Plan.

### **X. Organisation of Dairy Development Staff**

1.7.16. Dairy is a specialised field in which trained officers are essential to plan, implement, and supervise, various schemes. Quality control of milk and production of milk-products hygienically and standardisation of products require special attention. It is, therefore, proposed to entertain dairy development staff in the Fifth Plan to explore the potentiality of milk and its products in Meghalaya.

1.7.17. An outlay of Rs.2.00 lakhs is proposed in the Fifth Plan for the purpose.

1.7.18. The schematic outlays are shown in the same statement with animal husbandry in the foregoing pages.

## ANNEXURE 1

## FOURTH PLAN TARGETS AND ACHIEVEMENTS

Serial No.	Items	Base level 1968-69	Targets 1973-74	Anticipated achievement in 1973-74
(1)	(2)	(3)	(4)	(5)
1	Milk Plants in operative (Chilling)—			
	(a) Numbers.	1	Continued	Continued.
	(b) Capacity in litres	10,000 litres daily.	10,000 litres daily.	4,166 litre daily.
2	Milk Product Factories (including creameries) operation—			
	(a) Numbers.	...	1 creamery	1 creamery.
	(b) Capacity in litres	...	1,000 litres daily.	1,000 litres daily.
3	Rural Dairy Centres in operation—			
	(a) Number.	...	1	1
	(b) Capacity in litres	...	2,000 litres daily.	2,000 litres daily.
4	Dairy Co-operatives—			
	(a) Primary Societies—			
	(i) Numbers	10	Continuing	Continuing.
	(ii) Total membership	N. A.	...	N. A.
	(b) Unions (Nos)	1	Continuing	Continuing.
	(c) Quantity of milk handled litre annually.	12,00,000	15,00,000 litres.	15,00,000 litres.

ANNEXURE II

FOURTH PLAN PROGRESS OF CAPACITY OF MILK PLANTS/MILK PRODUCTS FACTORIES

Serial No.	Location of Plant Factory	Year of installation	Installed Capacity litres per day in 1968-69	Utilisation level in 1968-69	Actual utilisation level in 1971-72	Anticipated utilisation level 1972-73	Likely utilisation level 1973-74
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Nayabungalow Chilling Plant	1964	10,000 litres per day	12,00,000 litres annually	13,00,000 litres annually	14,00,000 litres annually	15,00,000 litres annually.
2	Rural Dairy Centre, Jewai	1967	2,000 litres per day	Not utilized for want of water	Plant out of order	Plant out of order	1,000 litres per day.
3	Creamery and Ghee Making Centre, Tura, 1973-74 (Rongram).	...	...	...	...	...	1,000 litres per day.

## ANNEXURE III

## FIFTH FIVE-YEAR PLAN TARGET ON DAIRY INDUSTRY

Serial No.	Item	Base level 1973-74	Target level 1978-79
1	Milk Plant in operation (Chilling) —	.	.
	(a) Numbers	1	2
	(b) Capacity in litres per day	10,000 litres daily.	10,000 litres daily.
2	Milk product factories in Operation (Creamery)—		
	(a) Numbers	1	1 Continuing.
	(b) Capacity in litres per day.	1,000 litres daily.	1,000 litres daily.
3	Rural Dairy Centres—		
	(a) Numbers	1	1 Continuing.
	(b) Capacity in litres per day.	2,000 litres daily.	2,000 litres daily.
	Dairy Co-operatives—		
	(a) Primary Societies —	.	.
	(i) Numbers	10	10 Continuing.
	(i) Total membership		
	(b) Unions-Numbers.	1	1 Continuing.
	(c) Quantity of milk handled in litres.	15,00,000 litres annually.	30,00,000 litres annually.

## ANNEXURE—IV

FIFTH FIVE-YEAR PLAN TARGETS OF DAIRY PROGRAMMES /  
PROJECTS

Serial No.	Item	Targets
1	Number of Milk Plants spilled into Fifth Plan and to be commissioned during the Fifth Plan.	Nil
2	Number of existing Milk Plants which are proposed to be taken up for expansion during Fifth Plan.	1
3	Number out of 2 above, where expansion is proposed to be completed during the Fifth Plan.	Central Dairy Shillong.
4	Number of New Milk plant proposed to be taken up during the Fifth Plan.	1
5	Number out of 4 above which are proposed to be completed during the Fifth Plan.	1
6	Number of New Milk Product Factories proposed to be taken up during the Fifth Plan.	Nil
7	Number out of (6) above which are proposed to be completed during the Fifth Plan.	Nil

### 1.8. FORESTS

1.8.1. In Meghalaya, the area under forests extends to some 8510 square kilometres or about 37 per cent of the State's land surface. But the area under Reserve Forests is only about 700 square kilometres. The remaining so-called forest area falls under unclassed forests with no proper system of management.

1.8.2. The forests in the State can be broadly classified into (a) the Sal forests of the northern belt of Khasi and Garo Hills bordering Assam Valley and of the Border Area of Garo Hills (b) the evergreen and semi-evergreen belts in the submontane tracts and in the southern face of the Khasi and Jaintia Hills ; (c) the Pines in the Central Plateau of the Khasi and Jaintia Hills and (d) the Bamboo forests in mixed growth in (a) and (b) above.

1.8.3. The approximate area under Sal is 119 square kilometres, under evergreens 565 square kilometres and under Pine 18 square kilometres. The present growing stock is assessed at 6.80 lakhs cubic metres for Sal, and 10.50 lakh cubic metres for evergreens. The annual rate of cut is estimated at 9000 cubic metres in respect of Sal and 18,000 cubic metres in respect of evergreen species.

1.8.4. There are 28 Saw Mills in the State with a total capacity of 285 cubic metres per day. There is also one plant for pine wood wool and wood wool board with a capacity of 3-4 tonnes per day. The bulk of the sawn timber is sent out for consumption in the NER and in the neighbouring States. Substantial quantity of the produce in the form of logs for plywood and bamboo also had to be sent out in the absence of manufacturing plants in the State.

1.8.5. The demand for forest products has been increasing at a very rapid rate. This trend will continue for many decades to come. The requirement for rawmaterial assumes great significance in the context of the idle capacity of the existing forest-based factories in Assam and the new industries such as paper and pulp, sports goods, resin, oils and gums that are being set up in the North Eastern Region. The demand of construction will continue to increase even at a faster rate till the alternative building materials like cement and steel are available in abundance and at competitive cost in this region. Likewise, the demand for fuel wood will become more acute till other energies are widely used for domestic purposes!

and till the standard of living of the masses is high enough to switch over to other fuels.

1.8.6. Forests are among the rare renewable resources that the State possesses and can contribute appreciably towards building its growing economy. Apart from the direct uses just enumerated, forests are indispensable in providing protection to the soil, stability of the water regimes and climate, improvement of the environ and providing recreational facilities for games and tourist attraction. Also, by virtue of the terrain, the forest in the State is highly labour intensive enabling dispersal of the labour force to the most interior areas and thus, avoiding concentration in the towns.

1.8.7. Repeated clearing of forests for shifting agriculture is a common sight in this State where this practice is the means of livelihood for over two-fifths of the population. This has caused great denudation of forests in the more accessible areas that are owned privately or by the village communities. The damage is such that for most of these areas it would be a misnomer to call them forest areas. The implications of this practice have been described more fully in the chapter on Soil Conservation. Those apart, this has caused acute scarcity of firewood not only in the towns but also in the villages even those in the so-called forest areas. In many villages, the water supply sources have become dry for a part of the year due to clearing of forests.

1.8.8. A sound forest policy must, therefore, take into account not only the immediate and more apparent needs but also several other factors such as the changes in the socio-economic structure and living standard and development of substitutes for raw materials. Forestry is a long gestation investment in most ways not capable of giving the product in a decade or two. In the time lag, these factors will have influenced the attitudes and the pattern of consumption of forest produce. A policy of forest development must, therefore, include measures designed for short-term, medium-term and long-term demand projections.

#### **Progress in the Fourth Plan**

1.8.9. Forest development in the Meghalaya area could not receive the deserved attention in the Fourth Plan and in the earlier plans for one reason or another. When the State obtained a separate identity in April, 1970 the Fourth Plan allocation for different States had already been decided and Meghalaya has had to be content with whatever due from the Assam Hill Plan. The approved outlay for forests



under the New State was only Rs.88 lakhs and 60 per cent of this outlay had to be funnelled to the District Councils to continue the programmes as per pattern evolved earlier. Within the several limitations, some reorganisation of the programmes was undertaken and the expenditure during the fourth plan is expected to be Rs.99 lakhs. Even with this amount, the development expenditure in the fourth plan works out to less than Rs.12 per hectare for 5 years. Within this amount, 21 schemes were taken up in the fourth plan and almost all the targets are expected to be fully realized. The progress of the major programmes is shown in the tables below:

TABLE 1

**Progress of expenditure**

(Rs lakhs)

Programme	4th Plan outlay	1969-70	1970-71	1971-72	1972-73	1973-74	Total cols. 3,4 5,6 & 7 (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Quick growing species	1.58	0.03	0.02	0.24	0.59	1.46	2.34
2. Economic Plantation	12.29	0.90	1.80	2.73	2.75	3.30	11.48
3. Rehabilitation of Degraded Forests	7.17	0.58	2.39	2.20	1.30	1.08	7.55
4. Farm Forestry	1.26	..	0.16	0.30	0.40	0.40	1.26
5. Minor Forest Produce	4.00	0.60	0.95	0.87	0.87	0.93	4.22
6. Forest Protection	..	7.19	0.60	1.82	1.79	1.58	7.39
7. Consolidation	..	6.78	0.16	2.62	1.94	0.53	6.81
8. Nature Conservation	..	3.00	..	..	0.03	0.97	2.73
9. Green Blocks	..	9.44	..	7.41	2.03	..	9.44
10. Intensification of Management	2.72	0.30	0.64	0.35	0.51	1.48	3.28
11. Training	..	2.75	..	0.33	0.42	0.64	2.53
12. Working plans	..	3.00	..	..	0.35	1.05	2.55
13. Communications	..	9.45	1.21	2.77	1.83	1.31	8.42
14. Buildings	..	9.33	1.09	4.02	1.32	2.03	9.76
15. District Council Programmes	11.12	1.53	2.43	2.33	2.26	2.46	11.01
16. Other programmes	..	7.92	0.41	1.35	0.90	1.41	6.18
<b>Total</b>	<b>99.00</b>	<b>7.41</b>	<b>28.71</b>	<b>19.63</b>	<b>18.20</b>	<b>23.00</b>	<b>96.95</b>

TABLE 2

**Physical Targets and achievements (4th Plan totals)**

Programme	Unit	Target	Achievement
(1)	(2)	(3)	(4)
1. Quick growing species—			
Creation ... ..	Hectares	174	174
Maintenance ... ..	„	812	812
2. Economic Plantation—			
Creation ... ..	„	923	923
Pre-establishment ... ..	„	2,304	2,304
3. Rehabilitation —			
Creation ... ..	„	928	928
Pre-establishment ... ..	„	2,202	2,202
4. Farm Forestry—			
Creation ... ..	„	236	236
Pre-establishment ... ..	„	116	116
5. Minor Forest Produce ... ..	Hectares	3.2	3.2
6. Consolidation —			
Demonstration ... ..	Sq. kms	.399	.399
Resurvey and boundary... ..	km.	1,470	1,470
7. Cultural operations—	Hectares	500	500
8. Green Blocks ... ..	„	20.5	20.5
9. Communications—			
New Roads ... ..	Kms.	56	56
Improvement ... ..	„	5	54
Bridges ... ..	Nos.	12	12
10. Buildings ... ..	Nos.	82	82

1.8.10. In addition, the following work has been undertaken. Creation of a mini-Zoo at the Lady Hydary Park at Shillong and a Deer Park at Umiam Lake has been undertaken. Improvement of the Botanical Garden at Shillong by addition of an orchidarium and identification of the species in the

garden would be completed. An Orchid Sanctuary in the Jaintia Hills and a Pitcher Plant Sanctuary in Garo Hills are being established and a site for wild life sanctuary is being selected. For forest protection, 44 employees have been recruited and 5 vehicles and some firearms have been purchased. 32 different forest personnels have been deputed for training at Dehra Dun and another 3 subordinate staff sent for training in improved logging. Under the scheme for intensification of management, 20 subordinate staffs have been recruited and construction of buildings at Daina Dubi Range undertaken. The District Councils have been provided with 66 additional staffs to implement their programmes. Under research, the existing projects were continued and a new project to determine the yield and the economics of resin yield of *Pinus Khasia* was started. Ring wells and gravity water supply schemes have been undertaken for improving the amenities for forest staff.

### **Objectives and approach to the Fifth Plan :**

1.8.11. It follows from the preceding paragraphs that the objective of forest development should be—

1. to maintain adequate forest cover to ensure stable water regimes and prevent soil erosion and maintain stable climatic conditions ;

2. to improve the existing forests and extend the forest area for productive and regulated forestry to enable progressive yields ;

3. to protect the forests from wanton destruction and preserve the wild life from annihilations ; and

4. to create recreational facilities for the people in general and for the forest dwellers in particular.

1.8.12. In order to proceed towards these objectives it is necessary to—

1. improve the growing stock in quantity as well as in quality by adequate silvicultural operations ;

2. replace poor stands by more productive man-made forests ;

3. open up inaccessible forests by improving road communications ;

4. improve the harvesting techniques by improved methods of felling, logging and conversion to reduce waste ;

5. utilize the portions of trees now left to rot for other suitable purposes ;

6. take adequate protections against forests fires and illegal activities ;

7. to protect the wild life resources and rare plant species from destruction to ensure their preservation for posterity, etc. ; and

8. to extend the area under forests by reservation especially of river-catchment area.

1.8.13. It has been estimated that 76 thousand hectares of forests are cleared annually for shifting agriculture (Shag). A firm estimate will be possible only when the surveys in this regard under forests and soil conservation programmes have been completed. Regulation of Shag particularly in the river catchment areas is of immediate priority and such lands will have to be acquired and reforested. By virtue of the magnitude of the problems, the tasks will have to be phased out for more than one five year plans. In this regard, the District Councils could play an indispensable role to enable extension of regulated forest area. As acquisition and direct afforestation by Government would involve huge funds and necessarily take time, the village communities would be encouraged to raise plantation of quick growing species in abandoned shags to meet local demands as also of industrial raw material. Improvement of environmental condition and control pollution would be also possible by creating green belts and forest parks. The road side lands will be taken up for planting suitable species which apart from their economic value would also have recreational and beautification value.

14. Forests now contribute only about 10 per cent of the State revenues of Meghalaya. This is not line with the potential of the forests in the State. Necessary steps for better and more scientific management would have to be undertaken. Another step would be to adopt a more dynamic policy to replace the present conservation oriented practices. The poor and understocked forests would be gradually replaced with more economic species as part of a phased programme. In the fifth plan some of the sal forests in Garo Hills and the pine

belts of Khasi and Jaintia Hills would be brought under the programme on priority basis. A high priority will have to be given to construction of roads for opening up inaccessible forests as part of the programme for meeting current demands and to enable development programmes in these areas as well as to improve the revenues. Improved methods of logging and exploitation would be adopted increasingly to improve the returns per unit. Development and improvement of the yield of minor produce would be undertaken.

1·8·14. Measures to intensify protection against fires, poaching, encroachment and illegal operations would be undertaken. Preservation of the wild life and fish would be undertaken by creating sanctuaries and increasing the strength of protection squad.

1·8·15. In order to enable forestry on sound and scientific lines, it is necessary to carry out survey and prepare an inventory of forest resources in the State. Work in this direction has been started for the Garo Hills but separate working plan divisions would need to be created in order that detailed work plans for each division can be formulated. The Research Programme needs substantial expansion as a support to expansion and technique improvement as well as to determine suitability of species to different conditions. In order to meet the requirement of personnel for the programmes in the Fifth and succeeding plans, personnel training is of utmost importance. A larger number of qualified youths would be sent to the Forest Training College to meet the requirement in respect of higher level personnels. For the subordinate personnel, a separate Training Institute would have to be established for forest and soil conservation staff as the Assam Forest School would no longer be useful to Meghalaya due to the change in the medium of instruction and due to its limited capacity.

1·8·16. If forestry is to play its due role in building the economy of the State, all available resources will have to be tapped to finance the development programmes. Lack of funds from normal sources had greatly handicapped the programmes in the earlier plans. It would, therefore, be necessary to set up a Forest Corporation so that the investment can be augmented by tapping institutional finance. Through the Corporation's resources, substantial area now under different forms of ownership could be acquired and brought under forest programmes. Large-sized plantations could become possible through institutional finance and these could be linked with establishment of forest-based industries through the Corporation.

### Proposal for the Fifth Plan

1·8·17. As stated earlier, the outlay in the Fourth Plan was Rs. 88 lakhs. Against this outlay, the expenditure is expected to be Rs. 99 lakhs. Over the Fourth Plan period, the tempo of expenditure has stepped up from Rs. 7·41 lakhs in the first year to Rs. 23 00 lakhs in the final year of the plan. All the targets of work also would be achieved by the end of the plan. These facts suggest the inherent capacity in this sector to implement the programmes and to mobilize the necessary strength to match the enlarged programmes. The programmes drawn up for the fifth plan would entail an outlay of Rs. 513 lakhs which is over five times the fourth plan expenditure. At first sight this would look too ambitious. But if the recognised problems of the State and the need to fall in line with the pattern of the programmes in other States as well as its potential are borne in mind, the step up of the outlay is rather modest. In this outlay, a new programme of Rs. 200 lakhs for acquisition of land in catchment areas, a scheme for Rs. 60 lakhs for wild life management and conservation and an amount of Rs. 50 lakhs for the State Forest Corporation have been provided for. These programmes have to be taken up as part of a more dynamic policy that the State will have to adopt from now on and without such programme no real break through can be made in this sector. The schemes are described below.

#### 1. Raising of plantation of species of Economic and Industrial importance

1·8·18. The annual yield of commercial timber is only 0·1 cu. m. per hectare as against 0·5 cu.m. for India as a whole and the world average of 2·00 cu.m. It is an established fact that man-made forests (plantations) give much more annual increment than natural forests. It is, therefore, proposed to increase the area under plantations to cater the ever increasing demand for timber and industrial raw materials which cannot be met from the present low yielding forests. New techniques would be adopted for utilisation of timber, which can be sliced or peeled or pulped for further processing. It is proposed to replace the poorly stocked hard wood forests by more fast growing and softer timbers. Teak is a species which fills in this role perfectly as it also is suitable to climatic conditions prevailing in the State. Development of other species such as Titasopa, Hollock, Poma and Bogipoma which grow well in the sub-montane forests of the State will be expanded.

1·8·19. The Fourth Plan target under this scheme to raise 1000 hectares of plantation will be achieved. The target for the fifth plan is fixed at 3000 hectares of new plantations. The cost of raising the plantations is based on the actual expenditure incurred on such works in the past. This works out at Rs.1000 per hectare for raising a plantation including tending upto the fourth year. The total cost in the fifth plan comes to Rs.30 lakhs.

1·8·20 Under the scheme additional staff of 2 Forest Rangers, 6 Foresters and 12 forest guards would be required besides generating employment potential for 0·75 lakhs mandays to the local people.

1·8·21. The additional creation of plantation over 2000 hectares will increase yield from the existing forests in terms of timber and firewood from the areas cleared for new plantations. Taking an average yield from clearing one hectare of forests as 23 cm timber and 10 cm. stacked volume of firewood, the additional yield in the Fifth Plan would be 40,000 cm of timber and 20,000 cm of fuel wood. This would give an additional revenue of Rs.8-10 lakhs at current rates.

## 2. Farm Forestry on Private Lands

1·8·22. The scheme envisages creating plantation of tree species for supply of fuel woods, agricultural implements and small timber for consumption in the villages. This is a new scheme for this State. It is proposed to raise the plantations in land owned by the village communities by providing necessary planting materials and subsidising the cost of various operations. The work will have to be done mostly through the District Councils and village agencies. A sum of Rs.6·00 lakhs is earmarked for this purpose for raising 750 hectares of plantations.

1·8·23. A provision will be made for awarding cash prizes for best village forests in each block as an incentive and also to promote a healthy competition among the villagers. As the work involves frequent contact with the villages, a small cell will be created specially to implement this scheme. The cell would comprise of 3 Forest Rangers with 15 Forest Guards. It is expected that 1 lakh mandays of off-season labour time would be utilized under the scheme.

### 3. Communication

1·8·23. Some of the Forest Reserves of the State are still lying untapped for want of communication facilities. The Narpuh and Saipung Reserved Forests in the Jaintia Hills which account for nearly half of the total area under Reserved Forests of the State are not yet accessible for scientific exploitation.

1·8·24. The State has at present only 168·06 km. of forest roads for 700 sq. km. of Reserved Forests. The greater part of the length provides only the approach upto the reserve forest boundaries. At least 300 km. of roads are essential to open up the Reserved Forests alone for ensuring proper management and exploitation. During the Fifth Plan period, it is therefore, proposed to construct 100 km. of new roads besides construction of bridges and culverts on 30 kilometres of existing roads. An amount of Rs.25 lakhs is required in this regard in the Fifth Plan. For the purpose of comparison, an expenditure in the Fourth Plan was Rs.9·45 lakhs for construction of 56 km. of new roads and improvement of the existing roads.

1·8·25. By their very nature, forest roads are labour intensive requiring only earth cutting and construction of minor bridges and culverts. The scheme will generate employment for local people to the extent of 4·75 lakhs mandays of unskilled labour and 0·50 lakh mandays of skilled labour.

### 4. Improved method of exploitation and logging techniques

1·8·26. This is a composite scheme with the main object of improvement of the exploitation standards of the forests, installation of integrated conversion centres and training on improved practices of exploitation of forest produce.

1·8·27. Training of some staff has already been initiated during the Fourth Plan period. This programme will continue in the Fifth Plan period so that the trained staff can be utilised for setting up of an integrated conversion centre (Saw mill) with treatment plants as well as for imparting training to the forest contractors and labour in varied forest operations. In view of a great demand for electric transmission posts in the State, it is proposed to set up a treatment plant for Sal posts which would be available from the old plantations. An amount of Rs.5·00 lakhs is earmarked for the purpose.



### 5. Consolidation of Forests Survey and Demarcation

1·8·28. The scheme aims at more effective protection of Reserved Forests against illegal operations, poachers and encroachers by demarcating well-defined boundaries of the forests. For this purpose, the boundaries of most of the Reserved Forests in the State have to be freshly surveyed and properly demarcated. Under the scheme, arrangement will also be made for mutual exchange of forests low lying areas fit for agriculture and the adjacent private owned hilly terrains suitable for forests. Such areas are being surveyed, identified and demarcated under the scheme. The District Councils also would be helped in getting the areas under reservation proposals surveyed and properly demarcated.

1·8·29. During the Fourth Plan an amount of Rs. 6·78 lakhs was spent to resurvey and demarcate 1470 km. of forest reserve boundaries and fixing 3883 new boundary pillars. It is proposed to continue the work during the Fifth Plan period with an allocation of Rs. 8·00 lakhs.

1·8·30. Three additional Forest Surveyors will be entertained for this work. The scheme will create employment for 0·30 lakhs mandays of skilled and 1·00 lakh mandays unskilled labour.

### 6. Forest Protection

1·8·31. Forest are exposed to two main sources of danger (i) illegal operation of forest produce, felling, conversion and extraction, encroachment for using forest land for non-forestry purposes, grazing and illegal shooting of wild animals and birds and (ii) fires-both intentional and accidental.

1·8·32. During the Fourth Plan some protection squads have been provided in each division for assisting the normal forest staff in combating the danger at source. These squads have been able to do very good work and some of the forests areas are now assured of protection. During the Fifth Plan, period it is proposed to strengthen the squads by providing more equipments and for covering more forest areas under the scheme.

1·8·33. No separate "forest fire control" unit yet exists in this State. Except for the forest plantations in the pre-establishment stage no fire protection measures could be taken

in any area. The fire hazard is most disastrous in young plantations and may wipe out the seedlings. In high forests, fires cause damage to the growing stock and set back to natural regeneration and normal growth of timber resulting in reduced rates of annual increment. The problem is very serious in the pine forests specially those under resin tapping.

1·8·34. It is therefore, proposed to set up a fire detection and fire fighting organisation under each division. The set up will have to be provided with adequate equipment for quick detection of fire, relay of the information and for actual fighting and suppression of the fire. The organisation will also need to have quick transport. For all these protection schemes, an amount of Rs.8·00 lakhs is required in the Fifth Plan as against Rs.7·19 lakhs in the Fourth Plan.

### 7. Forest Working Plan

1·8·35. Working plans are essential for scientific management and planning for development and optimum utilisation of various forest produce. During the Fourth Plan, collection of basic data on growing stock in the Reserved Forest in Garo Hills and Khasi and Jaintia Hills is expected to be completed. The compilation of the data collected and preparation of detailed work plans will be taken up in the Fifth Plan on priority basis.

1·8·36. At present no data are available with regard to growing stock outside the Reserved Forests. The District Councils are at present managing these forests without any plan. It is, therefore, proposed that some of the major forest areas of District Councils will be taken up for a detailed inventory so that at least some broad guide lines for working these forests can be laid down pending preparation of detail working plan.

1·8·37. The staff recruited during the Fourth Plan will carry out this scheme but some amounts would be necessary on account of equipments for field work. The amount required is estimated at Rs.4·00 lakhs for the Fifth Plan.

### 8. Intensification of Management

1·8·38. The increase in yield from the forestry is dependent to a very great extent on the intensity of management. Intensive management entails frequent and effective supervision at different levels. Due to the topography, the effectiveness of the existing Divisional and Range organisations is limited. It is

therefore, proposed that a new Division with headquarter at Jowai covering the Jaintia Hills District will be opened in the first year of the Fifth Plan. The existing Ranges and Beats jurisdiction in the existing divisions will also be reorganised for more effective supervision of work. This would require more officers and subordinate staff and accommodation. It is also necessary to create the post of the Chief Conservator of Forests in this State in view of the manifold increase in developmental responsibility. The expenditure envisaged under this scheme is Rs.18·00 lakhs.

### 9. Forest Research

1·8·39. Forestry Research in this State is in an infant stage. A full-fledged Research Organisation is yet to be set up to meet the industrial, social and environmental obligations put on forests as outlined in the national forest policy. The input-output relationship of different plantation can be determined only on the basis of studies conducted. Likewise, research would be necessary to find the suitability of new species to different climatic zones, of seed improvement and for determining optimum conditions and inputs for different zones in the State.

1·8·40. It is therefore, proposed to create a Research Division with 3 Ranges for 3 different altitudinal zones of the State. The outlay required to set up this division works out at Rs.10·00 lakhs on account of requirement of trained personnel, purchase of instruments and equipments for the laboratory and for field experiments.

### 10. Forest Publicity and Public Relation Wing

1.8.41 The attitude of the people has to properly moulded in order that the Fifth Plan of the order envisaged can succeed. Their co-operation has to be won to enable aquisition of lands required and the meaning of protection of the flora and fauna has to be explained and the public enthusiasm invoked in programmes of farm forestry, etc. This is possible only through intensive publicity media like cinema, slides, lectures, etc.

1.8.42 It is, therefore, propose to organise a Public Relations Wing within the State Forest Department. The equipment comprising one generator, one projector, one camera, vehicle, etc., as well as the necessary staff would

cost about Rs.1.50 lakh. Under the scheme, short documentary films on forests and Soil Conservation would be produced and it is proposed to make up-to-date and publish the Book on "Flora of the State" which has already been compiled by the ERBSI.

1.8.43. The total requirement on account of the scheme works out at Rs.5.00 lakhs only.

### **11. Establishment of Statistical Unit**

1.8.44. Adequate information on forests and forestry activities in standardised and retrievable form is not properly organized. The normal staff are not trained for collection and processing of the type of data required for formulation of the plan schemes and projects evaluation and economic studies, feasibility studies for forest based industrial projects, etc. As a result the accuracy of the present statistics is not very high. It is, therefore, proposed to organize a statistical unit in the State Forest Department with adequately trained personnel. Each division will also be provided with trained statistical assistants for collection and compilation of primary data.

1.8.45 During the Fifth Plan the expenditure required on account of this scheme is Rs.5.00 lakhs only.

### **12. Economic Evaluation Unit**

1.8.45. A scheme for programme evaluation is to be taken up in the Fifth Plan. All proposal for development planning activities would be unevaluated to enable sound decisions. The past achievements also would be evaluated so that future plans can be formulated with required modification for increasing their efficiency. Likewise, the scheme in progress also will be scrutinised periodically so that corrective measures can be taken to achieve the physical targets.

1.8.46 The proposed organisation would be staffed with competent technical and professional personnel. The amount required for the organisation works out at Rs.3.00 lakhs only.

### 13. Forest Training

1.8.47 Inadequacy of trained staff has been the main handicap in efficient implementation of the plan programme. Since forestry is a technical subject, the staff engaged at all levels should be trained. The training programme is envisaged in three levels:

- (i) In order to obtain full benefit of the advancement in forestry in advanced countries it is considered essential to depute senior officers to countries abroad for advance and specialised training in different branches of forestry. It is proposed to depute two Officers during the Fifth Plan period for training for suitable length of time.
- (ii) The large expansion of forestry activities during the Fifth Plan will need a large number of trained personnel in supervisory capacities. It is proposed to depute trainees to I. F. C. and N. F. R. C. for the required training.
- (iii) The lower subordinates like foresters and forest guards will have to be trained in a training centre of the region.

1.8.48. The State has no training facilities of its own far and has to depend on Assam Forest School for training facilities. The capacity of the above institute is limited and not more than 2 to 3 seats are available to the State as against the present requirement of 10—15 seats. It is, therefore, proposed to establish a forest school in Meghalaya with capacity for accommodating 25 trainees annually to meet the requirement of both forests and soil conservation programmes.

1.8.49. An amount of Rs.8 lakhs is required for deputation of senior and supervisory staff and another Rs.10 lakhs for the Training Institute giving a total of Rs.18 lakhs for the scheme.

### 14. Environmental forestry

1.8.50. Creation of urban forests offers recreational facilities to the population. Forest parks and green belts with adequate recreational amenities in and around the

major town are proposed to be created under this scheme. It is also proposed to take up avenue planting work on major high ways of the State. The existing Botanical Garden and Park at Shillong will also be developed further for providing both recreational facilities and some picnic spots and adequate facilities including minimum sanitary need.

1·8·51 The above work will need setting up of a cell to look after this type of new responsibilities on the Department. An outlay of Rs.5.00 lakhs is required for this purpose.

### 15. Wild Life Management and Nature Conservation

1·8·52 The State has some rare species of flora and fauna. Yet nothing much has been done for their protection and management. There is no organisational set up for conservation and scientific management of various wild life species and their habitat. A scheme will be taken up in this direction. A wild life division will be created with adequate staff including an extension wing for creating wild life consciousness among the people by wild publicity about the need of their protection. The aim is:—

- (i) to establish a wild life sanctuary in the State and to develop the same as a tourist attraction. Tentatively an area of about 200 sq. km. in the Balpakram area of East Garo Hills adjoining the South West corner of the Nongstoin subdivision would be demarcated for the purpose. This would need acquisition of some private and community forests;
- (ii) to create a miniature zoological park at the Lady Hydari Park at Shillong; and
- (iii) to establish a Deer Park at Umiam Lake.

1·8·53 The expenditure envisaged on the above items of work is Rs.55·00 lakhs.

1·8·54 Some very rare plants like pitcher plants are available in parts of this State. A large number of attractive and beautiful orchids also grow in this State. But because of inadequate protection many of them are rapidly facing extinction. It is, therefore, proposed to create an orchid and rare flora sanctuary in selected areas where cultivation

and multiplication of the rare species also will be undertaken. This scheme would cost Rs.5.00 lakhs.

1.8.55 The total allocation proposed under wild life management scheme is Rs.60 lakhs.

### 16. Development of Forest Pastures

1.8.56 A large number of village cattle and some professional graziers cattle also depend on the forest areas, both reserved and unclassed, for their grazing. This poses grave problems for raising successful plantations. While measures to discourage grazing in the Reserved Forests areas would continue, it is also proposed to grow some fodder and pasture grasses in the plantation areas as a measure to increase fodder supply from the Forests and earn revenue in a regulated manner as well as check unauthorised grazing in the forest areas. Fodder could also be grown in seedlines and in young plantation to keep the weeds down. Cattle owners would be allowed to take the grass at a nominal price in case of very young plantations. In plantations of age of four years and more where the forest crop is expected to be of height beyond the normal browsing height some controlled grazing may be allowed. This will, in addition to meeting the need for fodder, reduce the fire hazards. Fencing materials will need to be purchased to introduce rotational grazing.

1.8.57. A provision of Rs.2.00 lakhs only is proposed for this scheme.

### 17. Development of Minor Forest produce

1.8.58. Minor forest produce of the State includes among others medicinal plants like Ipecae, Rowalfia, Lemon grass and resin. Of these Ipecae, Rowalfia and Lemon grass are found to grow successfully in this State. At present our Ipecae cultivation is done in a traditional way. It is proposed to extend the cultivation in a more scientific method by installing a sprinkler irrigation system and more permanent type collapsible nursery shades.

1.8.59. The resin tapping will be extended to all approachable pine forests. Cultivation of lemon grass and Rowalfia will also be extended. This will need employment of some

additional forest trained personnel. One Assistant Conservator with 2 Foresters and 8 Forest Guards will have to be created under this schemes .

An outlay of Rs.10.00 lakhs is required for this purpose.

### **18. Buildings**

1.8.60. The intensification of management and expansion of the programme will necessitate the personnel to work at different centres. By the nature of the work and the climatic accommodation facilities will have to be provided. A large number of buildings will be necessary.

1.8.61. The cost of new buildings to be constructed works out at Rs.14 lakhs. This scheme is expected to generate employment potentiality for 0.45 lakhs mandays of skilled persons like carpenters, masons, etc., and 0.75 lakhs mandays of unskilled persons besides a few educated unemployed as contractors and material suppliers.

### **19. Amenities for Forest Staff and Labour**

1.8.62. Labour is employed every year in remote forest areas for cultural operations, construction and repair of roads, bridges and buildings, etc., both by Government as well as contractors. Minimum amenities to forest labour as well as to the forest staff posted in remote places are proposed to be provided by way of medical and educational facilities and drinking water supply. An allocation of Rs.2 lakhs is proposed for this purpose.

### **20. State Forest Corporation**

1.8.63. The need for organising the State Forest Corporation has already been outlined in a previous chapter. Large scale and integrated forestry development will be possible only if large inputs are ploughed into this sector. Due to limitations of budgetary resources, investments will have to come increasingly by utilising institutional



finances from A.R.C., L.I.C., the Nationalised Banks, etc. Such institutional finances can be availed by organising a State Forest Corporation to undertake large scale forest plantations of species including medicinal plants and other Minor Forest Produce which are of economic importance. Exploitation of forest can also be taken up by the Corporation.

1.8.64. An outlay of Rs.45.00 lakhs is proposed as share capital contribution by Government for establishment of the Corporation. An additional amount of Rs.5.00 lakhs has been earmarked for establishment of a project formulation cell with one Conservator of Forests and necessary office staff. Thus the total amount proposed under this schemes is Rs.50.00 lakhs.

## **21. Miscellaneous Schemes**

### **(a) Strengthening of District Council Staff**

1.8.65. The District Councils are directly responsible for managing all the forest areas except the Reserve Forests. They are also responsible for all developmental activities in these forests. The District Councils' own resources are so poor that they are not in a position to engage the required number of supervisory staff for efficient implementation of the plan schemes. To enable the District Councils to entertain the required number of supervisory as well as the other categories of staff required for actual implementation of the work, it is proposed to augment their resources by providing grants-in-aid. An amount of Rs.15.00 lakhs is proposed for this purpose.

### **(b) Stores vehicles and other implements**

1.8.66. For effective supervision of the work, the mobility of the supervisory staff would be improved by providing transport facilities.

1.8.67. It is also proposed to adopt mechanisation of operations by use of tractor drawn implements for soil working in nursery and planting sites in suitable areas, use of mechanical weeders like Brush cutters, small power saws for site clearance operations, use of mechanical augers for drilling, fencing, pots, holes, etc. Small trucks or tractor-trailer units are also essential for quick transport of planting material in planting seasons and for carriage of other constructional materials for roads, buildings, etc.

1.8.68. To meet these needs a provision of Rs.10 lakhs is made in the Fifth Plan.

**(c) Acquisition of Forest land**

1.8.69. The consequences of shifting agricultural practices have been described earlier. The State owned Reserved Forests on the other hand are a too inadequate to fulfil the requirement of the area to be kept under forest cover for a hill State like Meghalaya.

1.8.70. Some of the privately owned forests forms the upper catchments of the major rivers of the State and it is apprehended that denudation of the forest cover in these areas will adversely affect the water regime of these rivers and streams and would create water scarcities in towns and villages.

1.8.71. It is therefore, essential to acquire the rights over such forests in the major rivers catchments either on payment of compensation or direct purchase and constitute them as Reserved Forests. During the Fifth Plan, 200 square kilometre of land will be acquired and the amount required for the purpose is Rs.200 lakhs.

**Centrally Sponsored schemes**

**1) Plantation of quick growing species**

1.8.72. It has been anticipated that there will be a rapid rise in demand of raw material for the pulp and paper industry in the country. Considering that the raw materials for the pulp and paper industry is of national importance transcending the territorial boundaries of the individual States, a national approach to this problem has to be taken. As such this has been included as one of the Centrally sponsored schemes

1.8.73. With the above objective, it is necessary to produce pulp wood from suitable quick growing species to feed the existing nearest mills in the country as well as to enable new industry to be set up in the State itself.

1.8.74. The suitable species of pulp wood are Eucalyptus, bamboos, pines, paper mulberry, poplar etc., In this State, bamboos and pines exist in natural growth. Conscious effort has to be made to expand and develop these resources. Babosom

groves naturally have to be tended and no new plantation is envisaged. But pine areas are to be extended by a large scale plantations.

1.8.75. For the above purpose, an outlay of Rs.15 lakhs is proposed during the Fifth Five Year Plan with the target of raising 2000 hectares of plantation. This will be in addition to about 13,500 hectares of plantation of pine proposed to be raised by a Forest Corporation during the Fifth Five Year Plan.

#### **(2) State Forest Resources Survey**

1.8.76. The objective of this scheme is to conduct survey of forest produce of industrial value and to prepare necessary management plans of operation of such produces to help the growth of industries. The survey, is, therefore, unlike the normal Working Plan survey, industry oriented.

1.8.77. The bamboo resources of this State both in State Reserved Forests or District Council Forests need to be surveyed for assessment of availability of these materials for starting a pulp and paper industry in the State. This will form a major work in the fifth plan.

1.8.78. For the above, a State Forest Reserce Survey Division has to be created. An outlay of Rs.8 lakhs is therefore, proposed for the purpose during the Fifth Five Year Plan to survey about 5,000 sq. km. of forests.

#### **(3) Development of National Part, Sanctuaries and Natural Resources**

1.8.79. No scheme is proposed as there is no national park or sanctuary in this State as yet to be taken up for development.

#### **(4) Central Forest Credit Corporation**

1.8.80. As Central support for the State Forest Corporation will be necessary, it is proposed to have a Central Forest Credit Corporation to take up responsibility for providing long term finances for plantation programme in the Forestry sector.

1.8.81. It has been tentatively estimated that the State would require Rs.50 lakhs in the Fifth Five Year Plan for the Corporation. Thus the total outlay on the schemes in the Centrally sponsored sector comes to Rs.73 lakhs.

**FOREST DEPARTMENT**  
**STATE PLANS SCHEMES**

**FIFTH FIVE YEAR PLAN**  
**FOREST DEPARTMENT, MEGHALAYA**  
**1974-1979**

**(a) State Plan Schemes**

Amounts in lakhs.  
 Areas in 0.000 H.  
 Man-power  $\frac{\text{n lakh.}}{\text{Mandays.}}$

Serial No.	Name of schemes	Fourth Plan		Fifth Plan proposal		Employment potentiality	
		Outlay	Physical target	Outlay in lakhs	Physical	Skilled	Unskilled
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Economical plantations for industrial and commercial use.	12.29	C=923 hect. tending=2304 hect.	30.00	3.00	...	6.75
2	Farm Forestry ... ..	1.25	C=156 hect. tending=116 hect.	6.00	0.75	...	1.00
3	Communication ... ..	9.45	Construction of 56 km. Maintenance of 54 km. constructing 12 numbers of minor bridges.	25.00	100 km.	0.50	4.75
4	Improved Logging ... ..	0.32	3 Nos. deputed for training.	5.00	..	...	...
5	Consolidation of Forests ... ..	6.78	Demarcation=399 sq. km. Resurvey=1470 km.	8.00	Resurvey of Reserved Forests Boundary and demarcation.	0.30	1.00
6	Forest Protection ... ..	7.19	Staff=44 No. Vehicles=5 Nos.	8.00	Staff and Vehicle.	...	...
7	Forest Working plans ... ..	3.00	Field work for data collection.	4.00	Completion of Garo Hills Working Plan and Data collection of District Council Forests.	...	...

8	Intensification of management	...	2.72	Staff=20 Nos. Building.	1 No.	18.00	Staff	...	...	...	...
9	Forest Research	...	1.53	—	—	19.00	—	...	...	...	...
10	Forest Publicity	...	1.18	1 No. projector including purchased of films. 1 No. staff.	—	5.00	—	...	...	...	...
11	Establishment of Statistical Unit	...	2.64	—	—	5.00	—	...	...	...	...
12	Establishment of Economic and Evaluation Unit.	...	...	—	—	3.00	—	...	...	...	...
13	Training of Staff	...	2.75	32 Nos.	...	18.00	Establishment of Training School and training of staff.	...	...	...	...
14	Environmental Forestry	...	...	—	—	5.00	Creation of Green Blocks in 3 towns and Avenue Plantating.	...	...	...	...
15	Wild Life Management and Nature Conservation.	...	3.00	2 Nos. Parks. 1 No. Orchid sanctuary and pitcher plant sanctuary.	1 No.	60.00	Creation of one sanctuary and improvement of Zoological and Botanical Parks.	...	...	...	...
16	Development of Forest Pastures	...	...	—	—	2.00	—	...	...	...	...
17	Development of minor Forest Produce	...	4.00	C=3.2 hect. Nursery=4454 sq. m.	—	10.00	15 hectares	...	...	...	...
18	Buildings	...	9.33	82 Nos. expected to be completed.	—	14.00	100 Nos.	...	...	0.45	0.75

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
19	Amenities for forest staff and labour.	0050	...	2.00		...	...
20	State Forest Corporation ...	...		50.00		...	...
21	Miscellaneous scheme—						
	(a) Strengthening of District Council Staff.	11.12	66 Nos.	15.00	Staff	...	...
	(b) Stores and vehicles ...	1.25	1 Vehicle and other Stores	10.00	6 Vehicles and other Stores.	...	...
	(c) Acquisition of land...	9.44	0.020 hect.	200.00	20.00	...	...
Total State Scheme ...				513.00			

#### CENTRALLY SPONSORED SCHEMES

1	Plantation of quick Growing Species.	1.58	C=174 hect. M=812 "	15.00		...	2.75
	(under State Plan)						
2	State Forest Resources Survey ...	1.50	600 sq. M.	8.00		...	.50
3	Development of National Park, sanctuaries and Natural reserves.					...	...
4	Central Forest Credit Corporation			50.00		...	...
Total Centrally Sponsored Schemes...				73.00		...	...

## ANNEXURE I

STATE : MEGHALAYA

## PHYSICAL TARGETS AND ACHIEVEMENTS

## FOURTH FIVE YEAR PLAN

## Forests

Serial No.	Item	Base level 1968-69	Unit	Targets for the Fourth Plan	Achievements in Fourth Plan			Total 6+7+8
					Actual 1969-72	Anticipated 1972-73	1973-74 Anticipated	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	Plantations of Quick growing species.	060	000 ha	0.174	042	080	052	As column 5
2	Economic Plantations for industrial and commercial uses.	138	000 ha	0.923	419	223	281	„
3	Farm Forestry cum-Fuelwood Plantations.	Nil	000 ha	0.236	160	036	040	„
4	Communication	N. A.	000Kms.	0.060	041	009	010	„

N. A.—Indicates figs prior to creation of the State were amalgamated, with, Assam, and, separate figs. not available.



## ANNEXURE II

STATE : MEGHALAYA

## PHYSICAL TARGETS FIFTH FIVE YEAR PLAN

<b>Forests</b>				
Serial No.	Items	Unit	Base level 1973-74	Target for the Fifth Plan
(1)	(2)	(3)	(4)	(5)
1	Plantation of quick growing species.	000 ha	232	2.000
2	Economic plantations for industrial and commercial uses.	000 ha	1.461	3.000
3	Farm Forestry-cum-Fuelwood plantations.	000 ha	236	0.750
4	Communications ...	000 Kms.	060	0.100
5	Other schemes ...	000 ha	...	0.015

## 1.9. FISHERIES

1.9.1. In common with other eastern States, Meghalaya comprises a population having fish as a regular diet. A variety of fish from the tiny minnows to the large sized cat-fishes and carps are consumed in one form or another. Fish culture in the State has no social prejudice and has potential in its numerous rivers and streams and beels and to some extent, in ponds and tanks.

1.9.2. Fisheries as a source of protein rich food need all rounds development and it is to be emphasized that natural fisheries in the State have so far been inadequately exploited. Though there is scope for fishery development in the State, the bulk supply of fish comes from outside.

**Review of Progress under the Fourth Plan**

1.9.3. The Fourth Five Year Plan outlay as approved by the Planning Commission was Rs. 20 lakhs. The expenditure under the Fourth Plan comes to Rs. 19 lakhs. The progress of expenditure during the first three years was rather slow which was mainly due to the fact that there was acute shortage of fishery trained personnel in the initial stage of the State. This shortage has been made up to a great extent during the 1973-74.

**Objectives, Target and Strategy for the Fifth Plan**

1.9.4. To enhance fish production in the State, supply of fish seeds to both departmental tanks and private tanks is a necessity. It is, therefore, proposed to construct more demonstration-cum-fish-seed farms and to encourage the public to take up pisciculture and culture all available water areas in the State for more fish production, etc. The Fifth Five Year Plan, therefore, aims at the following:

- (1) accelerating the programme on the lines initiated earlier ;
- (2) increasing production of fish seeds ;
- (3) stepping up the drive to encourage taking up of pisciculture by extending incentives ;
- (4) training of personnel in advanced technology of pisciculture ;

- (5) protection of natural fisheries like rivers, streams, etc., from indiscriminate destruction by explosives, etc. ;
- (6) research in high altitude fishes ; and
- (7) creating facilities for tourist attraction.

1.9.5. To anticipated expenditure during 1973-74, the base year of the Fifth Plan is Rs. 8 lakhs. For the Fifth Five Year Plan, the requirement of the programme works out at Rs. 58 lakhs. The schemes proposed are described in the following paragraphs.

## PROGRAMMES FOR THE FIFTH FIVE YEAR PLAN

### 1 Developmental Fish Seed Farming

1.9.6. By the end of Fourth Plan, it is anticipated that at least one Fish Seed Farm would be set up in each district. In order to cater to the demands more effectively, each subdivision will be provided with one Fish Seed Farm in the Fifth Plan. It is also proposed to start one Fish Farm for Induced Breeding Centre of the major carps. An outlay of Rs. 10.00 lakhs under these schemes is required in the Fifth Five Year Plan.

### 2. Assistance to Pisciculturists, etc.

1.9.7. With a view to improving the economic condition of the people, a scheme has been drawn up to encourage the public for taking up pisciculture. Under the scheme, Government would extend financial assistance in the shape of subsidy to the extent of 50 per cent of the cost of construction of the project or Rs. 750 per acre of water area which ever is less subject to the maximum of Rs. 1,500. The remaining amount is to be raised by the beneficiary from his own or other sources. The scheme is already in operation, the requirement in the Fifth Plan being for expansion work. A projection of Rs. 12.00 lakhs has been made for the Fifth Five Year Plan. According to calculations, in the first year of the Fifth Plan alone a water area to the extent of 960 hectares would be covered under the scheme.

### 3. Research, Education and Training

1.9.8. The scheme aims at training the personnel in modern fishery technology at the different institutes available in the country. Apart from this, it is also considered necessary to undertake research on high altitude fishes with a view to studying their adaptability to different climatic conditions of the State. For this purpose, a Research Unit set up at Mawpun near Umiyam Hydel Project needs to be strengthened. Work regarding construction of stocking tanks, nurseries and building has been taken up and would be completed in the Fifth Plan. So far, 6 Fishery Officers, 2 Assistant Fishery Officers and 20 Fishery Demonstrators have been deputed for training. One stipendiary for undergoing training at the University of Agricultural Sciences, Bangalore in the four-year-course was sent during 1972-73.

1.9.9. During the Fifth Plan period it is proposed that each Subdivision be provided with one Fishery Officer and each Development Block be provided with one Fishery Demonstrator. Apart from this, it is also proposed that each Fish Farm be provided with one Assistant Fishery Officer. The outlay required on these accounts of works out at Rs. 7.00 lakhs for the Fifth Plan.

### 4. Conservation and Protection of River Fisheries and Natural Fisheries, etc.

1.9.10. Under the scheme an amount of Rs.9.00 lakhs is proposed. The scheme aims at stopping the indiscriminate killing of fishes which is prevalent in the hills by enforcing the provision of the Fishery Act. Enforcement staff which consists of the Fishery Officers, the Fishery Demonstrators and River Guards have already been appointed. To strengthen the enforcement, more staff of the rank of Fishery Officers, Demonstrators and River Guards have further to be appointed.

1.9.11. Under the scheme some Flexible Sausage Dams have already been constructed where a number of carps have been introduced and found successful. More such dams would be constructed in suitable streams. In this connection survey works in some selected streams are already in progress to identify suitable reaches in different streams.

### 5. Development of Reservoir

1.9.12. To augment fish production in the State, it is proposed to develop the Umiyam and the Umtrew Reservoirs now under the jurisdiction of the District Council. These reservoirs

are being taken over by Government. Under the scheme, construction of buildings, creation of nursery areas, recruitment of staff and purchase of fishing crafts and tackles, etc. would be undertaken. An outlay of Rs.6.00 lakhs is required during the Fifth Plan period.

#### **7. Marketing and Transport of Fish and Trout Culture**

1.9.13. To meet the increasing demand of fish in the State, import fish from outside the State would be undertaken by improving the transport and storage facilities.

1.9.14. It is also proposed to take up culture for propagating Trout in the rivers of the State found suitable. In this connection a follow up action of the recommendations of Shri G. M. Mallick, a fishery expert, is being taken up. Acquisition of land for Trout Hatchery and training of the staff in Kashmir will be taken up.

1.9.15. For implementing these schemes an amount of Rs.4.00 lakhs is required during the Fifth Plan.

#### **8. Supervision and administration**

1.9.16. In each district there is one Fishery Officer and some demonstrators for the development works. During the Fifth Plan it is proposed that each district be provided with a Superintendent and each subdivision with the Fishery Officer. This strengthening is necessary to enable adequate supervision in the execution of the programmes. An amount of Rs.8.00 lakhs is required for this purpose in the Fifth Plan.

