

GOVERNMENT OF ASSAM



THIRD
FIVE YEAR PLAN
ASSAM

VOLUME I

338.954A4(III)
A844T

1961-66

PLANNING AND DEVELOPMENT DEPARTMENT

P. C. L.

FOREWORD

The problem of planning in Assam suffers from several limitations which are not so pronounced in the other parts of the country. Situated in the eastern-most part of the country and surrounded almost entirely by foreign States, the State occupies a strategic position in the political map of the country. Except for the railway link, the State is virtually isolated from the rest of the Union. Within the State, the plains districts are subjected to recurrent floods, while in the hill districts, which occupy about half the total area of the State, jhuming is wide-spread and these districts are deficit in food production. The partition of the country has further hard-hit the economy of the autonomous districts bordering on Pakistan. Despite vast hydro-power potential, the *per capita* consumption of electricity is the lowest in India. As a result no industrialisation worth the name has so far taken place in the State and economic growth of the State has lagged behind the other States of India. The rate of increase in population during the last decade was 3.4 per cent per annum. If the present population rate continues Assam's population will be 1.38 crores in 1966 and 1.58 crores in 1971. To provide balanced diet to this population production of food items must increase at a rate more than the population growth. The relatively slow rate of growth of income, coupled with fast rate of population growth, has resulted in a decline in its *per capita* income, while the cost of living is very high.

While the First Plan was a modest effort in the process of planned development in the State and the Second Plan, by and large, was a continuation of developmental activities initiated under the First Plan, the Third Plan is expected to pave the way for a rapid development of the State in the years to come.

Since the population is growing at a fast rate, land resources are fixed and other resources like water resources, mineral resources, industrial resources, etc., are yet to be exploited, consistent with the needs of the State and potentialities offered by these resources, we have to think of our developmental activities in a longer perspective, covering a period of ten to twenty years hence. This will call for energetic and sustained efforts and drive by the administrative machinery no doubt. But Governmental efforts must be supported by public co-operation in order that a general pattern of economic and

social development, based on possibilities of different areas and harmonising them into an integrated endeavour of development, could be advanced.

In these measures democratic institutions like the Panchayats will have to provide the initiative and local leadership. In the field of administration, officers entrusted with planning will have to bear the strain to their utmost, so that the task set forth for them are adequately realised and public confidence is created in them. These are vital issues and must be fulfilled in an objective manner. Only then can the State march forward in its endeavour to self-sustaining and self-generating economic growth.

I was associated in the finalisation of the State Third Five-Year Plan and the two publications (Volumes I and II) set out the objectives, techniques, priorities, schemes, etc., of the Third Plan, which have been agreed to by the Planning Commission. These publications are intended to give some idea of the projections of the first phase in the long range of planning in the coming years, and it is expected that the Third Plan period will set in motion a process of balanced and accelerated development of the State in the subsequent plans,

A. N. KIDWAI,

Chief Secretary to the Government
of Assam.

PREFACE

Work on the preparation of the State Third Five-Year Plan commenced during 1958-59 when at the instance of the Planning Commission the State Government constituted a number of working groups in respect of various developmental sectors for the preparation of preliminary proposals for the State Third Plan. A State Planning Advisory Board was also constituted at the State level to assist the State Government in the finalisation of the State Third Plan. The State Planning Advisory Board, consists of State Ministers, M. Ps., M. L. As., other non-official members and some official members. The State Planning Advisory Board also constituted a number of sub-committees to scrutinise the departmental plans more thoroughly. These sub-committees, after examining the schemes under each sector of development, recommended that the size of the State Third Plan should be of the order of Rs.254 crores. Considering, however, the other limiting factors, the State Government decided to submit to the Planning Commission a State Plan, involving a total outlay of Rs.150 crores. The Planning Commission have approved a total outlay of Rs.120 crores under the State sector. This outlay does not include the share of the Central Government on account of Centrally sponsored schemes and programmes. The State Plan accounts for only the State share of expenditure in respect of these schemes. In addition, about Rs.80 crores are likely to be spent by the Government of India during the Third Plan period on account of projects included in the Central Plans of the Ministries. It has also been estimated that, in the private sector, about Rs.56 crores or so may be spent in the State during the period.

Beginning with a very modest outlay of Rs.20.5 crores during the First Plan period, expenditure against State Plan provision during the Second Plan period was of the order of Rs.54.5 crores. Compared to the Plan expenditure under the First and Second Plans, allocations under the Third Plan is substantial and it is expected that the Third Plan will be able not only to accelerate the tempo of development generated during the last ten years but will also create a solid base for economic growth of the State under the subsequent plans.

In making the allocations under the different sectors such factors as the State's population, previous performance, needs under the different sectors and likely contribution to major national targets, etc., have been duly taken into consideration. The allocations are, however, not rigid and are of the nature of

projections. Annual Plans will be prepared from year to year and in doing so allocations will be made under the different sectors of development to see that no sector suffers for limitation of funds alone. Besides adjustment of provisions as between different sectors and schemes will be made whenever required making allowance for flexible nature of the Plan.

The State's Third Plan is presented in two separate volumes. The first volume is devoted to general principles and the rationale of the plan proposals. The second volume relates to the schematic programmes under the different sectors and contains particulars of the individual schemes under the various heads of development in the Plan. The appendices contain four statements furnishing information about certain selected economic indicators, outlays on First Plan and Second Plan and tentative yearly phasing of allocations for the Third Plan respectively.

These two volumes are, of course, the result of the thought given by my predecessors Shri A. N. Kidwai, I. C. S., Chief Secretary, and Shri D. R. Kohli, I. C. S., who is now the Director of Indian Aid Mission, Nepal and I should like to express my thanks to them.

S. C. KAGTI,

Development Commissioner, Assam.

CONTENTS

		Pages
Part I		
Chapter I—Physical features—economic background ...		1—10
Chapter II—Natural resources		11—18
Chapter III—A decade of planning in Assam		19—26
Chapter IV—Approach to the Third Plan, Assam ..		27—45
Chapter V—Income aspect of the Third Plan, Assam ...		46—49
Chapter VI—Employment aspect of the Third Plan, Assam ...		50—57
Part II		
Chapter VII—Programmes of development		58—159
1. Agriculture		58—62
2. Animal Husbandry and Milk Supply		62—66
3. Forests		67—69
4. Fisheries		70—71
5. Co-operation		71—73
6. Community Development		73—77
7. Panchayat		77—79
8. Medium Irrigation and Flood Control		79—83
9. Power		84—86
10. Large and Medium Industries		87—89
11. Village and Small Industries		89—97
12. Roads and Bridges		97—100
13. Road Transport		101
14. Other Transport		102—103
15. Tourism		103
16. Education (General)		104—113

	Pages
17. Education (Technical)	114—116
18. Health	116—125
19. Housing	126—128
20. Town and Country Planning	128—129
21. Welfare of Backward Classes	129—139
22. Social Welfare	139—142
23. Labour Welfare	142—145
24. Statistics	145
25. Publicity	145
26. Aid to Local Bodies	146
27. Appendices	147—159
(i) Selected indicators	147—149
(ii) Abstract of expenditure during the First Plan period.	150—152
(iii) Abstract of expenditure during the Second Plan period.	153—155
(iv) Tentative phasing of expenditure for the Third Plan period.	156—159

CHAPTER I

Physical features—economic background

Location.—Assam is a border State, lying in the easternmost part of the country and surrounded by Bhutan and Tibet on the north, China proper and Burma on the east, Burma on the south and Pakistan on the west. Indeed, Assam is unique among the Indian States being virtually surrounded by foreign States and, therefore, strategically, occupying a position of very great importance in the political map of the country. Except for the Assam Rail Link, which was constructed in record time, and which connects Assam with the rest of the country, the State is isolated from the rest of the union.

Natural Region.—The State has two main natural regions:—

(a) Assam hills, comprising of the four autonomous hill districts of Garo Hills, United Khasi and Jaintia Hills, Mizo Hills and the United Mikir and North Cachar Hills,

and

(b) Assam plains, comprising the seven districts of Cachar, Goalpara, Kamrup, Darrang, Nowgong, Sibsagar and Lakhimpur.

Area.—The total area of the State is 47,089 square miles, including certain portions of Mishmi Hills, Abor Hills, Tirap Frontier Tract and Balipara Frontier Tract which have since been brought under the State administration and are known as the “transferred areas”. The plains districts cover about 23·0 thousand square miles (49 per cent), while 22·7 thousand square miles (48·3 per cent) are in the autonomous hills districts and 1·3 thousand (2·7 per cent) square miles are in the transferred areas.

The Brahmaputra is the major river of the State. Except for Cachar all other plains districts are traversed by this river, entering the State in the Lakhimpur District in the east and flowing out the State through the district of Goalpara in the west. Owing to the rapidity of its current, the river, by and large, does not exercise its fertilising influence in its upper reaches. Barak is the other major river flowing through the district of Cachar. These two rivers—Brahmaputra and Barak—have 35 and 9 tributaries respectively, each of which

has considerable hill catchment. These rivers spillover their banks during the monsoon at frequent intervals and inundate large areas with all their consequences.

Climate.—Climatically, Assam knows mainly two seasons: the rainy season and the cold season. The monsoons usually start in June and last until the end of October. Due to the peculiar geographical position, rainfall in Assam is usually heavy. The annual rainfall ranges from 70" in the plains to 250" or more in the north-eastern hills. Cherrapunjee in the Southern face of the Khasi and Jaintia Hills has as high a precipitation as 400" to 600". The Kopili Valley, lying between the Khasi and Jaintia Hills and Mikir Hills, in the Nowgong district, is the only area where the average rainfall is 43" and, therefore, may be called the driest area in the State. The rainfall rapidly diminishes after October and December is usually the driest period of the year throughout the State.

The great earthquake of 1950 caused extensive land-slides in the north-eastern mountains and had up-set the river regimes and topography of the plains districts. Floods have become more pronounced after the 1950 earthquake. Even after the monsoon many depressions in the plains areas remain water-logged for varying periods, depending upon the depth of the depressions.

Population.—The total population of the State has been placed, according to the figures of 1961 census, at 1,18,60,059 against 88,30,732 in 1951.

The tables below indicates the population trends in Assam and in India :

TABLE I

Population in millions

			1951	1961	Percentage increase
				(provisional)	1951-61
India	...	...	359	436	21·49
Assam	...	...	8·8	11·9	34·30

TABLE 2

Rate per thousand

	1956-61	Assam
	India	
Birth rate	40·7	44·7
Death rate	21·6	19·5
Growth rate	19·1	25·2

This high increase in the State's population is mainly due to natural increase, immigration and under-enumeration in the previous censuses. Natural increase accounts for about 20 per cent due to the improved health facilities and excess of births over deaths.

The number of literate persons has risen from about 16·01 lakhs to 30·55 lakhs during the decade. While the percentage of literacy for the State as a whole is about 25·76 per cent of the total population, in the plains districts the percentage of literacy is about 25·61 per cent against 18·49 per cent in 1951. In the hill districts the corresponding figures are 26·91 per cent and 16·29 per cent respectively. The most literate district in the State is the Mizo Hills where 43·66 per cent are literate. The least literate district is the Garo Hills where only 16·26 per cent of the population are literate. In the plains districts, the percentage of literacy in Sibsagar is the highest (32·84 per cent) while Goalpara accounts for the lowest (19·96 per cent).

The rate of growth of population in the State, during the last decade, was about 34·3 per cent, against the all-India average of 21·49 per cent.

The indications are that—

- (a) the size of the labour force has been increasing at a faster rate,
- (b) pressure on land has been more intense,
- (c) the ranks of the educated unemployed, seeking white-collar jobs have been swelling,
- (d) and, above all, the food problems have assumed a position of far reaching implications.

During the last decade, about 8·89 lakhs of the State's population lived in the towns and 109·71 lakhs lived in villages ; corresponding figures according to the 1951 census were 4·10 lakhs and 84·20 lakhs respectively. There is thus a tendency for the rural people to move towards the urban areas. Pressure of population on the land, rapid expansion of educational facilities, desire for white-collar jobs, beginning of industrialisation, etc., are the main attributable factors. This has led to acute problem of housing shortages, inadequacy of sanitation and water supply and the like. To tackle these problems, to the extent feasible consistent with available resources both financial and human, provisions have been made in the State Third Plan for starting town planning, housing, sanitation and water supply.

Soil and Vegetation—Acidity is the general characteristic of Assam's soil. Soils on the hills are the most acidic and new alluvial soils representing the lands on the river banks are less acidic. These are often neutral and even alkaline. In the upper Brahmaputra valley where tea is grown, the phosphoric content is good, but low in the lower valley. Soils of the Barak valley are not much different from those of the Brahmaputra valley except for some local variations. The soil of the hill districts contains a high proportion of nitrogen and organic matter. Acidic alluvial soils are suitable for cultivation of tea. Heavy clays, with a high percentage of nitrogen in low-land areas give a good return of rice, while sandy loams above inundation level give a good yield of jute. In the hills fruit trees respond quickly to heavy clays which have a high percentage of organic matter. It is proposed to set up, under the central sector, a fertiliser plant by utilising gas from Naharkatiya oil wells, to produce 50,000 tons each of amonium sulphate and urea. Both of these fertilisers are good for paddy which is the principal crop in Assam. But amonium sulphate being an acid fertiliser, is likely to have bad affects on the soil by increasing the acidity when it is continuously and indiscriminately applied on Assam soils. Alkali fertilisers like sodium nitrate or nitrochalk and neutral urea, therefore, are better suited to local conditions. Acid fertilisers like amomiun sulphate will have to be supplemented with organic matter to suit the Assam soil. Agriculture department will have to pay more attention to demonstrate to the cultivators about use of fertilisers and adoption of proper cropping pattern in the different areas. It will also be necessary to establish soil testing laboratories in the districts to determine proper relationship between soil, fertiliser and seed.

Density of population—The population is very unevenly distributed as between the plains and the hills. According to the 1951 census the four autonomous hill districts, occupying nearly half the total area of the State contained only about 10 p. c. of the total population while the seven districts in the plains, with slightly more than half the total area of the State, contained 90 p. c. of the total population. As against the mean density of 43 persons per square mile in the hill districts, density of population in the plains districts was as high as 339 per square mile. Even in the plains the density varied. It was 409 persons per square mile in Nowgong district and 265 persons per square mile in Lakhimpur. The most sparsely populated district was Mizo hills with a density of 24 persons per square mile, although it is the biggest district in the state. Assam shows a much higher density of population in 1961 (252 persons) than 1951 (188 persons). The main concentration of population in the state is in the Brahmaputra valley. The distribution of population between the hills and plains is still very uneven. In the plains areas the density in 1961 is 432 persons as against 58 persons per square mile in the hill areas.

The two divisions and their economy.—The State has two divisions (Plains Division and Hills Division), 11 districts, 27 towns and 24,815 villages. The two divisions constitute two types of inter dependent economy. The economy of the valley is dominated by the plantation, oil refining, factory industry and jute, paddy, oil seed cultivation, etc. In the hills on the other hand 'jhum' cultivation is widespread.

The hill districts are deficit in food production but are surplus in commercial crops such as cotton, betelnuts, fruits, etc. The partition of the country dislocated the economy of the tribal people bordering on Pakistan. Ceaseless efforts have been made since 1947 to rehabilitate the economy of these areas. For this purpose besides implementation of various plan schemes a special programme of border relief is also being carried out. In view of the vastness of the problems involved, Governmental efforts, if supplemented by sustained public support and co-operation in an increasing measure, will only be able to finally solve the problems.