#### **9. Engineering and Survey Scheme**

1.9.17. During the past few years, development has been handicapped due to absence of any survey to identify the fishery potentialities of the different regions of the State before taking up any scheme for implementation in the field. For successful implementation, it is highly essential to collect data regarding fisheries. Due to the topography of the area, there is need for technical support in preparation of estimates for construction of fishery ponds, buildings, etc. and for proper implementation of the work relating to construction. It is, therefore, proposed to create a small cell for this purpose during the Fifth Plan. Initially, the cell will include a fishery officer and one overseer with some subordinate staff and will be strengthened as the Plan progresses. The amount of Rs.2.00 lakhs is required in the Fifth Plan.

# FISHERIES

## Schemewise Outlay and Expenditure

(Rs. in lakhs)

Serial No.	Name of the Scheme	Total Outlay of 4th Plan	Outlay 1973-74	EXPENDITURE					Total Allocation 1974-79	Remarks
				1974-75	1975-76	1976-77	1977-78	1978-79		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Development Fish-seed Farming ...	-	1.20	1.60	1.80	2.00	2.20	2.40	10.00	
2	Assistance to Pisciculturists individual and Co-operative	-	1.50	2.00	2.20	2.40	2.60	2.80	12.00	
3	Research, Education and Training (State)	-	1.00	1.20	1.30	1.40	1.50	1.60	7.00	
4	Conservation and protection of River Fisheries and Natural Fisheries	20.00	1.20	1.40	1.60	1.80	2.00	2.20	9.00	
5	Applied Nutrition Programme ...	-	0.50	...	...	...	...	...	...	
6	Development of Reservoirs ...	-	0.60	1.00	1.10	1.20	1.30	1.40	6.00	
7	Marketing-Transport of fish and Trout Culture (State)	-	1.10	0.80	0.80	0.80	0.80	0.80	4.00	
8	Supervision and Administration ...	-	0.90	1.30	1.45	1.60	1.75	1.90	8.00	
Total—		20.00	8.00	9.10	10.15	11.20	12.25	13.30	56.00	
9	Engineering and Survey (State) (New Scheme)	-	...	0.20	0.30	0.40	0.50	0.60	2.00	
<b>GRAND TOTAL—</b>		20.00	8.00	9.30	10.45	11.60	12.75	13.90	58.00	

## ANNEXURE I

### FISH

#### Progress Made During 1969-70 to 1973-74

State: Meghalaya

Serial No.	Item	Unit	Base level (1968-69)	Fourth Plan Target (1969-74)	Achievement		
					1969-72 Actual	1972-73 Anti	1973-74 Target
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Physical Programme—						
1	Mechanised boats	No.	..	..	..	..	..
2	Trawlers	No.	..	..	..	..	..
3	Refrigeration—						
	(a) Cold Storages	No.	..	..	..	..	..
	(b) Ice Plants	..	..	..	..	..	..
	(c) Freezing Plants	..	..	..	..	..	..
4	Minor ports with landing and berthing facilities	..	..	..	..	..	..
5	Fish seed produced—						
	(a) Spawn	Million	0.08	0.34	0.14	9.08	0.12
	(b) Fry/Fingerlings	..	0.04	0.18	0.07	0.03	0.08
6	Fish seed farms established	No.	1	3	1	..	2
7	Nursery area	Hactares	0.5	5.6	1.8	1.3	2.5
8	Development of Reservoirs	..	..	..	..	150	300
II	Fish production—						
	(a) Inland	000 tonnes	90	570	120	200	250
	(b) Marine	..	..	..	..	..	..
	(c) Total	..	90	570	120	200	250

## ANNEXURE III

## FISH

## Fifth Five Year Plan 1974-79

## Production and Programme Targets—Fisheries

State: Meghalaya

Serial No.	Item	Unit	Base level 1973-74	Fifth Five Year Plan 1978-79	Target
(1)	(2)	(3)	(4)	(5)	(6)
<b>I Physical Programme—</b>					
1	Boats mechanised	No.	...	...	2
2	Trawlers procured	No.	...	...	...
3	Refrigeration—				
	(a) Cold Storages				
	(i) Number	No.	...	...	2
	(ii) Rated capacity	Tonnes	...	...	1
	(b) Ice plants—				
	(i) Number	No.	...	...	2
	(ii) Rated capacity	Tonnes	...	...	2
	(c) Freezing plants—				
	(i) Number	No.	...	...	...
	(ii) Rated capacity	Tonnes	...	...	...
4	Minor ports with landing and berthing facilities.	No.	...	...	...
5	Fish seed procured:—				
	(a) Spawn	Million	0.12	16.00	
	(b) Fry/Immerlings	"	0.05	3.60	
6	Fish seed farm—				
	(i) Number	No.	2	7	
	(ii) Area	Hectares	1	12	
7	Nursery area	Hectares	2.5	10	
8	Development of reservoirs	"	200	1300	
9	Brackish water fish farming area.	"	...	...	
10	Fish marketed through institutions i.e. Cooperatives Corporations.	Tonnes	...	...	
11	Fish production—				
	(a) Inland	000 tonnes	250	2000	
	(b) Marine	"	...	...	



## CHAPTER II

COMMUNITY DEVELOPMENT  
AND CO-OPERATION

## 2.1. Co-operation

2.1.1. Over four-fifths of Meghalaya's population is tribal. The co-operative spirit is inherent among the tribals of the State. This is to be seen in the villages in the form of community labour and sometimes pooling of other resources in construction of dwelling houses, sowing and harvesting of crops, construction and maintenance of village roads and paths and other community assets. But as it is, this takes largely the form of a primitive society trying to maintain community existence. With the penetration of education and cash transaction to the villages, this spirit has been dying out without being replaced by other forms of co-operative effort that would ensure adaptability of the community with the march of time.

2.1.2. The history of the co-operative movement in the Meghalaya is rather of recent origin compared to elsewhere in the country. As elsewhere in the North Eastern Region, the movement has seen ups and downs in its short history. The Second War, the Partition and the emergence of Bangladesh have all had profound influence on the movement in this State. Reorganisation of the movement had started in the late sixties following the recommendation of the Joint Centre-State Study Team as an effort to bring it in line with the changing circumstances. Because of age-old traditions and other handicaps, the result has not been as much as expected. More recently, the Reserve Bank in collaboration with the State Government has carried out a study for further and comprehensive reorganization of credit and marketing structure of the co-operative movement in the State. The finding of this study would enable taking corrective measures applicable to conditions obtaining in the State.

2.1.3. For a rural population of 8.14 lakhs which is almost entirely dependent on agriculture, the State has now only about 600 primary societies. The membership strength is about 30,000 or less than one-fifth of the rural families. The short term advances is of the order of Rs.75 lakhs annually with practically no medium and long-term advance. None of the primary societies in the State can be considered viable

without support of Government. This does not, however, mean that the movement has not made any progress in the State. On the contrary, it has a bright future with a little perseverance and dedicated effort.

2.1.4. A large number of societies in the State are in the nature of service societies with marketing as one of the main functions. Many of these societies have come into being under compelling circumstances to find a market for the produce because of intermittent closures of Border trade. The value of the agricultural produce marketed by these societies is expected to be around Rs.2 crores during 1973-74 having come up from a negligible level a few years ago. The number of marketing godowns is now 107 with a storage capacity of 15500 tonnes. These have helped to maintain agricultural production in no small measure. Likewise, sales of consumer articles is now of the order of Rs.50 lakhs in the rural areas and Rs.35 lakhs in the urban areas. These functions assume tremendous significance in the context of the take-over of wholesale trade and the need to hold the price line.

### **Objective of the Programme**

2.1.5. The co-operative movement in the State is still very weak and in a large area it is still in embryonic stage. The Fifth Plan of the State aims to consolidate the movement and strengthen its structure by enlarging the coverage, by reorganisation of the societies and by diversification of their activities. The Plan takes note of the limitations of organising new societies in view of the phenomenon of small, scattered and shifting villages in the State as well as the need to bring as much as possible the rural population under movement. Thus while only a moderate increase in the number of societies is envisaged, the membership strength would have to increase many-fold in order to cover at least half of the agricultural population and to ensure larger sized and viable societies. Medium and long-term loan would become indispensable functions of the credit societies in addition to short-term advances to ensure that co-operative credit is available in all stages of agricultural production. Marketing of the produce, storage and distribution of consumer articles would likewise expand to fit in with the enlarged activity envisaged in the Plan.

**Progress in the Fourth Plan**

2.1.6. The allocation for co-operation during the Fourth Plan was Rs.120.00 lakhs and the anticipated expenditure Rs.107.25 lakhs. The progress of the expenditure is shown below :

1969-70	...	Rs.10.58 lakhs (incurred by Government of Assam).
1970-71	...	Rs.15.78 ,,
1971-72	...	Rs.17.22 ,,
1972-73	...	Rs.26.67 ,,
1973-74	...	Rs.37.00 ,, (anticipated).
Total	...	<u>Rs.107.25</u> ,,

2.1.7. During the Fourth Plan period, important steps to strengthen the movement have been taken giving added impetus to the movement. Co-operative Credit had shown a marked improvement as observed by the agricultural loan demands of the service co-operatives for seasonal agricultural operations. New co-operative societies have been organised while the existing societies have been strengthened by augmenting their capital resources. As stated earlier, the Reserve Bank of India have already carried out the study in collaboration with the State Government and the State Apex Bank for complete reorganisation of co-operative credit and marketing structure in the State.

2.1.8. An important landmark in the co-operative movement in the State was the setting up of the Meghalaya Co-operative Apex Bank, Ltd., during 1971 to cater to the agricultural credit needs of the cultivators of the State through the co-operative system. Share capital contribution of Rs.19.88 lakhs and managerial subsidy of Rs.6.71 lakhs have been provided during the Fourth Plan period

to strengthen the capital structure of the Bank. The Apex Bank has so far issued a short-term loans to the extent of Rs.74.00 lakhs to Primary Agricultural Credit Societies and by the end of the Fourth Plan it is anticipated that the amount would be Rs.75.00 lakhs. The Service Co-operative Societies, numbering about 200 by the end of the Fourth Plan period, are the principal institutional agencies in the State in the field of agricultural credit. These societies are financially assisted by Government in the shape of share capital contribution to improve their working capital resources and managerial subsidy to induce proper and healthy management of the societies. An amount of Rs.3.77 lakhs as share capital contribution and Rs.3.25 lakhs as managerial subsidy is anticipated during the Fourth Five Year Plan.

2.1.9. The Meghalaya Co-operative Apex Marketing Society will be set up during 1973-74 by conversion of the erstwhile Assam Hills Co-operative Development Corporation. The Apex Society will co-ordinate marketing of the produce and distribution of fertilisers to enable expansion of activity in these areas on co-operative lines. An amount of Rs.11.94 lakhs as share capital contribution is anticipated to be achieved during the Fourth Plan. The Apex Marketing Society would immediately start this year with marketing of such produce as potato, tezpata, fruits, etc., and to take up channelising of fertilisers and bone-meal, etc., to the farmers.

2.1.10 30 Sub-area Co-operative Marketing Societies are anticipated to be in position by the end of the Fourth Plan. An amount of Rs.7.75 lakhs as share capital contribution and Rs.2.83 lakhs as managerial subsidy is expected to be spent during the Fourth Plan period to strengthen these co-operatives.

Seven of the sub-area co-operatives have also been brought under the Central Sector Scheme for strengthening the share capital base of selected co-operative marketing societies during the Fourth Plan.

2.1.11. No new processing societies either of small or medium size have been installed during the Fourth Plan. The only processing society existing in the State is the Co-operative Ginning Mill which was established in 1954. This Mill has not been functioning properly. Steps have been taken to revitalise the Mill and to put up an attached oil crushing unit with the help of the technological experts

of National Co-operative Development Corporation. Financial assistance of Rs.4.00 lakhs as share capital contribution and Rs.0.35 lakhs as managerial subsidy has been extended to this Mill as part of the revitalization scheme on the suggestions of NCDC expert.

2.1.12. As regards co-operative storage, 34 marketing godowns and 73 rural godowns are expected to be financed by the end of the Fourth Plan. These godowns have a total storage capacity of 15,530 tonnes. An expenditure of Rs.10.07 lakhs as financial assistance will have been made during the 4th Plan towards construction of co-operative godowns both under the State Plan and the Central sector scheme.

2.1.13. In the field of distribution of consumer articles a little over hundred service co-operatives and 20 marketing societies have been entrusted with distribution of consumer articles, particularly the daily essential needs to the rural people. To strengthen the capital resources in this sector, an amount of Rs.2.84 lakhs as share capital contribution and Rs.1.63 lakhs as managerial subsidy is anticipated to have been spent during the Fourth Plan. A larger section of the rural population has benefited from this scheme. In view of the increased role of Government in distribution, this scheme will be greatly expanded during the Fifth Plan.

2.1.14. As regards the Urban Consumers Co-operatives, no new consumer co-operative stores have been organised. The work has, however, been concentrated in reorganising the existing societies to strengthen their structure and management in order to enable them to cater more effectively to the demands of the urban population. During the Fourth Plan, an amount of Rs.1.78 lakhs as share capital contribution and an amount of Rs.1.32 lakhs as managerial subsidy are expected to be spent as assistance in this direction. Substantial strengthening and stabilisation of urban consumers co-operative structure will be taken during the Fifth Plan.

2.1.15. Education and training of the office bearers of co-operative societies are of special importance under the conditions obtaining in this State. This is very essential in order to ensure management of the societies on true co-operative principles. An amount of Rs.1.70 lakhs is expected to be spent during the Fourth Plan. A separate Co-operative

Training Institute is being set up in the State. The Institute will impart training to the officials as well as non-officials. A training institute of its own for Meghalaya has been necessitated by the circumstances of the changed language policy in this region as well as by the requirement of trained staff for our enlarged programme. Incidentally, this institute will also facilitate absorption of the trained educated unemployed in the Fifth Plan co-operation programmes.

## PROGRAMME FOR THE FIFTH PLAN

### 1. Agricultural Credit

2.1.16. In order to further strengthen the capital base of the Apex Bank and its branches for increased loan operation, a provision of Rs.19.00 lakhs as share capital contribution is proposed during the Fifth Plan. The Apex Bank and its branches have to strengthen the staff at all levels for smooth performance in the matter of issue and recovery of loans. For this purpose, a provision of Rs.11.00 lakhs is proposed as subsidy for maintenance of staff. This will also increase the employment opportunities among the educated unemployed.

2.1.17. The 'Service Co-operative' Societies will continue to be the main agencies in the field of agricultural credit. Reorganisation programme will be taken up on the basis of the master plan recommended by the Reserve Bank of India to make these societies viable units. To substantially expand the loan activities of these societies and at the same time to provide increased measure for a variety of other services, such as supply of inputs, a provision of Rs.20.00 lakhs is proposed as share capital contribution. A further sum of Rs.20.00 lakhs is proposed under the provision by borrowing from the Long Term Operation Fund of Reserve Bank of India to further strengthen the capital base of these societies and of the Apex Bank. Under this scheme, amalgamation of the societies as also organisation of pilot societies for farmers will also be taken up. These societies will maintain full-time paid secretaries and other full-time paid staff for proper maintenance of all books and accounts. For this purpose, a provision of Rs.15.00 lakhs is proposed as subsidy

during the Fifth Plan. Steps for cadre formation for paid secretaries of these societies and creation of a cadre fund will be taken up in the Fifth Plan. For this purpose, a provision of Rs.5.00 lakhs is proposed during the Fifth Plan. This item provides employment opportunities to educated unemployed and at the same time would raise the standard of the societies.

2.1.18. Further, to undertake follow up action for the implementation of the programme suggested by the Expert Groups of the Government of India/Reserve Bank of India to prepare blue prints for institutional credit arrangements on district basis, a provision of Rs. 5.00 lakhs is proposed during the Fifth Plan.

## 2. Marketing

2.1.19. The Co-operative Apex Marketing Society would be in position by the end of the Fourth Plan. This Apex Society will be strengthened substantially to enable it to take up the required marketing activity in regard to the produce and distribution of agricultural inputs like fertilisers, seed, pesticides, agricultural implements, machinery, etc. The Apex Marketing Society will also take up the semi-automatic bakery for the purpose of producing cheaper fortified bread and other ready-to-eat foods. For this purpose, a provision of Rs.15.00 lakhs as share capital contribution is proposed during the Fifth Plan. A provision of Rs.10.00 lakhs is also proposed as subsidy for recruitment and maintenance of the necessary staff by the Apex Society during the Fifth Plan.

2.1.20. The Sub-area Co-operative Marketing Societies would be activated to enable them to improve the turn over and also adoption of improved marketing practices such as grading and pooling. These will take up marketing of agricultural produce with the Apex Marketing Society or through National Co-operative Marketing Federations like NAFED—NAGRIFED. New marketing societies will be organised only in areas where the necessity is felt. For strengthening the resources of these marketing societies, a provision of Rs.15.00 lakhs as share capital contribution, Rs.10.00 lakhs as subsidy for maintenance of staff and Rs.5.00 lakhs as subsidy to stabilise the price fluctuations are proposed during the Fifth Plan.

2.1.21. Assistance for purchase of trucks will be provided to the co-operatives by way of loans, margin money at 25 per cent of the cost of the trucks while the remaining 75 per cent will be obtained by the societies either from Nationalised Banks or Apex Bank. A provision of Rs.6.00 lakhs is proposed for assisting the purchase of 30 trucks during the Fifth Plan.

### 3. Co-operative Processing

2.1.22. It is proposed to set up two Fruit Processing Units in the areas where there is abundant horticultural produce during the Fifth Plan. Technical experts will be invited to prepare detailed project reports for the scheme. The State proposes to make adequate outlay for share capital contribution in the State Plan and obtain block loan from financing institutions like Agricultural Refinance Corporation, etc. A provision of Rs.4.00 lakhs is proposed as share capital contribution to these units and for maintenance of staff both technical and non-technical, a provision of Rs.2.00 lakhs is proposed as subsidy during the Fifth Plan.

2.1.23. The existing Co-operative Cotton Ginning Mill which will be activated to make it a viable unit by the end of the Fourth Plan will continue to be financially assisted. To accommodate the suggestion of the experts from National Co-operative Development Corporation, a provision of Rs.4.00 lakhs as share capital contribution and Rs.1.00 lakhs as subsidy for maintenance of the staff is proposed during the Fifth Plan.

### 4. Co-operative storage

2.1.24. In view of the anticipated increase in the volume of business of co-operatives in the field of marketing of agricultural produce, distribution of agricultural inputs and consumers articles, their storage capacity is also to be increased appreciably. The storage requirements during the Fifth Plan are assessed as follows:—

(1) Godowns required by the Apex Marketing Society.	500 tonnes capacity.
(2) 20 Mandi godowns of about 400 tonnes capacity each.	8,000 ,,
(3) 50 Rural Godowns of about 200 tonnes capacity each.	10,000 ,,
Total ...	<hr/> 23,000



2.1.25. Thus the total additional storage capacity proposed to be created during the Fifth Plan is 23,000 tonnes. The outlay required to create this capacity is Rs.34.50 lakhs. Since the Central Sector Scheme under which the National Co-operative Development Corporation is providing loan assistance to the State Government for construction of co-operative godowns is to be discontinued during the Fifth Plan period, adequate provisions (37½ P. C.) is being made in the State Fifth Plan while the loan portion (62½ P. C.) is to be obtained from the financing institutions like Agricultural Refinance Corporation, etc. Thus, a provision of Rs.13.00 lakhs as subsidy for construction of godowns is proposed in the Fifth Plan.

### **5. Co-operative distribution of consumers' articles in rural areas.**

2.1.26. The village co-operatives are the best agency for making available the daily essential commodities to the rural people. A number of Co-operative Marketing Societies and also the Service Co-operative Societies are actively engaged in distribution of consumers articles in the rural areas. More societies will be encouraged to take up this business so that the consumers articles, particularly the daily essential needs, are made available to the most interior areas. To strengthen the resources of these societies, a provision of Rs.6.00 lakhs is proposed as share capital contribution. For maintenance of staff for managing this section of their function, such as sales manager and weighman, a provision of Rs.3.00 lakhs is proposed as subsidy during the Fifth Plan.

### **6. Urban Consumers Co-operatives**

2.1.27. In order to ensure fair prices of basic consumers needs like food-stuff, clothing and other essential household need, it is necessary that consumers co-operatives be assigned a dominant role in the distribution system. During the Fifth Plan, an intensive programme will be taken up for strengthening and stabilisation of the existing urban consumer co-operatives. New co-operative stores will also be set up. Hence to strengthen this sector, a provision of Rs. 14.00 lakhs as share capital contribution and Rs 6.00 lakhs for maintenance of staff is proposed during the Fifth Plan.

## 7. Other types of Co-operatives Societies

2.1. 28. The existing Co-operative Urban Bank functioning at Shillong has been doing good work in helping small traders and entrepreneurs. During the Fifth Plan, it is proposed to set up two more Co-operative Urban Banks at Tura and Jowai. For this purpose, a provision of Rs. 5.00 lakhs as share capital contribution and a provision of Rs. 2.00 lakhs as managerial subsidy is proposed during the Fifth Plan. Provisions are also made for assisting other types of societies such as Transport Societies, Industrial Societies and Milk Producers Unions, Farming Co-operatives during the Fifth Plan.

## 8. Co-operative Training Education and Publicity

2.1. 29. It is only necessary that the office bearers of the Co-operative Societies such as the Secretaries and the Chairmen should be properly trained and educated so as to enable them manage and run the societies on true co-operative principles. Office bearers of the processing societies and industrial societies will also be sent for training. For this purpose, a provision of Rs. 5.00 lakhs is proposed during the Fifth Plan.

2.1. 30. Further, a provision of Rs. 5.00 lakhs is proposed for training the officials in the Co-operative Training Institute.

## 9 Co-operative Administration

2.1. 31. The State Co-operative Department is to be properly strengthened for smooth administration. Additional staff and officers posts are proposed to be created during the Fifth Plan to secure the required co-ordination to ensure that the schemes are properly implemented and the co-operative societies are properly inspected and audited. A provision of Rs. 10.00 lakhs is proposed during the Fifth Plan.

**FIFTH FIVE YEAR PLAN—CO-OPERATION****SCHEME-WISE OUTLAYS**

Serial No.	Title of the schemes	(Rs. lakhs)		
		Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	
(1)	(2)	(3)	(4)	(5)
<b>1 Co-operative Agricultural Credit—</b>				
(a)	Share capital contribution to Apex Bank.	26·00	19·88	19·00
(b)	Share capital contribution to Service Co-operative Societies.	12·30	8·77	20·00
(c)	Subsidy for maintenance of staff to Service Co-operative Societies.	2·00	3·25	15·00
(d)	Subsidy for maintenance of staff to Apex Bank.	3·37	6·71	11·00
(e)	Subsidy for Cadre fund for cadre formation for paid Secretaries of Primary Agricultural Credit Societies.	...	...	5·00
(f)	Fund for follow up action for the implementation of the programme suggested by the Expert Groups appointed by Government of India/Reserve Bank of India to work out blue prints for institutional credit arrangements on a district by district basis.	...	...	5·00
(g)	Share capital contribution to Co-operative Credit Institutions provided by borrowing funds from the long term operations fund of the Reserve Bank of India.	...	..	20·00
Total—1 ...		43·67	38·61	95·00

Serial No.	Title of the schemes	( Rs. lakhs )		
		Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	
(1)	(2)	(3)	(4)	(5)
<b>2 Co-operative Marketing—</b>				
(a)	Share Capital contribution to Apex Co-operative Marketing Society.	7.83	11.94	15.00
(b)	Subsidy for maintenance of staff to Apex Co-operative Marketing Society.	...	...	10.00
(c)	Capital contribution to Sub-Area Co-operative Marketing Societies.	8.40	7.73	15.00
(d)	Subsidy to Sub-Area Co-operative Marketing Societies for maintenance of Staff.	3.50	2.83	10.00
(e)	Subsidy to Co-operative Marketing Societies for price fluctuation and stabilisation of prices.	...	0.50	5.00
(f)	Assistance towards purchase of transport vehicles (loan-margin money)	1.80	1.88	6.00
	<b>Total ...</b>	<b>21.53</b>	<b>24.48</b>	<b>61.00</b>
<b>3 Co-operative Processing other than Sugar Factories—</b>				
(a)	Share capital contribution to Co-operative Fruit processing Societies.	0.50	0.20	4.00
(b)	Subsidy for maintenance of staff (both technical and non-technical) to Co-operative Fruit processing Societies.	...	...	2.00
(c)	Share Capital contribution to Co-operative Cotton Ginning Mills.	2.50	4.00	4.00
(d)	Subsidy for maintenance of staff to Co-operative Cotton Ginning Mills.	1.88	0.35	1.00
	<b>Total ...</b>	<b>4.88</b>	<b>4.55</b>	<b>11.00</b>

Serial No.	Title of the schemes	(Rs. lakhs)		
		Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	
(1)	(2)	(3)	(4)	(5)
4	Co-operative Sugar Factories—			
5	Co-operative Agricultural Supplies—			
6	Co-operative Storage—			
(a)	Loan for construction of godowns (Rural/urban) to Co-operative Societies.	7.65	2.20	...
(b)	Subsidy to Co-operative Societies for construction of godowns.	2.50	7.87	13.00
	Total ...	10.15	10.07	13.00
7	Co-operative Distribution of consumers Articles in rural areas—			
(a)	Share Capital contribution to Co-operative Societies for distribution of consumers articles in rural areas.	2.50	2.84	7.00
(b)	Subsidy for maintenance of staff to Co-operative Societies for distribution of consumers articles in rural areas.	1.50	1.63	3.00
	Total ...	4.00	4.47	10.00
8	Urban Consumers Co-operatives—			
(a)	Share Capital contribution to Consumers Co-operative Stores.	2.00	1.78	14.00
(b)	Subsidy for maintenance of staff to Consumers Co-operative Stores.	2.00	1.32	6.00
	Total ...	4.00	3.10	20.00

Serial No.	Title of the schemes	(Rs. lakhs)		
		Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	
(1)	(2)	(3)	(4)	(5)
9	Other types of Co-operatives Societies—			
(a)	Working Capital Grant to Co-operative Development Corporation.	10·17	8·57	...
(b)	Share Capital contribution to Co-operative Urban Banks.	3·00	3·25	5·00
(c)	Subsidy for maintenance of staff to Co-operative Urban Banks.	...	...	2·00
(d)	Grant to Industrial Co-operatives and Fisheries.	0·90	0·80	2·00
(e)	Share Capital contribution to Industrial Co-operative Societies and Transport Co-operative Societies.	2·00	1·50	5·00
(f)	Subsidy for maintenance of staff to Industrial and Transport Co-operative Societies.	...	...	2·00
(g)	Share Capital contribution to Co-operative Farming Societies.	0·25	...	5·00
(h)	Subsidy to various other types of Co-operative Societies for maintenance of staff.	1·00	1·48	4·00
(i)	Share Capital contribution to Milk Producers' Co-operative Unions.	...	...	4·00
(j)	Subsidy for maintenance of staff to Milk Producers' Co-operative Unions.	...	...	2·00
	Total	17·32	15·70	29·00

Serial No.	Titles of the schemes	(Rs. lakhs)		
		Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	
(1)	(2)	(3)	(4)	(5)
10	Co-operative Training and Education and Publicity—			
	(a) Subsidy for Training and Education of the office bearers of Co-operative Societies.	1.70	1.70	5.00
	(b) Training of Departmental Officers	4.00	1.50	5.00
	Total	5.70	3.20	10.00
11	Co-operative Administration—			
	Additional Staff for strengthening the Co-operative Administration.	3.70	2.35	10.00
	Total	3.70	2.35	10.00
12	Handloom Co-operatives	5.05	0.72	...
	Total	5.05	0.72	...
	GRAND TOTAL	120.00	107.25	259.00

## STATE—MEGHALAYA

## ANNEXURE II

Fifth-Five Year Plan—Co-operation Physical Targets  
and Achievements

Serial No.	Item	Unit	Fourth Plan (Anticipated Achievement) (1973-74)	Fifth Plan target (1978-79)
(1)	(2)	(3)	(4)	(5)
1	No. of primary agricultural credit societies at the end of the year.	No.	600	1,000
2	No. of viable primary agricultural credit societies at the end of the year.	No.	Nil	600
3	Membership of primary agricultural credit societies at the end of the year.	T thousand	30,000	3,00,000
4	Coverage of agricultural families at the end of the year.	Per cent	39 %	50 %
5	Percentage of borrowing members	Per cent	20 %	50 %
6	Short term loans advanced during the year.	Rs. crores	0.75	1.50
7	Medium term loans advanced during the Five Year of the Plan!	Rs. crores	...	0.50
8	Long term loans advanced by Land Development Banks during Five Year of the Plan. (including ordinary as well as special).	Rs. crores	...	0.25
9	Agricultural produce marketed by Co-operatives during the year.	Rs. crores	2.00	10.00
10	No. of co-operative processing units installed at the end of the year (commodity-wise).	Number	...	...
	(i) Sugar Factories	...	...	...
	(ii) Rice Mills	...	...	...
	(iii) Dal Mills	...	...	...
	(iv) Cotton ginning and pressing	...	I	Nil



Serial No.	Item	Unit	Fourth Plan (Anticipated Achievement) (1973-74)	Fifth Plan target (1978-79)
(1)	(2)	(3)	(4)	(5)
	(v) Jute baling units ... ..	...	...	...
	(vi) Jute Mills ... ..	...	...	...
	(vii) Oil seeds units ... ..	...	...	...
	(viii) Fruits-Vegetables units ... ..	...	Nil	I
	(ix) Plantation crops units ... ..	...	...	...
	(x) Dairying units ... ..	...	...	...
	(xi) Cold storages ... ..	...	...	...
	(xii) Others ... ..	...	...	...
11	Fertilisers retailed by the Co-operatives during the year.	Rs. crores	...	...
	(i) Quantity in terms of materials (metric tonnes).	...	3,366	20,000 M. tonne.
	(ii) Value ... ..	Rs. crores	00-20	...
	(iii) No. of co-operative/retail fertiliser depots.	No.	20	500
12	Marketing godowns—			
	(i) Assisted upto the end of the year.	No.	34	21
	(ii) Constructed upto the end of the year.	No.	29	...
	(iii) Capacity upto the end of the year.	'000 tonnes	7.03	13.0)
13	Rural godowns—			
	(i) Assisted upto the end of the year.	No.	73	50
	(ii) Constructed upto the end of the year.	No.	50	...
	(iii) Capacity upto the end of the year.	'000 tonnes	8.50	10.00
14	(i) Distribution of consumer articles in rural areas during the year.	Rs. crores	0.50	1.00
15	Retail sales of urban consumer co-operatives during the year.	Rs. crores	0.35	1.00

## FIFTH-FIVE YEAR PLAN--CO-OPERATION

## Programme-wise--Financial Outlays

(Rupees lakhs)

Serial No.	Programme	Fourth Plan		Fifth Plan
		Outlay	Anticipated expenditure	Proposed outlays
(1)	(2)	(3)	(4)	(5)
1.	Co-operative Agricultural Credit ...	43.67	38.61	95.00
2.	Co-operative Marketing . ...	21.53	24.48	61.00
3.	Co-operative Processing other than Sugar Factories.	4.88	4.55	11.00
4.	Co-operative Sugar Factories ...	...	...	...
5.	Co-operative Agricultural Supplies	...	...	...
6.	Co-operative Storage .. ...	10.15	10.07	13.00
7.	Co-operative distribution of consumers articles in rural areas.	4.00	4.47	10.00
8.	Urban Consumers Co-operatives ...	4.00	3.10	20.00
9.	Other types of Co-operative Societies	17.92	15.70	29.00
10.	Co-operative Training and Education	5.70	3.20	10.00
11.	Co-operative Administration ...	3.70	2.35	10.00
12.	Handloom Co-operatives ..	5.05	0.72	...
	Total ...	120.00	107.25	259.00

## 2.2. Community Development and Panchayati Raj

### 1. Progress during the Fourth Plan Period.

#### (a) Community Development

2.2. 1. At the commencement of the Fourth Plan the State had 4, Stage I, 11 Stage II and 9 Post-Stage II C.D. Blocks in operation. During the 4th Plan, 4 Stage I and 7 Stage II of these blocks were converted to Stage II and Post-Stage II respectively. Thus, at the beginning of the Fifth Plan the State will have 4 blocks operating in Stage II and 20 blocks in Post-Stage II. The financial outlay for the 4th Plan is Rs. 118.00 lakhs and the entire amount is anticipated to be spent within the plan period.

#### (b) Centrally Sponsored Schemes

##### (1) Tribal Development Blocks

2.2. 2. There are 24 T. D. Blocks in the State. On the first year of the 4th Plan, 8 of these blocks were operating in Stage I, 13 in Stage II and 3 in Stage III. During the 4th Plan, 8 of these were converted to Stage II and 11 to Stage III. The operational stages of the T. D. Blocks at the beginning of the 5th Plan will be 8 in Stage II and 16 in Stage III. There has been no indication so far from Government of India as to whether the T. D. allotment of Rs. 2.00 lakhs per year will be available for the T. D. Blocks after their 5 year period of operation in Stage III. Considering the needs felt in these areas as also the urgency of accelerating the pace of development, it is desirable that the Stage III T. D. allotment of Rs. 2.00 lakhs per year be continued during the Fifth Plan also.

2.2. 3. The entire amount of Rs. 160.00 lakhs allotted for the T. D. Blocks during the 4th Plan will be spent within 31st March 1974.

##### (2) Applied Nutrition Programme

2.2. 4. Five Applied Nutrition Programme Blocks were in operation in the State at the beginning of the 4th Plan. During the 4th Plan period, three additional Blocks were allotted each with an operational period of 5 years. By the end of the 4th Plan the number of Applied Nutrition Block in operation in the State will be 5. The 4th Plan allocation in respect of Applied Nutrition Programme is Rs. 6.80 lakhs out of which the anticipated expenditure is Rs. 5.36 lakhs.

### (3) Pilot Research Project in Growth Centres

2.2. 5. The Project was started in 1971-72 in the Bhoi Area Development Block for collecting data to identify the Growth Centres with a view to formulating schemes for future development. The scheme is in progress and will continue during the 5th Plan also. Out of the 4th Plan allocation of Rs. 4.00 lakhs under this project the anticipated expenditure is Rs. 3.31 lakhs.

### (4) Crash Scheme for Rural Employment

2.2. 6. The Crash Scheme for Rural Employment was started in 1971-72. An amount of Rs.25.00 lakhs was allotted for 1971-72, Rs. 37.50 lakhs for 1972-73 and Rs. 25.00 lakhs for 1973-74. The anticipated expenditure under this scheme during the 4th Plan period is Rs. 86.28 lakhs generating approximately Rs. 20.00 lakhs mandays.

### (5) Special Nutrition Programme

2.2. 7. The programme had been implemented in the State from 1972-73. Altogether 218 feeding centres were organised in the rural areas which will benefit approximately 21,375 children of 0.6 years and 6,734 expectant and nursing mothers. Out of the amount of Rs. 34.00 lakhs earmarked for this programme during 1972-73 and 1973-74 the anticipated expenditure is Rs. 23.16 lakhs.

### Composite Programme for Women and Children

2.2. 8. This programme is proposed to be implemented during 1973-74 and an expenditure of Rs.1.09 lakhs is anticipated to be spent for implementing it.

## II. Strategy and approach for Fifth Five-Year Plan.

### **Community Development and Tribal Development Blocks**

2.2.9. The community development programme, being a countrywide programme and having a specific pattern of budgetary provision and staff, will continue to operate in the Fifth Plan in conformity with the norms and guidelines laid down for the country as a whole. The financial outlay for both community development and Tribal Development Blocks, is, therefore worked out on the basis of the existing pattern laid down for different stages of operation.

2.2.10. During the Fifth Plan, some of the T.D. Block will be operating in Post Stage III (T.D.). At present there is no indication yet from the Government of India as to what would be the pattern of allocation to such blocks after completion of Stage III (T.D.). Therefore, in working out the financial outlay, the quantum of allocation for these Post Stage III T.D. Blocks is calculated at Rs.2.00 lakhs per year per block as admissible for them during T.D Stage III. There are 3 such blocks at the beginning of the Fifth Plan Period and the number will increase to 12 at the end of the Fifth Plan. It is also proposed to include a provision of Rs.100.00 lakhs for opening of 10 (ten) additional T. D. blocks—4 in Khasi Hills, 4 in Garo Hills and 2 in Jaintia Hills—during the Fifth Plan. According to the recommendation of the Joint Centre State Study Team headed by Shri Tarlok Singh, the then Member of the Planning Commission, opening of five additional blocks was very essential for effective coverage of the Tribal Development Programme. But in view of low coverage, it is necessary to have 10 Tribal Development Blocks instead of 5. The area covered by some of the existing Tribal Development Blocks is too big and these need re-adjustment in order to enable adequate impact and accelerate the pace of development. This proposal could not be accommodated during the Fourth Plan due to financial constraint and is, therefore, to be included in the Fifth Plan.

#### **(b) Crash Scheme for Rural Employment**

2.2.11. The allocations under C. S. R. E. during 1971-72 and 1972-73 are Rs. 25.00 lakhs and Rs.37.50 lakhs respectively. The financial outlay for the Fifth Plan has been double of 1972-73, to which is also added the proposed expenditure for maintenance of the scheme amounting to Rs.12.50 lakhs for the entire plan period.

#### **(c) Special Nutrition Programme**

2.2.12. The outlay under Special Nutrition Programme during the Fifth Plan has been calculated at Rs. 170.00 lakhs. This is the amount required for implementation of this programme only in the rural areas covered by the Tribal Development Blocks and does not include the requirement for the urban areas which are under the control and management of the State Social Welfare Department.

**(d) Applied Nutrition Programme**

2.2.13. The outlay under this programme is worked out at Rs. 1.70 lakhs for 5 Applied Nutrition Programme Blocks per year at Rs. 0.34 lakhs each.

**(e) Welfare of Backward Classes**

2.2.14. There are certain very backward pockets in the block areas which need special attention for their development. It is proposed to provide them with better housing facilities, improved drinking water, school building and other amenities. For this purpose the inhabitants living in small villages will be offered incentives to come and stay in selected centres where facilities will be provided for their development. The break-up of the facilities to be provided in these villages will be as detailed below :—

	Rs.
1. Grant-in-aid for construction of dwelling houses as per prescribed plans and specifications at Rs. 2,000 each.	10,00,000
2. Provisions for drinking wells . . . . .	50,000
3. Provision for School buildings . . . . .	25,000
4. Provision for play ground . . . . .	50,000
5. Provision for approach roads, etc. . . . .	1,75,000
	Rs.13,00,000

2.2.15. It is proposed to organise five villages with approximately 100 houses per village during the Fifth Five-Year Plan.

2.2.16. The details of financial outlay are as shown in Annexures I and II.

## FIFTH FIVE-YEAR PLAN

**Financial Outlay**

## Community Development and Panchayati Raj

Programme	Fourth Plan		Fifth Plan		
	Outlay	Anticipated expenditure	Outlay		
<b>1. Community Development—</b>					
(a) Investments	...	108·00	108·00	54·80	
(b) Common outlay	...	10·00	10·00	12·90	
Total (a) + (b)	...	118·00	118·00	67·7	
<b>2. Panchayati Raj—</b>					
(a) Investments	...	...	...	...	
(b) Common outlay	...	...	...	...	
<b>CENTRALLY SPONSORED SCHEMES</b>					
<b>1. Tribal Development Blocks—</b>					
(a) Existing blocks	...	160·00	160·00	232	
(b) 5 Additional Tribal Development Blocks.	...	...	...	100	
2. Applied Nutrition Programme	...	6·80	5·86	8	
3. Pilot Research Project in Growth Centres.	...	4·00	3·31	5	
4. Crash Scheme for Rural Employment	...	87·50	86·28	500	
5. Special Nutrition Programme	...	34·00	23·16	170	
6. Composite Programme for Women and Children	...	1·40	1·40	10	
7. Welfare of Backward Classes—Housing, Health and other schemes.	...	...	...	1	
Total	...	293·70	279·51	103	

## FIFTH FIVE YEAR PLAN

Community Development and Panchayati Raj Schematic  
Outlay

(Rs. in lakh)

Serial No.	Title of the Scheme	Whether continuing or new	Fourth Plan		Fifth Plan
			Outlay	Anticipated expenditure	Outlay
(1)	(2)	3	(4)	(5)	6
1	Community Development	Continuing	118.00	118.00	67.70
2	Panchayati Raj	.....	.....	.....	.....
3	CENTRALLY SPONSORED SCHEMES—				
(a)	Tribal Development Block	Continuing	160.00	160.00	332.00
(b)	Applied Nutrition Programme.	Do	6.80	5.36	8.50
(c)	Pilot Research Project in Growth Centres.	Do	4.00	3.31	5.00
(d)	Crash Scheme for Rural Employment.	Do	87.50	86.28	500.00
(e)	Special Nutrition Programme.	Do	34.00	23.16	170.00
(f)	Composite Programme for Women and Children.	Do	1.90	1.90	10.00
(g)	Welfare of Backward Classes, Housing, Health and other Schemes.	.....	.....	.....	13.00
			294.20	280.01	1038.53



## CHAPTER III

## IRRIGATION AND POWER

**Irrigation and Flood Control**

Though the State of Meghalaya comprises mostly of Hill areas there are certain areas which comprises a portion of plain areas. These plain areas are found mostly in Garo Hills and some near the foothills of Jaintia Hills for many year together it has been observed that these plains areas within Meghalaya are subjected to heavy floods causing heavy damages and loss to both life and property. It is therefore essential that some protection works, such as Embankments and Drainages are taken upto prevent misery to the people and save food crops in those areas.

The allocation during the 4th plan for flood control works is 16.00 lakhs only. With this allocation three schemes were taken up. But due to dearth of qualified technical personnel no apreciable progress could be made on these schemes upto 1972-73. In July 1972 a separate and independent Division has been created to tackle the Flood Control and Irrigation Schemes. It is now planned to complete 30 per cent of the schemes during the remaining period of the Fourth Plan and the balance of the work is proposed to be taken up in Fifth Plan period as continuing schemes, for which adequate provision of Rs. 98.71 lakhs is proposed.

The rural people practice Jhum cultivation extensively. This has resulted in denudation of the forest areas and soil erosion. As a corollary to soil conservation to lure away the tribal people from their usual habit of jhum cultivation and encourage them to take to wet cultivation, provision of irrigation facilities are of utmost necessity for augmenting the agricultural production.

Till the Fourth Plan, no Major and Medium irrigation projects worth the name was taken up in the State. Some investigation works were carried out by the Assam Government during the period of 1964-71 under the E and D Division, Goalpara (Assam) and preliminary project reports were completed. After the creation of the State of Meghalaya in

1972, these schemes were handed over to the Agricultural Department of Meghalaya. The same have since been taken over by the P. W. D., Meghalaya. Provision have been made in this Plan for those schemes after giving due weightage so that investments do not remain unproductive. All the schemes so included/selected are economically viable and are located in the backward tribal areas. Maximum efforts shall be taken to utilise the potentials created by way of programming, land stepping, construction of field channel and diversified services for supply of seed, fertilisers etc. Provision for irrigation schemes included in the plan is Rs. 129.68 lakhs.

**Research:**— No separate provision has been made in this plan for Research at this stage, but it is proposed to provide adequate funds in the schemes with estimates for testing in any well established laboratory in Assam or elsewhere.

**Organisational set up:**— Adequate attention will be paid to set up organisational machinery to implement the plan schemes. At present one Division with one Subdivision have been established. There is proposal to set up one more Subdivision.

### Employment Potential

The 5th Plan will provide employment opportunities to:

Unskilled labour ... ..	500 Nos.
Skilled labour ... ..	50 Nos.

### Graduate Technical

Personnel ... ..	10 Nos.
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### Undergraduate Technical

Personnel ... ..	15 Nos.
Other educated persons ... ..	18 Nos.

**DRAFT FIFTH FIVE YEAR PLAN**

**Scheme-wise detail of Outlay and Expenditure**

**Irrigation  
Statement II-A.**

NAME OF STATE --MEGHALAYA											Rs. in Lakhs	
Sl. No.	Name of Project	Latest Estimate cost		Expenditure to end of 1968-69	Fourth Plan Outlay	Expenditure during			Total Fourth Plan (likely Expenditure)	Fifth Plan Outlay		
		Amount	Date			1969-72 Actual	1972-73 Actual	1973-74 Approved		Total	Capital	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
New Scheme of Fifth Plan—												
1	Multi purpose and Major Scheme.	...	...	..	..	...	...	...	...	...	..	
II. Medium Schemes—												
1	Simsangiri Irrigation Scheme in Garo Hills.	2.7	...	...	...	...	...	...	...	2.7	2.7	
2	Nogchram Irrigation Scheme in Garo Hills.	2.0	...	...	...	...	...	...	...	2.0	2.0	
3	Rongrengiri Irrigation Schemes in Garo Hills.	2.5	...	...	...	...	...	...	...	2.5	2.5	
4	Dadengiri Irrigation Schemes in Garo Hills.	3.10	...	...	...	...	...	...	...	3.10	3.10	
5	Darni Irrigation Schemes in Garo Hills.	13.80	...	...	..	...	...	...	...	13.80	13.80	
6	Rongai irrigation Scheme in Garo Hills of Meghalaya and Goalpara in Assam.	27.00	...	..	...	...	...	...	...	27.00	27.00	

7	General Deling Irrigation Schemes.	21.77	...	...	...	...	...	...	...	21.77	21.77
8	Sung Valley Irrigation Schemes in Khasi Hills.	7.54	...	...	...	...	...	...	...	7.54	7.54
9	Ichamati Irrigation Schemes in Khasi Hills.	6.00	...	...	...	...	...	...	...	6.00	6.00
10	Pynthor Main and Pynthor Wah Valley Irrigation Schemes in Jaintia Hills.	17.00	...	...	...	...	...	...	...	17.00	17.00
11	Litein Valley Irrigation Schemes in Jaintia Hills.	27.00	...	...	...	...	...	...	...	27.00	27.00
Total—II		...	...	...	...	...	...	...	...	123.66	123.66

#### INVESTIGATION—

1	Collection of Hydrological datas on rivers and hydrological datas for irrigation schemes in the State of Meghalaya for the period 1974-79.	6.02	...	...	...	...	...	...	...	6.02	6.02
2	Research	...	...	...	...	...	...	...	...	...	...
Total Irrigation		...	...	...	...	...	...	...	...	129.68	129.68

**DRAFT FIFTH FIVE YEAR PLAN**

**Irrigation**

**Scheme-wise details of Outlays and Expenditure in Flood Control Drainage,  
Anti-water Logging and Anti-sea Erosion Scheme**

**Statement-II-B**

Name of State—MEGHALAYA

Serial No.	Name of the Schemes	Latest estimated cost.	Expenditure to the end of 1968-69.	Fourth Plan Outlay.	Expenditure during the year			Total Plan likely expenditure	Rupees in lakhs		
					1969-72 actual	1972-73 actual	1973-74 approved		Fifth Plan		Outlay Capital
									Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
<b>FLOOD CONTROL—</b>											
A. Continuing Scheme											
I. Marginal Embankment --											
1	Construction of embankment along left bank of Jinjiram from Nidanpur to Phulbari in Garo Hills.	25.00	..	..	...	...	...	..	...	...	
2	Protection of Jigabari from Flooding by river Galwang and Jingiram in Garo Hills.	25.00	...	...	...	...	...	..	...	...	
	A. H. Protection of Towns ...	...	...	...	...	...	...	...	...	...	
III. River Improvement and Anti-Erosion Schemes.—											
3	Protection of Dawki from erosion of River Umngot in Khasi Hills.	3.00	...	..	...	...	...	..	...	...	
Total—'A'		53.00	...	16.00	0.76	1.04	10.00	11.80	37.00	37.00	

B. NEW SCHEMES OF FIFTH PLAN

I. Marginal Embankment—

1 Construction of retirement bund to embankment along left bank of river Jingjiram from Bhaitbari to Konwarchar in Garo Hills.	7.26	...	...	...	...	...	...	7.26	7.26
2 Construction of Flood Embankment along both banks of river Galwang at Selsella Block in Garo Hills.	18.83	...	...	...	...	...	...	15.00	15.00
3 Construction of embankment along both banks of Bakla river in Garo Hills.	25.00	...	...	...	...	...	...	25.00	25.00
4 Construction of embankment on both banks of river Rongken in Garo Hills.	4.55	...	...	...	...	...	...	4.55	4.55
5 Construction of flood embankment along right bank of river Jinari for prevention flood in paddy fields at Bajengdoba in Garo Hills.	4.66	...	...	...	...	...	...	4.66	4.66
Total of 'B' (I)	60.30	..	...	...	...	..	...	56.47	56.47

Serial No.	Name of the Schemes	Latest estimated cost	Expenditure to the end of 1968-69	Fourth Plan Outlay	Expenditure during the year			Total Plan (likely expenditure)	Fifth Plan Outlay	
					1969-72 actual	1972-73 actual	1973-74 approved		Total Capital	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	II. Protection of Town	...	...	...	...	...	...	...	...	...
	III. River Improvement and Anti-Erosion Schemes—									
1	Protection of Kalatak area from erosion of river Umiam in Khasi Hills.	0.87	...	...	...	...	...	..	0.87	0.87
2	Protection of Maheshkhola from erosion in Garo Hills	2.00	...	..	...	...	...	...	2.00	2.00
	Total III	2.87	...	...	...	...	...	...	2.87	2.87
	IV. Drainage Improvement—									
1	Protection of village Shnongpdeng by providing drainage in Khasi Hills.	0.37	..	...	...	...	...	...	0.37	0.37
2	Providing sluices on Mahendraganj embankment in Garo Hills.	2.00	...	..	...	...	...	...	2.00	2.00
	Total IV	2.37	...	...	...	...	...	...	2.37	2.37
	Total Flood Control	118.54	...	...	...	...	...	...	98.71	98.71

### 3.3. POWER

3.3.1. Under Section 53 of the North Eastern Areas (Reorganisation) Act, 1971, the Assam State Electricity Board shall continue to function in Meghalaya for a period of two years from the 21st January, 1972, or if dissolved, earlier. The Government of Meghalaya has appointed Messrs G. K. Murti and K. L. Vij to advise on the need or otherwise to have a common Board with Assam in the context of power development programmes for Meghalaya. The report is expected shortly.

3.3.2. In view of the above, the power programme of Meghalaya has been discussed in these pages with relation to the tentative power programme of Assam. This power programme will undergo changes depending upon the new administrative structure of power development for the State.

3.3.3. It has been accepted that electric power is one of the basic infra-structure of a developing economy. The *per capita* consumption of electricity in the North Eastern Region is only 20 Kwh. against the all-India consumption of 90 Kwh. It is aimed to raise the *per capita* consumption of power to about 90 Kwh. by the end of the 5th Plan, to about 150 Kwh. by the end of 6th Plan and about 200 Kwh. by the end of 7th Plan.