Occupational distribution.—The occupational distribu-

tion of population of the State, according to the census of 1951 was as follows:—

(Figures in lakhs)

(1)	Population%	Percentage to total population	All India Percentage
	(2)	(3)	(4)
A.—Agricultural Occupation	64·32	72·8	69·8
1. Cultivators of land wholly or mainly owned	50·38	57·0	46·9
2. Cultivators of land wholly or mainly unowned.	11·56	13·1	8·9
3. Cultivating labourers	1·56	1·8	12·5
4. Non-cultivating owners of land and rent receivers.	0·82	0·9	1·5
B. Non-agricultural occupations	23·98	27·2	30·2
1. Production other than cultivation	13·25	15·0	10·6
2. Commerce and Transport	4·66	5·3	6·0
3. Other Services	6·07	6·9	12·0
Assam Total	88·30	100	100

Agriculture is by far the most important means of livelihood, supporting about 3/4th (72·8 per cent) of the total population against the All-India average of 69·8, non-agricultural occupations accounting for 27·2 per cent of the total population against All-India average of 30·2 per cent. A noteworthy feature of the agricultural classes is the predominance of the "Owner cultivators", (50·38 lakhs against the total agricultural population of 64·32 lakhs), they account for 57 per cent of the total population against the All-India average of 46·9, per cent and 78 per cent of the total agricultural population against the All-India average of 67 per cent. Consequently, the proportion of cultivating labourers to the total agricultural population is much smaller (about 2·4 per cent) than the average for the country as a whole (18 per cent).

Although Assam's average for non-agricultural occupations (27·2 per cent) of the total population is lower than the corresponding figure for India as a whole (30·2 per cent), Assam's average for "production other than cultivation" (15 per cent) is higher than the corresponding All-India ratio (10·6 per cent). This is due to the large population engaged in plantation industries. (In 1958, average daily number of workers employed in tea plantations in Assam was 5·23 lakhs).

Occupational distribution is not uniform over the hills and the plains, the percentage of agricultural

classes to total population in the Plains being 71·5 as against 83·0 in the Hills. Assam hills, thus, depend far more on agriculture than the plains. The same disproportion between plains and hills is also noticeable in respect of non-agricultural pursuits: 28·5 per cent of the population subsist on non-agricultural pursuits in the plains as against 15 per cent in the hills.

In view of the pattern of investment and development under the first two plans there could be no material change in the pattern of means of livelihood and that agriculture and plantation continue to be the main-stay of the State's population.

Movement of State National Income.—Over the period of the first ten years of planning in Assam, the State National Income has been estimated to have risen by 34 per cent from Rs. 224 crores in 1950-51 to Rs. 299·7 crores in 1960-61 in terms of 1948-49 prices. The corresponding figures in terms of 1960-61 prices are Rs. 266 crores in 1950-51 and Rs. 358 crores in 1960-61. Although judged by the increase in the size of the State's National Income, the response of State's economy is not discouraging, due to rapid growth of State's population, the increase in the per capita income was not as high as had been earlier estimated. Taking the recent figures of State's population into consideration the increase in the State's per capita income if at all was negligible. With the implementation of the schemes and projects during the Third Plan period, the per capita income in Assam in terms of 1948-49 prices is expected to go up by 20 per cent from Rs. 257 in 1960-61 to Rs. 308 by 1965-66. In terms of 1960-61 prices, per capita income in Assam would rise from Rs. 307 in 1960-61 to Rs. 367 in 1965-66 against the all-India average of Rs. 385.

The tables below indicate the growth of total and per capita incomes for India and Assam in the Second Plan period and the expected growth in the next five years:

TABLE I

Total income in crores of rupees at 1948-49 prices.

					1955-56	1960-61	1965-66
India	...	...	...	...	10,480	12,690	16,418
Assam	...	...	...	...	267·9	299·7	403·9

TABLE II

Rate of growth of total income.						1956-61	1961-66
India	...	...	...	...	...	16·5	53
Assam	...	...	...	...	...	11·9	36·7

TABLE III

Per capita income in rupees at 1948-49 prices.

					1955-66	1960-61	1965-66
India	...	...	...	...	268	293	333
Assam	...	...	...	...	268	257	308

TABLE IV

Rate of growth of per capita income.						1956-61	1961-66
India	...	...	..	...	...	9·3	13·7
Assam	...	..	...	...	...	(—)4·1	19·8

Employment—In the sphere of employment, the unemployment problem is steadily growing in the State. The number of unemployed on the live registers of the employment exchanges in Assam, over the past one year or so, varied between 27,000 and 30,000. According to a survey of urban employment and unemployment conducted in 1959 the number of unemployed persons is estimated to be around ten thousands. The bulk of the unemployed are under-matrices, having little or no technical skill, seeking white-collar jobs or jobs requiring little technical skill. On the other hand, the employment market service in the State has been repeatedly reporting considerable shortage of technical personnel. To meet the requirements of technical personnel, various provisions have been made under the different heads of development for turning out the required trained personnel.

In the rural areas, the problem is largely in the form of under-employment and disguised unemployment. According to the surveys conducted in the recent past, the number of rural persons available for work but actually not seeking works for one reason or another was about 2·5 lakhs. Against this, the number reporting not able to find work was about 1·1 lakhs. The bulk of the unemployed belongs to the tea garden areas where in 1958 there were about 66,000 such persons.

The current unemployment position in the State may be of the order of 1·2 lakh persons. During the Third Plan period, another 4·6 lakh persons will be entering the labour force. The number of persons requiring employment during the Third Plan period will be about 5·8 lakhs. Against this, with the programmes now envisaged under the Third Plan it has been estimated that the Third Plan may provide about 3·9 lakh jobs, leaving a back-log of about 1·9 lakhs. A part of this unemployed is expected to be absorbed in the execution of local works programmes for which a provision of Rs.150 crores has been made under the National Third Plan. Out of this amount the State is likely to receive about Rs. 7 crores over and above the State Third Plan allocation. A scheme of pilot project, providing for supplementary works programme has already been put under operation during 1961-62, entailing a total provision of Rs.2 lakhs for each project. The pilot projects cover schemes for irrigation, afforestation, soil conservation, drainage, land reclamation and improvement of communications. In Assam, irrigation and similar schemes have been taken up to start with. For 1961-62, three pilot projects were allotted to the State and for 1962-63, ten such projects have been allotted. The object of the pilot projects is to gain experience in organising works programmes which will make some impact on the problem of unemployment and under-employment. The public co-operation received in the execution of the pilot projects is one of the finest in the State and it is expected that it will be possible to extend the programme on a mass scale to other areas.

Price situation.—The price situation in Assam in the context of the all-India phenomenon of rising prices both in regard to food and non-food articles continues to cause anxiety. The causes of price rises are of course many, but as far as Assam is concerned, perhaps a major factor has been the rapid increase in the State's population compared to the State's virtually stagnant food production. The index number of wholesale prices in Assam (base 1953—100) was 104 in 1955, in 1960 it stood at 131. During 1961 also the prices in Assam have shown a very strong tendency to advance further. From January 1961 the index of wholesale price has been continuously rising from 132 to reach the level of 139 in September, 1961.

The average wholesale price of rice of coarse variety rose from Rs.16 in 1955 to Rs.21 in 1956 and to Rs.24·50 in 1957 and reached Rs.25·75 in September, 1958. Various measures at all-India and State levels, particularly the scheme of State trading in foodgrains in Assam, have been

adopted. The index of wholesale price (base 1953—100) of the non-food group rose from 127 in January, 1960 to 147 in December, 1960. Thereafter, the index slightly receded to 146 and 143 in January and February, 1961 respectively. From March 1961 it has resumed an upward move.

The high prices prevailing in the State has resulted in high cost of living. Compared to 1955 the cost of living of the general working class in the three urban centres in Assam, namely, Gauhati, Silchar and Tinsukia, was 17 to 24 per cent higher in 1960. The table below indicates consumer price index numbers for Gauhati, Silchar and Tinsukia compared to the price trends in the rural areas from 1950 to April 1962.

Consumer price Index Numbers

Year	General working class Base (1949=100)				Rural Population (Base 1944=100)
	Gauhati	Silchar	Tinsukia	General for Assam	
1950 ..	98	106	104	101	
1951 ..	110	115	113	112 (Sept. to Dec.)	184.8
1952 ..	111	102	116	113	(Annual Average). 157.4
1953 ..	102	95	108	108	do 145.7
1954 ..	95	93	103	99	do 143.6
1955 ..	87	88	101	95	do 141.6
1956 ..	96	99	110	104	do 144.0
1957 ..	103	104	118	111	do 151.0
1958 ..	103	107	118	111	do 157.3
1959 ..	98	109	117	109	do 155.4
1960 ...	102	109	118	111	do 158.0
1961 ...	103	104	114	109	do 162.7
1962—					
January ..	109	110	116	113	.. 162.1
February ..	109	110	116	113	.. 163.4
March ..	109	110	116	113	.. 165.0
April (p) ..	111	111	118	115	.. 169.0

(P)=Provisional.