3.3.4. The growth rate in demand (utilities) during the past decade 1961-71 works out to an average of 12.5 per cent (all-India average). In case of the North Eastern Region, however, special measures are proposed to be taken to increase the economic activities in the region in order to bring the economic level at least equal to the rest of the country. The Ministry of Irrigation and Power have accepted a growth rate of 23 per cent for this region. With accelerated rural electrification schemes, including irrigation programme and small scale and agro-industries programme and industrialisation, the power requirement in this region will be much higher than even the 25 per cent growth indicated in the Irrigation and Power Ministry's Decade Plan. In the following table, the total estimated power demand of the North Eastern Region in the year 1980-81 as shown by the Ministry of Irrigation and Power in the Decade Plan (without considering the



extensive rural electrification schemes) and upto 1990-91 as estimated by the State Electricity Board is indicated—

Year	N. E. Region Power Demand	Assam, Meghalaya and Mizoram			
		Power Demand	Installed capacity	Firm generat- ing capacity	Surplus (+) Shortfall (-)
(1)	(2)	(3)	(4)	(5)	(6)
1972-73	...	115*	146	95	(-) 20
1973-74	...	135	176(*1)	110	(-) 25
1974-75	...	170	206(*2)	133	(-) 37
1975-76	...	220	206	163(*3)	(-) 57
1976-77	...	290	266(*4)	215	(-) 75
1977-78	...	380	266	215	(-) 165
1978-79 (end of 5th Plan).	...	500	266	215	(-) 285
1980-81 (end of Decade Plan)	550** (700)***	750	266	215	(-) 535
1983-84 (end of 6th Plan).	1350	1150	197(*5)	170	(-) 980
1988-89 (end of 7th Plan).	2100	1900	197	170	(-) 1730
1990-91 (end of 2nd Decade Plan).	2500	2250	197	170	(-) 2080

\*Industries restricted to operate during peak load hours due to Power shortage.

\*\* (Source Decade Plan, Ministry of Irrigation and Power)

\*\*\* This is expected to go upto about 700 MW now with R. E. Schemes.

(\*1) Commissioning of Chandrapur 1st Set ... .. 30 MW.

(\*2) Commissioning of Namrup 1st Extension .. ... 30 MW.

(\*3) Assuming 30 MW firm power available from Loktak.

(\*4) Commissioning of Kyrdem Kulai Project .. ... 2 × 30 MW.

(\*5) Useful life of Namrup Gas Turbine expected to be over.

3.3.5. Without taking into consideration the requirement for rural electrification, even after commissioning of the projects now under construction by the A. S. E. B. and taken up by the Central Sector, the short falls are expected to reach a figure of 385 MW in the North Eastern Region in the year 1980-81. To meet this power shortage, the A.S.E.B. has recommended major projects for power development as indicated below—

Name of Project (1)	Approximate cost in crores of Rs. (2)	Proposed installation MW		
		5th Plan (3)	6th Plan (4)	7th Plan (5)
1. Lower Umiam-Umkhen Project 3×60 MW.	45.0	...	30×60	...
2. Chandrapur 1st Extn. 1×30 MW.	6.5	1×30	...	...
3. Namrup 2nd Extn. 1×30 MW.	6.5	1×30	...	...
4. (a) Baragolai Thermal Project 4×60 MW.	53.0	3×60	1×60	...
(b) Baragolai / Bongai- gaon Thermal Project 3×110 MW	70.0	...	2×110	1×110
5. Kopili Hydro Electric Project 5×60 MW. 2×30 MW.	75	...	2×60 1×30	3×60 1×30
6. Kynshi Hydro Electric Project 5×60 MW.	70	...	3×60	2×60
7. Garo Hills Thermal Project 2×60 + 2×110 MW.	70	...	2×60 1×110	1×110
8. Umiew-Upper Khri- Umiam-Untrew Stage IV Project 3×30 MW.	35	...	2×30	1×30*
9. Small Hydro Electric Projects.	3.0	10	...	...
10. Small Thermal Projects	3.0	10	...	...
<b>Total ...</b>	<b>437.0</b>	<b>260</b>	<b>1080</b>	<b>580</b>

\* Investigations and constructions of more schemes will have to be taken up from the Fifth and Sixth Plan periods for commissioning during the Seventh Plan and onward.

3.3.6 Implementation of the above schemes in the phased manner as per requirement of power will necessitate the following provisions of funds for Assam and Meghalaya during the Fifth and Sixth Plan periods for generation only.

Name of Projects	Funds requirement for generation only		
	Fifth Plan	Sixth Plan	Spillover in Seventh Plan
	In crores of Rs.		
(1)	(2)	(3)	(4)
<b>Assam Plan</b>			
1. Namrup 1st Extension (contd. scheme) 1 × 30 MW.	0.50	...	...
2. Kyrdenkulai H. E. Project (contd. Scheme 2 × 30 MW.)	8.50	...	...
3. Lower Umiam-Umkhen H.E. Project 3 × 60 MW.	32.0	13.0	...
4. Chandrapur 1st Extn.	6.25	...	...
5. Namrup 2nd Extn. ...	6.25	..	...
6. Barogolai 4 × 60 ...	46.0	7.0	...
(b) Barogolai/Bongaigaon 2 × 110.	10.0	50.0	10.0
7. Kopili H. E. Project 5 × 60 + 2 × 30.	24.0	40.0	11.0
Total	133.5	110.0	21.0
<b>Meghalaya Plan</b>			
1. Kynshi H. E. Project 5 × 60 ...	25	40	5
2. Garo Hills			
(a) 1st Phase—2 × 60 MW. ...	22	3	2
2nd Phase—2 × 110 MW. ...	12	30	3
3. Umiew Upper Khri Stage IV 3 × 30.	16	17	2
Total	75	90	10

Additionally, the Board will require at least another Rs. 150-160 crores for transmission, distribution, rural electrification, normal development and investigation. Thus the Board will require about Rs. 320 crores in each Plan for development works as mentioned above.

3.3.7 The Kynshi Hydro Electric Project will need investigation, preparation of report and clearance of the first phase. Construction will start in 1975-76. It is hoped to commission the first set of 60 MW by 1981-82, the next set by 1982-83 and the third set by 1983-84. As regards the second phase, the construction is expected to be taken up in 1977-78. The two sets of 60 MW are expected to be commissioned by 1985-86.

3.3.8 The feasibility report of Garo Hills Thermal Project is under preparation. Further investigation and clearance will be necessary. The construction will start in 1975-76. It is proposed to complete the first phase of  $2 \times 60$  MW by 1979-80 and 1980-81. As regards the second phase, the first set of 110 MW is expected to be commissioned by 1981-82 and the second set by 1984-85.

3.3.9 As regards the Upper Khri Stage IV, the construction works will be taken up in 1977-78. Two sets of 30 MW are expected to be commissioned by 1981-82 and one set by 1984-85.

3.3.10 An amount of Rs. 1 crore is proposed for investigation of new Projects to be taken up during the subsequent plan periods.

3.3.11 A provision of Rs. 1 crore is suggested for research and testing works. The Assam Electricity Board has a full-fledged laboratory under experienced staff in Barapani. The maintenance of the laboratory will be necessary so long execution of hydro-electric projects are in hand.

3.3.12 For normal development a provision of Rs. 9 crores is suggested which will also include a component for subsidy for R. E. C. schemes. The latter, according to the existing criteria, are not viable and hence the schemes need to be subsidised for sometime if the State Government is to avail of the loan facilities from the R. E. C. It is also proposed to subsidise sale of coal by Mineral Corporation to A. S. E. B. for Nangal-bibra Power Station.

3.3.13 As regards rural electrification, a provision of Rs. 15 crores inclusive of Rs. 3 crores under minimum needs programme is suggested which will bring about electrification of about 40 per cent of the villages in Meghalaya.

3.3.14 For transmission and distribution, a provision of Rs. 9 crores is proposed.

3.3.15 The above projects involve an expenditure of Rs. 108 crores. This is beyond the resources of the State and it is expected that the North Eastern Council will make substantial contribution towards investigation, power generation and transmission grids.

3.3.16 In the State Plan an outlay of Rs. 36.00 lakhs only is proposed for the programme indicated in the statement below.

**Power Plan Abstract—Meghalaya  
Fifth Five Year Plan Outlays**

(Rs. in crores)

	Total cost	Expenditure incurred by the end of 1973-74	Spill over outlay	Phasing					Total 1974-79	Spill over if any, into VI Plan.
				1974-75	1975-76	1976-77	1977-78	1978-79		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>State/Centre/Units</b>										
I. Generation ...	...	...	...	...	...	...	...	...	...	...
II. (a) Transmission ...	9.00	...	...	...	...	1.00	2.00	2.00	5.00	4.00
(b) Sub-Transmission...	5.00	...	...	...	...	1.00	2.00	2.00	5.00	...
III. Rural Electrification...	15.00	1.53	...	1.00	2.00	3.00	4.00	5.00	15.00	...
IV. Investigation ...	1.00	0.20	0.55	0.40	0.15	0.15	0.15	0.15	1.00	...
V. (a) Research-Testing Laboratories.	1.00	...	...	0.20	0.20	0.20	0.20	0.20	1.00	...
(b) Normal Development.	9.00	...	...	0.50	1.00	2.00	2.50	3.00	9.00	...
<b>Grand Total ...</b>	<b>40.00</b>	<b>1.73</b>	<b>0.55</b>	<b>2.10</b>	<b>3.35</b>	<b>7.35</b>	<b>10.85</b>	<b>12.35</b>	<b>36.00</b>	<b>4.00</b>

**Proposed Fifth Plan  
N. E. Region**

(In crores of rupees)

Schemes	Total cost	Proposed Expenditure Year-wise in Fifth plan					Total 1974-79	Spill over in Sixth and Seventh Plan
		1974-75	1975-76	1976-77	1977-78	1978-79		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>I. Generation</b>								
1. Lower Umiam-Umkhen Project 3×60 MW.	45·00	2·00	4·00	8·00	8·00	10·00	32·00	13·00
2. Kopili Project 5×60 MW + 2×30 MW.	75·00	...	1·00	3·00	10·00	10·00	24·00	41·00
3. Kameng H. E. Project 5×50 MW.	55·00	2·00	4·00	8·00	8·00	10·00	32·00	23·00
4. Kynshi H.E. Project 5×60 MW.	70·00	...	...	3·00	10·00	12·00	25·00	45·00
5. Garo Hills 2×60 ½ 2×110 MW.	...	1 00	3·00	8·00	10·00	12·00	34·00	36·00
6. Umiew Upper Khri-Umiam Stage IV 3×30 MW	35·00	...	...	2·00	5·00	9·00	16·00	19·00
II. Transmission EHV. ..	12·00	1 00	2·00	2·00	2·00	2·00	9·00	3·00
III. Investigations .. ..	4·00	0·30	0·80	0·90	1·00	1·00	4·00	...

Total ...

Rs. 176·00 crores.

## CHAPTER IV

## INDUSTRY AND MINERALS

## 4.1. Large and Medium Industry

4.1.1 The State of Meghalaya has so far been neglected in the matter of development of industries. In recognition of this, the State has been declared as a backward area under the scheme for giving financial incentives for industrial development. Till now, there is only one major industry. On the other hand, the State possesses rich forest, mineral and agricultural resources. The formation of the State has aroused high expectation among the people. The few years of the 4th Plan have been spent in investigation, preparation of feasibility reports, formulating package scheme of incentives and organisation of the Industrial Development Corporation. Having laid down the necessary framework, it is considered that the Government will be in a position to implement the schemes amounting to Rs.1165.50 lakhs during the Fifth Five Year Plan as against Rs.109 lakhs in the Fourth Plan. During the current year the provision has been limited to Rs.52 lakhs which falls very much short of the requirement in this sector.

4.1.2 The major resources of Meghalaya which can be exploited for industrial development fall broadly into three categories: 'mineral' resources, 'forest resources' and 'resources' based on agriculture including horticulture, livestock and sericulture.

**Review of the Plan IV**

4.1.3. In the 4th Plan, the programmes for major and medium industries, being State level programmes, were not included in the Assam Hill Plan from which Meghalaya got its share of plan outlay. Programmes for industrial development of the State could, therefore, be initiated only from 1970-71. In view of the various limitations in the initial period including shortage of funds and technical personnel, only a limited programme for industrialisation has been drawn up for the Fourth Plan. This programme, along with the programmes under transport and communication, agriculture, forest and power sought to provide the foundation and infrastructure for industrial development in the succeeding Five-Year Plans.



4.1.4. In the State Plan, the programme for large and medium industries is confined only to (1) development of industrial area (2) investigation, survey and preparation of feasibility and project reports, (3) Industrial Development Corporation and (4) development of organisational machinery. The two industrial projects which have been included in the plan are (i) expansion of the Cement Factory at Cherrapunjee and (ii) expansion of the Meter Factory at Shillong.

4.1.5. The approved allocation for large and medium industry for the Fourth Plan was Rs.100 lakhs. The expenditure by the end of 1972-73 was Rs.58.00 lakhs. The allocation for 1973-74 is Rs.51.50 lakhs. With the taking over of the Cherra Cement Factory by the Government of Meghalaya from Government of Assam, the question of additional funds for the State plan on account of this project has been taken up with the Planning Commission.

4.1.6. One of the most important decisions of the Government of Meghalaya was to request the National Industrial Development Corporation Limited to prepare an industrial development programme for Meghalaya. They submitted the report in November, 1971 identifying 50 projects small, medium and large. The Ministry of Industrial Development also deputed their experts to suggest industries for the new State. This Study Team recommended for consideration 26 projects based on the resources and 18 need-based industrial projects. In addition, the Regional Research Laboratory, Jorhat had also studied prospects of industrialisation in the hill states and made a number of suggestions.

4.1.7. During the Fourth Plan, the schemes taken up and the progress made in implementing them is as follows:—

- (a) **Meter Factory** :—The Assam State Electricity Board installed a Meter Factory in Shillong with the capacity to produce 60,000 meters annually on single shift basis. The capital investment was Rs.40.00 lakhs. Unfortunately, the factory had to close down because of the high and uneconomic cost of production. The National Industrial Development Corporation Limited, at the instance of the Government of Meghalaya, has prepared a rehabilitation scheme for the factory. The National Industrial Development Corporation have suggested replacement of machinery removed by Assam State

Electricity Board, purchase of balancing equipment for tool and die-making, etc. and diversification of the production. Broadly, they have suggested manufacture of mechanical counters, electro-mechanical counters, timer relay/over current relays, digital electro-mechanical clocks, in addition to some quantities of modified type of meters. They have also suggested that job orders should be taken. The Indian Telephone Industries have already agreed to place orders with the unit. The Government is in negotiation with the Kamanis for joint venture in re-starting the factory. A programme of recruitment and training of operational staff has also been recommended. Fresh capital investment to the tune of Rs.20 lakhs is envisaged for putting the factory into operation. A provision of Rs.5 lakhs has been made for 1973-74.

- (b) A provision of Rs.6 lakhs has been made for development of industrial area during 1973-74. The area selected is near Bornihat. At present, 92 hectares have been earmarked for the purpose. Steps are being taken for acquisition of the land. A number of industries are likely to come up in the area.
- (c) With a view to accelerating the industrialisation of the State, the Meghalaya Industrial Development Corporation Ltd., was established in 1971. The State Government has so far subscribed Rs.26.52 lakhs towards the share capital. The Corporation will act as an agent of the Government for implementation of the package scheme of incentives. It is also proposed to entrust the Corporation with the implementation of the transport subsidy and capital investment subsidy schemes of the Government of India. The Corporation will also discharge the function of supplying raw materials to the small scale units as also the work relating to hire-purchase of machinery. Meghalaya being a small State, it is proposed to entrust the work relating to small scale industries in the initial stages to the Corporation. So far, the Corporation has subscribed Rs.5 lakhs to the equity capital of the Komorrhah Limestone Mining Company Ltd., a public limited company established with a view to supplying 2 lakh tonnes of limestone to Bangladesh. The Corporation has

also agreed to collaborate with M/s. Camphor and Allied Products Ltd., for establishing an essential oils complex. The feasibility report for this project has already been approved. Besides these, some other projects are awaiting clearance of the Corporation.

- (d) The only major industry in the State is the Cement Factory at Cherra producing 250 tonnes of cement per day. The factory is being expanded to produce to 950 tonnes of cement per day. The implementation of the expansion programme is in the advanced stages and is scheduled to be completed by the end of 1974. The requirement of funds is Rs.110 lakhs during 1973-74 and Rs.174 lakhs during 1974-75. The State Government is expected to contribute about Rs.30 lakhs and the balance has been sought for from the North Eastern Council. If funds are not available from the Council, completion would have to be slowed down. Besides the above, the State Fourth Plan programme also includes provisions for (i) departmental construction of Industrial Roads, (ii) Package scheme for incentives for setting up large and medium industries (iii) surveys and investigations and (iv) strengthening of the Directorate of Industries.

4.1.8. The following feasibility and project reports have so far been prepared:—

- (a) Project report for supply of limestone from Komorrah in Meghalaya to Chhatak Cement Factory in Bangladesh. This project is under implementation. The Company floated is called Komorrah Limestone Mining Company Ltd.
- (b) Feasibility report to manufacture essential oils in Meghalaya. This report was prepared by M/s. Camphor and Allied Products Ltd., and has been accepted for implementation. Steps have been taken to register the Company called the Meghalaya Essential Oils and Chemicals Company Ltd.
- (c) Feasibility reports on calcium carbide, calcium carbonate and hydrated lime have recently been received and are under examination.

4.1.9. The following project reports are being prepared by the Industrial Development Bank of India at the request of the State Government.

(a) Meat Processing (b) Tannery for hides and skins  
(c) Plywood veneers (d) Asbestos cement sheets (e) Cold-storage (f) Saw-mill, seasoning-cum-treatment plant.

It is expected that these feasibility studies would be available by the end of the Fourth Plan. In addition, project reports on a clinker/cement project in Garo Hills and a techno-economic feasibility report for utilisation of coal in Garo Hills are also under preparation. Besides these reports which are in various stages of preparation, a techno-economic report for production of limestone, clinker and cement in Meghalaya/Bangladesh is also being prepared by the Ministry of External Affairs through a consultancy firm in pursuance of the recommendation of the Joint Study Group appointed to examine the possibility of supply of limestone to Bangladesh.

4.1.10. The Meghalaya Industrial Development Corporation has applied to the Central Government for licences in respect of a clinker/cement project in Garo Hills and a Polypropylene fibre project. Setting up of industries in the private sector is also being encouraged by the State Government. A private party has received a letter of intent for a fruit canning project and a license for can-making unit has been issued to a private sector party. A licence for manufacture of jute twines has also been issued to another party. The State Government has also recommended an application for establishment of a flour mill in the Khasi Hills District. Negotiation with a leading industrial concern for putting up a pulp and paper project in Meghalaya has reached an advanced stage.

### **Fifth Plan Programme**

#### **1. Meter Factory:**

4.1.11. As mentioned earlier, the State Government is considering taking over of the Meter Factory at Shillong from the Assam State Electricity Board. For this, it has been estimated that amount of Rs. 60 lakhs will have to be paid to the A.S.E.B. as cost of existing plant, machinery, building, etc., before actual take over of the factory. Hence, the required amount of Rs. 60 lakhs is proposed for the Fifth Plan.

## 2. Cement Factory :

4.1.12. The estimated requirement of funds for the expansion phase of the factory during the Fifth Plan is Rs. 174 lakhs. The requirement of funds for 1973 is Rs. 110 lakhs which is expected to be available from NEC. If, however, funds are not available during 1973-74 as envisaged the actual requirement of fund in the Fifth Plan will be more than what has been estimated for 1974-75 ; the first year of the Fifth Plan. Considering these factors, a provision of Rs. 200 lakhs is made tentatively for this scheme for the Fifth Plan period. This provision will stand modified in case fund is made available by the North Eastern Council. In that event, the State Government will be required to make a smaller contribution to the share capital of the company.

## 3. Industrial Area :

4.1.13. The acquisition proceedings of the land for the proposed Industrial Area at Bornihat are expected to be completed by 1973-74. An amount of Rs. 10 lakhs is proposed for the Fifth Plan for payment of the balance of acquisition cost and for providing the necessary infrastructure in the Industrial Area.

## 4. The Meghalaya Industrial Development Corporation :

4.1.14. For implementation of the various programmes for development of industries during the Fifth Plan, the MIDC will be required to play a leading role. The strategy is that separate companies will be formed either in the joint sector or in partnership with suitable private entrepreneurs and the Corporation will contribute to the share capital of the new company to the extent ranging from 26 per cent to 51 per cent. Some of the projects which are expected to materialise during the Fifth Plan are discussed below and the contribution of the Corporation has also been indicated:

(a) **Pulp and Paper Unit of 100 M/T per day** :—Negotiations with a leading industrial house in the country has reached an advanced stage. The Corporation would be required to subscribe to the extent of about Rs. 250 lakhs towards the share capital of the proposed company.

(b) **Clinker/Cement Factory in Garo Hills** :—It is proposed to set up a clinker/cement factory in Garo Hills with the capacity of  $3 \times 900$  tonnes per day. It is proposed to supply 2 lakh tonnes of clinkers per annum to Cooch Behar in West Bengal. Negotiations are also under way to supply 3 lakh tonnes of clinker per annum to the grinding unit in Chittagong in Bangladesh. It has also been suggested to Bangladesh to take another 3 lakh tonnes per annum of clinker to be converted into cement across the border near Baghmara in Meghalaya. In addition, it is also proposed to grind 1 lakh tonnes of clinker per annum for meeting the local demands. The estimated total capital cost is Rs. 32.30 crores (Equity-Rs. 7.70 crores; Loan-Rs. 23.10 crores and Working Capital-Rs. 1.50 crores). The contribution of the MIDC for this project has been taken at Rs. 250 lakhs.

(c) There is a good prospect of establishing a **Jute Mill** based on the local raw material in Garo Hills in Meghalaya. The Jute mill will have a capacity of producing 10,000 tonnes of sackings per annum with 150 sacking looms on triple shift basis. The contribution of the MIDC to a Government company to be formed will be Rs. 45 lakhs.

(d) The Corporation has already decided to subscribe to the extent of Rs. 5 lakhs of equity capital and to purchase preference shares of Rs. 5 lakhs of the proposed **Asbestos Cement Sheets Project** which is being set up in Meghalaya.

(e) The Corporation has also decided to participate in the share capital of the proposed **Essential Oils Complex Project** to the extent of Rs. 10 lakhs.

(f) As stated earlier, a private firm has obtained a letter of intent for establishing a **Fruit Processing unit**. The party has approached the Government to subscribe to the share capital of the proposed company through the MIDC to the extent of Rs. 40 lakhs.

(g) A feasibility report in respect of **Calcium Carbide** plant in Meghalaya has already been received. The total capital investment will be Rs. 310 lakhs out of which, the share capital will be Rs. 102 lakhs and loan capital of Rs. 208 lakhs. A provision of Rs. 50 lakhs is proposed for this project.

(h) A feasibility report on **Chemical Calcium Carbonate and Hydrated Lime plant** has also been received. The total investment envisaged is Rs. 67 lakhs. Excluding the capital subsidy, the share capital of the proposed company will be Rs. 21 lakhs and loan capital Rs. 39 lakhs. A provision of Rs. 11 lakhs is proposed for the purpose of implementing this project.

(i) As pointed out earlier, a number of **Feasibility Reports** are being prepared by the Industrial Development Bank of India for our State. A lump sum contribution of Rs. 20 lakhs by the Corporation has been proposed.

(j) The techno-economic feasibility report for utilisation of coal in Garo Hills envisaging manufacture of **Carbon Black, Ammonia and Urea, Liquid Fuels** by hydrogenation process, domestic smokeless fuel, etc., is under preparation. A provision of Rs. 100 lakhs is proposed for taking action on the feasibility report.

(k) The techno-economic survey report for production of **Limestone, Clinker and Cement** in Meghalaya/Bangladesh is also likely to be made available by the end of 1973. The Corporation may be required to subscribe to the share capital of some of these new projects and a token provision of Rs. 50 lakhs is proposed for taking action on the feasibility report.

(l) The Corporation is also expected to assist the **Small Scale Units** in the form of loan, share capital participation, etc. A provision of Rs. 16 lakhs is proposed.

4.1.15. Summing up, the Government will be required to contribute to the share capital of the Corporation to the extent of Rs. 850 lakhs. A share capital of Rs. 1 crore is, therefore, expected to be subscribed by the end of the Fifth Plan.

##### 5. Strengthening of the Directorate of Industries :

4.1.16. The Directorate of Industries will require strengthening in order to initiate action on various projects, scrutinise the feasibility reports, provide leadership and guidance to the entrepreneurs, etc. Accordingly, a provision of Rs. 10 lakhs is proposed.

### 6. Investigation, Survey and Feasibility Reports :

4.1.17. Some of the feasibility reports commissioned in 1973-74 may not be completed by the end of the 4th Plan and, therefore, provision is necessary to pay for their cost during the 5th Plan. The identification of project ideas is a continuous process and some more reports may have to be got prepared during the 5th Plan. Hence a provision of Rs. 10 lakhs is suggested.

### 7. Package Scheme of Incentives :

4.1.18. The State has already adopted a comprehensive package scheme of incentives which is proposed to be implemented through the Corporation. A provision of Rs. 15 lakhs is suggested for this scheme for the Fifth Plan period.

### 8. Industrial Roads :

4.1.19. The State Industries Department has taken up with the State P. W. D. the question of construction of roads important from the point of view of industries. It may, however, still be necessary for the Industries Department to construct some industrial roads to facilitate quick implementation of industrial projects. Accordingly, a token provision of Rs. 10 lakhs is suggested.

### 9. Training :

4.1.20. The successful implementation of the schemes and projects requires availability of adequate trained manpower. It is proposed to provide scholarships to tribal candidates to undergo courses in Management Institutes, chartered accountancy, company secretaryship, cost accountancy, etc. A provision of Rs. 0.50 lakhs is suggested on this account for the fifth plan period.



## Scheme-wise Outlay

Rupees in lakhs.

Serial No.	Schemes	FOURTH PLAN				FIFTH PLAN (Proposed) 1974-1979							
		Approved Fourth Plan Outlay	Approved Outlay for 1973-74	Anticipated Expenditure for 1973-74	Anticipated Expenditure during the Fourth Plan	Total	Capital	Foreign Exchange	1974-75	1975-76	1976-77	1977-78	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Expansion of the Meter Factory	10.00	5.00	5.00	5.00	60.00	60.00	...	30.00	30.00	...	...	...
2	Expansion of the Cement Factory	...	12.50	12.50	40.51	200.00	200.00	...	150.00	50.00	...	...	...
3	Industrial Areas	11.00	6.00	6.00	6.00	10.00	10.00	...	4.00	4.00	2.00	...	...
4	Meghalaya Industrial Development Corporation.	70.00	19.00	19.00	44.80	850.00	850.00	...	110.00	200.00	200.00	180.00	160.00
5	Organisation, Strengthening of the Directorate.	4.00	2.00	2.00	2.05	10.00	...	...	2.00	3.00	2.00	1.50	1.50
6	Investigation, Survey and Feasibility studies.	5.00	3.00	3.00	5.32	10.00	...	...	2.00	2.00	2.00	2.00	2.00
7	Industrial Roads	...	3.00	3.00	3.00	10.00	10.00	...	2.00	2.00	2.00	2.00	2.00
8	Package Scheme of Incentives	...	1.00	1.00	1.00	15.00	...	...	3.00	3.00	3.00	3.00	3.00
9	Man power Training	...	...	...	..	0.50	...	..	0.10	0.10	0.10	0.10	0.10
	Total	100.00	51.50	51.50	107.68	1165.50	1130.00	...	303.10	294.10	211.10	188.60	168.60

## 4.2 METRIC SYSTEM OF WEIGHTS AND MEASURES

4.2.1. The Weights and Measures Act of 1956 was enforced in the Meghalaya areas by the Assam Act of 1958. But due to a variety of factors, the progress in adoption of standard weights and measures in Meghalaya has been slow. The illiteracy of the people, lack of adequate publicity and education in the new system and the meagre enforcement staff have delayed penetration of the metric system into the country side. As a matter of fact, the work in all these years was concentrated mainly in the towns.

4.2.2. When the new State came into being, the need was realized for wiping out exploitation of the simple rural folks by unscrupulous traders resulting from two systems in operation side by side. But because of lack of funds and shortage of personnel and equipment, not much intensive work could be done. Adoption of various metric systems acts and periodical verification could only be made. In the years to come the tasks will be more demanding with adopting of new standards like taxi meters, electric meters, gas meters, water meters, etc.

4.2.3. In the Fifth Plan, therefore, considerable effort has to be made for systematic, intensive and extensive enforcement to ensure universal adoption of the standards in the State. All illegal standards and instruments would be eliminated. Intensive verification would be made in both urban and rural areas in accordance with the provisions of the Acts.

4.2.4. Besides legislative support, the enforcement has to be strengthened appreciably. Adequate publicity and education on use of the legal standards would have to be undertaken. Both punitive and incentive measures would have to be undertaken to speed up adoption of legal standards.

To achieve the objective, the following schemes are proposed in the Fifth Plan.

#### 1. Strengthening of Staff:

4.2.5. The present strength of enforcement staff in the State comprise only one deputy controller, 4 inspectors and 3 assistants. These have to cater to 4,629 villages and an area of roughly 22,500 square kilometres of difficult terrain. In the Fifth Plan, a minimum strength required is an addition of 20 enforcement personnel at different levels. Besides, additional supporting staff would have to be recruited. The expenditure required works out at Rs. 6.70 lakhs in the Fifth Plan.

## **2. Purchase of Working Standards and Equipment :**

4.2.6. As required under the Act, the Inspectors and Assistant Controller are to be provided with the working standards, secondary standards and other tools and equipment for carrying out verification. For 11 of these personnel, the cost of the standards and accessories required works out at Rs. 2.46 lakhs.

## **3. Vehicles :**

4.2.7. Due to the scattered markets and the difficulty of the terrain, jeeps and a mobile van are proposed to be purchased to enable mobility of the enforcement staff and transport of the equipment. An amount of Rs 2.56 lakhs is proposed on this account.

## **4. Publicity :**

4.2.8. As stated earlier, adequate publicity is necessary to ensure adoption of the metric system. A small cell is, therefore, proposed to be created. The amount required works out at Rs. 1.50 lakhs.

## **5. Laboratories :**

4.2.9. It is proposed to establish one Laboratory for Reference Standards and one for Secondary Standards both to be located at headquarters. In addition, a laboratory for Working Standards for each district would be necessary. The cost on account of these laboratories works at Rs. 2.50 lakhs.

The total cost of the programme in the Fifth Plan works out at Rs. 15.72 lakhs as against Rs. 3.00 lakhs in the 4th Plan.

## Draft Fifth Year Plan

### Outlay and Expenditure—Summary

Rupees in lakhs

Serial No.	Head/Sub-head	Fourth Plan				Fifth Plan outlays proposed			Annual Plan for 1974-75		
		Approved fourth plan outlay	Approved outlay for 1973-74	Anticipated expenditure 1973-74	Anticipated expenditure during the 4th Plan	Total	Capital Outlay	Foreign Exchange	Total	Capital Outlay	Foreign Exchange
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>Weights and Measures</b>											
<b>Development schemes</b>											
1	Maintenance and strengthening of staff.					6.70	...	...	1.20	...	
2	Purchase of Vehicle and maintenance of.	3.00	1.50	1.50	2.73	2.56	2.10	...	2.10	2.00	
3	Purchase of Laboratory equipment, etc., and maintenance of.					2.46	2.46	...	2.00	2.00	
4	Publicity Wing	...		...	...	1.50	...	...	0.25	...	
5	Land and Building for Laboratory.	...		...	...	2.50	2.50	...	1.50	1.50	
<b>Grand Total</b>		3.00	1.50	1.50	2.73	15.72	8.06		7.05	5.50	

### 4.3. MINERAL DEVELOPMENT

4.3.1. Meghalaya is endowed with rich mineral resources. However, for one reason or another exploitation and development of these resources has been extremely slow and in most cases negligible. Lack of co-ordinated planning due to lack of adequate investigations has been one of the factors for this slow progress. Proper exploitation of minerals would help immensely the economic development and industrialisation of this State thereby contributing to the growth of the economy of the entire N.E.R. In order to take stock of the State's mineral resources and assess their potential scientifically, intensive and extensive investigation is needed within the shortest possible time to enable plans for mineral-based industries to be formulated on sure footing.

4.3.2. Investigations of some minerals are already in progress. Geological investigations carried out by the Geological Survey of India and the Government of Assam in the Meghalaya areas have indicated a promising picture for this region. Deposits of coal, limestone, sillimanite, refractory clay, kaolin have been recorded. Occurrences of other minerals like quartz, feldspar, corundum, glass sand and pyrites as also phosphates and base metal sulphides have also been reported in various parts of the State and are being investigated. However, a great deal of investigation is still to be done even in respect of the known deposits and work has to be undertaken to locate hidden deposits.

#### **Potential Resources**

4.3.3. Coal is the most important among the known minerals of Meghalaya. The known reserve of coal is more than a thousand million tonnes in Garo Hills alone. The better known areas are Langrin field, Darrangiri and Sijju fields. The coal of this State is known for its high volatile, high sulphur and very low ash content. Presence of uranium and germanium are also reported in some of the coal deposits. Though the demand of coal from these areas has considerably declined with the Indo-Pakistani conflict of 1965, with the dieselisation of rail transport and tea industry, the demand for coal has revived lately with the setting up of cement and other industries. The geological investigation for clay and limestone has indicated inexhaustible reserves in Meghalaya. The limestone is suitable for the manufacture of cement in well as for use in the blast furnaces, steel melting shops and as

the processing of chemical grade lime. Some clay deposits in the State are suitable for manufacture of fine china and low tension insulators while other large deposits of clay may be used in the pottery stoneware pipes and refractory industries. Large deposits of finest grade sillimanite also occur in Sonapahar in the Khasi Hills. Meghalaya produces most of India's sillimanite. This industry, however, needs considerable investigational support even to retain its present position.

#### **Present state of development**

4.3.4. **COAL** : The present production of coal is about 40,000 tonnes per year which is raised mainly from a few small collieries. The Meghalaya coal has seen a boom with annual production topping 2 lakh tonnes in the early sixties as well as suffered a crash following the Indo-Pakistan conflict of 1965.

4.3.5. **LIMESTONE** : Approximately 80,000 tonnes of limestone is raised annually at present.

4.3.6. Mining activities in respect of other minerals are almost negligible. Some granites and other hard rocks are quarried for building and road construction.

4.3.7. The only worth mentioning mineral-based industry in the State is a cement factory with an installed capacity of 250 tons per day which is being expanded to 950 tonnes daily. This factory consumes the bulk of coal and limestone now being produced. A small pottery industry has recently been set up in Garo Hills. A 5 MW thermal power station in Garo Hills and operating at 2.5 MW capacity has recently been commissioned consuming about 3,000 tons of coal annually from the local coal fields. A limestone quarry has just been started at Komorrah in Khasi Hills. It will raise about 2 lakhs tons of limestone annually, mainly for export.

#### **Review of the Fourth Plan**

4.3.8. Prior to April 1970, mineral development in Meghalaya areas was the responsibility of Government of Assam. With the formation of Meghalaya as an Autonomous State in 1970, a separate Directorate of Mineral Resources was set up. For sometime, the Directorate of Geology and Mining, Assam looked after the work of Meghalaya also. The Meghalaya Directorate started on its own from May, 1972. Difficulties in executing the different programmes were experienced

due to lack of sufficient trained and skilled personnel, insufficient transport and want of sufficient drilling accessories. The State Directorate even at present is operating with a staff mainly on deputation from Assam and therefore, the geological investigations had to be confined to a few selected areas only.

4.3.9. The Fourth Plan allocation for mineral development was Rs.30.00 lakhs of which an amount of Rs.18.00 lakhs has been spent during the first four years. The anticipated expenditure during the current year is Rs.12.00 lakhs. The schemes in the Fourth Plan are (1) administration including planning (2) intensive mineral investigation (3) laboratory and analytical unit and (4) Mineral Development Corporation and preparation of feasibility reports. As a result of the development programmes, the following projects have already come up or are in various stages of implementation (1) Mining of Limestone in Khasi Hills and its export to Bangladesh (2) feasibility studies for setting up of a cement clinker plant in Garo Hills (3) feasibility studies for setting up of calcium carbide and precipitated lime manufacturing units and (4) feasibility studies for setting up of 400 MW thermal power station based on the coal resources of Garo Hills. The following table will indicate the physical achievement in respect of mapping, drilling, etc.

	Geological Mapping (sq. kms)	Drilling (Rms)	Pitting and Trenching (Cums)	Sampling and Bulk sampling (Nos)
	(1)	(2)	(3)	(4)
4th Plan Target	4.15	3525	1800	1200
1969-70... ..		Not available		
1970-71.. ..	9.9	525	125	150
1971-72... ..	22.0	447	237	132
1972-73... .. anticipated.	65.0	1500	450	400
1973-74 (Target)...	100.0	2000	1000	600

4.3.10. During 1973-74, the programme for investigation, survey and drilling will be further intensified. The organisation will be further strengthened by procuring more equipment and accessories and by recruiting scientific and technical personnel to undertake and carry on the programme envisaged. With a view to testing and analysing the various samples collected, an analytical laboratory is being set up during the current year.

#### **Fifth Plan objective and priorities**

4.3.11. Although geological investigations of the mineral deposits of the State have in the past been carried out by both the Directorate of Geological and Mining of Assam and the Geological Survey of India, a lot of work is still to be done to cover all the known deposits and to locate the hidden reserves. In the case of some of the deposits that require immediate exploitation, detailed surveys are necessary in order to assess the reserves, quality, suitability to industry, etc. The prime objective is, therefore, to intensify the programme of geological investigations both by ground surveys as well as by drilling in order to produce the desired data in the shortest possible time. It is only on the basis of sufficient data that a rational utilization of the minerals can be programmed.

4.3.12. In the current year (1973-74) and in the early part of Fifth Plan, large strides are expected to be made in the assessment of the mineral raw material of the State. Simultaneously, this has to be accompanied by measures to set up mineral-based industries on the basis of known raw materials available. First and foremost, the availability of huge resources of limestone in the State suggests the possibility of setting up of more cement or clinker plants. With the emergence of Bangladesh as a sovereign and friendly State, the limestone deposit along the border, hitherto lying idle, has assumed great commercial significance to both India and Bangladesh. Steps have already been taken at the initiative of the Government of India for supply of this limestone to the cement factory in Bangladesh near the border. Apart from trade with Bangladesh, the question of setting up of cement and clinker plants needs serious consideration for meeting the needs of the eastern region of the country.



4.3.13. Meghalaya coal has been a problem to industry because of its high sulphur content as well as its high delivery cost. However, if the State is to develop its economy, the vast resources of coal available have to be tapped as quickly as possible. A feasibility report for establishment of a 400 M. W. thermal power project is under preparation. The State Government is also thinking in terms of commissioning a techno-economic report on the utilisation of coal in the manufacture of urea, carbon black and other coal chemicals and products.

4.3.14. A number of clay deposits—both fire clay and china clay—have been located in the State. A few refractory and pottery industries could be set up based on these deposits. It will, therefore, be necessary to probe for more such deposits so that proper industries could be set up during the plan periods ahead.

The major portion of the State is covered by what is known as “hard rock” areas which have not been looked into in depth geologically. The known geology of such areas suggests that presence of some base metal ores, indications of which have been seen in the Mawphlang-Tyrsad and Umpyrtha areas. The terrain being highly rugged, it has been suggested in the past that the Geological Survey of India should carry out a quick geophysical survey of the Shillong Plateau to indicate the areas of probable mineralised zones which could be followed up by ground surveys. It will thus be necessary to follow up this suggestion so that it materialises within the shortest possible time. Feasible industries based on base metal ores can be formulated only after the reserves and quality of such ores are more clearly known.

4.3.15. The availability of glass sands in some localities suggests the possibility of setting up of glass ware units.

4.3.16. In order to enable the State Directorate of Mineral Resources to discharge its responsibilities more efficiently and expeditiously, it will be necessary to strengthen it both by way of personnel, technical and scientific as well as by way of equipments, instruments and other accessories. In the first place, the Technical Laboratory should be strengthened and equipped to enable it to undertake all testing and analysis jobs of the various samples collected by the field crew. At present coal samples are still being sent to laboratories outside the State for

their analysis which is a long drawn out and costly process. It is also necessary to set up a technical library with the latest publications for keeping the scientific and technical personnel abreast with the latest development in this field. Thirdly, a Geological Museum is also required to be set up in order to place in it specimen samples of rocks of various types available in the State as well as samples of other rock types available in the country and abroad. This will serve also the purpose of educating both the workers and the general public interested in such matters.

4.3.17. The State is at present experiencing a great dearth of scientific and technical personnel in the disciplines of earth sciences and allied subjects to fill up the posts required for carrying out the different programmes. It is, therefore, essential that the avenues of employment in this branch of science be publicised among boys and girls. For this purpose, it will be necessary to create scholarships to attract meritorious students for prosecuting higher studies in any of the earth sciences. Technical personnel with trade qualifications are also necessary for these programmes. It will therefore, be necessary to initiate training programme in different trades required for the profession. These steps will go a long way in solving the unemployment problem among the educated youths of the State.

**(iv) Investment and employment potential:**

4.3.18. Since Mineral Development is a continuing process, all the four schemes of the 4th Plan will be continued in the 5th Plan. In addition, during the 5th Plan a new cell of "Minor Mineral Survey and Development Cell" has been proposed. This cell will be responsible for systematic surveys and proper development of vast resources of minor minerals in the State. It will guide the local people in proper development of minor minerals and their use and provide them with grants-in-aid, etc. Provision has also been proposed for (i) award of stipends for study in earth sciences as well as for training of personnel in different trades and (ii) setting up of a geological museum and a technical library. The physical programmes and targets have been indicated in Annexure III.

4.3.19. The implementation of the various programmes outlined in the foregoing pages envisages an outlay of Rs.103 lakhs during the 5th Plan. Out of this amount, Rs.68 lakhs will be for implementation of the projects as listed out in the Annexure. The balance Rs.35 lakhs will be required for preparation of feasibility reports on mining and setting up of mineral industries and also as share capital in the State Mineral Development Corporation. Schemewise outlays and expenditures are indicated in the Statement.

4.3.20. The mineral investigation schemes will provide regular employment to about 170 technical and non-technical personnel while between 100 to 150 personnel will be engaged on daily wages.

4.3.21. The mineral development schemes envisaged for implementation during the fifth plan will provide direct employment to approximately 1,000 personnel in mines and mineral based industries.

State—Meghalaya.

## ANNEXURE

### MINERAL RESOURCES

#### **A Shelf of Projects of the Directorate of Mineral Resources for Inclusion in the Fifth Five-Year Plan (1974-75 to 1978-79)**

##### A.—FIELD INVESTIGATIONS BY THE DIRECTORATE

###### (a) Khasi Hills District

1. Investigation of mineralised zone in the Mawphlang-Tyrsad area.
2. Continuation of proving of gold occurrences in the Mawphlang-Tyrsad area by drilling.
3. Detailed investigation of pyrite belt near Laitryngew by trenching, pitting and shallow drilling for investigation of reserves.
4. Investigation by drilling for iron ore occurrences around Aradonga and Rongshapara (near Hahim).
5. Investigation of Kaolin deposit at Smit.
6. Detailed investigation of the mineralised belt in the Barapani and adjacent areas.
7. Investigation of reported copper ore occurrences in the Ryngud area (near Mawsmat falls).
8. Investigation of reported clay deposits around Sohrarim.
9. Detailed mapping for coal and limestone near Pynursla, to be followed by drilling for proving the reserves.
10. Investigation of reported coal occurrences near Lum Didom, Umsohmat areas.
11. Preliminary investigation of reported iron ore occurrences in Nongspung area.
12. Mapping of Cretaceous rocks of Khasi Hills for phosphates.

###### (b) Garo Hills District

1. Continuation or investigation for phosphates in Garo Hills.
2. Detailed investigation of reported iron-ore deposits in the Kharghar Hills (east of Debu).

3. Investigation for coal in the Rongrenggiri-Karaibari areas.
4. Geological mapping, including pitting, for feldspar in Adogiri, Jengjalgiri, Chisukgiri, etc., areas.
5. Detailed investigation for coal and limestone around Pendengi-Asilgao Dalphagram area, followed by drilling, if necessary.
6. Preliminary investigation for coal in the south of Tura Range.
7. Investigation for glass sands along Tura-Garobandha road.
8. Continuation of mapping of lithomargic clays in various areas of Garo Hills.
9. Preliminary investigation for mica and feldspar near Nengkhra.
10. Mapping of the Gondwanas around Haldiganj (Singrimari) for coal.

**(c) Jaintia Hills District**

1. Proving by drilling of the chemical grade limestone deposits along the Jowai-Badarpur road section.
2. Detailed investigation for clay deposits in the Shangpung and Sutnga areas.
3. Preliminary investigation for limestone in the Mynkre, Syndai and Nongkhlieh areas.
4. Preliminary investigation for coal deposits around Shyrmang village (near Jowai).
5. Preliminary investigation of reported mica occurrences in the Jowai-Dawki Road.
6. Detailed investigation for reported clay occurrences in Larnai area.

**G.—STRENGTHENING THE TECHNICAL SIDE OF THE DIRECTORATE**

1. Equipping the Technical Laboratory for undertaking major testing and analysis of samples.
2. Setting up of a Geological Museum.
3. Expanding the Geo-Science Library.
4. Sponsorship of promising boys and girls for higher technical education and/or trade training and apprenticeship.

**Programme arise outlays**

Rs. lakhs

Sl. No.	Name of the Scheme/Project	Total Cost original/ Revised	Foreign Ex- change component	Fourth Plan		Propose outlay for Fifth Plan		Phasing of outlay in the Fifth Plan				
				Approved outlay	Estimated expenditure	Total	F. E.	1974-75	1975-76	1976-77	1977-78	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	<b>Mineral Development:</b>											
(i)	Projects/Schemes implemented during the Fourth Plan.											
	I—Geology and Mining	..	..	..	..	5.43	..	1.47	0.95	0.97	1.00	1.02
	II—Intensive Mineral Investigation.	..	..	20.00	20.00	46.90	..	9.17	7.93	9.50	10.10	10.20
	III—Laboratory & Analytical Unit.	..	..	..	..	8.59	..	1.55	2.08	1.62	1.65	1.68
	IV—											
	(a) Share capital in State Mineral Development Corporation and	..	..	10.00	10.00	35.00	..	5.00	5.00	5.00	10.00	10.00
	(b) Feasibility Reports	..	..	..	..	..	..	..	..	..	..	..
(ii)	New projects/Schemes proposed to be taken up in the Fifth Plan (in order of priority).											
	I—Minor Mineral Survey and Development, Scholarships Library and Geological Museum.	..	..	..	..	6.56	..	1.34	1.46	1.22	1.25	1.29
	<b>Total</b>	..	30.00	30.00	30.00	102.48	..	18.53	17.42	18.31	24.00	24.19

## Fifth Five Year Plan

### Physical Programme : Target

Serial No.	Item	Unit	Fourth Plan		Fifth Plan Target		Remarks
			Target	Lik-ly Achievement	Total	1974-75	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	(a) Large Scale mapping...	Sq. Km.	415	200	50	10	Seven Geological Survey parties and Five Drilling parties.
	(b) Small Scale mapping...	Sq. Km.			3,250	500	1st Year of the Plan.
2	Pitting ... ..	Cu. mr.	1,800	1,800	5,000	1,000	Increasing to—
3	Drilling ... ..	R. mr.	3,525	3,525	17,000	2,500	Eight Geological parties and Eight Drilling parties.
4	Sampling and Analysis ...	Nos.	1,200	1,200	4,500	700	Towards the last part of the plan.
							Drilling for proving of known coal deposits =10,000 metres.
							Drilling for proving of Chemical grade Limestone =3,000 metres.
							Test drilling in the Tyrsad mineralised belt =3,000 metres.
							Drilling for proving of clay deposits =1,000 metres.
							Large Scale mapping (Scale 1 : 1000 to 1 : 3000)

## 4.4. SMALL SCALE INDUSTRIES

## 4.4.1. Small Scale Industry

4.4.1.1. Altogether 29 schemes have been taken up in the State for implementation during the Fourth Plan period. While most of the schemes included in the development programme for this sector were inherited from the Assam State Plan for Meghalaya areas, some new need-based schemes have also been taken up for development of small industries in the State. A techno-economic survey of the State was conducted by the NIDC which has listed about 50 potential industries—both need-based and resource-based.

4.4.1.2. The Fourth Plan provision for Small Scale Industries, Industrial Estates, Handicrafts and Khadi schemes was Rs. 85.00 lakh. The anticipated expenditure against this outlay is Rs. 57.79 lakhs. The low expenditure in the Fourth Plan period was due to shortage of staff in the formative stage and comparatively low expenditure in 1969-70 when the schemes were implemented under the Hill Plan of Assam.

4.4.1.3. The various schemes under implementation are reviewed below:

## 1. Headquarter Staff

4.4.1.4. A provision of Rs. 4.69 lakhs had been made for recruiting staff under Directorate and for purchase of vehicles. Full complement of staff has not been recruited and it is expected that in the final year of the Plan at least some officers and staff would be recruited to strengthen the present Directorate.

## 2. District Staff

4.4.1.5. The district offices at Shillong and Tura are already functioning and are being further strengthened during the current year. A new district office has also been started at Jowai for the Jaintia Hills Officers and staff for the new district office are being recruited.



### **3. Ginger Dehydration Plant**

4.4.1.6. This was a continuing scheme and after working for some time, it was found that the ginger available in the region was not suitable for dehydration due to its fibrous nature. Experiments are now being carried out for commercial exploitation of ginger and turmeric available in the area.

### **4. Lime Making Plant**

4.4.1.7. Construction of the lime burning kiln in Jaintia Hills District has been completed and the personnel have been appointed. This unit is expected to go into production during the current year. The other scheme for the Garo Hills district was not taken up as raw material sources are not easily accessible.

### **5. Saw Milling-cum-Mechanised Carpentry**

4.4.1.8. Two units, one at Nayabungalow and the other in the Garo Hills have been envisaged. The unit at Nayabungalow is functioning and steps are being taken to start the new unit in the Garo Hills. A scheme in this regard has been prepared in consultation with the State Forest Department and the land required for the purpose would be available from the Forest Department at Darugiri in Garo Hills.

### **6. Cinamon Leaf Oil Distillation Plant**

4.4.1.9. The capital investment involved in setting up this plant is in excess of the permissible investment for a small scale unit. The scheme is now under consideration of the Meghalaya Industrial Development Corporation.

### **7. Fruits Preservation Plant**

4.4.1.10 Feasibility of setting up a fruits preservation plant in the Garo Hills district is being examined.

### **8. Tailoring, Knitting and Embroidery Training Centres**

4.4.1.11. Two centres one at Khliehriat in Jaintia Hills and the other at Baghmara in the Garo Hills are functioning and training is being imparted in these trades.

## **9. Training Inside and Outside the State**

4.4.1.12. Under this scheme, entrepreneurs and artisans are sent for training in various trades organised by the Small Industries Service Institute and the Khadi Board. 12 persons were trained outside the State in the year 1972-73.

## **10. Study Tour of Artisans and Entrepreneurs**

4.4.1.13. Batches of Artisans and Entrepreneurs from all the three districts have been sent on study tours to familiarise themselves with new methods and techniques in the management of small scale units. During 1971-72, 20 persons were sent on study tour and in 1972-73 more persons were sent.

## **11. Grants-in-aid to Institutions and passed out Trainees**

4.4.1.14. During the Plan period, grants have been disbursed, both in cash and kind, to artisans, institutions and passed out trainees.

## **12. Power Subsidy**

4.4.1.15. Subsidy was granted under this scheme to various industrial units in the State. This scheme, however, is being amalgamated in the Package Scheme for incentives.

## **13. Exhibitions**

4.4.1.16 In order to bring about an industrial atmosphere in the State, exhibitions were held in all the three districts of the State. Further, the State Government also participated in the Asia'72 at Delhi.

## **14. Stipends to Trainees**

4.4.1.17. Forty Artisans were given stipends during 1972-73 for undergoing training in the departmental training centres.

## **15. Industrial Loans**

4.4.1.18. Under this scheme, loans to the extent of Rs.20,000 are given to industrial concerns either to improve their existing units or to set up new units and for purchase of raw materials.

## **16. Raw Materials-cum-Sales Depot**

4.4.1.19. Raw Material-cum-Sales Depots have been established in Shillong, Jowai and Tura to cater to the needs of industrial concerns regarding procurement of raw materials. Further, finished products are also brought for market exploration under this scheme.

## **17. Multipurpose Service Workshop**

4.4.1.20. Steps have been initiated for setting up a multipurpose service workshop at Jowai. Plans and estimates are being worked out for the civil work required.

## **18. Manufacture of Chemical Grade Lime**

4.4.1.21. It has been proposed to take up a scheme for precipitated chalk and manufacture of chemical grade lime but this has been dropped as a proposal for setting up an integrated lime complex is under consideration.

## **19. Package Scheme of Incentives**

4.4.1.22. To encourage entrepreneurs to set up new small scale industries the Government had initiated action on this scheme in the last year of the Plan.

## **20. Employment of Technically Qualified Persons**

4.4.1.23. To partially solve the problem of unemployment of Engineering Graduates and Diploma holders, Government had introduced this scheme in the last year of the Plan.

## **21. Industrial Estate**

4.4.1.24. Based on the techno-economic survey conducted by the Small Industries Service Institute, two areas have been identified for the Industrial Estate, one at Shillong and the other at Mendipathar in Garo Hills. Steps for the acquisition of the land are under way.

## **22. Handicraft**

4.4.1.25. In collaboration with the all-India Handicrafts Board, Government is contemplating to set up a centre for manufacture of cane and bamboo products and a unit for manufacture of fibre from pine apple leaves.

### 23. Khadi and village Industries

4.4.1.26. The Assam Khadi and Village Industries Board was implementing the khadi and village Industries schemes in Meghalaya also. As such yearly contributions by Meghalaya Government in the form of grants-in-aid were made to the Assam Khadi and Village Industries Board till 1972-73. The Khadi Board of Meghalaya has since been constituted and will be functioning from the last year of the Plan.

4.4.1.27. The expenditure during the Fourth Plan period on account of the various schemes under village and small scale industries indicated below—

	Rs. in lakhs			
	Fourth Plan outlay	1969-73 (actual expenditure)	1973-74 (Anticipated expenditure)	1969-74 total (anticipated expenditure)
1. Small Scale Industries	72.40	29.79	19.50	49.29
2. Industrial Estate ...	6.60	...	3.00	3.00
3. Handicrafts ...	4.00	...	3.50	3.50
4. Khadi Board ...	2.00	1.00	1.00	1.00
	85.00	30.79	27.00	57.79

### (Strategy and objectives for Fifth Plan .

4.4.1.28 Since there is no industry for catering to the local consumers needs or ancillary industries for manufacture of components for supplying to the medium and large units, efforts towards development of small scale industries in the State would necessarily have to be confined to setting up modern small scale industries to provide opportunities of productive employment to the under-employed and unemployed. At the initial stages, it would be necessary to concentrate on developing entrepreneurship, a skilled and semi-skilled work force and provision of the infra-structure. There are departmental training centres for imparting training in trades like carpentry, blacksmithy, soap making, tailoring, etc. In addition, the artisans are being trained in trades like machinist, fitter, draughtsmen, etc. There were a few commercial schemes under implementation departmentally and it is proposed to implement a few commercial schemes which will provide opportunity of employment.

4.4.1.29 Government activity will be confined to promotional works. The State Department of Industries will have to be expanded and entrepreneurs in the State will have to be assisted from identification of project, arrangement of finance, procurement of raw materials and to the marketing of the products.

4.4.1.30 A consultancy cell and a statistical and raw material wing are proposed to be added to the existing set-up of the Directorate.

#### **Consultancy Cell**

4.4.1.31 A consultancy cell is proposed to be set up with staff conversant with different spheres of activity in an industrial undertakings to man this cell.

#### **Statistical and Raw Material Wing**

4.4.1.32 The function of this wing will be to compile statistics in respect of raw materials requirement, marketing information, records of production, etc. The arrangement for procurement of imported, scarce category, controlled raw materials, construction materials like steel, cement, C. I. sheets, etc., will have to be made and arrangement for storage and disposal of the same will be looked after by this wing.

4.4.1.33 The emphasis, therefore, will be more in the organisational set up of the Directorate to do promotional work and for creating conditions conducive for development of industries in general and Small Scale Industries in particular.

### **PROPOSALS FOR THE FIFTH PLAN**

4.4.1.34. The allocation proposed in the Fifth Plan for this sector is Rs.173.00 lakhs out of which Rs.5.00 lakhs is earmarked for the Khadi and Village Industries, Rs.8.00 lakhs for the Handicraft Schemes, Rs.10.00 lakhs for the Industrial Estates and Growth Centres and the balance for small scale industries.

## SMALL SCALE INDUSTRIES

**1. Head Quarter Staff**

4.4.1.35. A provision of Rs.10·00 lakhs for this scheme is proposed to strengthen the present set up of the State Department of Industries so that it can cater to the needs of the entrepreneurs in all respects, *i. e.* finance, consultancy, procurement of raw materials, statistics, etc. Further a separate cell for civil works will also have to be established.

**2. District Staff**

4.4.1.36. Two subdivisional offices will be set up and staff will be recruited in the districts for the field work envisaged to be undertaken during the Fifth Plan.

**3. Lime Making Plant**

4.4.1.37. It is proposed to expand the existing Plant at Sutnga. More kilns and sheds are to be made/constructed and more staff will be entertained.

**4. Saw Milling-cum-Mechanised Carpentry**

4.4.1.38. A new unit is being started in the last year of the 4th Plan in the Garo Hills District. The provision of Rs.8·00 lakhs made is for the expansion of the existing unit at Naya-bungalaw and for the new unit in the Garo Hills District.

**5. Raw Material-cum-Sales Depot**

4.4.1.39. To serve the entrepreneurs and artisans to a fuller extent it is proposed to expand the operations of the existing Raw Material Depots for procurement of scarce and controlled raw materials also, like steel, non-ferrous metals, tallow, yarn, etc. Considering the high cost of these materials, a provision of Rs.30·00 lakhs is made for the three depots.

**6. Multi-purpose Service Workshops**

4.4.1.40. This is a spill over scheme from the 4th Plan. Initial steps have been taken for implementation of the scheme and it is proposed to complete the projects during the Fifth Plan.

## **7. Tailoring, Knitting and Embroidery Training Centres**

4.4.1.41. The centres at Baghmara and Khliehriat are already imparting training to local persons in these trades. However, the number of trainees is limited. Therefore, it is proposed to increase the number of trainees and for this, additional expenses will have to be incurred for buildings, hostels, etc. A new tailoring training centre is proposed to be attached to the Ready-made Garments manufacturing unit.

## **8. Training Inside and Outside the State**

4.4.1.42. With the increase of industrial activity and with the setting up of large and medium industries in the State, more personnel entrepreneurs will have to be trained so that ancilliary units can come up in the small scale sector. As such, a provision of Rs.3.50 lakhs is made which includes scholarships also.

## **9. Study Tour For Artisans and Entrepreneurs**

4.4.1.43. With the ever increasing trend towards modernisation, more entrepreneurs have to be sent on study tours regularly so that they can keep abreast with the developments and as such provision for this is also made in the Plan.

## **10. Grants-in-aid to Institutions and Passed out Trainees and Artisans**

4.4.1.44. To create employment for the passed-out trainees and to help the financially handicapped village artisans, grants-in-aid, both in cash and kind, will be disbursed. Institutions engaged in industrial activities will also be eligible for the grants.

## **11. Exhibition Inside and Outside the State**

4.4.1.45. With a view to accelerating the growing industrial activity in the State, it is proposed to organise exhibitions in the head quarters of the districts and also in the sub-divisional head quarters. The provision made is also for participation in some exhibitions outside the State.

## **12. Stipend to Trainees**

4.4.1.46. Under this scheme, stipends will be granted to trainees who will be accommodated in the departmental training centres.

### 13. Industrial Loans

4.4.1.47. It is proposed to disburse loans under the State Aid to Industries Act to industrial units in areas where commercial banks do not operate.

### 14. Package Scheme for Incentives

4.4.1.48. In view of the backwardness of the State it is felt that entrepreneurs should be given more incentives to start small scale units. This scheme provides for various incentives which will be offered to entrepreneurs so as to attain a more rapid growth in the Small Scale Sector.

### 15. Subsidy on interest on loans from Financial Institutions

4.4.1.49. The present high rate of interest on loans from commercial banks discourages the prospective entrepreneurs in availing the advantages of the various schemes introduced by the banks. It is proposed to subsidise the interest charges on bank loan so as to attract local entrepreneurs in taking advantages of the bank scheme for financing small industries.

### 16. Survey, Investigation and Feasibility Studies

4.4.1.50. Feasibility reports of all prospective industries will be prepared and surveys conducted in respect of various natural resources of the State.

#### **Poultry Feed Unit and Ready Made Garment Unit, etc.**

4.4.1.51. Based on the survey report of the National Industrial Development Corporation, these two schemes have been included in the Fifth Plan. The schemes will be operated departmentally.

#### **Industrial Estates**

4.4.1.52. This is a spill-over scheme from the Fourth Plan. Two Industrial Estates are being set up in the current Plan—one at Shillong and the other at Mendipathar in Garo Hills—each having about ten sheds. Further it is proposed to have at least four growth centres in the State with three sheds each. All these schemes will be completed during the Fifth Plan period.



**Handicraft**

4.4.1.53. As suggested in the report of the Handicrafts Board, a Pine Apple Fibre Research Centre will be set up. Steps have already been taken during the Fourth Plan and implementation is being carried over to the Fifth Plan.

4.4.1.54. It is also proposed to set up a training centre for cane and bamboo products and also sales emporia to market the handicrafts of the State.

**Khadi and Village Industries**

4.4.1.55 The Meghalaya Khadi Board has been set up only in 1973. Prior to this, the Assam Khadi Board used to look after Meghalaya area also. The newly constituted Meghalaya Khadi Board is taking over all the schemes so long executed by the Assam Board and will also implement various other schemes like bee-keeping, honey extraction, paper making, etc.

4.4.1.56. Details of financial outlay and physical programmes are indicated in Annexure I, II and III.

**ANNEXURE I**

**Village and Small Industries**

**Summary Statement of State Outlays**

				(Rupees in lakhs)								
Fourth Plan				Fifth Plan proposed			1974-79					
Approved Outlay	1969-73 (Actual expenditure)	1973-74 (anticipated expenditure)	1969-74 (Estimated expenditure)	Total	Capital	Foreign Exchange	1974-75	1975-76	1976-77	1977-78	1978-79	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>I. Small Scale Industries</b>												
72.40	29.79	19.50	49.29	150.00	68.00	...	22.35	33.60	34.35	30.35	29.35	
<b>II. Industrial Estate</b>												
6.60	...	3.00	3.00	10.00	8.00	...	2.00	3.00	3.00	1.20	0.80	
<b>III. Handicraft</b>												
4.00	...	3.50	3.50	8.00	...	...	1.00	2.00	2.00	1.50	1.50	
<b>IV. Khadi and Village Industries</b>												
2.00	1.00	1.99	2.00	5.00	...	...	1.00	1.00	1.00	1.00	1.00	
<b>V. Sericulture*</b>												
30.00	14.15	8.00	22.15	35.00	0.75	...	7.11	6.84	6.88	6.98	7.19	
<b>VI. Handloom*</b>												
10.00	4.42	4.00	8.42	40.00	3.00	...	8.16	8.92	8.69	7.19	7.04	
<b>Total of I to VI</b>												
125.00	49.36	39.00	88.36	248.00	79.75	...	41.62	55.36	55.92	48.12	46.88	

\*N.B.—Details in next chapter

## ANNEXURE II

### Village and Small Industries

Name of Schemes

#### PHYSICAL TARGETS

Name of Schemes	PHYSICAL TARGETS								
	FOURTH PLAN						Fifth Plan		
	Target			Likely achievements			Targets		
	No. of new units likely to be established	No. of additional employment to be created		No. of New units likely to be established.	No. of additional employment to be created		No. of new unit to be established	No. of additional employment to be created	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Technically qualified.	Others		Technically qualified	Others		Technically qualified	Others
<b>I. Small Scale Industries</b>									
1. Head quarter Staff ...	...	...	...	...	...	...	...	15	62
2. District Staff ...	...	...	...	...	...	...	...	12	52
3. Lime Making Plant...	...	4	6	...	1	...	2	8	12
4. Saw Milling-cum-Mechanised Carpentry.	...	4	16	...	2	8	1	2	8
5. Raw-Material-cum Sales Depot.	...	...	9	...	...	9	...	...	12
6. Multipurpose Service workshop.	...	...	...	...	...	...	...	8	4
7. Tailoring Knitting and Embroidery Training Centre.	...	...	...	...	...	...	4	2	3
8. Schemes to be run Departmentally viz. Poultry Feed Manufacturing, Ready made Germants Making etc. etc.	...	...	...	...	...	...	2	8	60

**ANNEXURE II—concl'd.**

Fourth Plan Targets

Fifth Plan Targets

**II. Industrial Estates/Growth Centres**

No. of new estates/areas proposed to be set up  
(along with no. of sheds)

(a) Urban Areas

(b) Semi Urban Areas

(c) Rural Areas

1 shed—22 nos.

1 shed—8 nos.

No. of Persons likely to be employed in—

(a) Constructional activities

...

(b) Industrial activities

80

(i) Technical

10

(ii) Others

70

V. Handicrafts.

## ANNEXURE III

### Village and Small Industries

#### List of Schemes proposed for the Fifth Plan

Serial No.	Name of the Schemes	(Rupees in lakhs)									Remarks
		Fifth Plan (Proposed)			1974-79						
		Total	Capital	Foreign exchange	1974-75	1975-76	1976-77	1977-78	1978-79		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
<b>I. Small Scale Industries :</b>											
1	Headquarter Staff ...	...	20.00	3.50	...	1.50	1.50	3.50	2.00	1.50	
2	District Staff ...	...	10.00	1.00	...	1.50	1.50	2.50	2.50	2.00	
3	Lime Making Plant ...	...	5.00	1.00	...	1.30	1.30	0.80	0.80	0.80	
4	Saw Milling-Cum-Mechanised Carpentry.		8.00	3.00	...	1.00	3.00	2.00	1.00	1.00	
5	Raw Material-Cum-Sales Depot ...		30.00	24.00	...	2.00	7.00	7.00	7.00	7.00	
6	Multipurpose Service Workshop		8.00	7.00	...	1.00	1.00	2.00	2.00	2.00	
7	Tailoring, Knitting and Embroidery Training Centre.		5.00	1.50	...	1.15	1.15	0.90	0.90	0.90	
8	Training Inside and Outside the State and Scholarship.		3.50	...	...	0.70	0.70	0.70	0.70	0.70	

9	Study Tour for Artisans and Entrepreneurs.	2.50	...	...	0.50	0.50	0.50	0.50	0.50
10	Grants-in-aid to Institutions, Trainees and Artisans.	10.00	...	...	2.00	2.00	2.00	2.00	2.00
11	Exhibition within and Outside the State.	3.50	...	...	0.50	0.75	0.75	0.75	0.75
12	Stipend to Trainees	2.00	...	...	0.40	0.40	0.40	0.40	0.40
13	Industrial Loans	20.00	20.00	...	4.00	4.00	4.00	4.00	4.00
14	Package Scheme of Incentives	10.00	...	...	2.00	2.00	2.00	2.00	2.00
15	Subsidy on interest on loans from Financial Institutions.	2.50	...	...	0.50	0.50	0.50	0.50	0.50
16	Survey Investigation and Feasibility Studies.	5.00	...	...	1.00	1.00	1.00	1.00	1.00
17	Schemes to be run departmentally viz., Poultry Feed, Manufacturing, Ready Made Garment making, etc., etc.	15.00	7.00	...	1.30	5.30	3.80	2.30	2.30
Total—I		150.00	68.00	...	22.05	33.60	34.35	30.35	29.35
II. Industrial Estates / Growth Centres.		10.00	8.00	...	2.00	3.00	3.00	1.20	0.80
Total—II		10.00	8.00	...	2.00	3.00	3.00	1.20	0.80
III. Handicraft Board Scheme		8.00	...	...	1.00	2.00	2.00	1.50	1.50
Total—III		8.00	...	...	1.00	2.00	2.00	1.50	1.50
IV. Khadi and Village Industries		5.00	...	...	1.00	1.00	1.00	1.00	1.00
Total—IV		5.00	...	...	1.00	1.00	1.00	1.00	1.00

#### 4.4.2. SERICULTURE AND HANDLOOM

4.4.2.1. The climate, soil and ecology of Meghalaya is suitable for rearing several varieties of silk worms. In the lower regions, eri-silk rearing has been in existence from unknown past. In some areas muga was found in wild growth. The soil and climate of the Plateau Region is most suitable for raising high yielding mulberry varieties. In fact, Meghalaya provides the principal source of mulberry seed for multiplication in the Assam plains. In the past few years, development of foreign race mulberry silk worms has been taken up in some of the farms in the Khasi and Jaintia Hills and individual rearers were also encouraged to take up this high yielding variety. This was necessary in order to meet the increasing demands for seed and for cocoons in Assam especially consequent on the setting up of the Assam Spun Silk Mills as well as to improve the employment and earnings in the villages where silk rearing forms a principal or subsidiary occupation of the people. In the lower regions and in a number of villages in the plateau, handloom weaving is taken up by the people alongwith sericulture as an independent or part-time occupation.

#### **II. Achievements during the Fourth Five Year Plan**

4.4.2.2. During the period of the Fourth Plan, Sericulture and Weaving Sector was allotted Rs.40.00 lakhs for the following schemes which were taken up for implementation (1) development of Eri Silk, (2) development of Mulberry Silk, (3) development of Muga Silk, (4) training in Sericulture, (5) strengthening of the technical staff, 6) expansion of weaving training classes, 7) production of handloom fabrics and supply of fly-shuttle sleys, etc., 8) training in weaving technology, (9) Decorative Textile Production Centre at Dilma in the Garo Hills, (10) expansion of weavers extension services, and (11) Handloom Co-operatives.

4.4.2.3. The main work in regard to Sericulture development was (1) improvement of the Sericultural Farms and grainages for production of superior seeds, (2) extension activity in the rural areas through establishment of collective plantations with the common facilities of land, fencing, seeds and manure to the reares and (3) training of personel for the purpose of implementation of the plan programmes. In regard to Handloom Weaving, emphasis was on proper training of personnel and production of handloom fabrics with better designs and introducing improved techniques of weaving technology.

4.4.2.4. Due to set back in the initial stages of the New State, the achievements in the Fourth Plan were in many cases below the plan targets. However, the progress has picked up perceptibly in later years of the Plan. The progress of the principal programmes is shown below—

	4th Plan Target	Anticipated Achievement
1. Eri Cocoons ... ..	20,000 Kg.	15,000 Kg.
Eri Laying ... ..	2·00 lakhs	1·50 lakhs
2. Mulberry Cocoon ... ..	10,000 Kg.	8,500 Kg.
Mulberry layings ... ..	3·00 lakhs	2·80 lakhs
3. Handloom fabrics ... ..	3·00 lakhs metres	2·50 lakhs metres

4.4.2.5. Against the allocation of Rs. 40 lakhs during the Fourth Plan, an expenditure to the extent of Rs. 30·57 lakhs is expected to be realised.

### III. Objective and Approach

4.4.2.6. The aim is to consolidate the work done earlier and to expand further in order to take advantage of the increasing demands for the seed and the cocoons of this region. This is sought to be achieved by increasing production by 50 per cent at the rate of about 10 per cent per annum. The training programme will be intensified to get an outturn of personnel necessary to implement the programme. In Handloom the accent will be on quality improvement by improving the technology as well, as on increased production by schemes of assistance to the weavers.

### Programmes for the Fifth Plan

4.4.2.7. During the Fifth Plan, the following schemes are proposed to be expanded. Some new schemes including Tassar development would also be taken up. The outlay required on the Fifth Plan programmes is shown below—

Schemes	(Rupees in lakhs)	
	For development in the 4th Plan	Fifth Plan expansion/ development
(a) Sericulture—		
1. Eri Silk ... ..	9·50	12·00
2. Mulberry Silk ... ..	12·00	13·00
3. Muga and development of Oak Tassar.	5·00	6·00
4. Training in Sericulture ... ..	0·50	0·80
5. Strengthening of Supervisory Staff.	3·00	3·20
<b>Total (a) ...</b>	<b>30·00</b>	<b>35·00</b>



## (b) Handloom Weaving (Outside Co-operative)—

1. Establishment of training class at Baghmara, Garo Hills.	...	5.00
2. Extension of Weaving Training Class.	1.50	4.00
3. Training in Weaving Technology.	0.20	0.50
4. Production of Handloom Fabrics	1.00	7.00
5. Imprest fund for purchase of Yarn for Weavers' Extension Service Units.	..	0.50
6. Establishment of Textile Institute	...	13.00
7. Weavers Extension Services	1.00	...
8. Decorative Textile production centre at Dilma.	1.30	...
Total (b)	...	30.00

(c) Handloom Co-operatives	...	5.00	10.00
GRANT TOTAL	...	40.00	75.00

The following targets are aimed—

(1) Eri Cut Cocoons	...	...	30,000 Kg.
Eri Layings	...	...	3.00 lakh.
(2) Mulberry Cocoon	...	...	15,000 Kg.
Mulberry Layings	...	...	3 lakh.
(3) Muga Cocoons and Tassar	...	...	10 lakh.
(4) Handloom Fabrics	...	...	4 lakh metres

## (a) SERICULTURE

**1. Scheme for expansion of Eri Silk Industry**

4.4.2.8. Eri rearing is practised widely in the districts of Meghalaya. The industry has been registering notable progress year after year. The scheme proposed to be taken up during the Fifth Plan aims at increasing the quality production of Eri Seeds to meet hundred per cent of the demand by the end of the Fifth Plan. Quality improvement of silk-worm seeds and enlarging village extension work constitute the main programme of development under the scheme. The area under plantation is proposed to be increased by 60 hectares through establishment of concentration centres equipped with the required facilities. The production of seed is proposed to be stepped up by 50 per cent over the Plan period.

**2. Scheme for expansion of Mulberry Silk Industry**

4.4.2.9. The climatic condition in Meghalaya is very suitable for rearing of Mulberry Silkworm and the existing Sericulture Farms at Shillong, Ummulong and Tura are at present catering to the need of the silkworm rearers in the State as well as in the Assam Valley.

4.4.2.10. The programme during the Fifth Plan includes the schemes for (a) quality improvement of silkworm seeds by replacement of inferior varieties by superior strains and (b) expansion of village extension work for mulberry plantation by 40 hectares by establishment of collective mulberry gardens. These schemes are necessary in order to meet fully the requirement of seed. Production is proposed to be stepped up by 50 per cent over the Plan period.

**3. Scheme for expansion of Muga and Development of Oak Tassar Industry**

4.4.2.11. Muga rearing was introduced on experimental basis in the State during the Fourth Plan. The result has been encouraging. A muga farm was recently established at Resubelpara and is being operated for raising of Muga crops and seed production. Similarly, the Oak Tassar Industry has recently been taken up on experimental basis in the area near Garampani in the Jaintia Hills District.

4.4.2.12. During the Fifth Plan period, both Muga rearing and Oak Tassar Plantation are proposed to be organised on larger scale for production of the crop and for purpose of seed for extension.

#### **4. Scheme for Training in Sericulture**

4.4.2.13. There is at present acute shortage of trained personnel for work in the farms and in the villages. The scheme to be taken up during the Fifth Plan envisages award of 10 (ten) stipends for training in higher course at the Central Sericultural Research and Training Institute, Mysore; and 30 (thirty) stipends for the certificate course at the Sericultural Training Institute at Titabar in Assam.

#### **5. Scheme for strengthening of Headquarter Staff**

4.4.2.14. The scheme aims at strengthening the technical supervisory and establishment staff at the headquarters for the purpose of implementation of the development schemes in regard to both silk and handloom.

#### **(b) Handloom (outside Co-operative)**

4.4.2.15. The co-operative movement in Meghalaya is very weak for a variety of reasons. Development of Handloom in the State has, therefore, has to be both within the co-operative fold and outside it till the movement is strong enough to embrace all the weavers in this area.

#### **1. Establishment of a Weaving Training Class at Baghmara**

4.4.2.16. The establishment of a Weaving Training Class at Baghmara in Garo Hills with an intake-capacity of 20 (twenty) stipendiaries is proposed to be taken up with a view to meeting the demand of trained personnel and also for providing technical know-how to the artisans particularly in Garo Hills district where a large number of people are engaged in the industry.

## 2. Extension of Weaving Training Classes

4·4·2·17. Four Weaving Training Classes at Shillong, Jowai, Tura and Resubelpara and one Weaving Centre at Rongram are proposed to be strengthened. The intake capacity of 15 stipendiaries has been increased to 20 in respect of the weaving training classes at Tura and Resubelpara. In the Fifth Plan, the proposed scheme provides for (1) purchase of looms and accessories, yarn, etc. for the said weaving training classes (2) extension of buildings and (3) grants-in-aid for supply of looms and accessories to the *ex*-trainees as a follow-up programme.

## 3. Scheme for Training in Weaving Technology

4·4·2·18. The scheme envisages (1) award of 20 (twenty) stipends for training in 2 years certificate course of weaving technology at the Assam Textile Institute, at Gauhati @ Rs.120·00 p. m. each and (2) deputation of officers for advanced training within and outside the State to improve the position of trained personnel for implementation of development schemes.

## 4. Scheme for Production of Handloom Fabrics

4·4·2·19. The programme for production of handloom fabrics is proposed to be intensified, with a view to raising the level of production to 4 lakhs metres by the end of the Fifth Plan period. Under the scheme, provision is made for purchase of yarn, payment wages of weavers in the production centres at Shillong, Dilma and Rongram besides grants-in-aid for looms and accessories, yarn, etc., to deserving weavers and private institutions.

## 5. Scheme for Imprest Fund for purchase of Yarn for the Weavers Service Units.

4·4·2·20. The non-availability of adequate fund for purchase of yarn for the existing weavers extension service units at Tura, Baghmara, and Dainadubi had handicapped in many ways the successful and smooth running of these units and this has affected the programme of increasing the production of handloom fabrics. An imprest fund for each unit is, therefore, proposed to be provided.

## 6. Establishment of a Textile Institute

4.4.2.21. The scheme is proposed to be taken up with a view to imparting training in weaving technology in order to meet the requirement of technical personnel for implementation of the development schemes. This is most essential because the facilities in Assam Textile Institute at Gauhati will no longer serve the need of Meghalaya as the medium of instruction is being changed to Assamese. This is the only institute in this region. Besides, the non-availability of hostel accommodation at Gauhati has ruled out deputation of trainees to the Assam Institute. There is thus no alternative for Meghalaya but to set up an Institute of its own. The proposed textile institute in Meghalaya will have English medium of instruction and, therefore, other States in this region may also avail of the facility of this institute.

### (c) Handloom Co-operatives

4.4.2.22. The Handloom Co-operative schemes aim mainly at strengthening the handloom organisational staff and providing assistance to the weaving societies. The work proposed to be undertaken includes (a) supply of improved looms and accessories (b) deputation of weavers to textile centres (c) training of weavers (d) managerial subsidy (e) establishment of sales depot (f) setting up of weaving factories (g) share capital contribution and (h) working capital loan to primary weaver's co-operatives.

### Employment Potential

4.4.2.23. The employment status of the industry at the end of the Fourth Plan is expected to be 10,000. Since sericulture is an employment-oriented agro-industry, the increased production envisaged during the Fifth Plan is expected to generate employment for about 15,000 persons.

### Marketing

4.4.2.24. The present level of production of cocoons is not sufficient to meet the demands. For many years to come, there is an assured market. In respect of the fabrics, the production is not so high and whatever is produced is locally marketed without any difficulty. No difficulty is anticipated in the Fifth Plan period and hence no scheme is proposed for marketing. The position would be reviewed when the production in the State has made appreciable headway.

The scheme-wise outlays are shown in Annexure I.

4.4.2.25. The physical targets are shown in Annexure II.

**ANNEXURE I**  
**Sericulture and Weaving**  
**List of Schemes proposed for Fifth Plan**

(Rs. in lakhs)

	Fifth Plan (proposed)			1974-72				
	Total	Capital	Foreign exchange	1974-75	1975-76	1976-77	1977-78	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>HANDLOOM INDUSTRY</b>								
<b>(Handloom outside Co-operative)</b>								
1. Scheme for Establishment of Weaving Training Class at Baghmara in Garo Hills.	5.00	1.00	...	0.64	1.16	1.69	0.65	0.66
2. Scheme for Extension of Weaving Training Classes.	4.00	...	...	0.80	0.80	0.80	0.80	0.80
3. Scheme for Training in Weaving Technology.	0.50	...	...	0.10	0.10	0.10	0.10	0.10
4. Scheme for Production of Handloom fabrics.	7.00	...	...	1.36	1.38	1.40	1.42	1.44
5. Imprest fund for purchase of yarn for Weaving Extension Service Units.	0.50	0.50	...	2.50	...	...	...	...
6. Scheme for Establishment of Textile Institute.	13.00	1.50	...	2.80	3.50	2.50	2.20	2.00
	30.00	3.00	...	6.20	6.94	6.69	5.17	5.0
Handloom Co-operative ...	10.00	...	...	1.96	1.98	2.00	2.02	0.4
<b>Total--Handloom Industry</b>	<b>40.00</b>	<b>3.00</b>	<b>...</b>	<b>8.16</b>	<b>8.92</b>	<b>8.69</b>	<b>7.19</b>	<b>7.04</b>

**ANNEXURE I—concl'd.**

(Rs. in lakhs)

(1)	Fifth Plan (proposed)			1974-79				
	Total	Capital	Foreign exchange	1974-75	1975-76	1976-77	1977-78	1978-79
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9)
<b>Sericulture—</b>								
1. Scheme for Expansion of Eri Silk Industry.	12.00	...	.	2.47	2.23	2.34	2.43	2.53
2. Scheme for Expansion of Mulberry Silk Industry.	13.00	...	...	2.7	2.65	2.55	2.68	2.85
3. Scheme for Expansion of Muga and Development of Oak Tassar Industry.	6.00	0.75	...	1.61	1.18	1.19	1.05	0.97
4. Scheme for Training in Sericulture.	0.80	...	...	0.16	0.16	0.16	0.16	0.16
5. Scheme for Strengthening of Headquarter staff.	3.20	...	...	0.60	0.62	0.64	0.66	0.68
<b>Total—(Sericulture) ...</b>	<b>35.00</b>	<b>0.75</b>	<b>...</b>	<b>7.11</b>	<b>6.84</b>	<b>6.88</b>	<b>6.98</b>	<b>7.19</b>
<b>GRAND TOTAL—(Sericulture and Weaving).</b>	<b>75.00</b>	<b>3.75</b>	<b>...</b>	<b>15.27</b>	<b>15.76</b>	<b>15.57</b>	<b>14.17</b>	<b>14.23</b>

## ANNEXURE II

## (Sericulture and Weaving)

## Physical Targets

(1)	Fourth Plan		Fifth Plan	(5)
	Target	Likely achievement	Targets	
(2)	(3)	(4)		
<b>HANDLOOM INDUSTRY -</b>				
<b>I. Production (in lakh metres)</b>				
(a) Within the Co-operative fold.	2.0	1.80	3.0	
(b) Outside .. .. .	1.0	0.70	1.0	
<b>II. No. of persons likely to be provided with—</b>				
(a) fuller employment .. .. .	..	..	..	{ The Handloom Industry is affording mostly part-time employment to nearly 5,000 people during the Fourth Plan, and 7,500 persons are expected to gain such employment during the Fifth Plan.
(b) new employment ... .. .	..	..	..	
<b>SERICULTURAL:</b>				
<b>Production ('000 Kg.)—</b>				
(a) Eri Cocoons ...	20,000 Kg.	15,000 Kg.	30,000 Kg.	
(b) Mulberry Cocoons ...	10,000 ,,	8,500 ,,	15,000 ,,	
(c) Muga Cocoons . . .	Experimental only.	..	10 lakhs No. of cocoons.	
No. of additional persons likely to be employed.	5,000	5,000	7,500	



### 5.1. Roads and Bridges

The Autonomous State of Meghalaya came into being on the 2nd of April, 1970 and comprises of the three Hills Districts of Garo Hills, Khasi Hills and the newly created Jaintia Hills. The total area of the State is 22,445 square kilometres and the population as per the census of 1971 is 10.12 lakhs. The State is predominantly hilly and communication facilities scanty and difficult. Roads are the only means of communication in these difficult hilly terrains, there being no railway and waterways or even airways. Prior to Independence the length of motorable roads in these areas was practically negligible.

2. Since communication forms the basis of infra-structures for other developmental activities, topmost priority has been accorded to construction of a net-work of roads in these districts. Lack of adequate facilities for communication has so long been the greatest bottleneck in the exploitation and utilisations of valuable forest and mineral resource of the State besides depriving the people in the interiors from the various facilities and boons of modern civilisation.

3. At the commencement of the Fourth Five Year Plan in April, 1969, Meghalaya areas of the composite State of Assam had a total road length of 2649 K.M. On the date of its birth on 2nd April, 1970 the new State of Meghalaya had to its credit 2786.68 K.M. of road.

4. At present there are two National Highways in Meghalaya, *viz.*, (i) the National Highway Route No.40--Jorabat-Shillong-Tamabil Road, its entire length of 168 K.M. falling within Meghalaya and connecting Jorabat in Assam and Tamabil in the border of India and Bangladesh.

(ii) The newly declared National Highway Route No.44---Shillong-Jowai-Badarpur-Agartala which connects Shillong with Agartala in Tripura *via* Badarpur in the district of Cachar in Assam. The stretch of this National Highway falling within the boundaries of Meghalaya is only 174 K.M. from Shillong to Umkyang. The agency for the maintenance and improvement of the portion of the National Highway from Shillong to Jowai, a length of 6 Km. is with the Government of Meghalaya and for the rest with the Border Road Development Board.

4. Regarding the other important road links in the State mention may be made of the following:—

(i) **Damra-Darugiri-Nangalbibra-Baghmara Road** in Garo Hills District traversing from North to South and passing through the coal and limestone belts and connecting the National Highway No. 37 at Dudhnai in Assam and Nangalbibra in Meghalaya where the Assam and Meghalaya State Electricity Board has established a thermal plant. This road is being improved by the Border Road Development Board.

(ii) **Mawsynram-Balat-Maheshkhola Road.**

(iii) **Dalu-Baghmara Road.**

(iv) Dalu-Purakhasia Road—these three roads have been recognised for their strategic importance and are being developed under the Government of India's strategic roads programmes.

(v) Paikan-Bajengdoba-Tura-Balu-Baghmara Road—This road having a length of 205 K. M. runs North to South through Garo Hills and connects Paikan in Assam to Dalu and Baghmara to the border *via* Tura. For development of the portion from Paikan to Tura of the road, Government of India have already sanctioned aid in the shape of 100 per cent loan under Inter-State and Economic Road Programme. The works of improvement under this programmes has, however, not yet been taken up as the Government have not yet decided to take the loan. The North Eastern Council is considering the question of taking up development of this road for inter-state communication. Proposals are also under consideration of Government of India for declaring this road as a National Highway during the Fifth Five-Year Plan.

(vi) Again-Mendhipathar-Phulbari-Tura Road—This was the only dependable road link connecting Tura to Gauhati and Shillong. Phulbari is an important place in borders of Garo Hills and Goalpara Districts.

(vii) Shillong-Passi-Jowai-Garampani-Haflong Road—This is a road of inter-state importance. The stretch of the road from Shillong to Passi, a length of 13 KM overlaps with the N.H. 44. There was a proposal to declare this road from Passi to Haflong as a border road,

the proposal have not however been finalised yet. At present the North Eastern Council is considering its inclusion for development to National Highway standard for inter-state communication.

(viii) **Shillong-Mawphlang-Mawsynran-Balat-Maheshkhola-Bagmara Road.**—This is an important road connecting the borders to Shillong. The stretch of this road from Mawsynran to Maheshkhola is under improvement under the strategic road programmes.

(ix) **Umtyngar-Cherrapunjee-Shella Road.**—This road stretch from 23rd KM of Shillong-Umtyngar-Dawki-Tamabil Road (NH—40) and connects Shillong to Cherrapunjee and then to Shella. Proposals have been submitted by the State Government to the Government of India for their consideration to declare this road as a National Highway during the 5th Plan.

(x) **Umsning-Jagi Road**—Connects Umsning on the Shillong-Gauhati Road NH—40 in Meghalaya with Jagi Road on NH—37 in Assam and opens up the forest areas to the North East of Khasi Hills.

(xi) **Shillong-Nongstoin-Tura Road**—This road is being developed as a major Trunk road connecting Shillong to Tura within the State. Until this road is completed and opened as an all weather road to motorable traffic, connection between Tura and Shillong will remain through the territories of Assam. Government have moved to declare this as a National Highway during the 5th Plan.

6. As per the country's 20 years Road Plan setting out the minimum requirements of motorable roads for the country by the end of 1981. The State of Meghalaya should have 6289 KM of motorable roads.

The progress of road construction during the 4th Plan is shown below :—

Year	Expen liture Rs. in lakhs	New Road Length added Km.	Total Road length Km.
1969-70	200.09	138	2787
1970-71	337.50	205	2992
1971-72	325.00	155	3147
1972-73	243.00	80	3227
1973-74	300.00	158	3385
	(expected)	(expected)	(expected)

Thus 2904 Km. will have to be constructed during the 7 years from 1974-75 to 1981. Considering the existing conditions, it will be an extremely difficult and uphill-task to achieve this objective unless concentrated efforts are made and adequate funds are provided.

7. At the end of the Fourth Five Year Plan it is anticipated that Meghalaya will have 3385 km. of motorable road out of which 996 km. will be surfaced and 2,389 km. unsurfaced roads which will be mostly rural and hill roads except those in the town areas which may be claimed as Urban roads.

The Fifth Plan has been drawn up with the following priorities :—

- (i) **Spill Over Schemes.**—It is necessary to ensure expeditious completion of the continuing schemes from the Fourth Plan which could not be completed due to various reasons such as less allocation of funds difficulties in land acquisition, etc. It is anticipated that all the spill over schemes will be completed within the first two years of the Fifth Plan. An amount of Rs. 579 lakhs. has been provided for the spill over schemes which includes the funds for land compensation for acquisition of land during the past plan period which could not be finalised so far.
- (ii) **New Schemes.**—Priorities have been given to removing the deficiency in the existing system such as missing links, missing bridges, replacement of existing weak and narrow bridges, improvement of low grade surfaces, etc. Meghalaya being a hilly region with heavy rainfall it is extremely difficult and wasteful to maintain unsurfaced roads. So it has been aimed to surface as many kilometers of road as possible consistent with the availability of fund. Surfacing of the gravel roads will also improve load carrying capacity of the surface and reduce recurring expenditure on maintenance.
- (iii) **Minimum Needs.**—Stress has been given to fulfil the minimum needs of providing all weather road links to the villages with a population of 1,000 and above.

There are 4629 villages in Meghalaya of these, quite large number are with scanty population. According to the last census of 1971 there are only 60 villages with a population of 1,000 and above out of which 49 villages have already been connected by all weather roads. It is proposed to connect the remaining 11 villages and also 15 clusters of villages under the minimum roads programme during the 5th Plan for which Planning Commission has already allocated Rs.200 lakhs for Meghalaya.

Out of 187 villages with population of 500-1000, 125 will have been connected by all weather road by the end of 4th Plan and 62 have been proposed to be connected during the 5th Plan.

Regarding villages with population of 300 to 500, 150 Nos. will have been connected by the end of 4th Plan and 140 are proposed to be connected during the 5th Plan. Most of the villages with smaller population and scattered in the interior are expected to shift to the road sides in order to avail of the amenities provided by road communication.

- (iv) Connecting markets and important villages and providing outlet to the neighbouring districts/states.
- (v) Areas served by special projects like irrigation and power projects and Tourist Centres.
- (vi) Special needs of the town areas such as Shillong, Tura and Jowai.

9. During the 5th Plan it is proposed to construct 2500 Km. of new road surface 400 Km. and construct/reconstruct 2000 metre of bridges, at a total expenditures of Rs.812 lakhs. But actual achievements will largely depend upon allocation funds.

10. While going ahead with the developmental works proposed to be taken up in the 5th Plan, attention will have to be given for maintaining the assets already created during the past plan for which adequate separate staff will be maintained.

11. There is no Road Research Laboratory in Meghalaya. Attempts will be made to start a road research laboratory during the 5th Plan.

12. The State P. W. D. is short of road making machinery such as Road Rollers. Orders for sufficient number of road Rollers have already been placed with the D. G. S. and D.

12. Most of the road works, except specialised works of major bridges will be executed through the local labour and it is expected that 15000 labourer will get employment during the five year period of the plan.

Regarding the employment potential during the 5th plan period for technical personnel it is expected to provide employment to :—

Graduate Engineers	...	...	...	70
Undergraduate staff	...	...	...	500

13. Requirements of scare materials—The requirement of building materials during the 5th Plan has been estimated as follows—

- |  |     |     |     |                   |
|--|-----|-----|-----|-------------------|
| (1) G. C. I.-sheets  | ... | ... | ... | 3000 M. Tons.     |
| (2) M. S. Roads  | ... | ... | ... | 10,000 M. Tons.   |
| (3) Heavy structures such as channels<br>R. S. T. S., etc. |     |     |     | 5000 M. Tons.     |
| (4) Cement   | ... | ... | ... | 1,00,000 M. Tons. |

## ABSTRACT OF ROADS STATEMENT—I

(Rs. Lakhs)

Item	Total cost of Scheme	Fourth Plan Outlay	Likely expenditure upto 31-3-74	Proposed Outlay for Fifth Plan					Total	Remarks	
				1974-75	1975-76	1976-77	1977-78	1978-79			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
<b>Total</b>	...	5612.98	1215.00	1418.59	760.00	760.00	760.00	760.00	760.00	3800.00	
<b>Spill over from Fourth Plan</b>	...	1612.98	1215.00	1418.59	324.76	127.28	60.79	37.53	18.15	568.51	
New works to be taken during 5th Plan.	...	4000.00	...	...	435.24	632.72	699.21	722.47	741.85	3231.49	
Minimum needs programme (Rural roads connecting villages with population 1500 and above).	...	200.00	...	...	40.00	40.00	40.00	40.00	40.00	200.00	
Other Rural Roads	...	...	...	...	...	...	...	...	...	..	
Other Road	...	-	...	...	...	...	...	...	...	...	
<b>Total—(Rs. Lakhs)</b>	...	5812.98	1215.00	1418.59	800.00	800.00	800.00	800.00	800.00	4000.00	

## ROADS, STATEMENT III

## RURAL ROADS

## Minimum Needs Programme--Rural Roads

	As on 31st March 1972	As on 31st March 1974 (Anticipated)	As on 31st March 1979 (Proposed)
(1)	(2)	(3)	(4)
1. Total number of village in the State.	4600	4600	4600
2. Of (1) above, the No. of villages not connected by and all weather road.	Not	Ascertained	...
3. Of the No. at (2) above, the No. of villages with a population of 1000 and above.	11 Nos.	11 Nos.	11 Nos.
4. Length of all wather roads to be constructed/improved to connect all the villages at (3) above (kms).	Not	Ascertained	...
4.1. New construction	...	Do.	...
4.2. Improvement—	...	...	...
5. Estimated cost of constructing/improving all weather roads as at (4) above (Rs lakhs).	200	Lakhs.	...
5.1. New construction	...	200	Lakhs.
5.2. New improvement—	...	...	...



## ROADS STATEMENT—II

**Physical Programme For Road Development In The Fifth Plan**

	As on 31st March 1969	As on 31st March 1972	As on 31st March 1974 (Anticipated)	As on 31st March 1979 (Proposed)
(1)	(2)	(3)	(4)	(5)
1. Surfaced ... ..	731 Km.	907 Km.	996 Km.	1696 Km.
2. Unsurfaced ... ..	1918 Km.	2240 Km.	2389 Km.	3189 Km.
3. Total ... ..	2649 Km.	3147 Km.	3385 Km.	4885 Km.
4. Rural Roads out of total Road Length (Includ- ing other District roads and village roads).	1918 Km.	2240 Km.	2389 Km.	2989 Km.
OF WHICH :—				
4.1. Rural roads covered by minimum needs pro- gramme (i.e. connect- ing villages with popula- tion of 1500 and above).	...	...	...	200 Km.
5. Roads other than Rural Roads (3-4).	731 Km.	907 Km.	996 Km.	1696 Km.

## 5.2 ROAD TRANSPORT

5.2.1 The objective of Road Transport in the State Plan is to create an efficient net work as part of the infrastructure building for economic and industrial development of the State. In Meghalaya because of the terrain of the land, road transport is the only economic means of transport. In the absence of any other means of mass transport, road transport has to also subserve the economic as well the social objectives in the State. This suggests that the transport need of the State has to be assessed not merely in term of economic returns alone.

5.2.2 By the end of the Fourth Plan, the road length in the State would be reaching a total of 3,385 kilometres. The surfaced roads would be 996 kilometres. There are also two National High ways with a length of 342 kilometres. The Shillong-Tura Road is expected to become a major highway in the State early in the Fifth Plan providing a direct link between the administrative headquarters of the Garo Hills and the Khasi Hills. The Shillong-Jowai-Garampani Road is expected to be developed into an inter-State highway early in the Fifth Plan linking Meghalaya and the North Cachar Hills of Assam. A number of District Highways in the State have also been developed in course of the past decade.

5.2.3. Transport services on the National Highways in Meghalaya are a monopoly of the Assam-Meghalaya Road Transport Corporation. In some of the State Highways, State services have been introduced since 1972. The remaining road length is left to the private operators and this for more than one reason, resulted in under-utilisation of the capacity created in a number of roads. The main reasons in this regard have been the inadequate private sector fleet, the rugged terrain and harsh monsoons, the higher costs of operation and the comparatively lower profits. These are linked to one another with the cumulative effect that private sector services have become highly concentrated only in some of routes. This trend tended to negative the very objective of road development in the State.

5.2.4. It is, therefore, also the aim of the State Plan to secure fuller utilization of the capacity of the road lengths created as also more efficient services on the traditional routes. This would be effected both in direct and indirect way. As an indirect measure, Government would take over some of the

routes in which there is already excessive concentration of private sector services thus indirectly forcing the private operators to divert the fleet to the underutilized roads. This would stop unhealthy competition and other undesirable practices on the existing routes. In a few cases, Government would themselves operate on the new routes. These measures subserve the economic and social objectives of transport and are a direct step counteracting the monopolistic tendencies of private transport services.

#### **Work in the Fourth Plan**

5.2.5. The allocation for Road Transport in the Fourth Plan was Rs.50 lakhs. There was no expenditure during 1969-70 as Meghalaya was then part of the Assam State. During 1970-71, an expenditure of Rs.8.74 lakhs was made for the purchase of chassis for 13 buses and 5 trucks. In the following year, an amount of Rs.5 lakhs was spent on building the body on these chassis. During 1972-73, 5 more buses were added to the fleet and the expenditure during the year amounted to Rs.15 lakhs. For 1973-74, an outlay for Rs.21 lakhs has been provided which will be utilized in full for acquisition of vehicles, construction of workshops and purchase of machinery.

5.2.6. The Meghalaya Transport Undertaking (CMTU) services commenced in May, 1972. So far the MTU is operating passenger services on six routes with a total length of 718 kilometres. The effective strength of the fleet at present is only 13 buses. By the end of the Fourth Plan this will go up to 30 buses. The bulk of the additional fleet in the Fourth Plan is earmarked for strengthening the services in the existing routes.

#### **Outlays and Programmes for the Fifth Plan**

5.2.7. The outlay of Rs.50 lakhs in the Fourth Plan will be fully utilised during the Plan period. In fact, the programme at hand demanded a much higher outlay than the amount allocated. The Fourth Plan outlay has been utilized only in four years with the annual expenditure having risen from Rs.8.74 lakhs in 1970-71 to Rs.21 lakhs in the final year of the plan. During the Fifth Plan, a programme for an amount of Rs.638 lakhs has been drawn up as shown in the attached statement. The following programmes would be taken up within this amount.

**(1) Strengthening of Services on existing routes**

5.2.8. The fleet in the existing six routes would be strengthening by putting more vehicles to increase the facilities and obtain optimum results. The outlay required works out at Rs.18 lakhs.

**(2) Strengthening and raising the standard of services on routes taken over from A.M.S.R.T. Corporation**

5.2.9. The Government of Meghalaya has decided in principle to take over the nationalised routes in Meghalaya which are now operated by the A.M.S.R.T.C. In view of this decision the division of assets and liabilities of the Corporation between Assam and Meghalaya is being undertaken shortly.

5.2.10. One of the routes that will come over to Meghalaya is the Shillong-Gauhati including Cherra Cement Transport. This is the premier service of the AMSRTC with a fleet of 20 buses and 100 trucks at present. The fleet on this route will have to be increased due to the normal growth of traffic as well as the requirement to lift the expanded output of the Cherra Cement factory till such time when the Cherra-Gauhati ropeway project materializes. The passenger traffic on this route is taken to increase at the rate of 10 per cent per year. The freight would increase by at least 700 tonnes daily on one way on account of the expansion phase of the Cherra Cement Factory going on stream in January, 1975. Other freight is taken to increase at the rate of 8 per cent per annum during the period of the Fifth Plan. Therefore, on this route alone additional 10 buses and 340 trucks would have to be purchased. Being a premier route, more upper class facilities would have to be provided on the Shillong-Gauhati Services. The outlay required works out to Rs.4.81 crores of which Rs.4.00 crores would be required early in the first year of the Fifth Plan on account of Cement Transport.

5.2.11. Another three routes with a total of 283 kilometres would also come over to Meghalaya as a result of the division. These are (1) The Shillong-Tamabil, (2) Shillong-Jowai and (3) Shillong-Sonapur section of the Shillong-Silchar route. The fleet on these routes comprises 12 buses at present. For an 8 per cent annual growth of traffic on these routes, 5

more buses will have to be purchased. The demand on the Shillong-Tamabil Service would increase should restrictions on travel with Bangla Desh becomes more liberalized. This has not been taken into account in these calculations. The cost works at Rs.7.00 lakhs.

**(3) opening of New Routes**

5.2.12. Twelve new routes would have to be opened during the Fifth Plan on priority basis due to the factors outlined, earlier. The total length of these routes is 1329 kilometres. A total of 60 buses would be required for these routes. The total cost under the scheme comes to Rs.107 lakhs.

**(4) Workshops**

5.2.13. The present workshop at Shillong is not sufficient for maintenance of the vehicles of the fleet to be built in the Fifth Plan. A Central Workshop for maintenance and servicing is therefore, to be set up at Shillong. The cost on account of the buildings and machineries works out at Rs.6 lakhs.

5.2.14. It is also proposed to set up divisional workshops at Jowai and Tura and servicing centres at Simsangiri, Mairang, Weiloj and Cherrapunji. The cost on this account works out at Rs.3 lakhs.