In order that the unusual fluctuations are arrested and a reasonable standard of consumption could be assured to the masses no stone should be left unturned by the development departments to maximise production.

CHAPTER II

Natural Resources

Land utilisation.—The present pattern of land utilisation in the State under the various categories is somewhat as follows :—

		(000 acres)		
		1955-56	1960-61	1965-66
(1)		(2)	(3)	(4)
1.	Geographical	3,01,71	3,01,71	3,01,71
2.	Forest	1,12,39	1,10,00	1,10,17
3.	Miscellaneous trees, crops and groves ...	7,18	8,10	9,00
4.	Permanent pastures and grazing lands ...	6,83	6,80	7,20
5.	Culturable waste	1,93	1,60	1,10
6.	Not available for cultivation	1,10,33	1,11,69	1,11,04
7.	Fallow—			
	(a) Current	4,06	4,02	3,20
	(b) Other	5,65	5,50	4,00
	Total	9,71	9,52	7,20
8.	Net area sown—			
	(a) Irrigated	13,18	14,50	17,65
	(b) Unirrigated	39,56	39,50	38,35
	Total	52,74	54,00	56,00
9.	Cultivated area (8 plus 7(a))	56,80	58,02	59,20
10.	Gross irrigated area (all crops)	13,18	19,67	24,17
11.	Gross area sown	61,93	62,50	67,00
12.	Area sown more than once	9,19	8,50	11,00

In view of increased population of the State all round efforts will have to be made to see that all cultivable areas are brought under the plough. In this respect the village panchayats and other voluntary organisations are expected to enthuse the people and provide the local leadership.

Minerals.—According to the investigations made by the Geological Survey of India, the mineral occurrences in Assam are coal, petroleum, sillimanite, lime-stone, asbestos, corundum, Fuller's earth, fire-clay, white-clay, kaolin, (China-clay) gem-stone, gypsum, and graphite. Of these, first four are being commercially exploited now. It has been estimated that the State's mineral output, excluding petroleum, was about, 10 per cent of India's total output. Of these coal and petroleum are the two by far the most important minerals of the State.

Coal.—There is tremendous reserve of coal in Assam of which only some portions are now being exploited by the Assam Railway and Trading Company Limited at Margherita and by the tribal people of the United Khasi and Jaintia Hills in the Cherrapunjee area and by private company in Joypur, Dilli and Koilajan areas. While the exploitation of coal at Margherita is being done by comparatively modern methods, the exploitation in the United Khasi and Jaintia Hills and other areas, is done by various methods including primitive methods. According to an earlier estimate, there are reserves of 1,933 million tons of coal in the State, distributed as under :—

				Thousand tons
1. Hidden coal fields of Garo Hills	...	...	...	1,60,000
2. Darrangiri coal field	...	...	...	1,25,000
3. Coal fields of Nongstoin State	...	...	...	8,00,00
4. Langrin coal field	...	...	...	8,00,00
5. Umrileng	...	...	...	4,70
6. Lairango	...	...	...	15,00
7. Cherrapunjee	..	...	..	11,85
8. Laitryngew	...	...	...	1,50
9. Mawsynram	...	...	..	63
10. Lakadong	...	...	...	11,64

					Thousand tons
11. Nampuk-Namshick	...	...	...	...	9,00,00
12. Makum	...	...	...	...	9,00,00
13. Jaipur	...	...	...	...	2,00,00
14. Nazira	...	...	...	...	22,10
Total					1,93,27,42

Assam's coal resources are fit for various industries, such as low temperature--carbonisation, hydrogeneration and pulverised firing process for extraction of germanium. Besides, about 40 per cent of sulphur in the coal may be converted into sulphuric acid by the same process. Assam's coal contains a high percentage of volatile matter which yields gas of low caloric value. This gas could be utilised by mixing it with the natural gas available from the Naharkatiya oil fields. Assam coal is also very suitable for liquid processing, etc., etc.

Petroleum.—The out-put of petroleum in Assam in 1950-51 was of the order of 68·8 million gallons, valued at Rs.4·12 crores. In 1960-61, the production was 538,216,538 litres.

The reserves of oil in the Naharkatiya-Moran area are expected to be around 48 million tons. Diesel oil, lubricants, furnace fuel, coke, bitumen produced out of the crude oil are used by the various industries in the country. The programme in hand for utilisation of the crude oil includes establishment of the Nunmati refinery in the State which has since gone into production. The new oil fields have a potential of 2·75 million tons of oil per annum in the initial stage. A number of chemicals both organic and inorganic can be derived from natural gas and petroleum of Assam. These can be used as base for various chemical industries such as—carbon black, synthetic rubber, urea, formaldehyde, ethylene oxide, chylene glycol, methanol, styrene, ethylene ammonium sulphate, etc. Natural gas can also be used as industrial fuel in power plants, cement plant and refractory unit. The State third plan provides for utilisation of these resources. The construction of electrical thermal station at Naharkatiya with an installed capacity of 69,000 K. W. has already been taken in hand and is expected to be completed by about 1964. A scheme for gas fractionisation and transmission has also been included under the State Third Plan under the industries sector.

Sillimanite.—Large deposits of sillimanite occur in Sonapahar, about $1\frac{1}{2}$ miles to the north of Nongmaweit in the north-western part of Khasi and Jaintia Hills. There are 13 deposits in one belt alone. The Assam Sillimanite Company has taken up exploitation of this mineral. About 3,835 tons of sillimanite were produced in 1950-51. A refractory plant for manufacture of fire bricks and refractory bricks is going to be set up in the private sector. In 1960-61, the production went upto 7586.64 tons.

Lime-Stone.—Limestone occurs along the southern side of the Khasi and Jaintia Hills, stretching over a length of about 40 miles from Cherrapunjee to Jadukata river. During 1957-58, about 75,000 tons of lime-stones were produced from these lime quarries. The existing quarries hardly meet the demand of the local lime kilns which are run on primitive lines. Since the reserves are huge and of high grade, the reserves offer great potentialities for cement manufacturing, building materials and calcium carbide manufacturing.

Minor Minerals.—Among the minor minerals, the China-clay offers good scope for establishment of ceramic plant and low tension insulators and refractories. The Garo Hills and United Khasi and Jaintia Hills possess light-coloured sandstones and quartzites in abundance. An extensive deposit of gold bearing alluvium occurs at the point where the rivers Dehang, Debang and Lohit join together to form the river Brahmaputra. The Subansiri river is also believed to contain gold bearing alluvium. The occurrence of pure kaolin has also been reported by the Geological Survey of India in the United Khasi and Jaintia Hills and Garo Hills.

Comprehensive investigations are necessary so as to ensure exploitation of the available mineral resources in the State. The Geological Survey of India have been carrying on surveys for the purpose of exploiting and determining the mineral resources and their reserves, etc. To supplement the survey work of the Geological Survey of India and also to explore possibilities for exploitation and utilisation of the mineral wealth of the State, a directorate of mining and geology has been established in the State. It is expected that it will be possible for the State Government to chalk out a programme of exploitation of these resources in the near future.

Forest.—Assam is rich in forest wealth. In 1959 the total forest area was of the order of 18,500 square miles as indicated below:—

	square miles			
Reserved Forests	6,396
Protected Forests	110
Unclassed State Forests	11,185
<i>Ex-zamindari</i> Forests	450
Private Forests	350
			Total	18,491

While the reserved forests account for about 12 p.c., the unclassified State forests cover about 23 p.c. of the total area of the State. The utilisation of unclassified forest areas, which are extensive, for real forestry, has become necessary in view of dwindling forestry. Besides, the necessity of undertaking soft-wood plantation has also arisen to keep pace with the modern developments. It is expected that in implementing forestry development schemes, utilisation of unclassified forests in a planned way, will also be borne in mind. A proposal is well underway to extend the coverage of the protected forests by about 500 square miles in the plains districts. In the near future, there are likely to be, in the plains districts, about 25 p.c. of the land area dedicated to forestry. In the autonomous hill districts, due to prevalence of Jhuming, the position is not satisfactory, where about 7½ p. c. of the land area is dedicated to forestry. It is proposed to extend forest areas in these districts gradually as follows:—

- (a) Afforestation of hill-slopes, which have been rendered barren by jhuming,
- (b) encouraging cultivation of cash crops such as pepper, cardamon, coffee, etc.
- (c) encouraging terraced cultivation for food production.