**(5) Amenities for staff and passengers**

5.2.15. The stations at Shillong, Jowai and Tura need considerable improvement for the minimum comfort of the passengers. It is proposed to improve the amenities for waiting rooms, lavatories, etc., in these stations. It is also proposed to provide amenities to the staff by way of transit quarters, canteens, etc. An amount of Rs.6 lakhs is required.

**(6) Organisation**

5.2.16. The programme of the above order cannot be implemented without an adequate organisation. The establishment staff at the stations and at headquarters, the inspecting staff and maintenance staff would have to be adequately strengthened. The amount required on this works out at Rs.10 lakhs in the Fifth Plan.

## Outlay for Fifth Plan

(Rupees in lakhs)

Heads	Fourth Plan outlay	1973-74	Fourth Plan expenditure (anticipated)	Fifth Plan proposed
(1)	(2)	(3)	(4)	(5)
<b>Road Transport</b>				
1. Strengthening of services on existing routes ...	...	...	...	18
2. Strengthening and raising the standard of services on routes taken over from AMSRT Corporation.	...	...	...	338
3. Opening of new routes ...	50	21	50	87
4. Organization Employment of 1001 personnel for maintenance etc. }				180
5. Workshops ...	...	...	...	9
6. Amenities for staff and passengers ...	...	...	...	6
<b>Total</b>	50	21	50	638

### 5.3. TOURISM

5.3.1. Meghalaya has immense potential for development of tourism. Its captivating land-scapes, the salubrious climate, hospitable people and other attractive features make Meghalaya a great source of attraction and delight for tourists. Shillong, the capital of the State and Cherrapunjee, the wettest place on earth, have attracted people from different parts for generations.

5.3.2. Development of tourist facilities in the State, however, is still in the infant state. One of the handicaps in this regard, is lack of adequate accommodation facilities for different classes of tourists. During the 4th Plan, development of a few places of tourist interest was taken up. But much remains to be done in the next Plan period both by way of development of facilities for accommodation for the tourists as well as for development of the tourist spots and facilities. The outlay required for the purpose in the 5th Plan is Rs.257 lakhs as against Rs.25 lakhs in the 4th Plan which is expected to be spent up fully. The following are the main programmes proposed for the 5th Plan.

#### **1. Tourists Hotels and Bangalows :**

5.3.3. At present, there is only one upper-middle class hotel in Shillong and two tourists lodges in Meghalaya. It is proposed to put up a hotel with 50 seats at Shillong in the 5th Plan with provisions for future extension. The capital cost in the 5th Plan to put up this hotel would be around Rs.150 lakhs, excluding the working capital and recurring expenditure. Tourist's Lodge and Boarding Houses would be put up at the Umiyam Lake with a restaurant and bar. The capital cost of the complex at Umiyam Lake would be Rs.42 lakhs.

#### **2. Tourists Lodges at Shillong-Tura and Jowai :**

5.3.4. The construction of Upper-class tourist lodge at Shillong was taken up before the 4th plan. The building has not yet been completed. It is proposed to take up the work relating to the construction of another storey of the building in the 5th Plan. The cost of completing the building is Rs.3 lakhs.

5.3.5. It is also proposed to set up tourist lodges with 20-beds capacity each at Jowai and Tura. These places also contain sports of tourist attraction like Tura Peak and Thadlaskein Lake, etc. The cost of construction of the tourist lodges works out to be Rs.20 lakhs.

### **3. Development of tourist facilities :**

5.3.6. Under this scheme, it is proposed to develop various picnic spots and places for hiking, fishing, boating, bathing and swimming, etc. The total outlay for the scheme is Rs.15.50 lakhs for the entire 5th Plan period.

### **4. Publicity :**

5.3.7. It is necessary to organise wide publicity to attract tourists to the various places of interest in Meghalaya. This will be done by printing of pamphlets, folders, brochures, cards, etc. Advertisements in newspapers, journals, periodicals, etc., would be made from time to time. It is also proposed to set up a small laboratory and dark room for developing, printing of photographs, etc., for tourist publicity. Hiring of air-port counters and opening of tourist's information centres at Gauhati and Calcutta and Delhi and other places would also be taken up under this Scheme. The outlay proposed for the scheme is Rs. 9.70 lakhs for the entire Plan period.

### **5. Conducted Tours**

5.3.8. For the purpose of conducted tours, it is proposed to purchase a few luxury cars and to arrange the necessary staff. The likely requirement of funds on this account works out to Rs. 7 lakhs in the 5th Plan.

### **6. Assistance to Private Hotels and Boarding Houses**

5.3.9. With a view to enabling the entrepreneurs to put up hotels and boarding houses, it is proposed to take up a scheme under which the rates of interest for the loans given for the purpose by the banks and financial institutions will be subsidised. Similar assistance would be extended for those operating tourist transport. The outlay of Rs. 5 lakhs has been proposed for the scheme for the entire plan period.

### **7. Training Programme**

5.3.10. The expansion of tourists facilities will require support from properly trained staff. It is proposed to train suitable personnel in management, catering tourist-guiding and similar lines for the purpose. The outlay proposed for the training is put at Rs. 0.80 lakhs.

### **8. Administration**

5.3.11. The stepping up of the availability of facilities for tourism in the State will require suitable strengthening of the administration set-up in the Directorate of Tourism. A sum of Rs. 4 lakhs is estimated to be required during the 5th Plan period for the purpose.



## CHAPTER VI

**SOCIAL SERVICES****6.1 Education**

6.1.1. The spread of education in Meghalaya has been uneven. The literacy rate for the State as a whole in 1971 was 29.48 per cent as against the all-India average of 29.35. The rate in the Khasi and Jaintia Hills was 33.46 per cent and in the Garo Hills 23.57 per cent. The better percentage of the Khasi Hills can largely be explained by the location of Shillong as the Capital of Assam and Meghalaya and headquarters of Arunachal and Central Government offices for the North Eastern Region which engendered concentration of literate non-tribal population from different parts of the country.

6.1.2. Education programmes have been handicapped in many ways in this State. The existence of a large number of villages which are small and scattered and that shift periodically makes the programmes expensive and the enrolment per school much below the desired numbers. The terrain of the land and the extreme backwardness of the interior areas acted as a disincentive both for the teacher and the prospective pupils. In spite of these odds, the general progress in the elementary stages has not been so bad. But as one goes up the ladder, the disparity between this area and the rest of the country quickly becomes glaring. These are described more fully in relevant sections of this chapter. Only very few tribal youths reached the degree stage. Facilities for technical courses, forestry, agriculture and other work orientation at the school stages are either negligible or absent. As a result, the school drops-out have swelled the rank of semi-educated unemployed.

6.1.3. The State has accepted the national objective of universal education in the age groups of 6-11 years by 1975-76 and in the age group 11-14 by 1980-81. It is the aim to extend and improve the quality of elementary education in the light of the national decisions. The Plan seeks also to take necessary and corrective measures to enable a more balanced development in the secondary and higher stages of education. Development of sports and games and of physical education is being emphasized to enable emergence of a physically fit and more disciplined generation in the decades to come.

6.1.4. The task involved in these directions is stupendous. For example, the national objective of a primary school within  $1\frac{1}{2}$  kilometres of a village and of a middle school within 5 kilometres would entail having in Meghalaya 2 primary schools for every three villages and a middle school for every 16 villages. Considering the present uneven distribution of schools a large number will have to be opened in regions where elementary education has not penetrated. Alternatively, considerable facility will have to be created to attract children to the existing school areas in order to achieve the national objective. Because of the small and shifting villages and other factors peculiar to this area both the approaches will have to be adopted according to the needs of the circumstances. In many areas of education, notably introduction of science and work orientation in schools, a big jump will have to be made. In the higher stages, it will require considerable effort to proceed towards correcting the present imbalances in the educational system.

6.1.5. The outlay required in the Fifth Plan for the programmes is Rs. 20.47 crores as against the Fourth plan expenditure of Rs. 3.25 crores. This includes an amount of Rs. 1.52 crores on the Minimum Needs Programme but excludes any provision for school feeding which has been integrated under the Nutrition Programme. An amount of Rs.40 lakhs has also been provided for in the State plan as the State's share of financing of the North Eastern Hills University which is required mainly on account of providing the land for the University.

6.1.6. The outlay on the various programmes is summarised below:—

Programme (1)	4th plan outlay (2)	1973-74 (3)	Rs. lakhs	
			Fifth plan proposals (4)	1974-75 (5)
1. Elementary education ...	134	51	905*	95**
2. Secondary education ...	108	26	606	69
3. University education ..	57	16	309	32
4. Teachers training:				
(a) Elementary ...	21	4	62	7
(b) Secondary ...	4	1	7	1
5. Social education ...	3	1	26	4
6. Other educational programme	13	4	95	11
7. Cultural programme ...	10	2	37	3
<b>Total—</b>	<b>350</b>	<b>105</b>	<b>2,047</b>	<b>222</b>

\* Includes an amount of Rs. 152 lakhs for Minimum Needs Programme.

\*\* Includes Rs. 10.63 lakhs for Minimum Needs Programme.

### Elementary education

6.1.7. The children population in 1971 is estimated at 1.76 lakhs for the age-groups (6-11 years) and at 0.77 lakhs for the age group (11-14). The enrolment in 1971 was 1.36 lakhs in the primary schools and 0.18 lakhs in the middle schools. This gives the enrolment in primary school at 77.3 per cent in relation to the population of the age group (6-11) and in middle school at 23.6 per cent in relation to the age group (11-14). In practice, however, enrolment in these stages is not confined to children of the age groups in question alone. At the end of the fourth plan it is anticipated to be 81.2 per cent in the age group (6-11) and 40.2 per cent in the age group (11-14).

6.1.8. These figures compare favourably with the All-India averages of 88 per cent and 40 per cent respectively. But because of the several limiting factors in Meghalaya, notably the economic backwardness of the people, the small, scattered and shifting villages and the hilly and harsh terrain, it requires a tremendous task to bring the balance of the children population to school in order to achieve the national objectives of cent percent for the age groups (6-11) and 75 per cent for the age group (11-14) during the period of the fifth plan.

#### Enrolment Requirement:—

6.1.9. The growth of the children population and the enrolment requirement for the specified age groups are shown below:—

(In thousand).

Year	Age group 6-11		Age group 11-14	
	Population	Enrolment	Population	Enrolment
(1)	(2)	(3)	(4)	(5)
1971	176	136	77	18
1974	186	151	81	30
1976	194	175	85	39
1979	206	216	91	68
1981	215	215	95	69

Taking in to account that in practice children above and below the prescribed age groups would also enrol in schools, the additional enrolment by 1979 works out as below :—

			(In thousand).	
Age group	Population		Enrolment	
(1)	(2)		(3)	
below 6 years	...		62	
6-11 „	206		206	
		Total	...	268
		Base level (1973)	...	146
		Additional enrolment by 1979	...	122
11-14 years	91		68	
(a) above 14 years	...		9	
		Total	...	77
		Base level (1973)	...	24
		Additional enrolment by 1979	...	53

The enrolment is phased as below :

				(in thousand)	
				6-11 years	11-14 year
1974-75	...	...	...	+10	+6
1975-76	...	...	...	+15	+8
1976-77	...	...	...	+25	+10
1977-78	...	...	...	+30	+13
1978-79	...	...	...	+42	+16
			Total	122	53

#### Requirement of Schools

6.1.10—By the norms of the national objective, Meghalaya should have 2 primary schools for every three villages and one middle school for every 16 villages. This norm cannot be applied strictly in this State due to the difficult terrain, and

the smallness and uneven distribution of the villages. An additional number of 1,128 primary schools and 180 middle schools will have to be opened in course of the fifth plan to enable achieving the enrolment targets. The number of schools at present is 2,372 and 211 respectively.

#### Requirement of teachers

6.1.11—The programme of expansion would require recruitment of adequate number of teachers. The present strength of elementary school teachers is 4,564. On basis of a teacher-pupil ratio of 1:125 for 6-11 age group and 1:20 for 11-14 age group, the additional teachers to be entertained work out at 5,436 and 1,390 respectively. A higher teacher: pupil ratio is not possible in this State on account of the limiting factors mentioned earlier. Taking into account also the need to make up the backlog of teachers in a number of schools, these targets are phased as below :

Year	Age group 6-11		Age group 11-14	
	No of Additional enrolment ('000)	Teachers to be entertained	No. of Additional enrolment ('000)	Teachers to be entertained
(1)	(2)	(3)	(4)	(5)
1974-75	10	500	6	200
1975-76	15	800	8	250
1976-77	25	1,000	10	300
1977-78	30	1,400	13	300
1978-79	42	1,736	16	340
Total	122	5,436	53	1,390

#### Minimum Needs Programme

6.1.12. Under the Minimum Needs Programme for elementary education in Meghalaya, an amount of Rs.152 lakhs has been agreed to by the Planning Commission. This, however, falls far short of the actual requirement to achieve the national target in respect of the elementary education. The requirement for the State in regard to this programme has been assessed at Rs.518.16 lakhs. The balance amount of Rs.366 lakhs has been proposed under the general programme for elementary education along with other schemes outside the Minimum Needs Programme for the fifth plan.

## **Training Of Teachers**

### **I. Age group 6—11**

6·1·13. There are at present 4,564 Primary School Teachers in the State. Only 1,600 of these teachers are trained. Along with entertainment of additional teachers, provision for training facilities both for the existing untrained teachers and the new entrants will have to be made. There are three Basic Training Centres in the State now with an intake capacity about 150 per year and three aided Teachers Training Centres with an intake capacity of about 50 annually. It is proposed to increase the intake capacity by enlarging the facilities in the existing institute maintained by Government and by opening two more centres so as to provide facilities for training 400 teachers per year.

### **II. Age group 11—14**

At present there are only two Normal Training Schools in the State having a total intake capacity of 40 trainees per year for a two-year course. It is proposed to increase the intake capacity of the existing Normal Schools to 40 per school and to establish 3 more Normal Training Schools with a view of raising the number of trained teachers. This will increase the intake capacity to 200 per year.

## **Administration**

6·1·14. The universalisation of elementary education will require substantial strengthening of the inspecting machinery both at the headquarter and the district levels.

### **Incentive to students and teachers**

6·1·15. The main factors for low enrolment of students, particularly of the age group 11—14 has been the low enrolment of girls and low enrolment from the economically backward rural sections particularly from the children of the migrating shifting agriculturists. The second factor is the wastage and stagnation at different levels of primary education. The third and the most important is the lack of physical facilities in the backward pockets. Generally, a school serves a group of villages and mostly such schools are one-teacher-one-room schools. Absence of residential quarters for teachers also acts as a hindrance in the matter of attracting qualified teachers. The need for quarters is particularly greater in remote areas.

6.1.16. With a view to overcoming these drawbacks in the matter of primary education in the State it is proposed to undertake the following programmes during the Fifth Plan period—

(1) construction of school buildings and construction of residential quarters for teachers ;

(2) in the sparsely populated areas, "Ashram Schools" will be started. Hostels facilities will be provided to the schools meant for scattered and small villages ;

(3) programme of mid-day meals, supply of free text books, uniforms and other materials like slates, pencils etc., will be introduced ;

(4) production of text books in the local languages will be taken up ;

(5) arrangement of part time education for such children who cannot attend school on a whole-time basis will be made for groups of such students ;

(6) the system of grant of stipends and scholarship will be expanded.

6.1.17 With a view to raising the standard of education and adopting measures for effecting qualitative improvement, it is proposed to convert a few primary and middle schools into model or community schools. These schools will be provided with adequate accommodation, furniture and equipment. The proposal is to develop 250 primary schools and 100 middle schools into community schools at a total cost of Rs.40.00 lakhs.

6.1.18. At present, there is no Institute of Education in the State nor is there any Institute of Science Education. Such Institutions play key-role in proper guidance of educational development. It is proposed to establish a composite Institute both for General and Science Education with one Director, eight Counsellors (Lecturers) and the supporting staff. The total cost will be of the order of Rs. 22.00 lakhs.

6.1.19 Considerable emphasis has to be laid on the introduction of work experience in schools. At the primary level, steps will be taken to introduce the scheme in 500 schools and in 300 schools at the middle stage. Necessary equipment will be provided together with a part-time instructor in primary and a whole-time instructor in the middle schools.

### Introduction of Science under UNICEF Projects

6.1.20 The State has made necessary preparation for introducing science in primary and middle stages in accordance with guidelines given by NCERT and UNICEF. This would necessitate construction of a science-room and procuring furniture and equipment. It is the aim to introduce the scheme in 800 primary schools and 200 middle schools. Funds at the rate of Rs. 400 to a primary school and Rs. 6000 to a middle school on construction of a class-room, and at the rate of Rs. 500/- to a primary school and Rs. 1000 to a middle school will be provided for purchase of equipment and apparatus.

6.1.21 At present the primary schools have no library at all, while the middle schools have nothing worth the name. Text Book libraries will have to be built both at the primary and the middle stages. A grant of Rs. 500 for each primary school and of Rs. 1000 to a middle school is proposed for the Fifth Plan period.

6.1.22 Facilities will have to be given to teachers for Bharat Darshan and short educational excursions to students as well.

### Secondary Education

#### Expansion of Educational Facilities for Age-Group 14-17 years.

6.1.23 (1) The student population of the age-group 14-17 is estimated at 85000 by 1979. The target is to enrol 50 per cent of this age-group in schools. The present enrolment in schools being 25000 only, provision will have to be made for 17500 students, with 65 additional schools (average enrolment being 300 per school) and 975 teachers at an average of 15 teachers (including the headmaster) per school.

At present there are 106 High Schools with 1250 teachers with an enrolment of 25000.

(2) The following physical target is proposed—

	1974-75	1975-76	1976-77	1977-78	1978-79	Total
Addl. Students	1000	2000	3500	5000	6000	17500
„ Schools	8	8	2	17	20	65
„ Teachers	100	150	175	250	300	975



**(3) Strengthening the existing schools**

The minimum number of teachers required for the existing 106 high schools is 1590 whereas there are only 1250 teachers working in these schools. In order to make teaching effective, 340 teachers will have to be appointed as below—

1974-75	...	- ...	...	140 teachers.
1975-76	...	...	...	200 teachers.

**(4) Establishing Residential Schools**

The need for residential schools in the State has a specially urgent need because of the population living in villages scattered over a wide area. It is proposed to establish 10 such high schools, 2 in first year, 4 in second year and 4 in third year. There will be no recurring cost in first year, the recurring cost is estimated at Rs.7.00 lakhs and non-recurring at Rs.5.00 lakhs per school.

**(5) Extending the benefit of regular and uniform pay scales to all teachers of High and Middle Schools.**

The monthly grant-in-aid being very small, the teachers in private schools at present are getting a low scale of pay compared to that of their counterparts in Government schools. In fact, the more backward the area, the lower is the pay. This position needs to be corrected immediately. This will involve roughly 2000 teachers, the additional cost being Rs.100/- on average per teacher per month.

**(6) Introduction of work-experience in selected schools.**—A number of craft and vocation will be introduced in 100 schools (including middle sections) with 2 part-time teachers on average on a monthly remuneration of Rs.100. The non-recurring cost on fencing, equipments, etc. is estimated at Rs.2,000 per school. Altogether there will be 200 part-time teachers with Rs.500 per year on contingent expenditure. The estimated requirement is Rs.9.05 lakhs of which Rs.2.00 lakhs will be non-recurring.

**(7) Establishment of Government schools in the new Subdivisional headquarters.**—Two high schools have to be established in the two new subdivisional headquarters. These have to be with adequate hostel facilities. The non-recurring cost is estimated at Rs.10.00 lakhs for each and the recurring expenditure at Rs.6.50 lakhs for 4 years of the plan period.

(8) **Provision for reconstruction on account of natural calamities.**—An amount of Rs.2.00 lakhs per year is provided to meet the expenditure on account of damages done to schools every year by natural calamities, the total amount being Rs.10.00 lakhs.

(9) **Improvement of School Buildings.**—The majority of the High Schools of recent origin are housed in poorly built huts which require reconstruction. Provision is made for reconstructing 100 schools at an estimated cost of Rs.50,000 per school, the total amount being Rs.50.00 lakhs.

#### 6.1.24. Provision for hostels facilities to students

- (i) It is proposed to provide hostel facilities in 30 high schools for 100 students in each at an estimated cost of Rs.15.00 lakhs.
- (ii) The Government high schools do not have adequate hostel facilities. During the fifth plan, the total number of Government High Schools will be 7. Some of them require separate hostels for boys and girls. It is proposed to construct hostels for these schools capable of accommodating 200 boys and 100 girls. The estimated cost for each hostel is Rs.5.00 lakhs, the total for all being Rs.35.00 lakhs.

The total provision required for this scheme is Rs.50.00 lakhs.

#### Improvement of play fields:

6.1.25. Considerable importance is now being placed on development of sports and games. In order to create the condition for the purpose, the play grounds have to be developed and equipment for games provided. The estimated cost for improving one play field is about Rs. 8,000. The cost of games equipments is about Rs.1,000. Such facilities are sought to be created in 50 schools, the total cost involved being Rs.4.50 lakhs.

#### Teachers' quarters:

6.1.26. Because of the peculiar nature of the hilly areas and dearth of suitably qualified local teachers, residential quarters for teachers are necessary. It is proposed to provide residential quarters to 400 teachers. The estimated cost for each quarter is Rs. 6,000 totalling Rs.24.00 lakhs.

**6.1.27. Girls' common rooms and sanitary facilities:**—Almost all schools in the State are co-educational. It is necessary to provide a common room for Girls with sanitary facilities in each school. Provision is made for 100 schools at the rate of Rs.5,000 each, the total being Rs.5.00 lakhs.

**6.1.28. Facilities for teaching of science.**—Laboratory equipments in the High Schools are practically absent at present. Science equipment are necessary in all the schools. It is estimated that cost on equipments will come to Rs. 5000 per school. About 150 schools will get these equipments, at a total cost of Rs. 7.50 lakhs.

**6.1.29. Audio-Visual Aids to selected Schools.**—This scheme envisages providing of radio sets to 150 schools, each set costing Rs.800 at a total cost of Rs. 1.20 lakhs.

**6.1.30. Improvement of school libraries.**—Text Books, Teachers' hand books and auxilliary books are required for each school. It is proposed to grant Rs. 3000 each to 100 schools at a total cost of Rs. 3.00 lakhs.

**6.1.31. Preparation, printing and publication of Text Books.**—The Board of School Education is entrusted with the work and it will require tremendous efforts and considerable funds to bring out suitable books in local languages and in English as well. An amount of Rs. 10.00 lakhs is provided for bringing out about 100 books.

**6.1.32. Extra curricular activities.**—Provision for Students' excursions, Bharat Darshan, hobby centres, social works by students, etc., is also suggested for the fifth plan. An amount of Rs. 2.50 lakhs is proposed for this scheme.

**6.1.33. Free education for Tribal students and other deserving students.**—Tribal students are not required to pay any tuition fees and the schools are compensated for the loss of fee income. An amount of Rs. 20.00 lakhs is provided to compensate such loss.

### **Incentive to Student**

With a view to attracting students, the following incentives are proposed to be introduced during the Fifth Plan.

- (i) **Book-grants:** A book-grant of Rs.20 for each deserving student each year; the estimated expenditure being Rs. 7.5 lakhs.

- (ii) **Clothing grant for Girls-students** : Two uniform sets for each deserving girl at the time of first admission in particular, for about 5,000 girls @ Rs.40 per student. Total Rs.2.00 lakhs.
- (iii) **Special stipends for Border Area students and other specially backward areas** : Nearly 1,000 students each year will be given lump-sum grant of Rs.100 each as an impetus for studying in schools. The total provision will be Rs.5 lakhs.
- (iv) **Hostel subsidies** : For specially deserving students hostel subsidy of Rs.200 will be granted per year. The grant will be made to 500 students. Total cost involved Rs.5.00 lakhs.

#### 6.1.34 Establishment of 2 years Higher Secondary Schools or Junior Colleges.

The most vital question is: What direction should the Post-Matric stage of education adopt for this area; and in what line should it expand. Undoubtedly facilities must be created for the technical and semi-professional courses, either by taking advantage of the existing Institutions outside the State or by establishing such institutes within the State. At this stage of socio-economic development, full-fledged institutes of degree standard on Medicine, Engineering, Agriculture, Veterinary, etc., may not be necessary for the State. Instead of starting these highly expensive institutions, which will also face the difficulty of availability of teaching personnel, a fairly large number of scholarships can be created so that our boys and girls can get the training from well-established institutions.

6.1.35. It is felt that there should be institutions where a large number of adult men and women who have had sufficient general education already can get the opportunity and facilities for specialised courses in diverse fields. These institutions while offering specialised courses should not be entirely terminal for, an institution terminating the educational career midway can never attract students of ability and ambition. In other words, an institution of this type should offer a general core-course combined with specialised courses, so that, for students who decide on taking up general degree course again, the door may be kept open. The answer to this situation would be some sort

of a Junior College. A Junior College offering multiple courses of two years' duration after matriculation should, if properly planned, prove to be an efficient organisation training up men and women for a variety of avocations.

6.1.36. Seven such institutions are proposed to be established—1 in Jaintia Hills and 3 each in Khasi and Garo Hills in the following areas namely Jowai, Shillong, Nongstoin, Bhoi, Tura, Simsangiri and Baghmara. Each institution will have a common core-syllabus with at least 4 optional courses. The optional courses may vary from institution to institution.

6.1.37. While the exact shape in the matter of core-course, elective courses and staffing pattern cannot precisely be envisaged at this stage, a rough working estimate has been projected.

6.1.38. Each Junior College will have a capacity of 250 students on average, with 4 core-subjects and 4 elective courses. It will need an administrative block including class-rooms, Laboratory, Workshop, Library, Hostels and Teachers quarters. On rough a calculation, the cost involved will be as indicated below :

					Rs.
Administrative building ...	...	...	...	...	2.50 lakhs
Laboratory ...	...	...	...	...	0.50 „
Workshop ...	...	...	...	...	0.50 „
Library ...	...	...	...	...	0.50 „
Hostel (2 Blocks) ...	...	...	...	...	8.00 „
Teachers' Quarters (15 Institutions)	...	...	...	...	2.50 „
Apparatus and Equipment	...	...	...	...	1.50 „
					<hr/>
			Total ...		15.50 lakhs

6.1.39. Teaching and office staff, peons, etc., together with contingency will amount to Rs.1 lakh annually. For the proposed seven institutions the total expenditure will be about Rs.120.00 lakhs.

6·1·40. These Junior Colleges will replace and serve the purpose of the Higher Secondary stage of education and the Pre-University Course and should prove to be more purposeful and effective.

#### **Strengthening of Administrative and supervision**

6·1·45. There should be 3 Education Officers—one a specialist in Arts, another a specialist in Science and the third on Technical side. One more senior specialist will be attached to the Directorate. The supporting staff in the districts will also be strengthened suitably. In the headquarters, besides the Education Officer there should be one Planning-*cum*-Evaluation Officer and the supporting staff. The approximate expenditure will be Rs. 6·50 lakhs.

#### **Collegiate Education**

6·1·46. Meghalaya has now 14 colleges including the two Post-Graduate Professional Colleges namely, the B. T. College and the Law College. Except the Shillong Polytechnic offering Diploma Course on a few engineering subjects there is no other technical institution in the State. Of these 14 colleges, only 2 are Government colleges started in recent times, and as many as 10 of them (including the two professional colleges) are situated in Shillong. There is only 1 college in the Jaintia Hills District with a population of 1·13 lakhs and with 6 high schools. In the District of Garo Hills with an area of 8,100 sq. km. and a population of 4·06 lakhs there are only 41 High Schools and only 2 colleges, the second one having been started only a year ago.

6·1·47. In the entire State of Meghalaya, only one college, namely the St. Anthony's College, offers Post-Graduate course in Mathematics.

6·1·48. There is only one Commerce College in the State and only four colleges offer Science Courses upto the degree standard, and one of them upto the P. U. standard. One of the 2 Government Colleges (Jowai), is located in rented houses and the second one (Tura) has utterly insufficient accommodation inherited from its "aided" stage. Both these colleges will have to build their accommodation with hostels and teachers' quarters. Accommodation in 7 Shillong Colleges is fairly satisfactory although 3 of them do not have hostel-facilities for students. Another college outside Shillong (Union Christian College) has fairly good buildings including hostels.

6.1.49. While all these 8 colleges will have to extend their accommodation in large or small measure, one aided college, namely the Synod College, has no building of its own while the Mendipathar college in Garo Hills has a few buildings which are not adequate.

#### **Existing Colleges**

6.1.50. (1) Three Colleges in Shillong which are partly co-educational, have facilities for Science and Honours Courses in a limited extent. One Girls' College has similar facilities.

Facilities are proposed to be created in both Women's Colleges for Arts and Science upto the Honours standard. Science is being introduced in the 4th Boys' College and full facilities for this requires to be extended. The Commerce College will be brought upto the optional standard.

(2) Both the Government Colleges should be made full-fledged Degree Colleges with Honours in Humanities and Science.

(3) Sufficient financial assistance should be extended to the Synod College and the Mendipathar College so that they can develop upto degree standard quickly.

(4) The B. T. and the Law Colleges are proposed to be treated as constituent colleges of the proposed University.

#### **New Colleges**

6.1.51. The question now is whether we need more colleges in the State. Two more degree level colleges, in the interior part of each of Garo Hill and Khasi Hills would need to be set up.

A rough estimate showing the financial implication involved for achieving the objective narrated is given below :--

(1) **Government Colleges**—Both the colleges will have to shift to the new sites selected and all buildings will have to be constructed. The approximate amount involved will be Rs. 75.00 lakhs for Tura, and Rs. 45.00 lakhs for Jowai.

(2) **Aided Colleges (existing).**—Proper accommodation including laboratory and hostels will have to be created in the 10 existing Aided Colleges. The estimate includes the Synod and Mendipathar Colleges having practically no building at all. The B. T. College needs further space and also a hostel and Rs.5.00 lakhs is proposed for the same. The total financial implication of the proposal is Rs.120 lakhs of which Rs.61 lakhs is for construction of buildings and equipments for the existing Aided Colleges, Rs.30 lakhs for the two proposed new Colleges and Rs.29 lakhs as recurring expenditure.

6.1.52. Of the 10 non-Government Colleges, 6 are getting grants from Government on deficit system. Another College, namely Union Christian College, is already getting near-deficit grant. The remaining 3 Colleges namely the Commerce College, the Synod College and the Mendipathar College also requires to be brought under deficit system of grant.

8. It would be essential to have a centre of Post-graduate studies and research in Garo Hills. It would be desirable therefore, for Garo Hills to have a University Centre. It is expected that the Central Government will take appropriate measures in this direction and therefore, no scheme has been worked out in this behalf.

6.1.53. Introduction of the 2nd Year Pre-University Course will necessitate additional space and additional staff. Provision has been made in this behalf.

6.1.54. In the Fifth Plan, adequate provisions for grant of different type of scholarships have also been made.

6.1.55. The schematic details are shown in the attached statement.



## GENERAL EDUCATION

### Outlay and Expenditure

State: Meghalaya.

Rs. lakhs.

Sl. No.	Schemes	Fourth Plan				Total	Fifth plan outlay proposed					
		Approved 4th Plan outlay	Outlay for 1963-74	Anticipa- ted expen- dituae 1973-74	Anticipa- ted expen- diture for 4th Plan		Capital	F.E.	1974-75 proposed	Capital	F.E.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
<b>MINIMUM NEEDS PROGRAMME—</b>												
I. Primary: Age group-6-11.—												
1.	Entertainment of additional teachers	...	...	..	...	..	60.00	..	...	1.68	..	..
2.	Construction of new school buildings	..	..	...	...	..	10.00	10.00	...	0.60	0.60	...
3.	Ashram schools	...	...	...	...	...	12.00	12.00	...	3.00	3.00	...
4.	Furniture and equipments for schools	..	..	...	...	...	3.50	..	..	0.20	...	..
5.	Teacher quarters	..	...	...	...	...	10.00	10.00	..	1.00	1.00	...
6.	Incentives to students—											
	(1) Free text Book and uniforms	...	...	...	...	...	7.50	...	...	0.20	...	...
	(2) Scholarships	...	...	..	...	...	5.00	..	...	0.15	..	...
	<b>Total—Primary</b>	...	...	..	...	...	<b>108.00</b>	<b>32.00</b>	...	<b>6.83</b>	<b>4.60</b>	...

Middle (Age ground—11—14).—

1. Entertainment of additional teachers	...	...	..	...	24.6	...	...	1.08	..	...
2. Construction of school buildings	...	...	...	...	5.10	5.10	...	0.60	0.60	...
3. Hostels	...	...	..	...	6.00	6.00	...	1.00	1.00	..
4. Furnitures for schools	...	..	...	...	0.75	...	...	0.10	...	...
5. Teachers quarters	...	...	..	..	5.00	5.00	...	0.60	0.60	...
6. Free Text Books and Uniforms	...	..	..	..	1.55	...	...	0.22	...	...
7. Scholarship	...	....	...	..	1.00	...	...	0.20	...	...
Total—Middle	...	...	..	..	44.00	16.10	...	3.80	2.20	..
Grand Total Minimum Needs Programme	...	..	...	...	152.00	48.10	...	10.63	6.80	...

## Schemes outside Minimum Needs Programme

Rs. lakhs

Serial No.	Schemes	Fourth Plan				Fifth Plan Outlays Proposed						
		Approved Fourth Plan outlay	1973-74	Anticipated Expenditure 1973-74	Anticipated 4th Plan expenditure	Total	1974-75		Proposed		Capital	F. E.
							Capital	F. E.	Capital	F. E.		
1	2	3	4	5	6	7	8	9	10	11	12	

### ELEMENTARY EDUCATION

#### I. PRIMARY EDUCATION—

1. Pre-Primary Education...	.. ..	5.30	1.60	1.60	7.58	72.00	...	...	4.70	...	...
2. Establishment of model community Primary Schools.	.. ..	...	...	...	...	25.00	...	...	5.00	...	...
3. Introduction of science in Primary Schools	.. ..	...	...	...	...	35.00	...	...	4.50	..	...
4. Upgrading of Primary School to the prescribed minimum level.	.. ..	...	...	...	..	45.00	...	...	8.00	..	...
5. Introduction of Work experience in Primary Schools.	.. ..	...	...	...	..	10.00	...	..	0.60	...	...
6. Production of Text Books	.. ..	...	...	...	..	12.00	...	..	1.00	...	...
7. Games and Sports	.. ..	0.55	..	...	0.67	5.00	...	..	1.00	..	..
8. Text Book Libraries	.. ..	0.36	0.11	0.11	0.42	10.00	...	..	2.00	...	..
9. State Institute of Education	.. ..	..	...	..	..	22.00	10.00	..	2.00	...	..
10. Educational excursion of the teachers	.. ..	..	...	..	..	50	...	...	0.15	...	...
11. Strengthening of administration and supervision.	.. ..	..	...	...	..	19.00	..	...	1.00	...	...

12	Expansion of educational facilities for age group 6-11.	22.55	13.00	13.00	33.40	119.00	...	...	5.82	..	...
13	Construction of new Primary Schools.	10.00	6.00	8.00	16.52	26.00	26.00	...	5.40	5.40	..
14											
15	Teachers quarters .. ..	...	...	...	...	40.00	40.00	...	4.00	...	..
16	Free Text Books and Schools uniforms.	1.50	4.80	4.80	5.02	18.00	..	...	2.20	...	...
17	Scholarships to students ...	1.25	0.10	0.10	0.76	16.00	...	...	1.85	...	...
18	Stipend to students residing in Hostels.	5.00	1.00	1.00	3.85						
18 (a)	Ashram Schools ... ..	...	...	...	...	3.00	3.00	..	...	...	...
Total—Primary ..		46.51	26.61	26.61	68.22	495.00	79.00	...	53.52	5.40	..

## II MIDDLE

19	Expansion of educational facilities for age group 11-14.	22.50	6.00	6.00	18.62	41.21	...	..	2.12	...	...
20	Construction and improvement of school buildings.	8.00	6.70	6.70	26.65	34.90	34.90	...	4.40	4.40	...
21	Hostels ... ..	4.80	2.50	2.50	7.92	9.00	9.00	...	...	...	...
22	Teachers quarters ... ..	3.80	2.00	2.00	6.15	25.00	25.00	..	2.40	2.40	..
23	Free Text Books and Uniforms for students.	...	..	...	...	3.45	...	...	0.78	...	..
24	Scholarships ... ..	...	...	...	...	9.50	...	...	0.80	...	...

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
27	Establishment of Community Schools and School Complex.	..	...	...	...	15·00	15·00	...	2·00	2·00	...
28	Reconstruction of Government Schools.	...	..	..	..	25·00	15·00	...	2·00	...	..
29	Introduction of uniform scale of pay for existing teachers.	...	..	...	...	30·00	...	...	6·00	...	...
30	Introduction of science education in Schools.	2·00	2·33	2·33	3·85	14·00	..	...	2·80	...	...
31	Teaching aids and furniture for Schools.	...	..	..	...	4·25	...	...	0·90	...	...
32	Libraries in Schools ... ..	1·80	0·30	0·30	1·84	5·00	..	...	1·00	...	...
33	Introduction of work orientation	0·60	0·10	0·10	0·32	15·00	...	..	2·00	..	..
34	Development of playgrounds ...	2·00	0·60	0·60	2·81	3·00	...	..	0·60	..	...
35	Excursion of teachers and students	...	...	...	..	2·00	...	..	0·40	..	...
36	Extra curricular activities ...	1·40	0·40	0·40	1·44	2·50	...	...	0·50	...	..
37	Production of Text Books ..	...	..	...	...	8·00	...	...	0·50	..	..
38	Games and Sports ... ..	...	...	...	...	10·00	..	...	2·00	...	...
39	Taking over of M. E. Schools ..	6·30	4·00	4·00	8·22	...	...	..	...	...	..
Total: Middle Schools ...		53·20	24·93	24·93	77·82	256·81	98·90	..	31·20	8·80	...
Total for ELEMENTARY EDUCATION.		99·71	50·54	50·54	146·04	751·81	177·90	...	84·72	14·20	...
Add Minimum Needs Programme ..		...	...	...	...	152·00	48·10	...	10·63	6·80	...
Total ... ..		99·71 +34·05	50·54	50·54	146·04	903·81	226·00	...	95·35	20·00	...

## SECONDARY EDUCATION

39(a) Expansion of Educational facilities for age group 14-17.	25.00	6.00	6.00	18.14	75.60	...	...	2.40	...	...
40 Strengthening of Existing Schools	...	...	...	...	43.56	...	...	3.36	...	...
41 Establishment of Model Residential School.	...	...	...	...	57.00	50.00	...	5.00	5.00	...
42 Introduction of Uniform Pay scale for teachers.	...	...	...	...	61.00	...	...	10.00	...	...
43 Work Experience	1.30	0.55	0.55	0.55	9.05	...	...	0.80	...	...
44 Establishment of Government Schools in New Sub-division.	...	...	...	...	26.50	20.00	...	4.00	4.00	...
45 Provision for Repairs of buildings due to natural calamities.	...	...	...	...	10.00	...	...	2.00	...	...
46 Improvement of School buildings	16.00	2.00	2.00	14.88	50.00	...	...	10.00	...	...
47 Hostels	4.70	2.00	2.00	7.30	50.00	50.00	...	50.00	50.00	...
48 Improvement of Playgrounds	2.00	0.50	0.50	2.02	4.50	...	...	1.00	...	...
49 Teachers quarters	4.00	1.50	1.50	7.61	24.00	24.00	...	4.00	4.00	...
50 Girls common room in Girls Schools	1.31	0.40	0.40	0.40	5.00	5.00	...	1.00	1.00	...
51 Facilities for teaching Science	2.75	2.30	2.30	5.22	7.50	...	...	1.50	...	...
52 Audio Visual Aids	...	...	...	...	1.20	...	...	0.24	...	...
53 School Libraris	2.50	0.77	0.77	2.58	3.00	...	...	0.60	...	...
54 Publication of Text Books	...	...	...	...	10.00	...	...	1.00	...	...
55 Extra Curricular activities	...	...	...	...	2.50	...	...	0.50	...	...
56 Free Education	30.00	5.60	5.60	22.00	20.00	...	...	3.00	...	...
57 Incentive to students	14.25	2.70	2.70	12.46	19.50	...	...	3.00	...	...

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
58	Establishment of Higher Secondary Institutions.	...	...	...	...	120.00	100.00	...	10.00	10.00	...		
59	Strengthening of Administration and supervision.	...	...	...	...	6.50	...	...	0.30	...	...		
60	Conversion of High Schools into Higher Secondary Schools.	3.50	...	..	0.20	...	...	...	...	...	...		
61	Provincialisation of High Schools	...	7.00	1.90	1.90	2.99	...	...	...	...	...		
Total—Secondary		...	...	114.31	26.22	26.22	99.35	606.41	249.00	...	68.70	29.00	...
				(-) <b>5.94</b>									

#### UNIVERSITY EDUCATION—

62	Construction of Government Colleges at Jowai and Tura.	3.00	0.50	0.50	2.46	120.00	120.00	...	10.00	10.00	...
63	Introduction of Science and other subjects in Government Colleges.	6.50	2.30	2.30	2.66	10.50	...	...	0.50	...	...
64	Library Laboratory equipments and Furniture for Government Colleges.	...	...	..	...	10.00	...	...	1.00	...	...
65	Improvement of buildings of the existing Aided Colleges.	...	2.00	2.00	3.00	13.00	13.00	...	2.00	2.00	...
66	Improvement of Library and Laboratories in Colleges.	6.05	1.50	1.50	3.44	9.50	...	...	1.50	...	..
67	Provision of Workshops for Science Courses and Science apparatus.	...	...	...	...	6.00	6.00	...	1.00	1.00	...
68	Introduction additional subject in the existing Aided Colleges.	20.00	2.50	2.50	6.47	13.00	...	...	1.00	...	...
69	Common room for teachers and students	3.00	...	...	0.10	3.00	...	...	0.50	...	..
70	Hostel Students	...	5.00	2.00	2.00	6.00	11.50	11.50	2.00	2.00	...

71	Teachers quarters	...	...	3.00	1.00	1.00	3.96	2.50	2.50	...	0.50	0.50	...
72	Play Grounds	..	...	7.65	0.50	0.50	3.37	1.50	...	...	0.50	...	...
73	Establishment of two new colleges in the State.	...	...	...	...	...	...	30.00	28.00	...	1.00	1.00	...
74	Improvement of B. T. College	...	...	2.00	...	...	...	5.00	4.50	...	0.50	...	...
75	Improvement of Law College	...	...	...	...	...	...	1.00	...	...	..	...	...
76	Matching Share for the U. G. C Grants.	...	...	...	...	...	...	6.50	...	...	1.00	...	...
77	Introduction of Work experience	...	...	...	...	...	...	2.50	...	...	0.50	...	...
78	N. C. C., N. S. S. and Other Services.	...	...	...	...	...	...	4.50	...	..	0.50	...	...
79	Extra curricular activities	...	...	1.50	0.70	0.70	1.83	2.50	...	...	0.50	...	...
80	Educational excursion	...	...	...	...	...	...	2.50	...	...	0.50	...	...
81	Misc. grants to Colleges	...	...	...	...	...	...	5.00	...	...	1.00	...	...
82	Scholarships and Loans for higher studies.	...	...	0.50	0.25	0.25	3.65	11.50	...	...	0.50	...	...
83	Setting up of post graduate colleges	...	...	10.00	...	...	...	...	...	...	...	...	...



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
83.	Contribution for the Hill University.	...	...	..	..	40.00	..	..	5.00	...	...
84.	<b>SCHOLARSHIPS</b>										
	(i) Technical Courses—										
	(a) Overseas Scholarships	...	...	...	...	2.90	...	...	...	...	...
	(b) Scholarship in India	...	...	..	...	1.83	...	...	0.15	...	...
	(ii) General Courses—										
	(a) Research Scholarships	...	...	...	...	1.37	...	...	0.10	..	...
	(b) Overseas Scholarships	...	...	...	...	1.84	...	..	..	...	...
	(c) Other P. G. Scholarships	...	...	...	..	1.73	...	...	0.15	...	...
	(iii) Deputation for higher studies	...	...	...	...	2.80	...	...	0.32	...	...
	(iv) Ex-gratia grants for higher education.	...	...	...	...	0.51	...	..	0.10	...	...
85.	Maintenance of existing staff in Government Colleges	6.50	1.70	1.70	5.40	...	...	...	...	...	...
86.	Improvement of teaching of regional languages in Government Colleges.	0.40	0.20	0.20	0.31	..	...	...	...	...	...
87.	Free Studentships to tribal students in colleges.	5.00	0.60	0.60	2.77	...	..	...	...	...	...
88.	Hostel subsidies to students reading in colleges.	0.15	...	...	...	...	...	...	...	...	..
	<b>Total UNIVERSITY ...</b>	<b>80.25</b>	<b>17.75</b>	<b>17.75</b>	<b>45.42</b>	<b>324.47</b>	<b>185.50</b>	<b>...</b>	<b>32.32</b>	<b>16.50</b>	<b>..</b>
	(—)23.15										

## TEACHERS TRAINING

### I. PRIMARY

99. Establishment of training centres	..					22.00	22.00	..	2.00	..	..
90. Teaching staff of T. Cs	...	...				3.70	..	..	0.10	..	..
91. Deputation of teachers	...	..				13.50	..	..	1.50	..	..
92. Stipends to teachers	...	...				1.10	..	..	0.20	..	..
			}								
				9.50	2.00	2.00	6.05				

### MIDDLE

93. Establishment of T. Cs	...	..				12.00	12.00	..	2.00	..	..
94. Teaching staff in T. Cs	...	..				0.50	..	..	0.10	..	..
95. Deputation of teachers	...	...				8.00	..	..	0.50	..	..
96. Stipends to teachers	...	...				0.80	..	..	0.10	..	..
			}								
				10.70	1.10	1.10	3.40				

### SECONDARY—

97. Deputation of teachers	...	..				5.70	..	..	1.00	..	..
98. Stipends to teacher	...	..				0.50	..	..	0.10	..	..
99. Seminars workshops, etc	...	..				0.85	..	..	0.10	..	..
			}								
				4.54	1.50	1.50	4.54				

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<b>Total Training</b>	..					25.24	5.60	5.60	15.69	68.65	34.00	..	7.70	..	..
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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Other Educational Programmes—											
100	Sainik School stipends .. ..	..	..	..	..	3.05	..	..	0.20	..	..
101	Hindi education—										
	(a) Institute of Hindi Education .. ..	..	..	..	..	8.00	8.00	..	0.50	0.50	..
	(b) Stipends for Students .. ..	..	..	..	..	4.00	..	..	0.10	..	..
	(c) Appointment of Hindi teachers .. ..	..	..	..	..	13.50	..	..	1.00	..	..
102	Development of sports and games including construction of studio.	8.00	1.10	1.10	4.90	11.00	6.50	..	2.00	1.50	..
103	Physical education, youth welfare, etc. ..	0.80	0.20	0.20	0.27	2.10	..	..	0.30	..	..
104	Grants to State Sports Council .. ..	0.50	0.25	0.25	0.45	6.00	..	..	0.50	..	..
105	Maintenance of NCC schemes .. ..	1.50	..	..	..	..	..	..	..	..	..
106	Nehru Yuvak Kendra and other youth services.	..	..	..	..	2.30	..	..	0.30	..	..
107	Scouting, etc. and Junior Redcross ..	0.50	0.25	0.25	0.45	2.50	..	..	0.50	..	..
108	Grants to the Board of School Education	..	..	..	..	8.00	..	..	1.00	..	..
109	Compus work Projects .. ..	..	..	..	..	3.00	..	..	0.50	..	..
110	Miscellaneous Schemes .. ..	..	..	..	..	2.50	..	..	0.50	..	..
111	Audio Visual Education .. ..	0.50	0.15	0.15	0.42	..	..	..	..	..	..
112	Bureau of Vocational guidance .. ..	0.75	0.20	0.20	0.23	2.60	..	..	0.10	..	..
113	District Gazetteers .. ..	..	..	..	..	3.80	..	..	0.30	..	..
114	Tribal Research Institute .. ..	..	..	..	..	5.50	..	..	0.50	..	..
115	Contribution to Teachers Welfare Fund ..	..	..	..	..	0.50	..	..	0.10	..	..
Total Other Schemes .. ..		12.55	2.15	2.15	6.72	78.35	14.50	..	3.40	2.00	..

Strengthening of Administration —												
116	Strengthening of Inspectorate	...	2.00	0.89	0.89	1.08	5.00	5.00	...	0.50	...	..
117	Strengthening of Planning and Statistical Wing of the Directorate.	...					3.45	...	..	0.50	...	..
118	Strengthening of Planning and Statistical Wing in District Offices.	...	3.50	0.50	0.50	0.66	2.70	...	..	0.20	..	...
119	Hindi Unit in Directorate	...					1.85	...	..	0.30	...	..
	Library Unit in Directorate	..					1.85	..	...	0.30	...	..
	Sport Unit in Directorate	...					1.50	...	..	0.30	...	..
	Total Administration	...	5.50	1.39	1.39	1.74	16.35	5.00	...	2.10	...	...
Social Education—												
120	District and State Staff	...	..	..	...	...	2.90	...	..	0.45	...	...
121	Literacy survey and Training of staff.	..	..	...	...	...	0.83	...	...	0.15	...	...
122	Functional literacy and General literacy.	...	...	...	...	...	10.40	...	...	1.10	...	...
123	Production of Literature	...	...	...	...	...	0.70	..	...	0.10	...	...
124	Audio-visual Aids	...	...	...	...	...	0.90	...	...	0.10	...	..
125	Youth Welfare Projects	...	...	...	...	...	1.00	...	...	0.20	..	...
126	Voluntary organisations	...	...	...	...	...	1.70	...	...	0.20	...	...
127	Vehicle and other Misc. Works	...	...	...	...	...	0.70	...	..	0.30	...	...
128	Adult education	...	...	...	...	...	...	...	...	...	...	...
129	Community Centres	...	2.55	1.00	1.00	2.10	7.00	..	...	1.00	...	...
130	Rural Libraries	...	...	...	...	...	...	...	...	...	...	...
	Total Social Education	...	2.55	1.00	1.00	2.10	26.13	..	...	3.60	...	...

1	2	3	4	5	6	7	8	9	10	11	12	
<b>CULTURAL PROGRAMMES—</b>												
131	Library Services—											
	1	District Library Building	5·00	0·50	0·50	2·35	22·00	22·00	...	2·00	2·00	...
	2	Furniture and equipments	...	...	...	...	2·50	...	...	0·10	...	..
	3	Books	...	...	..	...	4·00	...	...	0·50	...	..
132	Establishment of Academies		...	...	...	..	3·30	...	...	0·20	...	...
133	Development of Arts		...	...	...	...	1·20	...	...	0·10	...	...
134	Pension on Art and letters		...	...	...	...	0·60	...	...	0·12	...	..
135	Assistance to authors		1·25	0·30	0·30	1·36	0·75	...	...	0·20	...	...
136	Development of Classical Languages		...	...	..	...	2·20	..	...	..	...	...
137	Preparation and Publication of Books		2·00	0·10	0·10	0·10	...	...	...	...	...	...
138	Encouragement of cultural activities through non-Government Institutions		3·00	0·95	0·95	3·83	...	..	...	...	...	...
	Total—Cultural Programmes		11·25	1·85	1·85	7·64	36·55	22·00	...	3·37	2·00	..
	Total—Education		350·00	105·00	105·00	324·70	1908·99	687·90	...	210·91	63·70	...
	Minimum Needs programmes		...	...	...	...	152·00	48·10	...	10·63	6·80	..
<b>GRAND TOTAL GENERAL-EDUCATION</b>			<b>350·00</b>	<b>105·00</b>	<b>105·00</b>	<b>324·70</b>	<b>2060·99</b>	<b>735·00</b>	...	<b>221·54</b>	<b>70·50</b>	...