The forests are important from the point of revenue to the State exchequer and raw materials for the industry. In 1956-57,

Assam produced forest products comprising 7.5 million cubic feet of timber, 2.8 million cubic feet of cane, 7.1 million bundles of thatch, contributing about Rs.4.0 crores to the State's income at current prices.

During the last decade Assam has become one of the largest plywood manufacturing States in India. Forests are supplying raw materials for the manufacture of tea-chests, black-boards, flush doors and commercial and ornamental plywood on a large scale. Besides supplying swan-timbers to the different parts of the country, demands of the Railway Ministry, Defence Ministry and Ministry of Works, Housing and Supply are largely being met.

There are two match factories producing box matches based primarily on simul. The vast bamboo wealth of the State have since attracted industrialists for the manufacture of paper pulp, rayon pulp, hard boards, etc. The utilisation of bamboo for producing useful commodities like mats, baskets and curtains in small scale establishments will also be of interest to the State.

Assam is also the largest cane producing State in India. In 1957, Assam produced 2,23,500 bundles of cane. Among the minor products mention may be made of agar and lac.

The State Third Plan envisages extension of the area under forests and utilisation of these resources on a planned basis, consistent with the available resources. The measures envisaged will include acceleration of production, intensification of facilities for exploitation, extension of forests in the hill districts, improved utilisation of low-grade timbers and systematic surveys of forest resources in relation of specific industries.

Power.—According to the estimate of Central Water and Power Commission out of the country's 40 million K.W. hydro-power potential, more than 10 million K. W. is concentrated in Assam. Despite this enormous hydro-electric power potential, prior to the First Plan there were only seven small undertakings with an installed capacity of 3,362 K.W. There were also a few private generation stations worked by the railways, collieries and oil fields with an installed capacity of 2,903 K. W. The table below sets out per capita generation of electricity during the first two plans and estimated target for the Third Plan in Assam, compared to all-India averages.

					KWHs	
					India	Assam
1950-51	...	...	...	...	18.0	0.94
1955-56	...	...	...	...	20.0	0.91
1960-61	...	...	...	...	45.0	5.63
1965-66	...	...	...	...	95.0	15.00

It will be noticed from above that Assam has so far hardly made any progress in power development on a scale commensurate with the possibilities.

According to the load forecast by the Central Water and Power Commission, even after completion of the State Third Plan power projects, Assam will continue to be deficit in electrical power as follows:—

(Figures in MW)						
Year				Require- ments	Available capacity under the Third Plan	Deficit(—) Surplus(+)
1965-66	...	...	...	112	125	(+)13
1970-71	...	...	...	202	125	(—)77
1975-76	...	...	...	404	125	(—)279

The above assessment made by the Central Water and Power Commission is very much on the conservative side. The State Directorate of Industries has also since made an assessment of power requirements in the State for the above mentioned periods. According to this assessment the Third Plan period also will end with a deficit to the extent of 40 M.W. as indicated below—

Year				Require- ment	Available capacity at the end of Third Five Year Plan	Deficit(—)
1965-66	...	...	...	165	125	(—)40
1970-71	...	...	...	330	125	(—)205
1975-76	...	...	...	660	125	(—)535

Since electricity is a *sine-qua-non* of rapid industrialisation and Assam commands enormous power potential, top-most priority has been given in the Third Plan to power development with an allocation of Rs. 27.5 crores which is about 23 per cent of the total State Plan allocation for the Third Plan.

Fisheries.—Due to abundance of water in the State, there are considerable natural fisheries in the plains and forests. The State Fishery Department have also implemented some schemes of their own. With the vast natural resources and almost limitless demand for fish, the scope for the development of fisheries in Assam is immense. The rivers Brahmaputra and Barak with their tributaries can form the most important riverine system for fisheries in the State. The State Third Plan envisages, besides implementation of some fish production schemes, surveys and investigations of the riverine fisheries as well as other culturable waters. Some work of reclamation of derelict tanks for fish culture has already been undertaken.

According to an estimate of the State Fisheries Department the total area under fish culture in Assam at present is about 1,150 acres, out of which an area of 650 acres is directly being cultivated by Government while the remaining 500 acres are under fish-culture by private parties. The total area under Government cultivation at the end of the Third Plan is expected to rise to about 1,000 acres.

It has been estimated that the total annual fish production in Assam can be increased by more than 2 lakh maunds by the end of 1970-71 as indicated below :—

Item	Additional annual production in maunds
1. Small tanks and ponds	10,000
2. Demonstration farms	22,000
3. Renovation of derelict tanks	50,000
4. Improvement of large beels	40,000
5. Reservoirs	49,000
6. Riverine fisheries	40,000
Total..	<u>2,11,000</u>

CHAPTER III

A Decade of Planning in Assam

Planning in Assam has been conditioned by several factors which are not so pronounced in the other parts of the country ; lack of necessary institutions, the largely unstable agricultural economy subjected to recurring floods, erosion and other natural calamities, inadequacy of communication facilities, lack of power etc., are some of them. The near isolation of the State from the rest of the country, coupled with effects of war and the partition have further aggravated the situation. In formulating the First Five Year Plan, therefore, efforts were made to strengthen the economy at the base and to initiate a process of institutional changes wherever required. Under the Post-War Plan, beginnings were already made with the establishment of certain basic training institutions like the Gauhati University, Agricultural College, Jorhat, Assam Medical College, Dibrugarh, Assam Ayurvedic College, Gauhati, Assam Veterinary College, Gauhati and the Forest School, Jhalukbari. These institutions were further improved and expanded under the First Plan so as to expand scope for training of technical personnel. In the sphere of agriculture, additional production potential of 2.30 lakhs tons was created. A large number of facilities in the form of irrigation, use of manure, supply of improved seeds and programmes of reclamation and development was initiated. Significant progress was also made in other sectors of the economy, such as community development, forestry, flood control, education, rural development, co-operative, medical and public health, transport and communication and welfare of backward classes. In the field of power development, Government entered the field and executed departmentally a programme of village and small town electrification schemes. Work on the Umtru-hydro electric project which is the only sizable hydro-electric project so far commissioned in the State was commenced with Canadian aid under the Colombo Plan. Due to meagre allocation under the First Plan it was not possible to make sufficient allocations under certain sectors, such as Cottage Industries, Large Industry, Animal Husbandry and Veterinary and Fishery development. Nevertheless the First Plan had initiated the people into the idea of planned activities as a means of orderly economic development while maintaining individual liberties.

The size of the First Five Year Plan was approved by the Planning Commission at Rs. 20.8 crores. The whole amount

was practically utilised. The actual progress of Plan expenditure during the First Five Plan period was as follows:—

						Rs. in crores.
1951-52	...	...	...	...	...	1.34
1952-53	...	...	...	..	...	2.01
1953-54	...	...	...	...	...	3.11
1954-55	...	...	...	...	...	5.00
1955-56	...	...	...	...	...	9.04
Total ...						20.50

The Government of India advanced, by way of Central assistance, Rs. 17.3 crores. The balance of Rs. 3.2 crores was met out of State revenues.

Statement I at the end of the publication indicates the progress of expenditure under the different sectors.

The Second Five Year Plan of the State was, by and large, continuation of the developmental efforts commenced in the First Plan. It sought to carry forward the institutional changes to make the State economy more progressive in terms of defined economic and social ends on the one hand, and on the other, it aimed at balanced distribution of plan funds under the different sectors of development. In particular, it laid emphasis on the provision of adequate transport facilities, an expanded and diversified industries and agricultural programmes, a much larger programmes for the tribal and other backward sections of the population, and a somewhat sizable provision for power development. For the first time the plan made provision for the establishment of a spun silk mill, a spinning mill, a jute mill, a sugar factory. Provision was also made, in the private sector, for a cement factory, a paper mill and a re-rolling mill-cum-cast iron factory.