## 6.2. TECHNICAL EDUCATION

6.2.1. Establishment of technical institutions in Meghalaya was a recent development and there has not been much progress in the sphere of technical education. The programmes in the Fourth Plan were, by and large, those which were taken up earlier or were being considered under the composite State of Assam and these are being continued under Meghalaya State. The outlay for the technical education in the State's Fourth Plan was Rs. 30.00 lakhs and the expenditure will be around Rs. 18.00 lakhs. The outlay required in the Fifth Plan is Rs. 131.11 lakhs.

6.2.2. Except the Shillong Polytechnic, there is no other Engineering or Technical Institute in the State. This institute was initiated during the Third Plan period and offers a three-year diploma course in civil engineering. Much of the work still remains to be completed. Lack of physical facilities like buildings, hostels, staff quarters, etc., have handicapped the functioning of the institute. As the only institution of diploma standard in the State, it has to be raised to its full stature. The programme for the Fifth Plan envisages construction of institutions buildings, hostels, staff quarters, workshops, etc. The estimated expenditure on account of construction work apparatus and equipment is Rs. 37.60 lakhs.

6.2.3. There is at present, appreciable shortage of teaching staff. The full complement of staff according to the revised pattern has to be entertained. The library has to be improved and provision has to be made for games and sports. The estimated expenditure is Rs. 3.30 lakhs.

6.2.4. The break up of the expenditure during the 5th Plan will be as follows—

(Rs. in lakhs)

Year	Building	Equipment	Recurring	Total
1974-75	8.00	1.50	0.30	9.80
1975-76	8.00	1.50	0.60	10.10
1976-77	10.00	1.00	0.80	11.80
1977-78	6.60	1.00	0.80	8.40
1978-79	...	...	0.80	0.80
	32.60	5.00	3.30	40.90

6.2.5. It is proposed to introduce courses on Tele-Communication and Architectural Assistantship courses in this polytechnic. Demands for these trades are on increase and the students of this region have a natural aptitude for these trades. This will be a three-year diploma course with an intake capacity of 30 per year. An amount of Rs. 10.70 lakhs is proposed for these schemes during the Fifth Plan period.

6.2.6. There was a proposal for starting Junior Technical Schools, one at Tura and the other at Jowai. Not much headway could be made so far in initiating these schemes, Steps will be taken to complete these schemes during the 5th Plan.

#### **Junior Technical School, Jowai**

6.2.7. It is proposed to start this School with an intake capacity of 30 students. The expenditure including buildings (institutional buildings, staff quarters, hostels, etc.) and equipments would be about Rs. 26 lakhs.

#### **Junior Technical School, Tura**

6.2.8. The expenditure pattern and the intake capacity will be the same as for Jowai.

The expenditure pattern is as below—

(1) Non-recurring	...	...	...	23.00 lakhs.
(2) Recurring	...	...	...	2.60 lakhs.

#### **Starting of a Diploma Course in Agricultural Engineering**

6.2.9. The people of the Hills are keen agriculturists with an aptituded for the profession. What they lack is proper training and proper guidance suited to the local environment and climate. A course on agriculture engineering will go a long way in helping the young generation to adopt modern and scientific tools and machineries for improved method of agriculture.

6.2.10. This project will be in the site meant for the Junior Technical School at Tura. The annual intake will be 30 and the course will be of 3 years duration, after Matriculation. The outlay involved is Rs. 15.20 lakhs of which Rs. 12.20 lakhs is non-recurring expenditure.

### Establishment of a Commercial Institute

6.2.11. This State has urgent needs for an Institution with courses on commerce, secretarial practice, cost and works accountancy, stenography and type-writing. It will have an intake capacity of 30 students.

The estimated expenditure will be

Buildings	...	...	1.75 lakhs
Equipment	...	...	1.85 lakhs
Recurring	...	..	2.40 lakhs

Total—Rs. 6.00 lakhs

### Scholarships

6.2.12. In absence of any institution upto degrees and Post-graduate level in the State, a comparatively large number of scholarships has to be created to meet the demands of the State and also to create opportunities for the youngmen and women of the State for seeking employment elsewhere in the country. It is therefore, proposed to create the following category of scholarships.

Standard	No.	Duration years	Value Rs.
1. Post-graduate Diploma	2	2 years (average)	250 p.m.
2. Degree Standard	3	3 Do.	150 p.m.
3. Diploma Standard	4	3 Do.	100 p.m.

6.2.13 Thus, 9 scholarships will be awarded every year. The courses will be determined by the appropriate authority every year and students selected. There will be at least 30 disciplines for which the students may select. An amount of Rs. 1.91 lakhs is proposed for the Fifth Plan.

### Strengthening of Administration, creation of Boards and Committees

6.2.14. The Directorate will have to be strengthened by appointing one Planning Officer, one Evaluation Unit and the supporting staff. The State will have also to constitute the State Council or at least an Advisory Board to guide Government in the matter of development of Technical Education in proper lines. The expenditure is estimated at Rs. 4.00 lakhs during the plan period.

6.2.15. The schematic outlays and the phasing of expenditure are indicated in the attached statement.



## TECHNICAL EDUCATION

### Phasing of outlays

(Rs. in lakhs)

Schemes	Fourth Plan outlay	Anticipated expenditure during 4th Plan	Total Fifth Plan	Phasing of outlay				
				1974-75	1975-76	1976-77	1977-78	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Shillong Polytechnic- Expansion and improvement including additional staff entertainment.	13.50		40.90	9.80	10.10	11.80	8.40	0.80
2. Introduction of Telecommunication and Architectural Assistantship courses.	...		11.90	1.90	3.60	2.20	2.00	2.20
3. Junior Technical Schools—								
(1) Jowai ... ..	5.00		25.60	4.00	9.00	10.70	0.95	0.95
(2) Tura ... ..	5.00		25.60	4.00	9.00	10.70	0.95	0.95
4. Diploma Course in Agricultural Engineering.	...	18.00	15.20	2.20	4.50	5.30	1.20	2.00
5. Commercial Institute ..	...	...	6.00	1.60	2.00	0.80	0.80	0.80
6. Scholarships, etc. ...	3.00	...	1.91	0.17	0.24	0.50	0.50	0.50
7. Strengthening of Administration.	3.50		4.00	0.30	0.70	1.00	1.00	1.00
<b>Total ...</b>	<b>30.00</b>	<b>18.00</b>	<b>131.11</b>	<b>23.97</b>	<b>39.14</b>	<b>43.00</b>	<b>15.80</b>	<b>9.20</b>

### 6.3. HEALTH

#### Difficulties experienced

The difficulty in the smooth implementation of Health Programmes in the State of Meghalaya which is situated in the Hill region of the eastern region of India are mainly due to the following factors :—

- (i) Lack of communication and transport facilities.
- (ii) Thinly dispersed population in extremely small villages, and
- (iii) Shortage of doctors and other para-medical personnel.

6.3.2. Lack of communications and transport facilities has a direct bearing on increasing the cost of buildings and on transportation of equipment. The thinly dispersed population has posed the problem of following any set pattern or norms in extending health facilities within the easy reach of a considerable number of villages. Shortage of health personnel, especially doctors, has limited the scope of taking up a need-based health plan in the remote areas in the State. With the improvement of communications, it is expected that the problems of extending health facilities to the far flung areas will greatly ease.

6.3.3. In order to meet the shortage of doctors to serve in the dispensaries, Primary Health Centres, Sub-centres, and Travelling Dispensaries, Government have sanctioned an incentive money at Rs.200, Rs.150 and Rs.100 per mensem according to the categories of dispensaries, etc., to which they are posted.

6.3.4. In order to meet the shortage of doctors in the State, it is felt that a Medical College of our own will be the only step towards providing adequate number of trained and dedicated doctors in the State. However, since the establishment of the Medical College will take time, provisions have been suggested to award stipends to our students undergoing study in the Medical Colleges of other States.

6.3.5. To meet the shortage of para-medical personnel, viz. Nurses, A. N. Ms., Pharmacist, etc., stipends will be given to the girls in General Nursing and Midwifery Courses in our own institutions. As regards training of other para-medical personnel where there is no institution of our own, stipends will be given to our trainees undergoing training in the institutions of other States.

6.3.6. In order to serve the far flung areas where dispensaries cannot be started immediately, Mobile Dispensaries since introduced will continue to function in the Fifth Five-Year Plan. In addition, it is also proposed to further extend this facility by providing more Mobile Dispensaries in the Fifth Plan.

6.3.7. The village people are not so conscious about the value of preventive aspects of Health Services as they are about its curative side. In order to enlighten the people further about the utility of preventive measures, it is proposed to establish Health Education Units in the three districts with headquarters at Shillong.

6.3.8. In the sphere of health, a substantial part of the programme of development is outside the State Plan and falls under the category of Centrally Sponsored Schemes. Vital schemes under the "Control of Communicable Diseases" such as Malaria, Filariasis, T. B., Trachoma, Small-pox, V. D., Leprosy, etc., are centrally sponsored and are executed by the State Government with cent per cent Central assistance. So also is the case with regard to Family Planning.

6.3.9. In the State Plan, the programme relates to Medical Education, Training Programme, Hospitals and Dispensaries, Primary Health Centres, Indigenous System of Medicine and Other Programmes like Health Education, Drug Control, Control of Food Adulteration, etc.

#### **Progress in Fourth Plan**

6.3.10. The Fourth Plan outlay for Health Programmes under the State Plan was Rs.175.00 lakhs. Against this, an amount of Rs. 81.92 lakhs is anticipated to be spent over the Plan period. The progress of expenditure and achievement during the Fourth Five Year Plan are described briefly below.

6.3.11. I. **Medical Education.**—Under this head 13 students have been awarded scholarship for undergoing study in the Medical Colleges of Assam. An amount of Rs.1.12 lakhs is anticipated to be spent for the purpose during the Fourth Plan.

6.3.12. II. **Training Programme.**—Under this head, there was shortfall of trained personnel like Nurses, A.N.Ms., Radiographers, etc. During the Fourth Plan, 27 trainees have been awarded stipends for undergoing training in General

Nursing in the institutions of Assam. One existing training institution for A.N.Ms., is also maintained. Three training institutions were taken over from Assam on 21st January, 1972 on attainment of full Statehood of Meghalaya and are maintained under this head. The existing Hospitals have also been strengthened. The Pharmacist School is being established in 1973-74. The anticipated expenditure under this head during the Fourth Plan is Rs.4.97 lakhs.

6.3.13. III. **Hospitals and Dispensaries.**—As many as 10 existing dispensaries have been improved. District Hospitals have also been improved with provision of additional beds. Mobile Vans were purchased and staff attached thereto. The anticipated expenditure under this head during the Fourth Plan is Rs.29.69 lakhs.

6.3.14. IV. **Primary Health Centres.**—Fourteen Primary Health Centres out of 24 Blocks are expected to be in position by the end of the Fourth Five Year Plan *i. e.*, 9 existing and 5 new. Some existing Primary Health Centres have been improved. For this purpose, an amount of Rs.31.12 lakhs is anticipated to be spent during the Fourth Plan.

6.3.15. V. **Indigenous system of Medicine.**—The provision during the Fourth Five Year Plan under this head provides for grant-in-aid to the deserving candidates for the Ayurvedic treatment and medicine. No expenditure could be incurred during the previous years of the plan as no candidates came forward for the grant. However, it is expected that a sum of Rs.5,000 will be spent during the Fourth Plan.

6.3.16. VI. **Other Programmes.**—The anticipated expenditure of Rs.14.97 lakhs under this head during the Fourth Plan is mostly in the shape of grant-in-aid to the non-Government Hospitals and Dispensaries to the patients suffering from T.B., Cancer and other fell diseases and to the non-Government organisations for doing anti-leprosy works. It is expected that by the end of the Fourth Five Year Plan some new schemes will be taken up.

#### **Centrally Sponsored Schemes**

6.3.17. In this sector the programmes relate to Family Planning, strengthening of Basic Health Services Staff attached to P.H.Cs., control of Communicable Diseases like Malaria, Filariasis, T.B., Trachoma, Small-pox, V.D., Leprosy etc. The progress of expenditure in respect of the above schemes during

the Fourth Plan is anticipated at Rs.87.14 lakhs. The achievement is summarised below scheme-wise:—

6.3.18. The Family Planning scheme was taken over from the Government of Assam during the second year of the Fourth Plan. There were 2 District Family Planning Bureaus, 2 Rural Family Welfare Planning Centres, 2 Urban Family Welfare Planning Centres, 2 Static Sterilisation Units and Family Planning Clinics in State Dispensaries. The 2 Rural Family Welfare Planning Centres and Family Planning Clinics were re-organised as per revised staffing pattern of Government of India with the establishment of another 6 Rural Family Welfare Planning Centres and 20 Sub-Centres. The 2 Static Sterilisation Units were discontinued in the later part of 1972-73 as their performance was below the prescribed pattern of Government of India. Another Urban Family Welfare Planning Centre was also taken over on attaining of full Statehood. The Maternity and Child Welfare Schemes under Family Planning Programme were also implemented during 1972-73. Compensation of IUCD and Sterilisation in the form of Vasectomy for males, Tubectomy and I. U. C. D. for females was carried out. Free supply of Conventional Contraceptives was issued to desirous males and females. Mass Education and Orientation Camps were organised. Post Partum Programme is being implemented at the Ganesh Das Hospital. The State Family Planning Bureau has started functioning during 1973-74.

6.3.19. Construction programme could not be carried out as the plans and estimates could not be finalized. It is expected to finalise the plans and estimates during the current year, 1973-74. The establishment of a District Family Planning Bureau in Jaintia Hills is being taken up in 1973-74.

6.3.20 It is envisaged to cover the remaining 16 Blocks with Rural Family Welfare Planning Centres and 32 Sub-Centres during the Fifth Plan period. The construction programme is also expected to be carried out on finalisation of plans and estimates during the Fifth Plan. To improve the facility for maternity case in the State, the training of Dais is being implemented during the Fifth Five Year Plan. The following schemes will also continue during the Fifth Plan period:—

1. 3 District Family Planning Bureaus.
2. 8 Rural Family Welfare Planning Bureaus.

3. 3 Urban Family Welfare Centres.
4. 1 State Family Planning Bureau.
5. Compensation for IUCD and Sterilisation.
6. Mass Education and Orientation Camps.
7. Post Partum Programme.
8. M. C. H. Services under Family Planning Programme.
9. Construction Programme.

6.3.21. Hence the provision of Rs.117.98 lakhs has been made for the above schemes for the Fifth Five Year Plan period.

6.3.22. 2. **Strengthening of Basic Health Services Staff attached to P. H. Cs** :—Of the 1.80 units under N. M. E. P. 60 units have entered into Maintenance Phase and now transferred to Basic Health Services.

6.3.23. 3. **Malaria** :—This is a continuing scheme. There are 1.80 under N. M. E. P. *i.e.* 1.11 Units under Attack Phase, 0.09 units under consolidation phase and 0.60 units under Maintenance Phase. Of this 0.60 units have entered into maintenance phase and transferred to Basic Health Service. The remaining 1.20 units are now maintained and run under this scheme out of Central Funds as operational cost.

6.3.24. 4. **T. B.** :—The State Department is at present continuing the following activities during the Fourth Plan :—

- (i) 25 T. B. Isolation bed.
- (ii) One T. B. Clinic.
- (iii) Maintenance of upgraded chest clinic attached to R.P.C. Hospital, Shillong since taken over from Government of Assam on 21st January, 1972.
- (iv) B.C.G. Team in K. & J. Hills.
- (v) T.B. Centre—under process.

6.3.25. 5. **Trachoma** :—Under this programme six centres have been opened. 18 more centres are being opened by the end of the Fourth Plan.

6.3.26. 6. **Smallpox** :—Achievement in this field during the 4th Plan is satisfactory. Further augmentation of staff could not, however, be implemented within the Plan period.

6.3.27. 7. **Leprosy** :—Six S.E.T. Centres (5 new and 1 established by Government of Assam in 1970) are in position now. 5 new centres are expected to be opened by the end of the Fourth Plan. In addition, 32 treatment centres are also maintained under this head.

6.3.28. 8. **V.D. Clinic** :—One V.D. Clinic is expected to be opened by the end of the Fourth Plan.

6.3.29. 9. **Pilot Project for Mental Health** :—One psychiatric clinic attached to the Civil Hospital, Shillong is expected to be in position by the end of the Fourth Plan.

#### **Proposals for the Fifth Plan**

6.3.30. The Draft Proposals for the Fifth Five Year Plan relating to Health Sector have been prepared at an estimated amount of Rs.525.35 lakhs. Out of this, an amount of Rs.161.35 lakhs relates to Centrally Sponsored Schemes and will remain outside the State Plan ceiling of Rs.364.00 lakhs.

6.3.31. The break-up of Rs.525.35 lakhs and the target during the Fifth Plan is summarised as under headwise :—

6.3.32. I. **Minimum Needs Programmes** :—Under the Minimum Needs Programme, the State Plan aims at the establishment of 10 new Primary Health Centres, 46 Sub-Centres and upgradation of 6 Primary Health Centres. As far as possible the new Primary Health Centres and Sub-centres will be located at the existing rural dispensaries. The dispensaries will be functionally integrated with the P. H. C. complex. Provision of electricity in most of the P.H.Cs is one of the main aspects of the programme. Hence, the estimate of Rs.131.50 lakhs under this head.

6.3.33 II. **Hospitals and Dispensaries** :—Under this head it is proposed to take up incomplete works started during the Fourth Plan such as improvement of the existing District and Subdivisional Hospitals and Dispensaries as also new works. Two new Hospitals in the rural areas and 30 new dispensaries are proposed to be established. The provision of Rs. 120.50 lakhs has been included.

6.3.34. III. **Medical Education and Research.**—In order to meet the shortage of doctors in the State, it is felt that a Medical College of our own will be the only step towards providing adequate number of trained and dedicated doctors in the State. We feel that establishment of such a College will take time and therefore, a provision has been made for the award of stipend to our students from the State in the Medical Colleges of other States and in the proposed Regional Medical College. Provision has also been made for contribution towards the Medical Colleges for our students undergoing the courses in these colleges. Hence the provision of Rs. 10·00 lakhs.

6.3.35. IV. **Primary Health Centres.**—The provision of Rs. 12·50 lakhs under this head is for improvement of the P. H. Cs. and appointment of additional staff in the existing P. H. Cs. to be in accordance with the prescribed staffing pattern.

6.3.36. V. **Training Programme.**—In order to meet the shortfall of trained para-medical personnel in the State, the existing admission rate as already sanctioned by the Government of Assam in the existing institutions for General Nursing and Midwifery will continue. For other para-medical personnel for which there is no training institution of our own, it is proposed to send them to the institutions of other States. With more Hospitals, dispensaries and sub-centres, additional nursing staff are also required to man these institutions. Therefore, provision has been made to appoint these staff according to the prescribed pattern. The Pharmacist School will be completed and maintained in the Fifth Plan. Hence the provision of Rs. 27·50 lakhs under this head.

6·3·37. VI. **I.S.M. and Homeopathy.**—As usual grant-in-aid will be given to the deserving candidates for the Ayurvedic treatment of medicine. Provision has also been made for opening of one Homeopathy dispensary. Hence the provision of Rs. 2·50 lakhs.

6·3·38. VII. **Other Programmes.**—Under this head, grant-in-aid to non-Government Hospitals and Dispensaries, patients suffering from T. B., Cancer and other fell diseases and to non-Government organisations for doing anti-leprosy work will be continued. The headquarter staff will be strengthened. Drugs and Food Adulteration Control machinery will be established. A token provision for starting the schemes like School



Health, establishment of a Deep X'ray Therapy for cancer patients, State Nutrition Centre is also proposed under this head. The Health Education units in the three districts with headquarters at Shillong are also proposed to be set up during the Fifth Five Year Plan.

6·3·39. VIII. **Control of Communicable diseases.**—

Schemes under this head are cent per cent centrally assisted. The estimates under this head provide for continuation of the schemes taken up during the Fourth Five Year Plan. Provisions for new schemes like Cholera, Filariasis, Mental Hospital, Post-graduate medical education are also made. The estimate of Rs. 161·35 lakhs has been made for the schemes.

# APPENDIX I

## FIFTH FIVE YEAR PLAN—1974-79

**STATE—MEGHALAYA**

**OUTLAY—HEALTH PROGRAMMES**

Rupees in Lakhs

**HEAD OF DEVELOPMENT—HEALTH**

Serial No.	Programme	Fourth Five Year Plan			Fifth Five Year Plan			Phasing—Total Outlay					Remarks	
		Approved Outlay	Estimated Expenditure	Shortfalls	Total	Capital	Foreign Exchange	1974-75	1975-76	1976-77	1977-78	1978-79		Total Cols. 9-13
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	Minimum Needs Programmes	35.00	24.66	...	131.50	90.75	...	24.00	38.40	35.80	18.50	14.80	131.50	
2	Hospitals and Dispensaries	37.40	29.69	...	120.50	69.50	...	26.00	25.25	22.25	23.25	23.75	120.50	
3	Medical Education and Research	1.50	1.12	...	10.00	...	...	1.30	1.75	2.00	2.25	2.70	10.00	
4	Primary Health Centres	12.00	6.46	...	12.50	5.00	...	2.00	2.00	2.50	3.00	3.00	12.50	
5	Training Programmes	30.70	4.97	...	27.50	2.00	...	6.00	6.50	5.25	4.75	5.00	27.50	
6	I S M including Homocopathy	1.00	0.05	...	2.50	...	...	0.50	0.50	0.50	0.50	0.50	2.50	
7	Other Programmes	57.40	14.97	...	59.50	10.50	...	12.50	14.00	10.70	10.95	11.35	59.50	
	<b>Total—State Plan Schemes</b>	<b>175.00</b>	<b>81.92</b>	<b>...</b>	<b>364.00</b>	<b>177.75</b>	<b>...</b>	<b>72.30</b>	<b>88.40</b>	<b>79.00</b>	<b>63.20</b>	<b>61.10</b>	<b>364.00</b>	
8	Control of Communicable Diseases	42.22	87.14	50.01	161.35	8.00	...	30.30	32.80	33.30	32.05	32.90	161.35	
	<b>Grand Total—Health</b>	<b>217.22</b>	<b>169.06</b>	<b>...</b>	<b>525.35</b>	<b>185.75</b>	<b>...</b>	<b>102.60</b>	<b>121.20</b>	<b>112.30</b>	<b>95.25</b>	<b>94.00</b>	<b>525.35</b>	

STATE—MEGHALAYA.  
HEAD OF DEVELOPMENT—HEALTH.

APPENDIX II

Fifth Five Year Plan

Financial outlay Health Programme

(Rs. in lakhs)

Sl. No.	Programme	Fourth Five Year Plan			Fifth Five Year Plan			Phasing Total outlays					Total 1974-75 to 1978-79	Remarks
		Approved outlay	Estimated Expenditure	Shortfall	Total	Capital	Foreign Exchange	1974-75	1975-76	1976-77	1977-78	1978-79		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<b>1 MINIMUM NEEDS PROGRAMMES.—</b>														
	(a) Establishment of new primary health centres.	35.40	24.66	...	45.50	30.00	..	10.00	10.00	10.00	10.00	5.50	45.50	
	(b) Establishment of primary health centre sub-centres.	...	...	...	21.20	10.35	...	4.00	3.40	6.00	3.50	4.30	21.20	
	(c) Upgradation of primary health centres.	...	...	...	64.80	50.40	...	10.00	25.00	19.80	5.00	5.00	64.80	
	Total	...	35.00	24.66	...	131.50	90.75	...	24.00	38.40	35.80	18.50	14.80	131.50
<b>2 HOSPITAL AND DISPENSARIES.—</b>														
	(a) Establishment of Referral Hospitals.	16.50	...	...	20.00	10.00	...	5.00	5.00	3.00	3.50	3.50	20.00	
	(b) Establishment of new dispensaries.	2.00	...	...	42.50	28.50	...	9.50	9.00	8.00	8.00	8.00	42.50	
	(c) Improvement of District and Subdivisional Hospitals	8.00	9.30	...	32.50	25.00	...	6.00	6.00	6.50	7.00	7.00	32.50	
	(d) Improvement of dispensaries.	8.00	15.60	...	17.00	12.00	...	3.00	3.00	3.50	3.50	4.00	17.00	
	(e) Mobile dispensaries	...	2.90	4.79	...	8.50	...	2.50	2.25	1.25	1.25	1.25	8.50	
	Total	...	37.40	29.69	...	120.50	69.50	...	26.00	25.25	22.25	23.25	23.75	120.50

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(14)	(15)
<b>3 MEDICAL EDUCATION AND RESEARCH—</b>													
(a)	Scholarship for undergraduate.	1.50	0.47	.	5.00	..	...	0.30	0.75	1.00	1.25	1.70	5.00
(b)	Contribution towards Medical Colleges for students of Meghalaya.	...	0.65	.	5.00	...	...	1.00	1.00	1.00	1.00	1.00	5.00
Total ...		1.50	1.12	.	10.00	...	...	1.30	1.75	2.00	2.25	2.70	10.00
<b>4 PRIMARY HEALTH CENTRE—</b>													
(a)	Improvement of existing primary health centres.	7.00	5.76	.	5.00	5.00	...	1.00	1.00	1.00	1.00	1.00	5.00
(b)	Additional staff for P. H. Cs.	5.00	0.70	..	7.70	...	...	1.00	1.00	1.50	2.00	2.00	7.50
Total ..		12.00	6.46	..	12.50	5.00	...	2.00	2.00	2.50	3.00	3.00	12.50
<b>5 TRAINING PROGRAMME—</b>													
(a)	Nursing College	10.00	...	..	...	...	..	...	...	...	...	...	...
(b)	Pharmacist School	10.00	1.50	..	7.50	2.00	...	2.00	2.50	1.25	0.75	1.00	7.50
(c)	Training of Nurses, A. N. Ms. and other para-medical personnel.	7.50	3.07	..	10.00	..	...	2.00	2.00	2.00	2.00	2.00	10.00
(d)	Strengthening of existing Nursing Service.	3.20	0.40	..	10.00	...	...	2.00	2.00	2.00	2.00	2.00	10.00
Total ...		30.70	4.97	..	27.50	2.00	...	6.00	6.50	5.25	4.75	5.00	27.50
<b>6 ISM AND HOMOEOPATHY—</b>													
(a)	Grant to deserving Practitioners for Ayurvedic treatment of Medicines.	1.00	0.05	..	1.50	...	...	0.20	0.20	0.20	0.20	0.20	1.00
(b)	Opening of Homoeopathic dispensaries.	...	...	..	1.50	...	...	0.30	0.30	0.30	0.30	0.30	1.50
Total ...		1.00	0.05	..	2.50	...	...	0.50	0.50	0.50	0.50	0.50	2.50

Sl. No.	Programme	Fourth Five Year-Plan			Fifth Five Year-Plan			Passing Total outlays					Remarks	
		Approved outlay	Estimated Expenditure	Short fall	Total	Capital	Foreign Exchange	1974-75	1975-76	1976-77	1977-78	1978-79		Total 1974-75 to 1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<b>7. OTHTR PROGRAMME'S—</b>														
	(a) Additional staff for Head-quarters.	3.00	0.30	...	3.00	..	...	0.50	0.50	0.65	0.65	0.70	3.00	
	(b) Drug Control ... ..	0.80	0.10	..	3.00	...	..	0.50	0.50	0.65	0.65	0.70	3.00	
	(c) Health Education ... ..	3.50	0.30	...	5.00	...	...	1.00	1.00	1.00	1.00	1.00	5.00	
	(d) Control of Food Adulteration	0.50	0.10	...	2.50	..	...	0.50	0.50	0.50	0.50	0.50	2.50	
	(e) School Health .. ..	...	...	...	2.50	...	..	0.50	0.50	0.50	0.50	0.50	2.50	
	(f) Establishment of a Deep X-Ray Therapy Unit for Cancer patients.	...	...	..	4.50	2.00	...	1.00	1.00	1.00	0.75	0.75	4.50	
	(g) Incentives money to doctors in Rural areas.	...	...	..	2.00	...	...	0.25	0.25	0.50	0.50	0.50	2.00	
	(h) Maternity and Child Welfare Centres.	3.00	0.31	...	2.50	1.50	..	1.00	0.50	0.25	0.25	0.50	2.50	
	(i) Grants to Non-Government Hospitals and Dispensaries.	} 25.00	9.05	..	10.00	...	...	2.00	2.00	2.00	2.00	2.00	10.00	
	(j) Grants to patients suffering from T.B., Cancer and other fell diseases.		2.73	...	5.00	...	...	1.00	1.00	1.00	1.00	1.00	5.00	
	(k) Grant to non-Government Organisation for anti-Leprosy work.		0.46	...	2.50	..	...	0.50	0.50	0.50	0.50	0.50	2.50	
	(l) State and District Public Health Laboratories.	5.00	0.50	...	3.00	1.00	..	0.75	0.75	0.50	0.50	0.50	3.00	
	(m) Establishment of a State Nutrition Centre.	0.50	...	...	1.50	1.00	..	0.50	0.50	0.15	0.15	0.20	1.50	
	(n) Pasteur Institute .. ..	14.00	0.90	...	10.00	5.00	..	2.00	4.00	1.00	1.50	1.50	10.00	
	(o) Health Statistics ... ..	1.00	0.22	...	2.50	..	...	0.50	0.50	0.50	0.50	0.50	2.50	
	(p) Others .. ..	1.10	...	...	...	...	...	...	...	...	...	...	...	
	<b>Total</b> ... ..	<b>57.40</b>	<b>14.97</b>	<b>...</b>	<b>59.50</b>	<b>10.50</b>	<b>...</b>	<b>12.50</b>	<b>14.00</b>	<b>10.70</b>	<b>10.95</b>	<b>11.35</b>	<b>59.50</b>	
	<b>Total State Plan</b> ... ..	<b>175.00</b>	<b>81.92</b>	<b>..</b>	<b>364.00</b>	<b>177.75</b>	<b>...</b>	<b>72.30</b>	<b>88.40</b>	<b>79.00</b>	<b>63.20</b>	<b>61.10</b>	<b>364.00</b>	

3. CONTROL OF COMMUNICABLE DISEASES—

(a) National Malaria Eradication Programme.	24.00	67.97	...	80.00	..	..	16.00	16.00	16.00	16.00	16.00	16.00	80.00
(b) Urban Malaria ...	...	...	...	...	...	...	..	...	...	...	...	...	...
(c) National Smallpox Eradication Programme.	N. I.	3.18	...	12.50	—	..	2.50	2.50	2.50	2.50	2.50	2.50	12.50
(d) Cholera ...	N. I.	...	...	3.00	..	...	0.50	0.60	0.60	0.60	0.60	0.70	3.00
(e) T. B. ..	...	6.25	5.71	...	24.50	...	...	4.50	4.50	5.00	5.00	5.50	24.50
(f) Filaria ...	N. I.	...	..	1.00	...	...	0.20	0.20	0.20	0.20	0.20	0.20	1.00
(g) Leprosy ...	...	1.25	3.76	...	9.00	2.50	...	0.75	2.00	2.00	2.00	2.25	9.00
(h) Trachoma ...	...	2.08	1.22	...	5.00	...	...	1.00	1.00	1.00	1.00	1.00	5.00
(i) Mental Hospital ...	...	...	...	...	6.50	3.00	..	1.00	2.00	2.00	0.75	0.75	6.50
(j) Goitre ..	...	...	..	...	..	...	...	...	...	..	...	...	...
(k) Post-Graduate Medical Education.	...	...	...	1.35	...	...	0.15	0.30	0.30	0.30	0.30	0.30	1.35
(l) Basic Health Services Scheme.	6.64	4.95	...	12.50	...	...	2.50	2.50	2.50	2.50	2.50	2.50	12.50
(n) Pilot Project for Mental Health.	...	0.35	..	2.50	...	..	0.50	0.50	0.50	0.50	0.50	0.50	2.50
(n) V. D. Clinic ...	N. I.	...	..	3.50	2.50	...	0.70	0.70	0.70	0.70	0.70	0.70	3.50
Total	42.22	87.14	50.01	161.35	8.00	...	30.30	32.80	33.30	32.05	32.90	161.35	
Grand Total Health	217.22	169.06	...	525.35	185.75	...	102.60	121.20	112.30	95.25	94.00	525.35	

## STATE—MEGHALAYA

APPENDIX 'III'  
FIFTH FIVE YEAR PLAN 1974-79

## HEAD OF DEVELOPMENT—HEALTH

Physical Target  
Health Programmes

Sl.No.	Items	Fourth Plan Target	1973-74 Anticipate position	Target for the five year plan (Addition)	1974-75	Phasing/Addition				1978-79 Anticipated position
						1975-76	1976-77	1977-78	1978-79	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>1. MINIMUM NEEDS PROGRAMME</b>										
	(i) No. of P.H.C. ...	15	5	10	3	3	2	1	1	10
	(ii) No. of Sub-Centres. ...	...	...	46	10	10	10	10	6	46
	(iii) No. of Upgraded PHCs. (Rural Hospital).	...	...	6	2	2	2	...	...	6
<b>2. CONTROL OF COMMUNICABLE DISEASES.</b>										
i) Malaria—										
	(a) No. of Units in Attack Phase	1.11	1.11(c)	1.11(c)	1.11(c)	1.11(c)	1.11(c)	1.11(c)	1.11(c)	1.11(c)
	(b) No. of Units in consolidation phase.	0.09	0.09(c)	0.09(c)	0.09(c)	0.09(c)	0.09(c)	0.09(c)	0.09(c)	0.09(c)
	(c) No. of Units in Maintenance Phase.	0.60	0.60(c)	0.60(c)	0.60(c)	0.60(c)	0.60(c)	0.60(c)	0.60(c)	0.60(c)
	(d) No. of Towns under Urban Malaria Programme.									
(ii) T.B.—										
	(a) No. of T.B. Clinics ...	1	1	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)
	(b) No. of Demonstrations and Tr. Centres.	...	..	...	...	...	...	...	...	...
	(c) No. of Isolation beds ...	25 beds	25 beds	25(c)	25(c)	25(c)	25(c)	25(c)	25(c)	25(c)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(iii) Smallpox—										
(a) Primary Vaccination (in millions)	(in millions)	0.61	...	0.61	20%	20%	20%	20%	20%	100%
(b) Re-vaccination (in million)	(in million)	2.04	...	2.04	20%	20%	20%	20%	20%	100%
(iv) Leprosy Units—										
(a) Control Units	...	...	...	1	1	1(c)	1(c)	1(c)	1(c)	1(c)
(b) Set Centres	.. 10+	1(c)	11	11(c)	11(c)	11(c)	11(c)	11(c)	11(c)	11(c)
(v) Filariæ—										
(a) Control Units	...	...	...	...	...	...	...	...	...	...
(b) Rural Research-cum-Training Centres.	...	...	...	...	...	...	...	...	...	...
(vi) Trachoma—										
(a) Population coverage (in millions).	(in millions)	6.05	6.05	4.07	10.12(c)	10.12(c)	10.12(c)	10.12(c)	10.12(c)	10.12(c)
(vii) Cholera:—No. of Control Units.		...	...	...	...	...	...	...	...	...
(viii) V. D.—No. of V. D. Clinics		...	1	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)
3 Hospitals and Dispensaries (Allopathic only)—										
(i) Hospitals—										
(a) District Hospital	...	...	...	...	...	...	...	...	...	...
(b) Subdivision/Taluka Hospitals	...	2	...	2	2	2(c)	2(c)	2(c)	2(c)	2(c)
(ii) Dispensaries—										
(a) Urban	...	...	...	...	...	...	...	...	...	...
(b) Rural	...	26	...	30	6	6	6	6	6	30
(iii) Hospital Beds—										
(a) Urban	...	...	86	98	50	48	...	...	...	98
(b) Rural	...	52	312	124	56	66	66	...	...	312



Serial No.	Item	Fourth Plan Target	1973-74 Anticipated position	Targets for the Five Year Plan (Addition)	1974-75	Phasing/Addition				1978-79 Anticipated position
						1975-76	1976-77	1977-78	1978-79	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
4	Medical Education s.—									
	(i) No. of Medical Colleges ...	...	..	...	...	...	...	...	...	...
	(ii) Annual admissions to Medical Colleges.	...	...	...	...	...	...	...	...	..
	(iii) No. of Post Graduate Departments.	..	..	...	...	...	...	...	...	...
	(iv) No. of Annual Admission to P. A. Department.	...	...	...	...	...	...	...	...	...
	(v) No. of Dental Colleges	...	...	...	...	...	..	...	...	...
	(vi) No. of Annual Admission to Central Colleges.	...	...	...	...	...	...	...	...	...
	(vii) No. of Students awarded scholarships for under going training in M.C. of Assam.	...	13	10 each year	10 each year	10 each year	10 each year	10 each year	10 each year	...
5	Training Programmes.—									
	(a) Medical Auxiliaries—									
	(i) No. of Institutes	...	...	...	...	...	...	...	...	...
	(ii) Annual Admission	...	...	...	...	...	...	...	...	...
	(b) Nurses—									
	(i) No. of Institutes	...	3	3(c)	3(c)	3(c)	3(c)	3(c)	3(c)	3(c)
	(ii) Annual Admissions	...	56	5 (c)	56 (c)	56(c)	56(c)	56(c)	56(c)	56(c)
	(c) A. N. Ms.—									
	(i) No. of Institutes	...	2	2(c)	2(c)	2(c)	2(c)	2(c)	2(c)	2(c)
	(ii) Annual admissions	...	15	15	15 (1st admission)	As Col. 6	As Col. 6	As Col. 6	As Col. 6	15

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(d) Health Inspectors—										
(i) No. of Institutes	...	...	...	...	...	...	...	...	...	...
(ii) Annual Admission	...	...	...	...	...	...	...	...	...	...
(VI) Manpower—										
(a) Doctors	...	...	104	186	40 yearly.	40 yearly.	40 yearly.	40 yearly.	40 yearly.	200
(b) Dentists	...	...	...	10	2	2	2	2	2	10
(c) Medical Auxiliaries	...	...	...	75	15 yearly.	15 yearly.	15 yearly.	15 yearly.	15 yearly.	75
(d) Nurses	...	...	169	264	50 yearly.	50 yearly.	50 yearly.	50 yearly.	64 yearly.	264
(e) A. N. Ms.	...	...	95							
(f) Health Inspectors	...	...	...	15	3 yearly.	3 yearly.	3 yearly.	3 yearly.	3 yearly.	15
6 Ism including Homeopathy—										
(i) Colleges/Institutes	...	...	...	...	...	...	...	...	...	...
(ii) Hospitals/Dispensaries	...	...	...	5	1	1	1	1	1	5(c)
7 Other Programmes—										
(i) No. of Drugs and Food Analytical Laboratories.	...	...	...	...	...	...	...	...	...	...
(ii) No. of Psychiatres Clinic	...	...	1	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)	1(c)
(iii) No. of Rehabilitation Centres	...	...	...	...	...	...	...	...	...	...
(iv) No. of Children covered under School Health Programmes.	...	...	...	...	...	...	...	...	...	...

## I. BASIC STATISTICS—

(a) Population (1961 Census	...	...	7,69,380
(b) Population (1971 Census)	...	...	10,11,699
(c) Area (Sq. Km.)	...	...	22,548
(d) Density of Population (1971)	...	...	44 in Sq. Km.
(e) No. of Districts	...	..	3
(f) Estimated Birth Rate (1966-70)	...	...	N. A.
(g) Estimated Death Rate (1966-70)	..	...	N. A.
(h) Estimated Growth Rate (1966-70)	...	...	N. A.
(i) Estimated Growth Rate (1961-71)	..	...	N. A.
(j) No. of Couples in the reproductive age group (in September 1973).			N. A.
[ Age of wife 15-44 Years ]	..	...	
(k) No. of Couples currently protected	..	...	N. A.
(l) No. of Couples likely to be protected by the end of Fourth Plan.			N. A.

**Note:**—N. A.=Not available.

## APPENDIX—II

Allocation and Expenditure Fourth Five-Year Plan Family  
Planing Programmes

Item	1969-70	1970-71	1971-72	1972-73	1973-74
1. Allocations ...	N.A.	6.00	8.69	10.00	17.21
2. Provisional Payment ..	N.A.	4.00	4.00	6.59	...
3. Actual Expenditure ...	N.A.	3.63	4.24	6.55	17.21

(Deptt. Figure) (proposed)

Proposed outlay for the Fifth Five-Year Plan and Annual  
Break-up

Proposed Outlay 1974-79 (Rs. in lakhs) 117.98	Rs. in lakh Annual Break-up	
	Revenue Expenditure	Capital
1974-75	20.47	3.00
1975-76	20.16	3.00
1976-77	20.55	3.00
1977-78	21.60	1.50
1978-79	23.20	1.50

## APPENDIX—III

## PHYSICAL ACHIEVEMENTS

## FOURTH PLAN

Year	Sterilisation		IUCD		Con. Contraceptive		
	Target	Achievement	Target	Achievement	Target	Achievement	
1969-70	1758	382	1694	790	2341	16257	
1970-71	1500	565	2000	456	3500	45287	
1971-72	2076	502	660	475	2330	42536	
1972-73	6570	379	700	420	2300	27863	
1973-74	N.A.	457	N.A.	535	N.A.	32986	(Average achievement).

## EXPECTATION OF PERFORMANCE

## FIFTH PLAN

1974-1979

Year	Sterilisation	IUCD	Conventional Contraceptive
1974-75	834	1668	40032
1975-76	927	1854	44496
1976-77	1098	2196	52704
1977-78	2949	5898	141552
1978-79	4914	9828	235872

**FP  
APPENDIX IV**

**Maternal and Child Health Scheme Fifth Plan**

Scheme	Target*	Outlay pro- posed Rs. in lakh.
<b>1. Immunisation of—</b>		
(a) Infants and pre-school children with DPT,	40,000	} 0.65
(b) Expectant mothers against tetanus ...	25,000	
<b>2. Prophylaxis against—</b>		
(a) Nutritional Anaemia ... ..	54,000	0.88

\*Yearwise targets may also be given.

Target fifth plan breakup

Scheme

1974-75		1975-76		1976-77		1977-78	
Outlay	Target	Outlay	Target	Outlay	Target	Outlay	Target
}		}		}		}	

**Target Fifth Plan breakup**

Scheme	1974-75		1975-76		1976-77		1977-78		1978-79		Total	
	Outlay	Target	Outlay	Target	Outlay	Target	Outlay	Target	Outlay	Target	Outlay	Target
1. Immunisation of—												
(a) Infant and pre-school children with DPT.	0.08 { 6,000		0.10 { 7,000		0.12 { 8,000		0.15 { 9,000		0.20 { 10,000		0.65 { 40,000	
(b) Expectant mother against tetanus	3,000		4,000		5,000		6,000		7,000		25,000	
2. Prophylaxis against—												
(a) Nutritional Anaemia ...	0.14	9,000	0.16	10,000	0.18	11,000	0.20	12,000	0.20	12,000	0.88	51,000
(b) Control of Blindness among Children Vitamin A.	...	...	..	...	...	..	...	..	..	..	..	...

**FP  
APPENDIX**

Building—Fifth Plan

Item	Achievement as on 1-4-1974	In Progress on 1-4-1974	Target for 1974-79	Outlay pro- posed for 1974-79
				Rs. in lakhs.
1. Rural Main Centres ...	Nil	Nil	16 }	12.00
2. Rural Sub-centres ...	Nil	Nil	40 }	
3. ANM training Schools ...	...	...		



**FP**  
**APPENDIX VI**

**STAFF POSITION**

Designation (Category of Staff)	No. of posts as per pattern	No. of Posts likely to be sanctio- ned as on 1-4-1974	No. of Posts likely to be filled up as on 1-4-1974	Training Status.
<b>Rural Main Centre—</b>				
Assistant Surgeon-I	...	8	1	1
Block Extension Educator	..	8	1	1
Computer	...	8	1	1
Store-Keeper-cum-Clerk-cum- Accountant.	...	8	1	1
Auxilliary Nurse Midwife	...	8	1	1
Attendant	..	8	1	1
L. H. V.	...	2	...	...
Driver	...	8	1	1
<b>Urban Centre—</b>				
Assitant Surgeon-I	...	3	...	...
F. P. Field Worker	—	3	...	...
A. N. Midwife	...	3	...	...
Attendant	...	3	...	...
Store-Keeper-cum-Clerk-cum- Accountant.	...	3	...	...
<b>Sub-Centre—</b>				
A. N. Midwife	...	20	2	2
Attendant	...	20	2	2
F. P. Field Worker	...	10	1	1
<b>Post Partum Centre—</b>				
Sr. Medical Officer	...	1	...	...
Aneasthetist (A. S. I.)	...	1	...	...
Projectionist-cum-Mechanic	...	1	...	...

Designation (Category of Staff)	No. of posts as per pattern	No. of Posts likely to be sanction- ed as on 1-4-1974	No. of Posts likely to be filled up as on 1-4-1974	Training Status.
<b>Post Partum Centre—</b>				
Steno-Typist	...	1	...	...
L. D. Assistant-cum-Typist	...	1	...	...
Male Peon	...	1	..	...
<b>District F. P. Bureau</b>				
Addl. Civil Surgeon	...	2	1	1
U. D. Assistant	...	2	1	1
Cashier	...	2	1	1
L. D. Assistant-cum-Typist	...	2	1	1
Steno-Typist	...	2	1	1
Peon	...	4	2	2
Night Chowkidar	...	2	1	1
Driver	...	2	1	1
<b>Mobile Units (Sterilisation)†</b>				
Assistant Surgeon-I	...	2	1	1
O. T. Nurse	...	2	1	1
O. T. Attendant	...	2	1	1
Driver-cum-Mechanic	...	2	1	1
Cleaner	...	2	1	1
<b>(I. U. C. D.)</b>				
Assistant Surgeon-I	...	2	1	1
A. N. Midwife	...	2	1	1
Attendant	...	4	2	2
Driver-cum-Mechanic	...	2	1	1
<b>Education and Information Division—</b>				
F. P. Information Officer	...	2	1	1
District Extension Educator	...	4	2	2
Artist-cum-Photographer	...	2	1	1
Projectionist	...	2	1	1
Driver-cum-Mechanic	...	2	1	1
Cleaner	...	2	1	1

**FP  
APPENDIX VII****URBAN CENTRES**

Urban Centre		Functioning as on 1st April 1974	Targets for 1974-79
Type I	...	3	...
Type II	...	...	...
Type III	...	...	...
Type IV	...	...	...

## ANNEXURE II

## STATEMENT I

## STATE MEGHALAYA

## DRAFT FIFTH FIVE YEAR PLAN

## OUTLAY AND EXPENDITURE—Summary

Famil planning Programme Scheme	Proposed allocation during 1974-79				Rs. in lakhs.		
	1974-75	1975-76	1976-77	1977-78	1978-79	Total	
1	2	3	4	5	6	7	8
1. State Family Planning Bureau.	0.80	0.85	0.90	1.00	1.03	4.60	
2. District Family Planning Bureau.	7.00	7.25	7.50	7.75	8.00	37.50	
3. Rural Family Welfare Planning Centres.	5.00	5.25	5.50	5.75	6.00	27.50	
4. Urban Family Welfare Planning Centres.	0.65	0.70	0.75	0.80	0.85	3.75	
5. Immunisation of infants and pre-School children against D. P. T.	0.08	0.10	0.12	0.15	0.20	0.65	
6. Prophylaxis against nutritional anaemia among mothers and children.	0.14	0.16	0.18	0.20	0.20	0.88	
7. Construction of buildings	3.00	3.00	3.00	1.50	1.50	12.00	
8. Maintenance and procurement of Vehicles.	2.60	1.50	1.60	1.80	2.00	9.50	
9. Compensation for I. U. C. D. and Sterilisations.	0.50	0.60	0.70	0.80	1.00	3.60	
10. Mass Education and Orientation Camps.	2.00	2.00	1.50	1.50	2.00	9.00	
11. Post Partum Programme	0.70	0.75	0.80	0.85	0.90	4.00	
12. Training of Dais	1.00	1.00	1.00	1.00	1.00	5.00	
Total	23.47	23.16	23.55	23.10	24.70	117.98	

## 6.4. Nutrition

6.4.1. As elsewhere in the country, malnutrition is an acute problem in Meghalaya also. Under-nourishment due to poverty and imbalanced diet are common forms of malnutrition in the state. These problems are related and infact, one leads to other. The problems among the pregnant women and lactating mothers, infants and children of young age has a far reaching implication on the growing generations.

6.4.2. Improvement of nutritional standards calls for effort on many fronts. Besides the increase in general food supply there has to be increased production of nutritions foods. Training of personnel and mass education have to be undertaken further programme to make impact. It is also essential to carry out periodic surveys to locate areas of malnutrition and nutrition deficiencies.

6.4.3. Only two nutrition programmes are bring implemented in Meghalaya drawing the Fourth Plan period. These are (i) Applied Nutrition Programme and (ii) Special Nutrition Programme. The composite programme for women and children was proposed for implementation during 1973-74. However, due to organisational difficulties it has been decided to take up this programme during the Fifth Plan.

**6.4.4. Applied Nutrition Programme:** There were five operational blocks upto 1972-73. In 1973-74 there are three operational blocks. Government of India has allotted two more blocks for the year. Blocks Plans have been submitted and approval is awaited. If the Plan are approved there will be another two operational blocks that would bring the total to five. The anticipated expenditure till the end of the Fourth Plan is Rs.5.36 lakhs. It is expected that there will be five operational blocks through out the Fifth Five Year Plan. The proposed outlay for the Fifth Plan is Rs.8.50 lakhs at the rate of Rs.34,000.00 per block per year.

6.4.5. In addition to this, there are Applied Nutrition Programme Schemes under Agriculture, Animal Husbandry and Fishery Departments. The main aim of this programme under these sectors is to counteract mal-nutrition. These schemes are being implemented in all the selected Applied Nutrition Programme Blocks under their Programme.

Under the Agricultural Scheme, fruit plants seedlings, suckers are supplied to schools of the Community Development Blocks with a view to providing fruits and vegetables as a supplement to nutrition deficiency in the diets of the people covered by the scheme. The anticipated expenditure for this scheme during the Fourth Plan is Rs.3.23 lakhs. Under the Applied Nutrition Programme in Animal Husbandry Sector, all Applied Nutrition Programme Blocks have been covered with Poultry distribution schemes at subsidised rate. The farmers in turn are supplying 50 per cent of the eggs produced to the block agencies to feed children and expectant mothers. The likely expenditure during the Fourth Plan for this scheme is Rs.3.36 lakhs. Under Fishery financial assistance in the shape of grants-in-aid is given to selected Community Development Blocks for development of fisheries and fish production. The expenditure during the Fourth Plan will be around Rs.0.50 lakhs.

6.4.6. All these schemes will be continued during the Fifth Plan for which a total amount Rs.13.75 lakhs is proposed.

**6.4.3. Special Nutrition Programme.**—The programme was implemented from 1972-73. The number of beneficiaries covered up to 31st March 1973 was 21309 children 0-6 years and 7220 expectant and nursing mothers. Altogether 228 feeding centres were opened in the 24 Blocks of Meghalaya. Evaluation, immunization and deworming were not done. It is expected that these aspects of the programme would be taken up in 1973-74.