The table below indicates priorities in the National and State Second Plans:—

Sector.	Rs. in crores.			
	Outlay		Priorities	
	National Plan	State Plan	National Plan	State Plan
1. Agriculture and allied subject ...	320	7.44	6th	3rd
2. C. D., Panchayat and Co-operation.	210	7.43	7th	4th
3. Irrigation	4.50	0.64	4th	7th
4. Power	410	3.80	5th	5th
5. Village and Small Industries ...	180	3.80	8th	4th
6. Industry and Minerals	880	1.33	2nd	6th
7. Transport and Communication ...	1,290	7.70	1st	2nd
8. Social Services	860	25.79	3rd	1st
Total	4,600	57.93		

There was some shift in sectoral allocations under the State Plan from the allocations under the National Plan. While in an under-developed economy trying to build the human resources, first priority to social services is understandable, second priority went to transport and communications and third priority to agriculture and allied subjects. The shift in allocations under the other sectors was mainly to correct, to the extent feasible, the imbalance in allocations under the State First Plan.

The progress of expenditure during the Second Plan period was as follows:—

Year		Rs. in crores.	
		Expenditure	
1956-57	9.21
1957-58	10.13
1958-59	8.98
1959-60	11.32
1960-61	14.84
Total		...	54.48

The receipt of Central assistance during the period was of the order of Rs. 30·37 crores. The balance of Rs. 24·11 crores was met from State revenues as State share for the Plan.

The figures of expenditure mentioned in the above table do not indicate figures of expenditure financed by way of Central assistance received from the Government of India on account of Centrally sponsored schemes and programmes in respect of which there was no element of State share. Receipt from the Government of India on account such schemes was of the order of Rs. 14·18 crores. Actually, therefore, expenditure on development schemes during the Second Plan period was of the order of about Rs. 68 crores.

Some of the important targets achieved during the Second Plan period are indicated hereafter :

Agriculture.—Against a target of 3·83 lakh tons additional foodgrains set under the Second Plan, the actual realisation is likely to be of the order of 2·5 lakh tons. The response of agriculture to developmental efforts was not upto the expectations, mainly due to considerable weather fluctuations during the Second Plan period. The trend of production of other major crops was as follows:—

Commodity	Unit	1955-56	1960-61
Sugarcane	000 tons	66	81
Oil seeds	000 tons	58	47
Potato	000 tons	135	150
Jute	000 bales	1094	813

Animal Husbandry.—Intensive cattle development work was taken up in the key village areas. The number of veterinary hospitals and dispensaries increased from 127 in 1955-56 to 155 at the end of 1960-61. The number of rural key village blocks and key village centres increased from 11 and 29 to 17 and 71 respectively. The intake capacity of the Assam Veterinary College was increased from 68 to 93.

Forests.—About 7,900 additional acres had been afforested, while areas under the various plantations increased by about 3,000 acres.

Fisheries.—Being bounded on all sides by land, Assam has inland fisheries only. During the Second Plan period, 6 additional seed farms and 10 seed collection centres were established. Besides, 1,026 acres of additional water-areas were developed.

Co-operation.—Three thousand three hundred and sixty one service co-operatives, 37 co-operative unions, one cotton ginning mill, one co-operative rice mill, 200 large sized co-operatives, 111 primary marketing societies and 174 additional godowns were established. In addition, the number of co-operative farming societies increased from 105 to 157. The sugar mill established under the cooperative fold, went into production during 1958-59.

Community Development.—At the end of the Second Plan, the Community Development Programme covered 14,735 villages with an area of 26,341 square miles and a population of 42.92 lakhs. In the First Plan there were 27 blocks covering 5,623 villages and serving a population of 17.5 lakhs over an area of 7,859 square miles. Under the Second Plan 57 more blocks were opened covering 9,112 villages and serving a population of 25.4 lakhs, covering an area of 18,482 square miles.

Panchayat.—Under the Assam Panchayat Act, 1959, the State has three tiers of Panchayats, *e. g.* Gaon panchayat at the village level, Anchalik panchayat at the block level and Mahkuma parishad at the subdivisional level. By the end of the Second Plan 2,574 Gaon panchayats, 120 Anchalik Panchayats and 16 Mahkuma Parishads started functioning, covering the entire plains districts.

Irrigation.—The net area irrigated increased from 10.3 lakhs acres in 1955-56 to 16.9 lakhs acres in 1960-61. About 12.00 lakh acres of lands had also been protected from floods and about 13,000 acres of lands were reclaimed.

Power.—Development of power facilities in the State is the lowest in India. As a result of schemes taken up during the First and Second Plan periods, the *per capita* consumption of electricity increased from 0.91 KWH at the end of 1950-51 to 5.63 KWH at the end of the Second Plan. The achievements during the Second Plan period were as follows:—

(1) Additional installed capacity	...	14,597 KW.
(2) Additional H. T. line	...	157 miles
(3) Additional L. T. line	...	180 miles
(4) Number of towns electrified	...	25
(5) Number of villages electrified	..	19

The Umtru Hydro Electric scheme, with an installed capacity of 8,400 K. W. was commissioned in July, 1957. When extreme shortage of electricity was noticed, the Planning Commission were kind enough to sanction in course of the Second Plan itself at the request of State Government two new schemes (1) Umiam Hydro Electric Project, (2) Naharkatiya gas turbine project. Immediate steps were initiated and the Umiam project was undertaken in 1960. The Naharkatiya project also has since been undertaken. Both are for bulk generation while earlier ones which were tiny ones. These projects are expected to be commissioned by 1964.

Industry.—Despite the fact that industrialisation is essential for a sustained economic growth and the State has vast raw materials not much progress could be made under the First Plan. The greatest limiting factors were lack of reliable railway communication with the rest of India due to intervening Pakistan, and lack of electricity. The link line got stabilised by 1956. But the power shortage remained even after the inauguration of Umtru Hydro Electric Project.

The formation of the Assam State Electricity Board and taking up of the Umiam Hydro Electric Project and Naharkatiya gas turbine project created a new optimism for industrialisation. The holding of Industries Conference to which industrialists from all over India were invited coupled with the undertaking of survey of potentialities through the National Council of Applied Economic Research created for the first time a tempo of industrial development in Assam. Application for the establishment of small, medium and major industries began to come in. Licenses for major projects for rayon, paper, carbon-black, synthetic rubber, polythelene were issued. There were greater inquiries for small scale industry following the establishment of two Industrial Estates which were however held in check by lack of raw materials and foreign exchange.

The units to go into production were the sugar mill in the co-operative sector, the spun silk mill, the bamboo mill in the public sector, two cycle factories, one commercial plywood factory, a few barbed-wire and wire-nail factories, some engineering workshops, several foundries, some treating and seasoning plants, a meter factory, many brick fields. But the greatest achievement has been the Nunmati Refinery with crude pipe line which has given a fillip to industrialisation. A coke carbonisation plant, a sulphur dioxide plant, a super-phosphate plant, two spinning mills, some power looms are under erection. The earlier licensed schemes like cement factory and jute mill continue to be in difficulty yet,

Road Transport.—According to the “Nagpur Plan” Assam should have, by the end of 1981, about 22,000 miles of motorable roads. By the end of the Second Plan, the State is estimated to have 1,600 miles of black-topped roads, 174 miles of metalled roads, 5,541 miles of gravel roads and 1,507 miles of earth roads.

Social services.—(i) *Education general.*—The table below indicates the progress relating to the student distribution pattern among the various categories of schools at the end of the Second Plan period.

Age group	Total enrolment (in thousand)	Percentage targets set under the National plan	Percentage achievement in the State
6-11 Total	10.68	61.1	66.6
Girls	3.89	40.4	40.0
11-14 Total	2.05	22.8	28.7
Girls	0.56	10.8	16.2
14-17 Total	1.10	11.5	13.6
Girls	0.29	4.2	5.0

On an average, the State has not only fulfilled the average of All-India targets, but has also exceeded them.

The number of primary schools went up from about 13 thousands to 19 thousands, middle schools from about 14 hundreds to 19 hundreds, high schools from 376 to 631, multi-purpose schools from 14 to 23, high and higher secondary schools with general science from 45 to 98. Twenty two secondary schools also started functioning.

(ii) **Education (Technical).**—While the intake capacity of the Engineering College at Gauhati was increased, a second college was established at Jorhat. There were 6 training institutes for training of craftsmen. The number of admission for the degree course increased from 60 at the end of the First Plan to 180 at the end of the Second Plan. Training facilities for diploma course increased from 80 to 420 during the same period.