6.4.4. For 1973-74, the Joint Secretary to the Government of India, Socia. Welfare Department in his recent visit to Meghalaya has agreed to allow 30,000 beneficiaries and 233 feeding centres for 1973-74. Hence another three lakhs is likely to be required over and above the provision of Rs.17,00,000 for 1973-74.

6.4.5. It has also been decided to supply processed foods like Balahar and Balamul to the beneficiaries. The cost for transport would be subsidised by the Government of India.

6·4·7. In the Fifth Five Year Plan it is proposed to feed 50,000 beneficiaries in 450 centres. The anticipated year-wise physical achievement and the corresponding anticipated fund requirement is shown below—

1. Feeding Rate .. 25 p. per head per day for both categories of beneficiaries for 300 days.
2. Administration .. 5½ p. per head per day for 300 days.
3. Honorarium .. Rs. 20 for one organiser and Rs. 10 for one helper.
4. Utensils and other equipments. Rs. 250 per centre.

Anticipated Physical Achievement			Anticipated Fund Requirement
Period	No. of beneficiaris	No. of feeding centres	(Rs. Lakhs)
(1)	(2)	(3)	(4)
1974-75	30,000	300	29·28
1975-76	35,000	350	33·41
1976-77	40,000	400	33·17
1977-78	40,500	450	38·80
1978-79	50,000	450	47·37
		Total	187·03

6·4·7. **Composite Programme.**—This programme will be implemented in the Fifth Five Year Plan starting from 1974-75. The Central Component proposed outlay is Rs.10,00,000·00 to cover ten Development Blocks. This amount would cover feeding charges of an average number of 1,500 expectant and nursing mothers and 2,500 children 0—6 years per year.

2. Encouragement of economic activities by Mahila Mandals.

3. Training of associate women workers.

6·4·8. The proposals under A.N.P., S.N.P. and composite programme for the Fifth Plan envisages an outlay of Rs. 281·25 lakhs of which Rs.227 lakhs is earmarked for the Minimum Needs Programme during the next plan period.

**Table No. 1: Level of development in Nutrition Sector at the end of the Fourth Plan—Nutrition Sector**

Serial No.	Programme/Scheme	Unit	No. of Centres	No. of beneficiaries			(Rs. Lakhs)	
				0-6 years	6-11 years	Pregnant women/lactating mothers/women using I.U.C.D., etc.	Plan outlay	Plan Expenditure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Applied Nutrition Programme ... ..	..	282	3000	..	880	7.82	5.36
2	Special Nutrition Programme ... ..	..	233	22000	..	8000	23.03	26
3	Composite Programme—	The programme will be implemented in the Fifth Five Year Plan.						

**Table No. 2: Physical targets and achievements in the Fourth Five Year Plan—Nutrition Sector**

Serial No.	Programme/Scheme	Unit	Physical target for Fourth Plan			Achievements for the Fourth Plan			Remarks
			0-6 years	6-11 years	Pregnant women/lactating mothers, etc.	0-6 years	6-11 years	Pregnant women/lactating mother, etc.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Applied Nutrition Programme .. ..	..	3,000	22,000	1,000	3,000	20,000	900	
2	Special Nutrition Programme .. ..	..	26,000	..	8,000	22,000	..	8,000	
3	Composite Programme for women and children.—	This scheme will be implemented in the Fifth Plan.							



**Table No.3: Financial outlays and actual expenditure for the various items/schemes in the Fourth Five Year Plan—Nutrition Sector**

(Rs. Lakhs)

Serial No.	Item/Scheme	Fourth Plan Outlay	Total	Actual Expenditure					Remarks
				1969-70	1970-71	1971-72	1972-73	1973-74	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Applied Nutrition Programme	...	..	1.25	0.98	1.30	...	1.70	
2	Special Nutrition Programme	..	...	..	...	...	7.05	17.00	Another three lakhs is likely to be needed for 1973-74.
3	Composite Programme for women and children.			This scheme shall be implemented in the Fifth Plan.					

**Table No.4: Physical targets programme/scheme-wise in the Fifth Five Year Plan—Nutrition Sector**

( Rupees in lakhs )

Serial No.	Programme/Schem	Unit	Fourth Plan Achievement			Fifth Plan Target			Remarks
			0-6 years	6-11 years	Pregnant women-lactating mothers/women using Y.U.C.D.	0-6 years	6-11 years	Pregnant women/lactating mothers/women using I.U.C.D.	
1	2	3	4	5	6	7	8	9	10
1	Applied Nutrition Programme		3,000	20,000	880	6,000	40,000	2,000	
2	Special Nutrition Programme		22,000	...	8,000	...	35,000	15,000	
3	Composite Programme for women and children.			..	..	2,500	..	1,500	

TABLE No. 5

**Financial outlays proposed programme—Scheme-wise in the  
Fourth Five Year Plan—Nutrition Sector**

(Rs.-Lakhs)

Sl. No.	Programme/Scheme-wise	Fourth Plan actual/anticipated expenditure	Fifth Plan Outlay	Remarks
1	2	3	4	5
1	Applied Nutrition Programme	5.36	8.50	...
2	Special Nutrition Programme	34.00	187.00	...
3	Composite Programme for Women and Children.	1.40	10.00	...
4	Schemes under Agriculture	3.23	6.25	...
5	Schemes under Animal Husbandry.	3.36	3.50	...
6	Schemes under Fisheries ...	N.A.	4.00	..
7	Schemes under Education (Mid-day Meal).	...	62.00	...
Total		47.35	281.25	:

TABLE NO.

### Employment to be created during the Fifth Five Year Plan—Nutrition Sector

Serial No.	Programme/scheme	Employment Potential					(Rs. lakhs)	Remarks
		Men	Women	Administra- tion.	Executive	Technical		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	Applied Nutrition Programme	11	25	2	32	2	24 Gram Sevikas, 8 Drivers for 8 Nos. new A. N. P. Blocks, 1 Instructress for Training Centre.	
2	Special Nutrition Programme	2	974	4	372	...	Administration: 2 Inspector under a Special Officer one for Garo Hills and one for Khasi and Jaintia Hills Districts and 2 Chowkidars.  Executive: One organiser and one helper for each of 450 feeding centre=900.  3 more Gram Sevikas for each of the 24 blocks=72.	
3	Composite Programme for Women and Children.	...	..	...	..	...		

## 6.5. WATER SUPPLY

### Introduction:

6.5.1. The terrain in the State is mostly hilly and undulating. The villages are situated at the top of the Hills and the sources like streams and rivers are at a distance. In some places, springs at an higher altitude are available but due to the vagaries of rainfall and deforestation in the catchment areas, the yield of water from the springs is dwindling year by year. A few deep tube wells sunk along the plain areas adjoining Assam and Bangladesh have proved successful. The sources of at least 75 per cent of the villages included in the Fifth Plan are from springs, streams and rivers situated at a lower level than the village, which requires pumping and treatment of water and storage and distribution.

### Maintenance

6.5.2. Local committees set up in the rural areas are coming forward to maintain the piped water supply mainly from gravity sources and they are maintaining the completed schemes in a satisfactory manner.

6.5.3. For bigger schemes which require pumping and treatment, the State Public Health Engineering Department is undertaking the maintenance from normal funds. Also, the Public Health Engineering Department has framed rules for collection of taxes from the beneficiaries for street taps as well as house connection.

### Review of the Progress of Water Supply Schemes under the Fourth Five Year Plan:

6.5.4. Under the Fourth Plan only Urban and Rural Water Supply schemes were taken up. No sewerage or sanitation scheme was taken up in Meghalaya.

### Rural Water Supply

6.5.5. The allocations under the Rural Water Supply Schemes in the Fourth Plan were very meagre and consisted of an amount of Rs.170 lakhs under plan and Rs.100 lakhs under the accelerated Rural Water Supply Programme (Centrally Sponsored). The anticipated achievement by the end of the Fourth Plan including previous coverage will be about 179 villages with a population of 2.28 lakhs out of total rural population of 8,64,529. This is roughly 25 per cent of the

population in rural areas as per 1971 Census figures. This is, however, subject to release of Rs.1.00 crore by the Government of India under accelerated Rural Water Supply Programme during 1973-74. The expenditure upto March, 1973 under plan and accelerated Rural Water Supply scheme was Rs.140.96 and Rs.41.59 lakhs respectively.

### **Urban Water Supply**

6.5.6. The Fourth Plan allocation was only Rs.25 lakhs. A few schemes for augmentation of water supply for Shillong and Jowai were taken up costing about Rs.9 lakhs which are nearing completion and the expenditure upto March, 1973, was Rs.6.58 lakhs. The balance amount of Rs.18.46 lakhs along with Life Insurance Corporation loan of Rs.40 lakhs proposed to be drawn during the year, 1973-74 will be utilised for Greater Shillong Water Supply Scheme and partly for augmentation of water supply to Shillong town by taking up small schemes to tide over acute scarcity of water during the dry season. The total urban population of Meghalaya was 1.47 lakhs in 1971 and consists of 5 towns namely Shillong, Tura and Jowai, Mawlai and Nongthymmai. About 15,000 of the urban population will be covered by the end of Fourth Plan.

### **Proposals for the Fifth Plan**

6.5.7. The proposals for the Fifth Plan under water supply and sanitation are drawn up in accordance with the revised paper on Approach to Fifth Plan and the guidelines circulated by the Planning Commission.

### **RURAL WATER SUPPLY**

6.5.8. In rural areas, 70 per cent of the diseases are preventable and 50 per cent of the diseases like Typhoid, Gastroenteric diseases, Cholera, etc., are transmitted through water. Hence greatest emphasis is proposed on Rural Water Supply Programme in the scarcity and difficult villages especially in hilly and mountain tracts and cholera endemic areas.

6.5.9. Out of 1549 "no source" villages and 45 cholera endemic villages in Meghalaya, only 179 villages with a total population of 2.28 lakhs are expected to be covered by the end of the 4th Five Year Plan. It is proposed to cover another 620 "no source" villages with a population of 2.40 lakh

during the 5th Five Year Plan. An amount of Rs. 5.00 crores has been approved under the minimum needs programme for the Fifth Plan. In addition to the provision under the MNP, another Rs. 4.00 crores has been proposed for other schemes under Rural Water Supply thus bringing the total for Rural Water Supply Programme to Rs. 9.00 crores. The Rural Water Supply Schemes will be combined with Minor Irrigation, Rural Electrification, Rural Road, and P. H. E's so that these areas form the growth centres for integrated development.

6.5.10. Besides this, Rs. 52.93 lakhs will spill over from the 4th Five Year Plan (i. e. Rs. 26.20 lakhs plan +26.73 lakhs under accelerated). Further, an amount of Rs. 81.27 lakhs has been provided under the Backward Areas Water Supply Schemes to include other essential water supply schemes, like the problem villages having high mineral content in water and villages which are fast developing into small towns and staff for the execution of rural water supply schemes and continuation of P. H. divisions earlier sanctioned under accelerated rural Water Supply Scheme during the 4th Plan.

#### **GROUND WATER EXPLORATION**

6.5.10. For formulation of Rural Water Supply Schemes it is proposed to take advance action for identification of ground water sources. It is also proposed to combine Rural Water Supply Schemes with Minor Irrigation Schemes. It is proposed to sink 600 nos. of deep tube wells in 300 villages of Meghalaya at Rs. 20,000 per tube well costing Rs.1.20 crores. Also, it is proposed to purchase drilling rigs and ancilliary equipment for this work and provision for the purchase of the same is kept under the head tools and plants.

#### **URBAN WATER SUPPLY**

6.5.11. Out of the three towns in Meghalaya, *viz.* Tura, Shillong (including Mawlai and Nongthymmai) and Jowai, the Tura Water Supply Schemes is likely to be completed by the end of 4th Plan. The Greater Shillong Water Supply Scheme estimated to cost Rs. 3.36 crores (Rs. 3.50 crores revised) has been technically cleared by the Ministry of Health and Family Planning, Government of India and preliminary work on the scheme is being taken up during the year 1973-74 out of a budget provision of Rs. 60.00 lakhs for the same. An amount of Rs. 2.76 lakhs will spill over to 5th Plan. The L. I. C. loan for financing the schemes will be Rs. 1.77 crores and the balance Rs. 1.73 crores is to be met out of State Plan.

6.5.12 The survey and investigation work for Jowai Water Supply Scheme was completed and detailed estimates will be ready shortly. A provision of Rs. 60 lakhs was kept for the 5th Plan period for completion of the Jowai Water Supply Scheme. The Jowai District Council has expressed its willingness to take L. I. C. loan for the completion of the said scheme.

**(a) Urban Development**

6.5.12. **Sewerage Scheme for Shillong:** As per the "approach to Fifth Five Year Plan" document, all towns having a population of 1,00,000 and above are to be provided with sewerage schemes. Shillong along with contiguous urban areas like Nongthymmai and Mawlai has a population of 1,22,752. The Planning Commission has approved an amount of Rs.1.00 lakh during 1973-74 for survey and investigation of the Shillong Sewerage Scheme and the work is being taken up shortly. It is proposed to phase out the scheme to the 6th Five Year Plan also. In the 5th Plan it is proposed to lay sewers in the thickly populated portion of Shillong town like Jaiaw, Mawkhar, Barabazar, Kench's Trace, Laban, etc., where there is a maximum concentration of dry latrines and to abolish the system of carrying of human excreta on head loads by the scavengers. A provision of Rs.5 crores is provided during the 5th Plan period for this scheme. The sewage is proposed to be disposed off by partial treatment in irrigation of growing guinea grass and cattle fodder which can be sold to the nearby big diary farms by the Municipality to recover the maintenance and capital cost.

**(b) Garbage Disposal**

6.5.13. A scheme for disposal of garbage for the twelve wards of Shillong town has already been prepared and estimated to cost Rs. 28.60 lakhs and Rs. 12.40 lakhs respectively in the 1st and 2nd phases respectively. The total quantity of refuse per day collected from Shillong is 45 tons. This garbage is proposed to be disposed of by sanitary land fill at Itsyhwat forests about 9 kms from Shillong. The estimate provides for collection of garbage, purchase of vehicles for transportation to site, acquisition of land, staff and construction of 9 kms approach road, R. C. C. dust bins, Bull dozers, Central depot and workshop facilities, etc.



**(c) Conversion of dry latrines into sanitary latrines:**

6.5.14. An amount of Rs. 243 lakhs was provided for conversion of dry latrines to sanitary latrines. A septic tank latrine is estimated to cost to Rs. 2000 for a house of 5 members. Out of this amount, Rs. 1,000 was proposed to be given as subsidy to the house holder and the rest is to be borne by the house holder. It is expected to provide 24,300 septic tank latrines for a population of 1,22,000 people of Meghalaya mainly in the urban and semi-urban and rural areas. It is expected to cover 83 per cent of the urban population during the 5th plan period.

**(d) Tools and Plants**

6.5.15. Under this head it is proposed to purchase the following equipment for Ground Water exploration:—

Ten drilling rigs, rotary percussion and hard rock type along with air compressors, trucks, Jeeps and welding sets, and water carriers, AC-Terrameters and Gammaray logging equipment and magnetometers (Mining) and other Geohydrological equipment for Ground Water location.

6.5.16. Setting up of a Central Work shop with fully equipped machinery at Shillong and a subsidiary workshop at Tura and Jowai for servicing the Rigs, Jeeps, Trucks, garbage disposal vehicles, Bull-dozers, Air compressors, and Electrical and Mechanical equipment is proposed to be undertaken.

6.5.17. Extension of the Public Health Laboratory equipment to analyse water and sewage samples and to assist the water pollution control board for analysing samples of industrial effluent and other toxic substances discharged into streams and rivers and setting up monitoring stations would be undertaken

6.5.18. Also purchase of equipment for setting up Air Pollution Control and Monitoring Stations and laboratory for analysis of air samples is proposed.

**(e) Buildings**

6.5.19. Construction of office and workshop and central stores building, garages, laboratory buildings with electrification, water supply, etc. would be undertaken.

**(f) Staff**

6.5.20. The expenditure on staff for urban water supply and sewerage schemes is estimated at Rs.1.54 crores for five years which works out approximately at 10 per cent of the cost of the schemes of Urban Water Supply, Urban Development, Sewerage and Drainage, conversion of dry latrines to sanitary latrines, tools and plants and exploration of ground water, etc.

6.5.21. The details of expenditure and physical programme is indicated in the attached Statement.

**CENTRALLY SPONSORED SCHEME****(1) Special Investigation Subdivision**

6.5.22. As the Investigation Subdivisions are sanctioned and created in the middle of the 4th Plan it could not complete the investigation of all the villages in Meghalaya. It is proposed to retain the existing subdivisions till 1976-77.

6.5.23. The progress made up to March, 1973 is 1,617 villages and it is anticipated to complete investigation up to the extent of 2,000 villages in the 4th plan out of 4,629 villages according to the 1971 Census.

**(2) P. and D. Cell and Rural Water Supply Design Unit**

6.5.24. The P. & D. Cell was sanctioned during 1971-72 and the progress achieved up to the end of March, 1973 is regarding 42 W/S Schemes. Since it is proposed to cover 620 villages water supply schemes in the 5th Plan, it is necessary to create two more P & D Cells in addition to the existing one during the 5th Plan as the workload has nearly trebled.

6.5.25. Regarding the Rural Water Supply Design Unit, it may be stated that though Government of India have sanctioned the unit, it could not start functioning so far due to variety of factors. Therefore, it is proposed to retain the above unit during the 5th plan to prepare schemes under backward areas

Water Supply State Plan Schemes—

Programmes	Provision of expenditure—Water Supply and Sanitation										Rs. lakhs.			
	Fourth Plan provision	Fourth Plan					Total five years 1969-74	Fifth plan provision	Fifth plan phasing of expenditure					
		Expr.	1970-71 Expr.	1971-72 Expr.	1972-73 Expr.	1973-74 Approv. outlay			1974-75	1975-76	1976-77	1977-78	1978-79	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
<b>I. URBAN—</b>														
(a) Water Supply ...	25.00	0.03	0.48	2.37	3.70	60.00	66.58	336.00	120.00	120.00	96.00	...	...	...
(b) Sewerage and Drainage, etc.	..	...	...	...	...	...	...	550.00	110.00	110.00	110.00	110.00	110.00	110.00
Total Urban ...	25.00	0.00	0.48	2.37	3.70	60.00	66.58	886.00	230.00	230.00	206.00	110.00	110.00	110.00
<b>II. RURAL—</b>														
(a) Piped water supply schemes.	170.00	32.67	42.17	34.20	31.92	42.00	182.96	900.00*	150.00	150.00	200.00	200.00	200.00	200.00
(b) Wells and Hand pumps.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Rural	170.00	32.67	42.17	34.20	31.92	42.00	182.96	900.00	150.00	150.00	200.00	200.00	200.00	200.00
<b>III Others—</b> (*includes Rs. 500.00 lakhs for Minimum Needs Programme).														
(a) Tools and plants...	...	...	...	...	...	...	...	350.00	70.00	70.00	70.00	70.00	70.00	70.00
(b) Conversion of dry latrines into sanitary latrines (Urban Development).	...	...	...	...	...	...	...	243.00	35.00	40.00	48.00	60.00	60.00	60.00
(c) Staff and Establishment cost for execution of W. S. Schemes.	...	...	...	...	...	...	...	154.00	20.00	25.00	29.00	40.00	40.00	40.00
(d) Exploration of ground water deep tube wells.	...	...	...	...	...	...	...	120.00	24.00	24.00	24.00	24.00	24.00	24.00
Total Others	...	...	...	...	...	...	...	867.00	149.00	159.00	171.00	194.00	194.00	194.00
<b>Grand Total</b>	<b>195.00</b>	<b>32.70</b>	<b>42.65</b>	<b>36.57</b>	<b>35.62</b>	<b>102.00</b>	<b>249.54</b>	<b>2653.00</b>	<b>529.00</b>	<b>539.00</b>	<b>577.00</b>	<b>504.00</b>	<b>504.00</b>	<b>504.00</b>

## Centrally Sponsored Schemes.

Programmes	Fourth Plan provision	Fourth Plan					Total five years	Fifth Plan provision	Fifth Plan phasing of Expr.				
		1969-70 Expr.	1970-71 Expr.	1971-72 Expr.	1972-73 Expr.	1973-74 Apprd. outlay			1974-75	1975-76	1976-77	1977-78	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>I. RURAL</b>													
Accelerated Water Supply Schemes and Backward Area Schemes.	100.00	...	...	..	44.59	55.83	100.42	108.00	43.58	34.42	10.00	10.00	10.00
<b>II. OTHERS</b>													
(a) Planning and Development Cell	3.78	...	...	0.38	0.67	1.26	2.31	19.00	3.00	4.00	4.00	4.00	4.00
(b) Rural Water Supply Design Unit.	2.40	...	...	...	...	1.50	1.50	9.00	1.50	1.50	2.00	2.00	2.00
(c) Special Investigation subdivision.	5.00	...	0.13	1.11	1.69	2.26	5.19	2.00	1.00	1.00	...	..	...
<b>Total others ..</b>	<b>11.18</b>	<b>...</b>	<b>0.13</b>	<b>1.49</b>	<b>2.36</b>	<b>5.02</b>	<b>9.00</b>	<b>30.00</b>	<b>5.50</b>	<b>6.50</b>	<b>6.00</b>	<b>6.00</b>	<b>6.00</b>
<b>Grant Total ...</b>	<b>111.18</b>	<b>...</b>	<b>0.13</b>	<b>1.49</b>	<b>46.95</b>	<b>60.85</b>	<b>109.42</b>	<b>138.00</b>	<b>49.08</b>	<b>40.92</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>

Rs. Lakhs

## STATEMENT I

## OUTLAYS FOR THE FIFTH PLAN

	Fourth Plan outlay	1973-74	Fourth Plan Expdr. Anticipation	Five Plan proposed	Remarks
<b>1. Urban (a) Water Supply</b>					
1. Greater Shillong W. S. S. (Survey and Investigations) Establishment and Staff Quarters).	13.34	1.08	1.34	...	
2. Augmentation of Umkhen ..	7.75	1.25	7.57	...	
3. Greater Shillong W. S. S.	...	57.00	57.00	276.00	
4. Jowai W. S. S. land acquisition, Quarters, etc.	1.33	0.67	0.67	...	
5. Jowai Water Supply Scheme	2.58	...	...	60.00	
<b>I. (b) Sewerage and Drainage and Carbage Disposal.</b>	...	...	...	550.00	
<b>OTHERS</b>					
A. Tools and Plants including Water Pollution and Air Pollution Control.	...	...	...	350.00	
B. Conversion of dry latrine into sanitary latrine.	...	...	...	243.00	
C. Establishment charges	...	...	...	154.00	
<b>Total</b>	<b>25.00</b>	<b>60.00</b>	<b>66.58</b>	<b>1633.00</b>	

N. B.—The approved outlay of Rs.60.00 lakhs for 1973-74 includes 40.00 lakhs L. I. C. loan for Greater Shillong Water Supply.

RURAL WATER SUPPLY SCHEMES

OUTLAYS FOR THE FIFTH PLAN

Rs. lakhs

(STATE PLAN SCHEMES.)

Schemes:	No. of Villages	4th Plan outlay	Approved outlay for 1973-74	Anticipated expdr. for 1973-74	Total Anticipated Expdr for fourth Plan	Fifth Plan Proposal	Annual Plan 1974-75
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>KHASI HILLS—</b>							
1. Rural Water Supply Schemes implemented during fourth plan.	...	44.65	10.26	10.26	40.08	19.56 (Spillover scheme).	3.50
New Schemes for Fifth Plan.							
1. Mawsynram Development Block	13	...	...	...	...	25.00	4.80
2. Bhoi Area " "	29	...	...	...	...	60.20	11.60
3. Myllem " "	14	...	...	...	...	34.91	5.30
4. Mawphlang " "	10	...	...	...	...	15.03	3.60
5. Mawryngkneng " "	16	...	...	...	...	35.29	4.90
6. Pynursla " "	21	...	...	...	...	27.02	4.60
7. Nongstoin " "	14	...	...	...	...	22.87	4.50
8. Shella " "	22	...	...	...	...	38.95	7.80
9. Mawkyrwat " "	17	...	...	...	...	36.98	4.60
10. Mairang " "	13	...	...	...	...	25.97	2.90
<b>Total :</b>	<b>169</b>	<b>44.65</b>	<b>10.26</b>	<b>9.26</b>	<b>40.08</b>	<b>341.78</b>	<b>58.00</b>

	(1)	(2)	(3)	(4)	(5)	(6)	(6)	(7)
<b>JAINTIA HILLS—</b>								
1. Rural Water Supply scheme implemented during fourth Plan.	...	21.92	6.10	6.10	22.65	1.04 (Spillover schemes).		6.44
<b>NEW SCHEMES FOR FIFTH PLAN—</b>								
1. Thadlask in Development Block	12	...	...	...	...	27.73		4.40
2. Mynso Raliang „ „	31	...	...	...	...	55.29		9.60
3. Saipung Darrang „ „	22	...	...	...	...	39.36		7.20
Total :	65	21.92	6.10	6.10	22.65	123.42		21.64
<b>GARO HILLS—</b>								
1. Rural Water Supply Scheme implemented during 4th Plan.	...	103.43	26.51	26.51	118.97	5.40 (Spillover scheme).		5.40
<b>NEW SCHEMES—</b>								
1. Mouza I	...	34	...	...	...	28.58		4.20
2. Mouza II	...	34	...	...	...	37.11		5.30
3. Mouza III	...	77	...	...	...	36.31		11.80
4. Mouza IV	...	80	...	...	...	66.91		9.40
5. Mouza V	...	34	...	...	...	57.97		9.00
6. Mouza VI	...	45	...	...	...	58.96		9.90
7. Mouza VII	...	23	...	...	...	34.05		4.80
8. Mouza VIII	...	17	...	...	...	31.79		6.30
9. Mouza IX	...	24	...	...	...	27.79		4.70
10. Mouza X	...	9	...	...	...	10.19		1.36
Total :	377	103.43	26.51	26.51	118.97	435.06		72.16
Grand total :	611	170.00	42.00	42.00	181.72	900.26		151.80

## RURAL WATER SUPPLY

## OUTLAYS AND EXPENDITURE

## Backward Areas—Accelerated Water Supply Schemes

Programme	No. of Villages	Fourth Plan outlay	Outlay for 1973-74	Anticipated Expenditure: 1973-74	Anticipated Expenditures during 4th Plan	Fifth Plan Outlay Proposed	Annual Plan 1974-75 Outlay	
Establishment	..	...	10.00	10.00	10.00	10.00	50.00	10.00
Jaintia Hills	...	9	10.93	5.50	5.50	10.93	3.00	3.00
Khasi Hills	...	12	15.88	13.29	13.29	15.88	9.46	6.23
Garo Hills	...	22	63.19	27.04	27.04	63.61	45.51	24.35
<hr/>								
Total	..	43	100.00	55.83	55.82	100.42	107.97	43.53
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Physical Targets and Achievements under Water Supply and Sanitation

STATE : MEGHALAYA

(1)	Fourth Plan	1969-70 1970-71 1971-72 1972-73				1973-74 Targets	Total 5 Years 1969-74	Fifth Plan Target	1974-75 1975-76 1976-77 1977-78 1978-79				
		Achievement							Target				
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
<b>I. Urban Water Supply—</b>													
(i) Augmentation of Water Supply (M.G.D.)	...	...	...	...	...	...	...	...	...	...	...	...	
(ii) No. of Towns covered	1	...	...	1	...	..	1	2 Nos.	...	...	...	2 Nos.	
(iii) Population covered (lakhs)	0.15	...	...	0.15	...	...	0.15	1.32	...	...	...	1.32	
<b>II. Urban Sewerage—</b>													
(i) Augmentation of Sewerage Facilities (M.G.D.)	...	...	...	...	...	...	..	..	...	...	...	...	
(ii) No. of Towns covered	..	..	..	..	..	..	..	3 Nos.	...	...	...	3 Nos.	
(iii) Population covered (lakhs)	...	...	..	...	...	...	...	1.47	...	..	...	1.47	
<b>III. Rural Water Supply—</b>													
(a) Piped Water Supply i/c. Deep Tube Wells—													
(i) Village covered (Nos.)	...	92	8	...	28	51	179	620	40	130	140	150	150
(ii) Population covered (lakhs)	...	0.75	0.85	0.85	1.30	0.90	2.20	2.40	0.05	2.40	0.40	0.50	1.00
(b) Wells and Pumps (hand)—													
(i) Village covered (Nos.)	...	...	...	...	..	...	...	...	...	...	...	...	...
(ii) Population covered (lakhs)	...	...	...	...	...	...	...	..	...	...	...	...	...

## 6.6 HOUSING

6.6.1. The phenomenal growth in population in the last two decades has resulted in acute housing shortage in Meghalaya not only in towns but also in rural areas. In urban areas the problem has been further aggravated by the migration of population from rural areas particularly from the Border in search of employment. Shortage of housing is more acutely felt by the weaker sections of the society. The main aim of the programme of development under 'Housing' is therefore, to provide housing accommodation mainly to these sections of the population.

6.6.2. The extent of shortage of residential houses in the State is gauged from the 1971 Census figures which have indicated that the total number of households in the State was 2,06,285 as against 1,93,050 occupied residential houses thus implying that at least 13,226 households were without a house or shared a house with other households. Of this, 10,251 households belong to the rural areas.

### Review of the Fourth Plan

6.6.3. The allocation for the Fourth Plan period for Housing was Rs. 12.00 lakhs only. It has been reported that an amount of Rs. 5.00 lakhs was spent by the Government of Assam during 1969-70 for 'Meghalaya' areas under this programme. Details of achievements in this regard are, however, not available. The expenditures during 1970-71 and 1971-72 were nominal due to initial organisational difficulties after the formation of the State of Meghalaya. The expenditure during 1972-73 was Rs. 3.00 lakhs and the anticipated expenditure for 1973-74 is Rs. 9.00 lakhs. The total anticipated expenditure during the Fourth Plan is Rs. 19.00 lakhs. The programmes for the first four years were confined only to low income and middle income group housing schemes. The programme for 1973-74 includes Low and Middle Income Group Housing Schemes, Village Housing Project and Rental Housing Scheme. During the current year, it is envisaged to construct 40 houses under low income group and middle income group housing schemes, 20 houses under the village housing scheme and 28 houses under Rental Housing scheme. The idea behind the rental housing scheme is to provide accommodation for Government employees in the district headquarters. Steps are being taken during this year for construction of a housing colony for the Harijans in Shillong.

### Programme for the Fifth Plan

6.6.4 The problem of housing particularly in the urban areas of Maghalaya like Shillong, Tura and Jowai is very acute. As in the other cities in the country, there has been large and steady migration of people from rural to urban areas. This has been aggravated by migration from the border areas due to several factors. The migration has also created the problem of slums. The problem of housing has assumed urgency with the growth of population as developmental activities in urban areas resulting into migration from rural areas. Acute shortage of housing is also felt in the rural areas on account of growth of population and lack of construction activities. Moreover, the houses in villages are mostly primitive-type, small and insanitary. Due to the heavy monsoon and severe gales these require periodical reconstruction.

6.6.5. The provision of Rs.12.00 lakhs in the State's Fourth Plan has been totally inadequate even to give a minimum relief to enormous housing problem in the State and this has had to be revised subsequently to Rs.19 lakhs with a provision of Rs.9 lakhs for 1973-74 alone. A considerably larger programme is essential even to meet the growing demand for housing accommodation in the urban areas only. The programme of development under 'Housing' needs to be viewed in the context of the existing situation in the urban/rural areas and the problems likely to emerge over the next decade.

6.6.6. The housing programmes contemplated in the State Fifth Five Year Plan relate to the development activities confining mainly to the following housing schemes (i) Subsidised Industrial Housing (ii) Low Income Group Housing (iii) Middle Income Group Housing (iv) Environmental Improvement of the Slums, (v) Village Housing Projects (Rural Housing) Scheme, (vi) Rental Housing (vii) Loan Under Rural Housing Scheme and (viii) Homes for weaker section of the community. The outlay proposed for these schemes is Rs. 259 lakhs during the Fifth Plan period. Out of this, Rs. 104 lakhs is for preparation of house sites and the balance Rs.155 lakhs is for construction of houses. The schemes are briefly described below.

**6.6.7. Subsidised Industrial Housing Scheme.**—Along with the implementation of developmental programme under the industries sector, the question of providing accommodation to

the industrial workers will come up. With a view to meeting the future requirement of such houses, an amount of Rs. 5.00 is proposed under Subsidised Industrial Housing Scheme for construction 50 tenements during the Fifth Plan period. The cost for such tenement has been estimated at Rs.10,000 per unit.

**6.6.8. Low Income and Middle Income Group Housing Schemes.**—An amount of Rs.30 lakhs—Rs. 20 lakhs under Low Income Group Housing and Rs.10 lakhs under Middle Income Group Housing schemes—is proposed for construction of 250 units during the next Plan period. The amount will be sanctioned as loan @ Rs.10,000 and Rs.20,000 per loanee for these schemes.

**6.6.9. Environmental Improvement of Slum Areas.**—Rupees 30.00 lakhs has been provided for this scheme under the Minimum Needs Programme. It is envisaged to cover a population of about 30,000 living in slums in Shillong Town and mainly concentrated in Pologround, Jhalupara, Barabazar areas and in parts of Laban and Malki areas.

**6.6.10. Village Housing Project.**—An amount of Rs.104.50 lakhs has been proposed under this scheme. There are about 10,000 households in the rural areas, bulk of which are agricultural labour, without any house of their own and mostly sharing houses with other households. So far, nothing could be done to relieve the situation for want of adequate funds under the Plan. During the Fifth Plan, it is proposed to provide free house sites to the agricultural labourers who are without a house. The provision under the plan is meant for meeting the cost of preparation of house sites and other initial expenditure @ Rs.1,000 per unit. An amount of Rs.4.50 lakhs is proposed for training of personnel and administration of the scheme.

**6.6.11. Rental Housing Scheme.**—Under this scheme, an amount of Rs.30 lakhs is proposed for construction of 200 units during the Fifth Plan period. Houses will be constructed at the district and subdivisional headquarters to provide accommodation, mainly to Government employees, on rent. The construction will be done by the Government or through local authorities like Municipalities, etc.

6·6·12. **Loan under Rural Housing Scheme.**—Under this scheme it is proposed to grant loans to the rural people to the extent of Rs.10,000 per loanee for construction of houses. The interest charges on the loan will be subsidised. It is envisaged that 500 houses would be constructed under this scheme.

6·6·13. **Homes for weaker sections of the community.**—An amount of Rs.10 lakhs has been proposed for construction of house for the economically weaker section of the community like sweepers, scavengers etc., The target is to construct at least 125 houses in the district headquarters.

## Provision and expenditure in the Fourth Plan—Housing

(Rs. in lakhs.)

Scheme	Plan provision	1969-70 Expendi- ture	1970-71 Expendi- ture	1971-72 Expendi- ture	1972-73 Expendi- ture	1973-74 An-Expendi- ture	Total 5 years (1969-74)
1	2	3	4	5	6	7	8
1. Subsidised Industrial Housing	...	...	...	...	...	...	...
2. Low Income Group Housing	...	12.00	5.00	0.85	1.75	3.00	13.60
3. Middle Income Group Housing	...	...	...	...	...	1.00	1.00
4. Slum Clearance Improvement	...	N	I	L			
5. Village Housing Project	...	...	...	...	...	1.00	1.00
6. Plantation Labour Housing	...	...	...	...	...	...	...
7. Land Acquisition and Development	...	...	...	...	...	...	...
8. Rental Housing	...	...	...	...	...	4.00	
9. Other schemes	...	12.00	5.00	0.85	1.75	3.00	19.50

**Physical Targets and Achievements in the Fourth Plan—Housing**

Scheme	Unit	Fourth Plan Target	1969-70 Achievement	1970-71 Achievement	1971-72 Achievement	1972-73 Achievement	1973-74 Target	Total 5 years (1969-74)
1	2	3	4	5	6	7	8	9
1. Subsidised Industrial Housing	No. of Houses	...	...	...	...	...	...	...
2. Low Income Group Housing	Do	70	NIL (1)	NIL (2)	NIL (2)	17	20	37
3. Middle Income Group Housing.	Do	18	Nil	Nil	Nil	5	20	25
4. Slum Clearance Improvement	...	...	...	...	...	...	...	...
5. Village Housing ...	...	...	...	...	...	...	20	20
6. Plantation Labour Housing...	...	...	...	...	...	...	...	...
7. Land Acquisition and Development.	...	...	...	...	...	...	...	...
8. Rental Housing ...	...	...	...	...	...	...	28	28
9. Other Schemes ...	...	...	...	...	...	...	...	...
<b>Total</b> ...	...	<b>88</b>	...	...	...	<b>22</b>	<b>88</b>	<b>110</b>

(1) Data from Government of Assam not available.

(2) Due to scarcity of building materials after Bangladesh operation.

PROVISION AND EXPENDITURE IN THE FIFTH PLAN—HOUSING

(Rs. in lakhs)

Scheme	Plan provision	Phasing of Expenditure				
		1974-75	1975-76	1976-77	1977-78	1978-79
1	2	3	4	5	6	7
1. Subsidised Industrial Housing ... ..	5·00	1·00	1·00	1·00	1·00	1·00
2. Low Income Group Housing ... ..	20·00	4·00	4·00	4·00	4·00	4·00
3. Middle Income Group Housing ... ..	10·00	2·00	2·00	2·00	2·00	2·00
4. Slum Improvement ... ..	30·00	6·00	6·00	6·00	6·00	6·00
5. Village Housing project (Rural Housing Scheme) ...	104·50	20·90	20·90	20·90	20·90	20·90
6. Land Acquisition and Development .. ..	...	...	...	...	...	...
7. Rental Housing ... ..	30·00	6·00	6·00	6·00	6·00	6·00
8. Loans Under Rural Housing Scheme .. ..	50·00	10·00	10·00	10·00	10·00	10·00
9. Housing for weaker section of community ...	10·00	2·00	2·00	2·00	2·00	2·00
<b>Total ... ..</b>	<b>259·50</b>	<b>51·90</b>	<b>51·90</b>	<b>51·90</b>	<b>51·90</b>	<b>51·90</b>



PHYSICAL TARGETS AND THEIR PHASING OF THE FIFTH PLAN--HOUSING

Scheme	Units	Fifth Plan Target	1974-75	Phasing			
				1975-76	1976-77	1977-78	1978-79
1	2	3	4	5	6	7	8
1. Subsidised Industrial Housing ...	50	10	10	10	10	10	10
2. Low Income Group Housing ... ..	200	40	40	40	40	40	40
3. Middle Income Group Housing ...	50	10	10	10	10	10	10
4. Village Housing (Rural Housing Scheme)	10000	2000	2000	2000	2000	2000	2000
5. Rental Housing ... ..	200	40	40	40	40	40	40
6. Loan Under Rural Housing Scheme ...	500	100	100	100	100	100	100
7. Construction for weaker section of Community.	125	25	25	25	25	25	25
Total ... ..	11125	2225	2225	2225	2225	2225	2225

**Estimate of Employment generated in the Fourth Plan and targets for  
the Fifth Plan under Housing Programmes  
in the State Plans**

(in lakh mandays)

					*On the basis of Gross outlay	On the basis of Net outlay
<b>I. FOURTH PLAN TARGET</b>						
1969-70 (Actual)	...	...	...			
1970-71 (Actual)	...	..	...			
1971-72 (Actual)	...	...	...			
1972-73 (Actual)	...	...	...			
1973-74 (Estimated)		..	...			
Total 5 Years—1969-74	...	...	...			

} These Schemes were not included in Crash Programme for Rural Employment.

**II. FIFTH PLAN TARGET**

1974-75	...	...	...	...	...	1.08
1975-76	...	...	...	..	...	1.03
1976-77	...	...	...	...	...	1.08
1977-78	...	...	...	...	...	1.08
1978-79	...	...	..	...	...	1.08

\*Assuming that 25 per cent of the total cost of building goes for labour payment and the average daily wages per labour is Rs.12.

### 6.7. Urban Development

6.7.1. With the increase of population and development of urban areas, there has been marked increase in the urban population in the towns of Meghalaya. The urban population increased to 1.47 lakhs in 1971 from 1.17 lakhs in 1961. The total number of towns in Meghalaya now is 5 including Mawlai and Nongthymmai, the suburbs of Shillong. The growth of urbanisation and concentration of population in town have created a number of civic problems including haphazard growth and congestion in town areas. It is, therefore, essential that the development of urban area should be carefully planned with a view to creating healthy environment for the people.

#### Review of the Fourth Plan

6.7.2. The provision in the fourth plan for urban development programmes is Rs.50.00 lakhs. The total anticipated expenditure during the plan period is Rs.29.15 lakhs.

6.7.3. The Hill Plan of Assam, from which the outlay for the fourth plan of Meghalaya was carved out, did not include any provision for urban development of areas now forming the State of Meghalaya. With the creation of Meghalaya, the State Government initiated necessary steps under this programme. The first step was the setting up of Town Planning organisation. In the absence of necessary technical personnel for the town planning organisation, the activities during the period 1970-71 to 1972-73 were confined mainly to the urban development schemes through the District Councils and Town Committees. These schemes included improvement of roads, drainage, markets, etc. within the town areas approved by the State Government. During 1973-74, the State Government propose to train persons in the field of town planning and housing and take up the work of preparation of master plans and base maps for the towns of Jowai, Tura and Shillong including its suburbs. Two new schemes, *viz.*, improvement of Shillong Barabazar, and decentralisation of Harijans from Shillong Barabazar area have also been initiated in 1972-73.

#### Programme for the Fifth Plan

6.7.4. In the pasts practically no attention was paid to the problem of urban development in the areas now comprising the State of Meghalaya. In the context of the

rapid urbanisation and consequent unplanned growth, the question of urban development in a systematic way assumes great importance. Urban development is closely connected with the problems like migration from rural areas to towns, levels of living, provisions of facilities like water supply, sanitation, housing and such other civic facilities.

6.7.5. During the Fifth Plan period, the State Government propose to tackle the problems in regard to urban development in a systematic way. The first step towards this is to prepare master plans and regional plans for the urban areas and growth centres. For this purpose the Town Planning Organisation is being strengthened to enable it to take up the work. The various development schemes drawn up in the master plan will be implemented by the State Government. Besides, the local bodies and the District Councils will be given loans/grants for implementing the various programmes in their areas of operation.

6.7.6. The schemes and financial outlay proposed are indicated below:

#### **1. Preparation of Master Plan and Regional Plan**

6.7.7. An amount of Rs.26.00 lakhs is proposed for this scheme during the Fifth Plan period. Plans for all the five towns will be drawn up but the priority will be given to Shillong with its suburbs and the headquarters of the newly created subdivisions of Simsangiri and Nongstion.

#### **2. Implementation of development schemes in the Master Plans**

6.7.8. An amount of Rs.20.00 lakhs is proposed under this schemes. These schemes will be implemented departmentally.

#### **3. Loan and Grant to Local Bodies for Development Schemes**

6.7.9. An amount of Rs.60.00 lakhs is proposed for giving loans and grants to various local authorities and District Councils for environmental improvement and for creation of assets like construction and improvement of markets and bazars, construction of buildings for shops and commercial centres, etc.

6.7.10. The total outlay envisaged for the Fifth Plan is Rs.106.00 lakhs as against the provision of Rs.50.00 lakhs during the Fourth Plan period. The amount required for 1974-75 is Rs.22.00 lakhs.

PROVISION AND EXPENDITURE—URBAN DEVELOPMENT PROGRAMMES

(Rs. lakhs)

(1)	Plan provision (2)	Fourth Plan					Fifth Plan						
		1969-70 (3)	1970-71 (4)	1971-72 (5)	1972-73 (6)	73-74 (7)	Total Five Year 1969- 74 (8)	Fifth Plan Provision (9)	1974-75 (10)	1975-76 (11)	1976-77 (12)	1977-78 (13)	1978-79 (14)
1. Preparation Master Plans and Regional Plans.		...	...	..	...	3.00	3.00	26.00	6.00	5.00	5.00	5.00	5.00
2. Loans and Grants to Local Bodies for Development Schemes.		...	10.00	Nil	6.15	10.00	26.15	60.00	12.00	12.00	12.00	12.00	12.00
3. Implementation of development Schemes in Master Plans/ Development (by State Government).	50.00	Nil	Nil	...	...	...	...	20.00	4.00	4.00	4.00	4.00	4.00
4. Other Schemes .. ...		Nil	Nil	...	...	...	...	...	...	...	...	...	...
<b>TOTAL</b>	50.00	Nil	10.00	Nil	6.15	13.00	29.15	106.00	22.00	21.00	21.00	21.00	21.00

**Estimate of Employment generated in the Fourth Plan and Targets  
for the Fifth Plan under Urban Development Programmes  
in the State Plans (Lakh Manhours)**

**I. FOURTH PLAN TARGET**

1969-70 (Actual)	...	...	...	...	Nil.
1970-71 (Actual)	...	...	...	...	0.2
1971-72 (Actual)	...	...	...	...	Nil.
1972-73 (Actual)	...	...	...	...	0.13
1973-74 (Estimated)	...	...	...	...	0.2
<hr/>					
Total 5 Years—1969-74	...	...	...	...	0.53

**II. FIFTH PLAN TARGET**

1974-75	...	...	...	...	0.33
1975-76	...	...	...	...	0.33
1976-77	...	...	...	...	0.33
1977-78	...	...	...	...	0.33
1978-79	...	...	...	...	0.33

### Minimum Needs Programme—Outlay and Expenditure

(Rs. lakhs)

Programme	Fourth Plan 1969-74				Fifth Plan 1974-79			
	Outlay	Anticipated expenditure	1973-74 Approved outlay	1973-74 Anticipated expenditure	Five Year outlay		1974-75	
					Total	Capital	Total	Capital
1	2	3	4	5	6	7	8	9
Slum Improvement	Nil	Nil	Nil	Nil	30.00	Nil	6.00	
Total ..	Nil	Nil	Nil	Nil	30.00	Nil	6.00	

### Minimum Needs Programme—Physical Targets-Housing

Programme	Unit	FOURTH PLAN			FIFTH PLAN	
		Target	Likely Achievement	Likely 1973-74 Achievement	Five Year Target 1974-79	Target for 1974-75
1	2	3	4	5	6	7
Slum Improvement—						
(a) Town covered with names of towns.	Nil	Nil	Nil	..	SHILLONG	
(b) Population covered	Nil	Nil	Nil	..	30,000	Nil
(c) Construction of tenements, if any Nos.	Nil	Nil	Nil	..	Nil	Nil

## 6·8· SOCIAL WELFARE

6·8·1. Welfare Services are devised specially to meet the needs of the more vulnerable sections of the community. Social Welfare in Meghalaya is being organised with this end in view. Already a start has been given by constitution of the Meghalaya State Social Welfare Advisory Board in 1972-73. This Board will act in the advisory capacity for the implementation of various social welfare schemes in Meghalaya.

6·8·2. Welfare activities in the State are organised mainly through voluntary welfare organisation. This is done in the shape of giving grant-in-aid to various organisations doing welfare work. Matching grant to cultural organisations is also sanctioned for construction of gymnasiums, community halls and centres. Besides these schemes, other schemes like prosthetic aids to handicapped persons, Family and Child Welfare Centres, grant of stipends for research and training are also being implemented.

6·8·3. The Fourth Plan provision for Social Welfare Schemes was Rs.12·00 lakhs. The expenditure during the plan period is expected to be of the same order.

### Programme for Fifth Plan

6·8·4. Apart from expansion of the existing activities under the social welfare programmes, it will be necessary to increase the provision during the Fifth Plan since these schemes will have to be accelerated and expanded. The scheme of social defence did not receive due attention during the preceding plans so far as Meghalaya area is concerned. The schemes of assistance to physically handicapped, Research Centres, Children Home, Destitute Home have to be taken up or expanded so that social defence and correctional efforts can have the desired effect.

6·8·5. During the Fifth Plan, development of preventive social services will receive adequate attention. Voluntary character of social welfare services will be retained and encouraged. The schemes for the Fifth Plan include (1) Probation and corrective services, (2) Children's Home under the Family and Child Welfare, (3) construction of two Destitute's Home, (4) Special Educative programme for the male and female delinquents, (5) Rehabilitation of deserving destitutes



and post-probationers, (6) grants to voluntary organisations doing social welfare work, (7) grants to cultural organisations for upliftment of the weaker sections of the community through cultural programmes, (8) grants for rehabilitation of the physically handicapped, (9) grants to the State Social Welfare Board and (10) other miscellaneous schemes like strengthening the administration and schemes particularly for special assistance to Harijan orphans and destitutes.

6·8·6. The total outlay proposed for all the above schemes during the Fifth Plan is Rs.28·50 lakhs. The schematic phasing is indicated in the statement.

# SOCIAL WELFARE

STATEMENT

Rs. lakhs

Schemes	Fourth Plan outlay	Anticipated Expd in 4th Plan	Fifth Plan Outl	Phasing of Expenditure during the fifth Plan				
				74-75	75-76	76-77	77-78	78-79
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Probation and correctional services.			1.00	0.10	0.20	0.20	0.25	0.25
2. Childrens Home ... ..			3.00	0.40	0.60	0.60	0.70	0.70
3. Destitute Home ... ..			3.00	0.40	0.60	0.60	0.70	0.78
4. Special Educative Programme for delinquents.			2.00	0.20	0.40	0.40	0.50	0.50
5. Rehabilitation of destitutes and Post probationers.			2.00	0.20	0.40	0.40	0.50	0.50
6. Grants to Non-Official organisations.	12.00	13.50	5.00	1.00	1.00	1.00	1.00	1.00
7. Grants to cultural Institutions			5.00	1.00	1.00	1.00	1.00	1.00
8. Grants to physically handicapped and mentally retarded.			1.00	0.20	0.20	0.20	0.20	0.20
9. Grants to State Social Welfare Board.			3.50	0.50	0.50	0.75	0.75	1.00
10. Miscellaneous Schemes ...			2.00	0.20	0.30	0.50	0.50	0.50
11. Strengthening of Administration			1.00	0.15	0.18	0.20	0.22	0.25
<b>Total</b> ...	<b>12.00</b>	<b>13.50</b>	<b>28.50</b>	<b>4.35</b>	<b>5.38</b>	<b>5.85</b>	<b>6.32</b>	<b>6.60</b>

### 6·9·1. CRAFTSMAN TRAINING

6·9·1·1. Two Industrial Training Institutes (ITI) have been established earlier for the Meghalaya area under the composite Assam State. These institutes remained with Assam till Meghalaya attained the full State-hood in 1972.

6·9·1·2. Of these, the Tura ITI was located in Garo Hills (Meghalaya) and has a capacity of about 120 in trades for black smithy, carpentry, welder and fitters. Stenography is being also introduced in this institute from this year.