(iii) **Health.**—The number of admission in the Dibrugarh Medical College had been increased to 100. The number of hospitals increased to 52 with 3,500 beds. Seventy primary health units and 60 family planning centres were also established. National programmes of malaria eradication, filaria control, leprosy control and small-pox control, etc., were also pushed through with vigour.

(iv) **Housing.**—With the increase of population and gradually rising exodus from rural to urban areas, the housing problem has become more acute. To solve the problem, apart from

advancing house building advances from the State revenues to the Government employees, financial assistance under the plan is being made available under the Low Income Group Housing scheme, Industrial Housing Scheme, Slum Clearance scheme, etc. 900 houses under the Low Income Group Housing scheme, 279 tenements under the Industrial Housing scheme and 28 houses under the Plantation Labour Housing scheme were constructed, while under the Slum Clearance scheme and Middle Income Group Housing scheme 362 tenements and 14 houses respectively were under various stages of construction. Under the Rural Housing scheme 42 villages were selected for implementation of the scheme.

(v) **Welfare of Backward classes.**—Assam has a large population of tribal and backward population. In accordance with the existing principles of the State policy, apart from the benefits derived by the tribal and other backward population from the general State Plan under the different sectors, the standard of living of the backward population is sought to be improved by a substantial programme under the head, "Welfare of Backward Classes". This programme covers all the heads of development and is in the nature of an additional programme to make up the shortfalls between the levels of development of the tribal and backward population and the rest of the population. An allocation of Rs.10.30 crores is made for the Third Plan period against a total expenditure of Rs.755.99 lakhs incurred during the Second Plan period and Rs.436.30 lakhs incurred under the First Plan.

(n) **Other schemes.**—Social welfare, labour welfare, statistics, publicity and aid to local bodies are the other heads of development. Schemes under social welfare relate to the socially disadvantaged sections of the community, e.g., women children, physically and mentally handicapped, etc., 22 Welfare extension projects, 3 State homes, 4 district shelters/Centres started functioning. Under labour and labour welfare schemes a number of labour welfare centres and two training centres one for training of male workers and the other for the training of female workers were either opened or further equipped and expanded. Besides expanding the Directorate of Statistics, District Statistical Offices were also opened. For publicity and information, District Publicity Offices were established and about one thousand community receiving sets were distributed all over the State. Loan assistance was continued to the local bodies for improvement of water supply, improvement of hats and bazar and the like.

CHAPTER IV

Approach to the Third Five Year Plan—Assam

Objective.—The broad aims and objectives as set out in the National Third Five Year Plan are :

(1) to secure an increase in the national income of over 5 per cent per annum, the pattern of investment being designed also to sustain the rate of growth during subsequent Plan periods :

(2) to achieve self-sufficiency in food-grains and increase agricultural production to meet the requirements of industry and exports ;

(3) to expand basic industries like steel, chemical industries, fuel and power and establish machine-building capacity, so that the requirements of further industrialisation can be met within a period of ten years or so mainly from the country's own resources :

(4) to utilise to the fullest possible extent the manpower resources of the country and to ensure a substantial expansion in employment opportunities ; and

(5) to establish progressively greater equality of opportunity and to bring about reduction in disparities in income and wealth and a more even distribution of economic power.

These are, therefore, the main objectives for the State's Third Plan also. While formulating the State's Third Plan, within the limits of these objectives, consideration has also been given to the special problems of the State about which mention has been made in the earlier chapters, and, priorities under the State Third Plan accorded accordingly.

Allocations.—For the State Third Plan, an allocation of Rs.120 crores has been made by the Planning Commission. For financing the Plan the Government of India and the Planning Commission have promised to make central assistance available to the extent of Rs.87 crores ; the State will be required to bear the balance of Rs.33 crores, out of its own resources. The table below sets out the progress of expenditure under the State Plans for the first two plan periods and allocations under the State Third Plan.

Head of Development	(Rs. in crores)		
	Expenditure		Allocation
	First Plan 1951-56	Second Plan 1956-61	Third Plan 1961-66
(1)	(2)	(3)	(4)
1. Agriculture and allied subjects ...	4.85	15.02	24.37
2. Irrigation and flood control	3.39	0.97	7.28
3. Power	1.21	5.85	27.50
4. Industries and Maining	0.10	4.38	9.75
5. Transport and Communication	3.49	6.55	10.65
6. Social Services and allied heads	7.46	21.71	40.45
Total	20.50	54.48	120.00

Expenditure under the First Plan was meagre, while expenditure during the Second Plan was about two and half times more. Compared to the needs of the state, this developmental expenditure left much leeway to be made up during the Third Plan period. Essentially, therefore, the First Plan of Assam sought to pave the way for a little balanced Second Plan and the Second Plan could carry forward the processes initiated under the First Plan and the institutional changes for a balanced development of the State under the Third Plan. The Third Plan is expected to lay a solid foundation for a well balanced economic growth in future.

The tentative year-wise phasing of the outlay of Rs.120.00 crores is as follows:—

	(Rs. in crores).
1961-62	18.75
1962-63	22.55
1963-64	28.04
1964-65	27.03
1965-66	23.63
Total	120.00

Planning is a continuous process and a Five Year Plan is not a once-for-all exercise for the entire plan period. While one programme set forth in the Plan may take a little time more for execution than envisaged, another programme may be capable of execution at shorter time or by virtue of its importance may be required to be executed on priority basis. Allowances, would, therefore, have to be made for the flexible nature of the Plan and for necessary adjustments in the individual schemes and sectors necessitated from time to time by the circumstances of execution and availability of resources—both human and material.

Because of the relatively under-developed nature of the State, social services, which include education, health, labour welfare, social welfare, welfare of backward classes and other miscellaneous departments like publicity, statistics etc have so far contained a very high percentage of the allocations. Compared to the expenditure on social services under the first two Plans, however, percentage of expenditure on these subjects, during the Third Plan period is expected to be somewhat lower. It was about 36 per cent of the total expenditure during the First Plan and it increased to 42 per cent during the Second Plan period. During the Third Plan period expenditure on social services is likely to be of the order of 33 per cent of the total state plan outlay. The State Third plan is thus designed to reduce the existing disparities in sectoral allocations to the maximum extent possible and pave the way for a balanced economic growth continuing pari-pasu with accelerating the tempo of development reached at the end of the Second Plan so far as social services are concerned. In other words, in the sphere of general welfare services like education and public health etc. the progress made during the last decade will be consolidated and further expanded, during the Third Plan period in order to provide educational and medical facilities on par with the overall national targets envisaged for for the country as a whole.

In the scheme of allocations, highest priority has been given to 'Power'. This is because power is basic for industrial development, both large and small, and, because of meagre allocations for power development under the First and Second Plans, despite enormous potential for industrial development, which is again vital for increasing the economic growth, the pace of industrial development so far has been, by and large, static. Only recently Assam has got the benefit of

an Oil Refinery. Under the State Third Plan an allocation of Rs.27.50 crores has been made for power development which is about 23 per cent of the total State plan allocation under the Third Plan. Works on the Umiam Hydro-electric project (36,000 KW) and Naharkatiya Gas turbine station (69,000 KW) are in full swing and these projects are expected to be commissioned by 1964. A medium sized Thermal plant for Garo Hills, with an installed capacity of 5,000 KW, has also since received the approval of the Planning Commission. Besides a number of small towns and villages will also be electrified. It is expected that as the power supply position improves, the pace of industrialisation of the State will also simultaneously be accelerating. Against an allocation of Rs.1.33 crores under the Second Plan under the head "Large and Medium Industry" an allocation of Rs. 5.40 crores has been made under the Third Plan. This is in addition to an allocation of Rs. 4.35 crores for development and diversification of village and small industries. These programmes are expected to give full time employment to a substantial section of the population and part time employment to a still larger section which is unoccupied during several months of the year during the off season in agriculture. These programmes will also ensure better utilisation of the existing resources of the state and in general make available a variety of consumer goods for which the state is now dependent on imports from outside.

Availability of technical personnel is another important factor in any scheme of economic development. In the state Third Plan in addition to provisions under the respective departmental plans, a provision of Rs.305 lakhs has been made under the head "Technical Education" for training of other technical personnel like engineers, overseers and artisans.