6·9·1·3. The Shillong ITI has a capacity of 280 in trades for motor mechanics, welder, fitter, turner, wiremen, electrician, carpentry, blacksmithy, stenography, etc. This ITI, however, has been functioning as a guest institute outside the State at Gauhati for a number of years now. This greatly handicapped the enrollment of boys from Meghalaya although the institute is a Meghalaya Institute. The rate of stipend was not sufficient for the trainees' expenses outside the State and there is acute shortage of hostel accommodation at Gauhati. In fact, due to its location at Gauhati, only 4—5 boys from Meghalaya were enrolled at this institute. The Government of Meghalaya have, therefore, decided to shift immediately this institute from Gauhati to Shillong in Meghalaya. The shifting will take place this year and the institution will start in rented houses. The land at the new site has already been acquired. Construction of the staff quarters, hostels, workshops and class rooms will be taken up only in the fifth plan there being no provision in the current year. Replacement of obsolete equipment and conversion to trades suited to the requirement of Meghalaya would be undertaken from the first year of the fifth plan.

6·9·1·4. The State at present has only a skeleton, craftsman training administration. This will be strengthened in the fifth plan. The training staff will be deputed to Central Training Institutes at Calcutta, Bilashpur, and other places. Publicity will be organized and the State Advisory Council will be strengthened.

6·9·1·5. In the fifth plan, it is also proposed to establish 5 rural institutes, to increase the rate and the number of stipends and to take follow-up programmes for putting the passed out trainees in paid and in self-employment.

The programme in the Fifth Plan would cost Rs. 20·00 lakhs as below:—

Scheme	Rs. lakhs.					
	4th plan allocation	73-74	4th plan anticipated	Fifth plan	74-75	
(1)	(2)	(3)	(4)	(5)	(6)	
1. Shillong ITI-shifting, construction, consolidation and introduction, etc., of new courses.	...	0·75	0·75	12·65	2·00	
2. Diversification of courses in Shillong and Tura ITI's.	...	...	...	2·00	0·25	
3. Establishment of Rural Training Institutes.	...	...	...	0·80	...	
4. Organisation including publicity and training, of staff.	...	...	...	2·10	0·40	
5. Preparation of text books, guide books, etc.	...	...	...	0·05	...	
6. Stipends	...	...	...	0·40	0·06	
7. Follow-up for passed out trainees.	...	...	...	2·00	0·30	
<b>Total</b>	...	...	0·75	0·75	20·00	3·01

## 6·9·2. EMPLOYMENT SERVICES

6·9·2·1. The role of the employment exchanges and other employment services for providing proper vocational guidance and for serving as a direct liaison between the employers and job seekers has become very important with the growing un-employment in the State. These institutions are also required to play a key role in the matter of successful implementation of various programmes for easing the un-employment situation in the country like "half a million job" and other schemes for the benefit of the educated, un-employed.

6·9·2·2. In the State's Fourth Plan, no provision was made for Employment Services as the schemes under this programme were implemented by the Government of Assam in Meghalaya areas prior to January, 1972. Consequent upon Meghalaya obtaining full Statehood, the employment exchanges at Shillong, Tura and Jowai came under the exclusive jurisdiction of Meghalaya. An amount of Rs.1·25 lakhs has been provided in the State's Annual Plan for 1973-74 for strengthening of the employment services and the machinery for collection of the employment market information.

6·9·2·3. By the end of the Fourth Five Year Plan, there will be one Regional Employment Exchange, five District Employment Exchanges, five Employment Information and Assistance Bureaux, three Employment Market Information units and five vocational guidance units in the State. The Fifth Plan proposals for Employment Services have been drawn up keeping in view the increased requirement for providing vocational guidance and counselling and supplying of employment market information through the employment exchanges. These will require an expansion of the employment service both in the urban and rural areas, more studies and surveys to supplement the current employment market information programme and sustained publicity to ensure maximum utilisation of these services by employers as well as workers.

6·9·2·4. It is also proposed to set up adequate machinery in the State for the enforcement of the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959. Vocational guidance units will be located in all the exchanges and a unit will also be set up in the proposed North-Eastern Hill University. Special guidance centres will be set up to cater to the special need of certain categories of employment seekers like

Scheduled Tribes and Scheduled Castes, *ex-servicemen* and physically handicapped. Provision has also been proposed for construction of buildings for the Directorate of Employment and Training and for the employment exchanges as also for vehicles for better mobility of the personnel of these offices.

6·9·2·5. The estimated expenditure for implementation of employment programmes for the Fifth Plan is Rs.12·50 lakhs.

6·9·2·6. The schematic outlay for Fifth Plan is indicated in the statement below.—

STATEMENT OF OUTLAY

Schemes  (1)	(Rupees in lakhs)	
	Fifth Plan Proposals (2)	1974-75 (3)
<b>Expansion of Employment Service</b>		
1. Project Employment Exchange at Cherapunjee and Sonapahar.	0·50	0·10
2. Employment Information and Assistance Bureaux in Development Blocks in rural areas.	1·50	0·30
3. Publicity. . . . .	0·25	0·06
4. Special Guidance Unit for Scheduled Caste/Tribe, <i>Ex-servicemen</i> and physically handicapped.	0·15	0·05
5. Appointment of Artist and Transpator in the Directorate.	0·50	0·12
6. Vehicles for Directorate exchanges at Jowai and Shillong.	0·85	0·85
7. Buildings for 3 exchanges . . . . .	4·00	2·00
8. Enforcement Machinery for Apprenticeship Act.	0·30	0·06
9. Setting up of Staff Training cell in the Directorate.	0·25	0·06
10. Strengthening of Supervision and Administration.	0·40	0·10
11. Establishment of 10 Rural Employment Exchanges.	1·50	0·30
<b>Total—Expansion of Employment Service</b>	<b>10·20</b>	<b>4·00</b>

(Rupees in lakhs)

Schemes (1)	Fifth Plan Proposals (2)	1974-75 (3)
<b>II. Collection of Employment Market Information.</b>		
1. Establishment of E. M. I. Unit in 2 New Exchanges.	0.35	0.08
2. E. M. I. Unit for Research and Survey in the Directorate.	0.27	0.06
3. Vehicle for E. M. I. Wing ... ..	0.28	0.28
Total Collection of E. M. I. ... ..	0.90	0.32
<b>Vocation Guidance and Employment Counselling.</b>		
1. Setting up of V. G. Unit in Employment Exchange, Jowai.	0.20	0.08
2. Evaluation and Implementation Cell in the Directorate of Employment.	0.20	0.06
3. Library for the Directorate of Employment	0.05	0.02
4. Establishment of Employment Information and Guidance Bureau in the proposed Hill University.	0.30	0.05
Total V. G. and E. G. ... ..	0.75	0.21
<b>IV. Occupational Research and Analysis</b>		
1. Establishment of Research Cell in the Directorate of Employment.	0.30	0.10
2. Library for Research Cell ... ..	0.05	0.02
Total—O. R. and A. ... ..	0.35	0.12
<b>V. Inspectorate for the Directorate</b>		
1. Setting up of Inspectorate for the Directorate.	0.30	0.10
Total—Inspectorate ... ..	0.30	0.10
<b>GRAND TOTAL</b> ... ..	<b>12.50</b>	<b>4.75</b>

### 6.9.3. Labour Welfare

6.9.3.1. The Labour Welfare programmes aim at improving the living and working condition of labourers through the enforcement of various labour legislations and the implementation of various labour welfare schemes.

6.9.3.2. Labour Administration in the State of Meghalaya is of very recent origin and no provision in the State's Fourth Plan on Labour Welfare was made.

6.9.3.3. A nucleus organisation of the Labour Commissioner has been set up recently. This organisation will be responsible for maintaining industrial relations in the State and also implementation and observance of the code of discipline by Employers and Trade Unions to prevent industrial strife and to promote peaceful settlement of industrial disputes. During the Fifth Plan, it is proposed to strengthen the industrial relation machinery of the State

6.9.3.4. In addition, it is proposed to create and organise an Enforcement Squad for field duties in connection with inspections, checkings and effective enforcement of the provisions of the various labour laws. A statistical cell will be set up in the Directorate to gear up the administration, collection, compilation and analysis of data especially with regard to improvement of Wage Ratios, Cost of Living Indices and Industrial Disputes. Moreover, under the law the State is to give minimum rates of wages in respect of a large number of employments for which a Minimum Wages Advisory Board will also be required to be set up under the Payment of Minimum Wages Act, 1948.

6.9.3.5. In regards to welfare measures for the labourers and industrial workers practically nothing has been done so far. During the next plan period, it is proposed to set up two Community Centres to promote welfare activities by providing for health and sanitation, adult education and community recreational and cultural activities so as to raise the standard of living of the working class and thereby increasing productivity and reducing unemployment and under employment. In these centres, arrangements will be made for introducing various trades like tailoring, carpentry and other craft for training and education of workers to enable them to find gainful employment.

6.9.3.6. These centre will accomodate 50—100 trainees at a time who will be given stipends for undergoing the training. Apart from training facilities in these centres, will be Holiday Homes with recreational and educational facilities for the workers.



6.9.3.7. With a view to promoting labour welfare, it is proposed to introduce a scheme of grants-in-aid and loans to workers co-operatives and recognised private welfare organisations doing welfare works amongst the workers. Works Committees where such committees have been constituted as per the Industrial Disputes Act would also be entitled to this incentive and patronage of grants-in-aid. Workers co-operatives and individual enterprises engaged in trades employing 5 or more workers and running for at least 5 years would be given loans and grants-in-aid for expansion and development of their undertakings to improve and increase their efficiency, productivity and employment potentiality. Besides, progressive industrialists who are willing to invest and establish industries in the State would be given assistance in the form of subsidies varying from 50 per cent to 75 per cent of the cost of training of workers from the State to run their undertakings.

6.9.3.8. It is proposed to introduce mobile audio-visual entertainment programme for industrial workers and labour welfare publicity and also sponsored and conducted tours for industrial workers as well as training of departmental officers in labour welfare and specialised subjects outside the State.

6.9.3.9. The total expenditure involved under the above schemes during the fifth plan period is estimated at Rs.10.00 lakhs. The schematic details are given below:—

		Rs. lakhs	
Schemes (1)	Outlay proposed for 5th plan (2)	1974-75 (3)	
1. Strengthening of Administration including purchase of vehicles.	4.80	1.50	
2. Grants-in-aid, loans, stipends, conducted tours etc.	3.00	0.50	
3. Community centres including holiday homes.	2.00	0.70	
4. Publicity ... ..	0.20	0.05	
Total ...	10.00	2.75	

## 7.1. STATISTICS

7.1.1. The Fifth plan for Statistics has been drawn up on the guidelines of the Central Statistical Organisation. The schemes involve an outlay of Rs.27.42 lakhs in the Fifth Plan. Of this, Rs.12.18 lakhs is accounted for by Core Schemes of national importance, Rs.12.70 lakhs by State Core Schemes and Rs.2.54 lakhs by other State Scheme. Another Rs.18.80 lakhs is required for schemes that are proposed to be centrally sponsored.

### CORE SCHEMES OF NATIONAL IMPORTANCE

#### 1. Establishment of a Printing Unit:

7.1.2. Creation of additional printing capacity is not required in case of Meghalaya as sufficient capacity could be available in the Government Press for printing the statistical and other materials required when Assam Capital shifts from Meghalaya. However, a small cell with one Inspector and two Computers is proposed to be created with a view to ensuring follow-up action. The scheme would cost Rs.0.36 lakhs in Fifth Plan.

#### 2. Index of Industrial Production

7.1.3. The Index will be compiled initially in respect of organised industry for which data are available or could be collected. At later stage when sufficient data become available in respect of the un-organised sector, the scope of the Index would be enlarged. Initially, a simple index of main products and a 'weighted' index of 'value added or gross value of output would be compiled. Later other aspects of production operations would be taken up.

7.1.4. As the Meghalaya State Statistical Bureau has no industry division at present, a Cell for Industrial Statistics would be set-up under the plan. One Research Officer, one Inspector and three Field Investigator's and two Computers are required for the Cell. The outlay for this scheme is estimated at Rs.1.21 lakhs.

#### 3. Economic Census

7.1.5. An economic census is the only means to collect comprehensive data of all economic activity in the unorganised sector and is necessary to provide a sound base for the development planning. This scheme will be taken up by stages and will involve an amount of Rs.9.73 lakhs for the Fifth Plan period.

#### 4. Capital Formation and Savings estimation

7·1·6. This work will be taken up along with estimation of the State Income. The Meghalaya State Statistical Bureau, however, has not yet been able to set up a State Income Division. This has to be done in the Fifth Plan. One Research Officer with two Inspectors and two Computers would be necessary for the scheme. The cost works out to Rs.0·88 lakhs for the Fifth Plan.

7·1·7. For the Core Schemes of National Importance, the outlay in the Fifth plan works out at Rs.12·18 lakhs.

#### B. CORE SCHEMES OF STATE IMPORTANCE

##### 5. Strengthening of the Statistical Machinery :

###### At Headquarters :

7·1·8. The State Statistical Bureau at present has a skeleton staff. The programme of building the organisation has been taken up and will have to be continued in the Fifth Plan. Strengthening of the administration would be undertaken for co-ordination, supervision, and guidance of the different programmes of work. One Joint Director to assist in administration and two Deputy Directors and two Senior Research Officers to supervise and guide the divisions would be required in order that the programme envisaged is carried out smoothly. In addition, two Statistical Officers at the headquarters and other office staff would be provided.

###### District Offices

7·1·9. By the end of the 4th Plan, three district statistical offices would be in position. The staff of each of these offices at present consists of one Statistical Officer, one Inspector, one Sub-Inspector and three Field Assistants. With this staff, the district office could play a very limited role in the implementation of the various schemes for flow of statistics from the districts. Their work at present ranges from survey, field work, census of Government employees, price collection, preparation of abstracts and handbooks etc, and preparation of statistical reports for various Boards and Committees and to advice other offices on statistical work at the district level. The Statistical officer is also a member of a number of Boards and Committees. With the attainment of full State-hood, the scope and coverage of statistics at the district level require to be enlarged substantially in order to make the statistics more reliable. It is, therefore, necessary to strengthen these offices suitably. For this purpose a sum of Rs.11·01 lakhs has been provided.

## **6. Studies of impact on employment in command areas etc:**

7·1·10. The studies would to undertaken as recommended. To organise these studies, one Research Officer, one Inspector and 2 field investigators are proposed to be recruited. The cost on account of these works worksout at Rs.0·35 lakhs in the fifth plan.

## **7. Construction of Buildings**

7·1·11. The District Statistical Offices are accommodated in rented houses. Apart from the rent paid, these Offices face many inconveniences. It is proposed to construct building for the offices at Tura and Jowai. The cost of these buildings would be Rs 1 lakh. It is not proposed to construct buildings for the State Statistical Bureau and for the Shillong District office as it is expected that adequate accommodation would be available with the shifting of Assam's Capital from Shillong. The outlay for this scheme is estimated at Rs.1·00 lakhs in the fifth plan.

## **8. Training of district and lower level Field Staff:**

7·1·12. This scheme will be undertaken in the Fifth Five Year Plan. In view of what has been stated in the foregoing paragraphs, a training division will be set up in the State Statistical Bureau. The division will be under the charge of a Senior Officer proposed in the strengthening scheme above. He will be assisted by one Research Officer who would look after the day to day requirements of the training. The cost of the scheme works out to Rs.0·34 lakhs in the fifth plan.

### **C. OTHER SCHEMES OF STATE IMPORTANCE**

#### **9. Expansion of Price Division:**

7·1·13. The State Statistical Bureau at present has only a skeleton price division with only one Sub-Inspector and one Computer. At present, the wholesale and retail prices and rural labour wages are collected from a total of 8 centres only. The number of villages in the State is 4,629. In order that the price data are representative of the situation in the State, the number of centres has to be increased several times. The present programme is to have about 40 centres for whole-sale prices, 24 centres for retail prices and 16 centres for labour

wages. This is the minimum for construction of indices for the State. The cost involved on account of remuneration of price collectors is nominal since the Government agencies in such centres either already exist or could be mobilised. But this would require proper supervision for which statistical machinery at the district and block level is proposed to be strengthened as out-lined in the fore-going paragraphs. At the State Statistical Bureau level, the price division would be strengthened to enable to handle the increased number of price returns and also to enable compilation of the price indices. The division is proposed to be strengthened by recruiting one Research Officer, 2 Inspectors and one more Computer. The cost on account of the scheme works out at Rs.0.87 lakhs.

#### 10. Strengthening of Bulletin and Abstracts Section:—

7.1.14. At present there is only one Inspector to work after compilation of the statistical hand-books, abstracts, etc. The present strength does not permit to take up compilation of abstracts and to bring out the statistical hand-book in time. It is, therefore, proposed to strengthen the section by recruitment of 2 Computers. The cost in five years works out at Rs.0.50 lakhs.

#### 11. Survey of Border Areas and Backward Pockets and Regions :

7.1.15. The survey of the border area is of high priority in the State in view of the special significance of the Border Area in Meghalaya. Work on the Border Area survey will be started in 1973-74 but will have to continue in the Fifth Plan. A survey of backward regions is also proposed to be taken up in order to identify the problems of these areas and their magnitude. For this purpose the Survey Division of the State Statistical Bureau would be strengthened by appointing a full-time Research Officer and 2 more Inspectors. The field work would be carried out by the district and block agencies and the tabulation would be done in the tabulation unit for which proposals have been made in the paragraphs above. The cost of this scheme works out at Rs.1.17 lakhs in the Fifth Plan.

7.1.16. The cost, on account of other State statistical schemes comes to Rs.2.54 lakhs. The total outlay in the State Plan thus comes to Rs.27.42 lakhs as shown in the statement.

**D. CENTRALLY SPONSORED SCHEMES SUGGESTED.**

7.1.17. The following schemes are of special importance to State and are proposed as Centrally Sponsored schemes:—

**Agricultural Statistics Division :**

7.1.18. There is no proper arrangement in the State to maintain, analyse and interpret the agricultural statistics. Only the crop cutting experiments are carried out by the District Statistical Offices. But there is no organisation to analyse the results of these experiments. There is, however, a skeleton organisation in the State Directorate of Agriculture for agricultural statistics which functions without any technical guidance and its scope, therefore, is limited to maintaining the statistics furnished by the District Agricultural Offices. It is, therefore, proposed to set up an Agricultural Statistics Division in the State Statistical Bureau to plan and design and co-ordinate the crop cutting experiments and for further processing of the results. The number of experiments is proposed to be increased and more crops would be covered. One Research Officer and three Inspectors would be required in the State Statistical Bureau and three Field Investigators for each of the districts. As regards collection of area and other primary statistics at the village level, a scheme is being taken up under the State Plan from the current year on a pilot basis. For enabling the extension of the work by the State Statistical Bureau, 96 field investigators will be required in the Fifth Plan. In addition, 3 Inspectors and 6 Computers would be required in the State Statistical Bureau to enable the Agricultural Statistical Division to deal with the work. The total cost of the scheme works out at Rs.11.59 lakhs in the Fifth Plan.

**Other Schemes :**

7.1.19. It is also proposed to set up Cells each for Livestock, Forests, Education, Health, Water Supply and Roads to be located either in the State Statistical Bureau or in the Departments themselves. The cost of these Cells works out at Rs.5.63 lakhs in the Fifth Plan.

7.1.20. At the instance of Government of India the Directorate has taken up the Survey of Small Scale Industries in unorganised sectors from 1970-71. At present the work has been carried out by the existing staff of Directorate. A section for this work has been proposed to be opened up in the Directorate with one Research Officer, 2 Inspectors of Statistics and four field investigators with equipments such as calculating machines, in the Fifth Plan. The outlay for this Centrally sponsored scheme is estimated at Rs.1.58 lakhs for the fifth five year plan period.

**SUMMARY STATEMENT OF FIFTH PLAN PROPOSALS FOR STATISTICAL SCHEMES OF MEGHALAYA.**

STATE—Meghalaya

Name of Scheme (1)	Whether continuing scheme of Fourth Plan yet to be completed or scheme of the repetitive nature to be executed after every three/five years, or new scheme for Fifth Plan. (2)	Object of the Scheme (3)	Brief detail of design, other technical details phasing and coverage, (4)	Outlay proposed for Fifth Plan (Rupees in lakhs)						Break-up of outlay on				
				Total 1974-75 to 1978-79 (5)	1974-75 (6)	1975-76 (7)	1976-77 (8)	1977-78 (9)	1976-79 (10)	Additional Staff (11)	Total (12)	Foreign Exchange element (13)	Other expenditure (14)	
<b>A. Core Scheme of national Importance—</b>				As explained in the enclosed note.										
1. Establishment of printing unit.	New Scheme	Creation of a Small Cell for printing of the departmental publication.		0.36	..	0.17	0.07	0.11	0.11	0.36	..	..	..	
2. Index of Industrial Production.	New Scheme	The cell would organise collection of Statistics from the small scale units and the organised establishments residuary of N.S.S. as also compile the production indices for the State.		1.21	0.17	0.22	0.24	0.28	0.30	1.18	0.03	..	..	
3. Economic Census ...	New Scheme	The cell is meant to collect comprehensive data of all economic activity in the non-organised sector and also to provide a sound base for development planning for these sector.		9.73	...	0.54	2.76	4.37	2.06	9.33	0.20	..	0.20	
4. Capital formation and savings estimation.	New Scheme	This cell is intended to be created for making up estimation of capital formation and savings estimation along with estimation of State Income.		0.88	0.13	0.13	0.15	0.22	0.25	0.88	..	..	..	
<b>Total—A</b>				<b>12.18</b>	<b>0.30</b>	<b>0.96</b>	<b>3.22</b>	<b>4.98</b>	<b>2.72</b>	<b>11.75</b>	<b>0.23</b>	<b>..</b>	<b>0.20</b>	

Requirement of additional new Staff during Fifth Plan			Requirement of equipment		Cost	Remarks
Designation	No.	Scale of pay	Description	Total		
(15)	(16)	(17)	(18)	(19)	(20)	(21)
(i) Inspector of Statistics	...	1	Rs.225—600	...	..	Indicate for continuing schemes of Fourth Plan, the expenditure incurred during Fourth Plan, staff employed, equipment provided, results expected to be achieved by the end of Fourth Plan, the extent and nature of unfinished work/etc. etc. etc.
(ii) Computers	...	2	Rs.140—275	...	..	
(i) Research Officer	...	1	Rs.350—1,000	Facit calculating machine	0.03	(one)
(ii) Inspector of Statistics	...	1	Rs.225—600		..	
(iii) Computers	...	1	Rs.140—275			
(iv) Field Investigator	...	3	Rs.125—200			
(i) Census Officer	...	1	Rs.1,000—1,300	(i) Moscal calculating	0.20	etc.
(ii) Research Officer	...	4	Rs.350—1,000	machine (two)	..	
(iii) Inspector of Statistics	...	20	Rs.225—600	(ii) Printing of Schedule,	0.20	
(iv) Field Investigator	...	100	Rs.125—200			
(i) Research Officer	...	1	Rs.350—1,000	..	..	
(ii) Inspector of Statistics	...	2	Rs.225—600	..	..	
(iii) Computers	...	2	Rs.140—275	..	..	



Name of Scheme	Whether continuing Scheme of Fourth Plan yet to be completed or scheme of the repetitive nature to be executed after every three/five years, or new Scheme for Fifth Plan.	Object of the Scheme	Brief detail of design, other technical details phasing and coverage.	Outlay proposed for Fifth Plan (Rupees in lakhs)							Break-up of outlay on		
				Total 1974-75 to 1978-79	1974-75	1975-76	1976-77	1977-78	1978-79	Additional new Staff	Total	Foreign Exchange element	other expenditure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>B. Core Schemes of the State Importance.</b>													
1. Strengthening of the Statistical machinery of the State.	Continuing Scheme.	Strengthening of the Statistical machinery for proper coordination of the different programme for effective supervision and for ensuring the required flow of the Statistical data at different levels.		10.41	2.35	1.93	1.99	2.04	2.10	9.55	0.20	...	0.66
2. Vehicle ...	...	Vehicle for Directorate and for District office at Jowai.		0.60	0.60	..	...	...	...	..	0.60	...	...
3. Impact Studies of command areas.	New Scheme	This scheme is intended for studies of impact on employment in command areas etc.		0.35	...	..	0.03	0.15	0.17	0.35	...	...	...
4. Construction of Building.	New Scheme	Construction of two buildings for two district offices, one at Jowai and the other at Tura.		1.00	1.00	..	...	...	..	...	...	..	1.00
5. Training Scheme	New Scheme	Training of new and Junior Staff of the Directorate.		0.34	0.06	0.06	0.07	0.07	0.08	0.34	...	..	...
<b>Total—B ...</b>				<b>12.70</b>	<b>4.01</b>	<b>1.99</b>	<b>2.09</b>	<b>2.26</b>	<b>2.35</b>	<b>10.24</b>	<b>0.80</b>	<b>..</b>	<b>1.66</b>

Requirement of additional new Staff during Fifth Plan			Requirement of equipment		Cost		Remarks
Designation	No.	Scale of pay	Description	Total	Foreign Exchange element		
(15)	(16)	(17)	(18)	(19)	(20)	(21)	Indicate for continuing scheme of Fourth Plan, the expenditure incurred during Fourth Plan, Staff employed equipment provided, results expected to be achieved by the end of Fourth Plan, the extent nature of unfinished work/ etc. etc. etc.
(1) Jt. Director ... ..	1	Rs.1,000—1,300	(i) Moscal	0.20	..		
(2) Deputy Director ... ..	2	Rs.750—1,200	Calculator (two)	..	..		
(3) Senior Reserch officer ..	2	Rs.550—1,100	.....	..	..		
(4) Statistical officer .. ..	2	Rs.300—800	(2) Contigencies ..	0.66	..		
(5) Inspector of Statistics ...	2	Rs.225—600	.....	..	..		
(6) Sub-Inspector of Statistics	2	Rs.200—500	.....	..	..		
(7) Field Investigator .. ..	2	Rs.125—200	.....	..	..		
(8) Suporting office staff ...	25	(Different pay scales).	.....	..	..		
.....			Vehicle (two)	0.06	..		
(i) Research Officer ... ..	1	Rs.300—1,000	.....	..	..		
(ii) Inspector of Statistics ..	1	Rs.225—600	.....	..	..		
(iii) Field Investigator ... ..	2	Rs.125—200	.....	..	..		
.....			.....	..	..		
(i) Research officer ... ..	1	Rs.300—1,000	.....	..	..		

Name of Scheme	Whether continuing Scheme of Fourth Plan yet to be completed or scheme of the repetitive nature to be executed after every three/five years, or new Scheme for Fifth Plan.	Object of the Scheme	Brief detail of design, other technical details phasing and coverage.	Outlay proposed for Fifth Plan (Rupees in lakhs)						Break-up of outlay on			
				Total 1974-75 to 1978-79	1974-75	1975-76	1976-77	1977-78	1978-79	Additional new Staff	Total	Foreign Exchange element.	Other expenditure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>C. Other State Statistical Schemes —</b>													
1. Strengthening of Price Section.	Continuing Scheme.	The Scheme is intended to expand the price section.	.....	0.87	0.16	0.13	0.14	0.19	0.25	0.81	0.06	..	...
2. Strengthening of the Bulletin Section.	Continuing Scheme.	The Scheme is intended to strengthen the publication section as the present strength does not permit to take up the compilation work of Abstract and to bring out the publications in time.	.....	0.50	0.10	0.07	0.10	0.11	0.12	0.47	0.03	...	..
3. Survey of Border area and Backward pocket.	New Scheme	Meghalaya being a border State the Survey of the border areas is of high priority in the State with special significance and of the development taking place with the emergence of Bangladesh.	.....	1.17	0.18	0.19	0.25	0.29	1.17	...	..	...	...
<b>Total—C ..</b>			.....	2.54	0.44	0.39	0.49	0.56	0.66	2.45	0.09	..	...
<b>Total—A+B+C ...</b>			.....	27.42	4.75	3.34	5.50	7.80	5.73	24.44	1.12	...	1.86

Requirement of additional new <del>STP</del> during Fifth Plan				Requirement of equipment	Cost		Remarks
Designation	No.	Scale of pay	Description	Total	Foreign Ex- change element		
(15)	(16)	(17)	(18)	(19)	(20)	(21)	
(i) Research Officer ...	...	1	Rs.350—1,000	Facit machines (two)	...	0.06	Indicate for continuing scheme of Fourth Plan, the expenditure incurred during Fourth Plan, staff employed, equipment provided, result expected to be achieved by the end of Fourth Plan, the extent nature of unfinished work/etc. etc. etc.
(ii) Inspector of Statistics	..	2	Rs.225—600	.....	...	...	
(iii) Computers	...	1	Rs.140—275	.....	..	..	
(i) Inspector of Statistics	...	1	Rs.225—600	Facit machine (one)	...	0.03	
(ii) Computer	...	2	Rs.140—275	.....	...	...	
(i) Research Officer	...	1	Rs.350—1,000	.....	...	...	
(ii) Inspector of Statistics	..	2	Rs.225—600	.....	...	...	
(iii) Field Investigator	...	3	Rs.125—200	.....	...	...	

Name of Scheme	Whether continuing Scheme of Fourth Plan yet to be completed or scheme of the repetitive nature to be executed after every three/five years, or new Scheme for Fifth Plan	Object of the Scheme	Brief detail of design, other technical details phasing and coverage	Outlay proposed for Fifth Plan Break-up of outlay on (Rupees in lakhs)									
				Total 1974-75 to 1978-79	1974-75	1975-76	1976-77	1977-78	1978-79	Additional new Staff	Total	Foreign Exchange element.	Other expenditure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>Centrally Sponsored Schemes---</b>													
1. Agricultural statistics Division.	New Scheme	This Scheme is intended for setting up of an Agricultural Statistics Division in the S.S.B. to plan and design and co-ordinate the C. C. experiments and processing of results along with crop and area reporting by visiting fields.	...	11.59	1.90	2.27	2.33	2.47	2.62	11.51	0.08	...	...
2. Live-Stock Statistics	New Scheme	These Schemes are intended for setting up Statistical cells one each for the Live-stock, Forest, Education, Health Water-supply and P. W. D. to be located either in the S. S. B. or in the respective Departments.	...	0.75	0.16	0.13	0.14	0.15	0.17	0.72	0.03	...	..
3. Forests Statistics			0.75	0.16	0.13	0.14	0.15	0.17	0.72	0.03	...	..	
4. Road Statistics			0.94	0.19	0.17	0.18	0.19	0.21	0.91	0.03	..	...	
5. Health Statistics			1.31	0.26	0.24	0.25	0.27	0.29	1.28	0.03	..	...	
6. Education Statistics			0.94	0.19	0.17	0.18	0.19	0.21	0.91	0.03	..	...	
7. Public Health Engineering Statistics. (Water supply etc.)	0.94	0.19	0.17	0.18	0.19	0.21	0.91	0.03	..	...			

Requirement of additional new staff during Fifth Plan				Requirement of equipment		Remarks
Designation	No.	Scale of pay	Description	Cost		
				Total	Foreign Exchange element	
(15)	(16)	(17)	(18)	(19)	(20)	(21)
(i) Research officer ...	1	Rs.350 to 1,000	Moscal (one)	0.08	...	Indicate for continuing schemes of Fourth Plan, the expenditure incurred during Fourth Plan, Staff employed, equipment provided, results expected to be achieved by the end of Fourth Plan, the extent nature of unfinished work, etc.
(ii) Inspector of Statistics ...	6	Rs.225 to 600				
(iii) Field Investigator ...	96	Rs.125 to 200				
(iv) Computers ...	6	Rs.140 to 275				
(i) Research officer ...	1	Rs.350 to 1,000	Facit machine (one)	0.03	...	
(ii) Inspector of Statistics ...	1	Rs.225 to 600				
(iii) Computers ...	1	Rs.140 to 275				
(i) Research Officer ...	1	Rs.350 to 1,000	Facit machine (one)	0.03	...	
(ii) Inspector of Statistics ...	2	Rs.225 to 600				
(iii) Computer ...	1	Rs.140 to 275				
(i) Research Officer ...	1	Rs.350 to 1,000	Facit machine (one)	0.03	...	
(ii) Inspector of Statistics ...	2	Rs.225 to 600				
(iii) Computer ...	1	Rs.140 to 275				
(i) Deputy Director ...	1	Rs.750 to 1,300	Facit machine (one)	0.03	...	
(ii) Research Officer ...	1	Rs.350 to 1,000				
(iii) Inspector of Statistics ...	2	Rs.225 to 600				
(iv) Computer ...	1	Rs.140 to 275				
(i) Research Officer ...	1	Rs.350 to 1,000	Facit machine (one)	0.03	...	
(ii) Inspector of Statistics ...	2	Rs.225 to 600				
(iii) Computer ...	1	Rs.140 to 275				
(i) Research Officer ...	1	Rs.350 to 1,000	Facit machine (one)	0.03	...	
(ii) Inspector of Statistics ...	3	Rs.225 to 600				
(iii) Computer ...	1	Rs.140 to 275				

Name of Scheme	Whether continuing Scheme of Fourth Plan yet to be completed or scheme of the repetitive nature to be executed after every three/five years, or new Scheme for Fifth Plan	Object of the Scheme	Brief detail of design, other technical details phasing and coverage	Outly proposed for Fifth Plan (Rupees in lakhs)							Break-up of outlay on			
				Total 1974-75 to 1978-79	1974-75	1975-76	1976-77	1977-78	1978-79	Additional new staff	Total	Foreign Exchange Element.	Other Expenditure	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
18. Survey of Small Scale Industries in un-organised sector.	New Scheme	At the instance of the Govt. of India this cell is intended to be created to take up the survey of small scale industries in the unorganised sector.		1.58	0.31	0.31	0.32	0.33	0.31	1.45	0.03	...	0.10	
<b>Total Centrally sponsord Scheme</b>				<b>18.80</b>	<b>3.36</b>	<b>3.59</b>	<b>3.72</b>	<b>3.94</b>	<b>4.19</b>	<b>18.41</b>	<b>0.29</b>	<b>...</b>	<b>0.10</b>	
<b>Total :</b>	<b>All schemes</b> (Core schemes and Statistical Schemes and Centray Spon-sored Schemes).	<b>Grand Total</b>		<b>46.22</b>	<b>8.11</b>	<b>6.93</b>	<b>9.52</b>	<b>11.74</b>	<b>9.92</b>	<b>42.85</b>	<b>1.41</b>	<b>..</b>	<b>1.96</b>	

Requirement of additional new staff during Fifth Plan			Requirement of equipment		Remarks	
Designation	No.	Scale of pay	Discription	Cost		
				To a)	Foring Ex- change element	
(15)	(16)	(17)	(18)	(19)	(20)	(21)
(i) Research Officer ...	...	1	Rs.350 to 1,000	(i) Facit machine (one)	0.03 ...	Indicated for continuing scheme of Fourth Plan, the expenditure incurred during Fourth Plan, Staff employed, equipment provided, results expected to be achieved by the end of Fourth Plan, the extent nature of unfinished work, etc.
(ii) Inspector of Statistics ...	...	2	Rs.225 to - 600	(ii) Contingency	0.01 ...	
(iii) Primary Investigator ...	...	4	Rs.140 to 275			



## 7.2. INFORMATION AND PUBLICITY

7.2.1. The Information and Public Relations service has assumed great importance along with the increased developmental activities. Adequate publicity to development programmes is essential for involvement of people in purposeful collaboration with the implementation of the developmental activities of the State. With this end in view, publicity activities in Meghalaya are undertaken through different media such as publication of bulletins in regional languages, printing of publicity literature and posters for distribution upto village level, rural broadcasting, fixed loudspeaker system, publicity through cultural media, exhibitions and audio-visual publicity.

7.2.2. At present, some of the development departments of the State Government like Health, Agriculture, etc., have their own publicity units. The question of bringing the publicity units attached to other departments under the Directorate of Information and Public Relations is under consideration.

The intergration could not be done so long as the State Publicity Department was functioning with a skeleton staff only. However, pending a decision to amalgamate the entire publicity apparatus in the State under the Information and Public Relations Department all printed and audio-visual publicity on behalf of the State Government is being handled by the Information and Public Relations Department.

7.2.3. The Fourth Plan provision for Publicity Programme is Rs.12.00 lakhs. The expenditure for the Fourth Plan period will be around Rs.12.34 lakhs. Effective and successful implementation of programme of publicity require a well built team of technical and qualified personnel. The State's initial handicaps in these respects are now gradually being overcome and steps are being taken to streamline the publicity efforts during the next plan period.

### **Programmes for the Fifth Plan period**

7.2.4. During the Fifth Plan period, publicity efforts will be made more intensive, purposeful and broad-based with a positive emphasis on the need for emotional integration and economic development for the people of Meghalaya.

7.2.5. The achievements of all the development departments will be highlighted through the media of publicity. Exhibitions, films, printed publicity materials, etc., will continue to be the main features of such publicity. Adequate provision has been suggested for these items under the schemes—(a) hill bulletin, (b) exhibitions, (c) cultural media and (d) printed publicity. All publicity work will be development oriented. Printed publicity will be geared up and display arrangements will be made through streetcorner hoardings. For this, a provision of Rs.0.98 lakhs for hill bulletin, Rs.0.78 lakh for exhibitions, Rs.7.79 lakhs under printed publicity has been made.

7.2.6. A regular system of feed-back in respect of public reaction/opinion will be started. District and Subdivisional offices will analyse and bring out fortnightly reports on public opinion. The headquarters will keep the Government informed about public reaction to their policies/programmes from time to time. It is proposed to strengthen the organisation adequately for this work.

7.2.7. The interior areas of the State will be increasingly covered with publicity activities. Two new subdivisional offices will be opened for this purpose. A few more subdivisional administrative units are likely to come up during the period 1974-79. The Department will open new field publicity offices in these units also. An amount of Rs.1.32 lakhs is suggested for this purpose.

7.2.8. The system of regular flow of development information to the All India Radio for broadcast in local languages will be introduced. District and subdivisional officers, besides the headquarter officers, will issue regular press messages for use by the A. I. R. station at Shillong and the proposed A. I. R. station at Tura.

7.2.9. Arrangements will be made for regular training of the officers of the Information Department. To start with, some officers of the headquarters will be trained at the Indian Institute of Mass Communication at New Delhi. District and subdivisional level officers may be trained in that Institute also, but more frequently these officers will be trained in Shillong. Orientation courses for all officers will be organised at the State headquarters and they will be given lessons on Meghalaya's developmental schemes by senior officers dealing with the various sectors of development.

7.2.10. It is envisaged that publicity requirements of each homogenous areas would be met through various efforts of the Department during the plan period. Bulletins will be published in local languages giving emphasis on local developmental works. For this, an amount Rs.0.98 lakhs has been proposed. In the scheme for publicity through cultural media, it is proposed to meet the requirements of the various homogenous areas of the State. For this another amount of Rs.0.76 lakhs has been provided. Audio-visual aid in the districts and the subdivisions (to be set up during the fifth plan) will be augmented as the plan progresses. For this, an amount of Rs.3.84 lakhs has been earmarked.

7.2.11. The requirements of the various homogenous areas of the State will be met through the scheme of publicity through cultural media. The department will conduct exploratory research work on the arts and cultural heritage of Meghalaya by collecting relevant data on this subject. A provision of Rs.0.76 lakhs has been suggested for this scheme.

7.2.12. With the progress of the implementation of developmental activities during the fifth plan, audio-visual publicity in districts and subdivisions will be intensified. An amount of Rs.3.84 lakhs is proposed for this scheme.

7.2.13. The schemes envisaged for implementation during the Fifth Plan involve an outlay of Rs.24.25 lakhs. The attached statement indicates the schematic outlay for the Fifth Plan.

**Information and Publicity—Outlay and expenditure**

(Rs. in lakhs)

Serial No.	Schemes	Fourth Plan				Fifth Plan Outlays proposed					
		Approved 4th Plan outlay	Approved outlay for 1973-74	Anticipated expenditure 1973-74	Anticipated expenditure during the 4th Plan	Total	Capital outlay	Foreign exchange	Annual Plan for 1974-75		
									Total	Capital outlay	Foreign exchange
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	(i) Publication of Hills Bulletin at the District level ...	0.90	0.22	0.22	0.90	0.98	...	...	0.19	...	...
	(ii) Purchase of vehicle ...	0.79	0.02	0.02	0.79	2.75	...	...	0.55	...	...
	(iii) Exhibition ...	0.60	0.26	0.26	0.60	0.88	...	...	0.17	...	...
	(iv) Rural Broadcasting system and Radio Rural Forum	1.03	0.08	0.09	1.03	1.12	...	...	0.22	...	...
	(v) Publicity through Cultural media ...	1.12	0.28	0.28	1.12	0.76	...	...	0.15	...	...
	(vi) Printed Publicity (Bringing out Publicity literature and distribution upto village level).	3.40	0.96	0.96	3.40	7.94	...	...	1.59	...	...
	(vii) Maintenance and extension of fixed loudspeaker system.	0.53	0.22	0.22	0.53	0.75	...	...	0.15	...	...
	(viii) Films (Audio Visual Publicity) ...	3.02	0.95	0.95	3.02	3.63	...	...	0.72	...	...
	(ix) Establishment of 2 (two) Subdivisional Information and Public Relations Offices at Nongstoin and Simsangiri.	...	...	1.95	1.95	3.84	...	...	0.76	...	...
	(x) Constructions of Office Buildings ...	...	...	...	...	1.60	...	...	...	...	...
<b>TOTAL</b>		<b>12.00</b>	<b>3.00</b>	<b>4.95</b>	<b>12.34</b>	<b>24.25</b>	<b>...</b>	<b>...</b>	<b>4.50</b>	<b>...</b>	<b>...</b>

### 7.3. Development of Government Press

7.3.1. With the creation of Meghalaya as a full-fledged State, the Government Press at Shillong has come over to Meghalaya. A scheme for development of the Assam Government Presses was taken up during the Fourth Plan period. This however, was confined only to the expansion of the branch of the Government Press at Gauhati. It is essential to take up modernisation of both buildings and machineries of the Press at Shillong during the Fifth Plan period.

7.3.2. The building for a printing press is required to conform to the specifications as in the case of a factory. It is, therefore, proposed to construct new buildings according to specification at the existing site in a phased manner. An amount of Rs.7.50 lakhs is proposed for this purpose for the Fifth Plan period.

7.3.3. The existing machinery of the printing press comprises mostly of old and out-dated units requiring replacement by new and modern printing machinery and equipments. The approximate financial implication for the purchase of new machinery is Rs. 20.00 lakhs.

7.3.4. The absence of delivery van for quick distribution of printed papers, publications, etc., to various offices in Shillong is keenly felt now. It is, therefore, proposed to purchase a delivery van for smooth and timely distribution of various printed materials from the press. This would reduce accumulation of printed materials in the press. An amount of Rs.0.80 lakhs is proposed for purchase of the vehicle and for its maintenance during the Plan period.

7.3.5. The programme for development and modernisation of the Government Press envisages an outlay of Rs.28.30 lakhs for the Fifth Plan period and Rs.8.00 lakhs for the year 1974-75. The details are indicated in the statement appended.

State: Meghalaya

## DRAFT FIFTH FIVE YEAR PLAN

## Programme wise Outlay and Expenditure

Serial No.	Programme	Fourth Plan approved outlay.	Approved outlay for 1973-74.	Likely expenditure during 1973-74.	Likely expenditure during Fourth Plan.	Fifth Plan Total outlay	Annual Plan, 1974-75 outlay
DEVELOPMENT OF THE GOVERNMENT PRESS, MEGHALAYA.							
1	Purchase of modern Printing and Graphic Arts Machinery.	N	I	L		20.00	5.00
2	Purchase of one delivery Van ...	N	I	L		0.80	0.50
3	Construction of new building for the Government Press at Shillong.	N	I	L		7.50	2.50
GRAND TOTAL..		N	I	L		28.30	8.00

## Rural Works Programmes

1. Self-help schemes have proved to be successful in enlisting people's participation and contribution towards building up community assets in rural areas such as intra and inter-village paths and roads, small bridges and culverts, small rural water supply schemes, playgrounds, etc. A large number of such works left over by the Community Development Programme could be followed up under self-help programme.

2. During the Fourth Plan, the allocation was Rs. 30 lakhs. The expenditure during the plan period is expected to be Rs. 27 lakhs. During 1971-72, the amount spent was largely on schemes, continuing or left incomplete under the Community Development Programme. During 1972-73, a large number of schemes that could be taken up have been identified. But due to limitation of funds, only 98 schemes could be taken up within the allocation of Rs. 7 lakhs. During 1973-74, schemes are being implemented with an outlay of Rs. 8 lakhs.

3. The process of identifying schemes that could be taken up on self-help basis is continuing. On the basis of identification so far made, an amount of Rs. 70 lakhs would be required as Government share in the self-help programme in the Fifth Plan. The requirement during 1974-75 works out at Rs. 10 lakhs.

(Rs. in lakhs)

	4th Plan		4th Plan Anticipated	5th Plan		1974-75	
	Outlay	1973-74		Total	Capital	Total	Capital
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Minor Bridges and culverts.				23.00	...	4.00	...
2. Rural Roads and paths.	30.00	8.00	27.00	35.00	...	5.00	...
3. Playgrounds ...				6.00	...	1.00	...
4. Other Schemes ...				6.00	...	1.00	...
<b>Total ...</b>	<b>30.00</b>	<b>8.00</b>	<b>27.00</b>	<b>70.00</b>	<b>...</b>	<b>10.00</b>	<b>..</b>

4. The district-wise break-up of the 5th Plan outlay is as follows :—

					(Rs. in lakhs)				
					Khasi	Jaintia	Garó	Total	
1. Minor Bridges and culverts	...			...	15.00	2.00	6.00	23.00	
2. Rural Roads and Paths	...			...	14.00	7.00	14.00	35.00	
3. Playgrounds	...	...		...	2.00	2.00	2.00	6.00	
Other schemes	...	...		...	2.00	2.00	2.00	6.00	
Total					..	33.00	13.00	24.00	70.00



## 7.7. DISTRICT COUNCILS

7.7.1. The allocation in the Fourth Plan for grant-in-aid to the District Councils to implement development schemes drawn up by them was Rs.125 lakhs. The expenditure during the the plan period is anticipated to be Rs.125 lakhs. The allocation during 1973-74 is Rs.25.

7.7.2. The Fifth Plan of the State includes the Scheme for assistance to the District Councils to enable increased development effort by them in the Fifth Plan. These councils are given the discretion to prepare their own schemes. While preparing such schemes, these councils are required to include schemes which would subserve the wider national objectives. The councils are also expected to undertake revenue earning schemes, like improvement of rural markets and opening of new markets besides schemes for creation of community assets like roads, minor bridges and paths, small water supply schemes, etc. For the Fifth Plan an amount of Rs.240 lakhs is proposed as below—

		(Rs. in lakhs)			
		Khasi	Garo	Jaintia	Total
1. Water Supply	...	33·00	18·00	6·00	57·00
2. Rural Roads, etc.	...	21·00	12·00	6·00	39·00
3. Self-help schemes	...	12·00	6·00	6·00	24·00
4. Model villages	...	12·00	30·00	8·00	50·00
5. Markets	... ..	25·40	17·60	7·00	50·00
6. Buildings	... ..	7 50	7·50	5·00	20·00
<b>Total ...</b>		<b>110·90</b>	<b>91·10</b>	<b>38·00</b>	<b>240·00</b>

7.7.3. The requirement for 1974-75 is as below—

(Rs. in lakhs)

	Khasi	Garó	Jainia	Total
1. Water Supply ...	5.50	3.00	1.00	9.50
2. Rural Roads, etc. ...	3.50	2.50	1.00	6.50
3. Self-help ...	2.00	1.00	1.00	4.00
4. Model villages ...	2.00	5.00	1.40	8.40
5. Markets ...	2.92	2.68	1.00	7.60
6. Buildings ...	1.50	1.50	1.00	4.00
<b>Total ...</b>	<b>18.42</b>	<b>15.38</b>	<b>6.40</b>	<b>40.00</b>

7.7.4. These may be summarised as below—

(Rs. in lakhs)

	4th Plan	1973-74	Fifth Plan Total	Capital	1974-75 Total	Capital
1. Water Supply ...			57.00	...	9.50	...
2. Rural Roads ...			39.00	...	6.50	...
3. Self help ...	100.00	20.00	24.00	..	4.00	..
4. Model villages...			50.00	...	8.40	...
5. Markets ...			50.00	50.00	7.60	7.60
6. Building ...	25.00	5.00	20.00	20.00	4.00	4.00
<b>Total ...</b>	<b>125.00</b>	<b>25.00</b>	<b>240.00</b>	<b>70.00</b>	<b>40.00</b>	<b>11.60</b>

### 7.8. AID TO LOCAL BODIES

7.8.1 "Aid to Local Bodies" was a regular feature in the State Plan of composite Assam State. Assistance is given to the Municipalities and Town Committees for ensuring the minimum standard of civic amenities to the growing urban population.

7.8.2 In Meghalaya there was one municipal town covered under the scheme of assistance of the composite Assam State Plan. Like in all municipalities in this region, the civic facilities in Shillong also were never good. But thanks to the natural advantages of altitude, these facilities were also never so bad. Over the past few years, however, things have deteriorated due to the shrinkage of funds of the Municipality. The question of funds for the need to maintain the civic standards in Shillong was taken up along with the question of transfer of State level schemes from Assam to Meghalaya when it attained the full Statehood. Meghalaya Government has not been able to assist the municipality in this direction as its Fourth Plan allocation was already tied to continuing schemes and other schemes which had become committed within the Fourth Plan ceiling. In order to restore the standards of amenities in Shillong Municipality and to further improve them to be in line with the need of a progressive society, the requirement of funds in the Fifth Plan works out at Rs. 30 lakhs. This is on account of extension and improvement of water supply distribution and improvement of sanitation and roads and drains in the town. It is proposed that assistance in the form of loans and grants would be given to the municipality to make up the gap between the revenues and the expenditures required to provide the improved civic facilities.

7.8.3 There are also at present two town committees at Tura, the headquarters of the Garo Hills and Jowai, the headquarters of the Jaintia Hills. It is proposed to upgrade these town committees into Municipal Boards during the Fifth Plan. It is also proposed to constitute town committees in the two subdivisional headquarters of Nongstoin in the Khasi Hills and Simsangiri in the Garo Hills as well for Mawlai and Nongthymmai, the two satellite townships of the State Capital. In the later stages of the Fifth Plan, other growing towns would also be brought under the scheme. The outlay required is estimated at Rs. 25 lakhs.

7.8.4. The total amount required in the Fifth Plan is as below—

	4th Plan	5th Plan Total	Capital	1974-75 Total	Capital
	(1)	(2)	(3)	(4)	(5)
1. Shillong Municipality—					
(a) Water Supply distribution	...	15.00	15.00	2.00	2.00
(b) Sanitation	...	7.00	3.50	1.40	0.70
(c) Roads and drains, etc.	...	8.00	...	1.80	...
<b>Total—1</b>	...	<b>30.00</b>	<b>18.50</b>	<b>5.20</b>	<b>2.70</b>
2. Satellite townships (2 Nos.) ...					
	...	10.00	5.00	1.00	...
3. Tura Municipality (Proposed)					
	...	7.50	2.00	1.50	..
4. Jowai „ „					
	...	5.00	1.00	1.00	...
5. Subdivisional headquarter town committees.					
	...	5.00	...	1.00	...
9. Other growing towns					
	...	3.00	...	...	...
<b>Grand total</b>	...	<b>60.50</b>	<b>26.50</b>	<b>9.70</b>	<b>2.70</b>

7.8.5. The outlay in the different Districts is as below—

	Fifth Plan	1974-75
	(1)	(2)
1. Khasi Hills	43.50	6.20
2. Garo Hills	11.00	2.50
3. Jaintia Hills	6.00	1.00
	<b>60.50</b>	<b>9.70</b>