Self-sufficiency in food is the avowed aim of national policy. Hence sizeable provision has been made for the agricultural and allied subjects. In the other sectors allocations have been made more or less according to the priority assigned to these sectors under the Second Plan.

The total foreign exchange requirements are estimated at Rs. 17.39 crores as follows:—

	(Rs. in crores)			
1. Agriculture and allied subjects	0.17
2. Irrigation and Powers	13.96

3. Industry and Mining	...	...	...	2.26
4. Transport and Communication	...	...	...	0.58
5. Social Services and Miscellaneous	...	...	...	0.42
Total	...	...	...	17.39

SECTORAL ALLOCATIONS

Agriculture And Allied Subjects:— The progress of expenditure under the First and Second plans and allocations under the Third Plan are set out in the following table:—

(Rs. in lakhs)

Head	Expenditure		Allocation
	First Plan 1951-56	Second Plan 1956-61	Third Plan 1961-66
(1)	(2)	(3)	(4)
1. Agriculture including Minor Irrigation	279.43	475.97	902.00
2. Animal Husbandry including Dairying	21.77	68.53	140.00
3. Forests	} 51.03	103.89	140.00
4. Soil Conservation			
5. Fisheries	10.54	30.59	50.00
6. Co-operation and Warehousing	20.01	169.46	230.00
7. Community Development	...	512.10	835.00
10. Panchyats	102.57	140.95	140.00
Total	485.35	1501.54	2437.00

An additional food production target of 4.20 lakhs tons has been prescribed for the State by the Planning Commission. To achieve this target, the State Third Plan contains schemes for increasing agricultural production by 5.12 lakh tons of additional food grains. These schemes include irrigation facilities, soil conservation measures, establishment of seed farms and distribution of improved seeds, plant protection

measures, supply of improved agricultural implements, supply of fertilizers etc. An intensive district agricultural programme popularly known as "Package Programme" will also be launched. There are also schemes for raising the output of cash crops and development of horticulture.

The table below furnishes the broad targets proposed for the Third Plan period, compared to the potential created by the First and Second Plans:—

Item	1955-56	1960-61	Additional Production in Third Plan
1	2	3	4
Food grains in lakh tons	16.69	16.81	5.12
Cotton in thousand bales	9.00	5.00	7.00
Sugarcane in thousand (gur) tons	66.00	81.00	40.00
Oil seeds in thousand tons	58.00	47.00	33.00
Jute in thousand bales	1094	813	687

Under Animal Husbandry, important targets achieved at the end of the Second Plan and targets proposed for the Third Plan are indicated below:—

	1955-56	1960-61	1965-66
1	2	3	3
1. Dispensaries	118	139	182
2. Hospitals	9	16	35
3. Rural Key village blocks	11	17	23
4. Key village centres	29	71	112
5. Extension Centres .. .. .	..	2	4
6. Urban artificial insemination centre .. .. .	..	3	6
7. Cattle farm	4	7	8
8. Rate of admission in the Assam Veterinary College.	68	93	93

Under Forests, afforestation will be done over an area of about 12,000 acres while areas under various economic plantations will increase by about 10,000 acres. The mileage of roads in the forest areas will be increased to facilitate exploitation of forest resources. Some schools for the benefit of the children of the forest-dwellers will be opened, besides providing the forest-dwellers with provision of wells for drinking water.

Broad targets for development of fisheries set forth in the Third Plan are establishment of seed farms to cover all the subdivisions, development, exploitation and reclamation of natural fisheries, etc., and encouraging pisciculture among the rural population.

The schemes proposed for co-operative development in the Third Plan are based on the resolution of the National Development Council of December 1958 and the recommendation of the Rural Credit Survey Committee. The programme for the Third Plan period envisages consolidation and expansion of the co-operative movement at all levels. The table below indicates the broad targets achieved till the end of the Second Plan and targets aimed under the Third Plan.

Items	1951-52	1955-56	1960-61	1966-67
1	2	3	4	5
1. CO-OPERATION CREDIT—				
(i) Primary Agricultural Credit Societies	662	925	--	..
(ii) Service Co-operatives .. ..	..	..	3361	4560
(iii) Large sized Co-operatives .. ..	..	..	200	231
(iv) Central Banks	14	14	9	7
(v) Apex Bank	1	1	1	1
(vi) Short and Medium Term Credit in lakhs of rupees.	0.33	298.30	76	800

Item	1951-52	1955-56	1960-61	1966-67
1	2	3	4	5
2. CO-OPERATIVE MARKETING SOCIETY—				
(i) Primary Marketing Society .. .. .	..	2	111	200
(ii) Godown for Marketing Societies .. .. .	..	2	111	166
(iii) Apex Marketing Society .. .. .	..	..	1	1
(iv) Godown .. .. .	..	..	1	3
3. CO-OPERATIVE PROCESSING .. .. .	..	2	..	21
4. CO-OPERATIVE FARMING	22	105	107	500
5. CONSUMER CO-OPERATIVE	1815	1100	1130	640(a)
6. LAND MORTGAGE				
(i) Primary Land Mortgage Bank	2	2	6	15
(ii) Central Land Mortgage Bank .. .. .	..	..	1	1
(iii) Long term loan in lakhs of rupees	0.24	5.00	140.0	150.0

COMMUNITY DEVELOPMENT

Community development has been described as the method and rural extension as the agency through which the transformation of the social and economic life of villages is to be initiated. The main tasks of the programme may be detailed as—

- (i) raising of village productivity,
- (ii) increase of subsidiary employment,
- (iii) development of rural industries,
- (iv) fostering of local talent and leadership, and
- (v) maximum utilisation of rural manpower.

(a) Many consumers co-operatives which sprang up during the War time have since gone into liquidation.

The table below sets out the progress of the Community development movement in Assam :—

	Block	Area (Sq. mile)	Village	population in lakh
1	2	3	4	5
First Plan	27	7,859	5,623	17.50
Second Plan	57	18,482	9,112	25.40
Third Plan	76	18,679	10,941	36.78
Total	160	45,020	25,676	79.68

In chapter III, it has been indicated that the entire plains districts have been covered by the establishment of 2,574 gaon panchayats, 120 anchalic panchayats and 16 mahkuma parishads. These institutions have not been at work for long enough to permit more than preliminary assessment of the problems within their jurisdictions. The State Third plan envisages putting the movement on a sound basis. Funds have accordingly been made in the State Plan for financial assistance to these institutions in order that the panchayats could be ensured the growth and working of the Panchayati Raj and these democratic institutions are able to realise maximum development potential on the basis of local manpower and available resources.

Irrigation and Flood Control.—Agriculture in Assam, almost regularly, suffers from annual floods and erosion. This is because rainfall in Assam is heavy and the great earthquake of 1950 had changed the topography of the State, making the Brahmaputra shallow and liable to recurrent floods. Riverine towns like Dibrugarh, Palasbari, Sualkuchi, Jamuguri, Bilasipara, etc., have also been threatened by severe erosion from floods. Then again of late, there have been droughts prevailing in several parts of the State highlighting the need for irrigation schemes. Taking all these factors into consideration the following provisions have been made for flood control, drainage, irrigation and flood protection schemes, in the State Third Plan.

	(Rs. in lakhs)
(1) Medium Irrigation	228.00
(2) Flood Control Schemes continuing from Second Plan.	115.00
(3) Embankments and raising and strengthening embankments.	100.00

					(Rs. in lakhs)
(4)	Drainage schemes	...	...	...	100.00
(5)	Controlling sluice openings in Embankments	...			80.00
(6)	River training, town protection and anti-erosion measures.				50.00
(7)	Investigation.	...	...	...	55.00
	Total	...	...	...	728.00

The medium irrigation programme for which Rs.228 lakhs have been allocated envisages execution of four projects and are expected to create, at the end of the Third Plan, a total irrigation potential of 88 thousand acres and provide utilisation benefit to about 79.20 acres as indicated below:—

Name of Project	Outlay for Third Plan Rs. in lakhs	Irrigation potential Third plan (000 acres)	Utilisation benefit Third Plan (000 acres)
1	2	3	4
1. Jamuna Irrigation	168.00	64	57.6
2. Langa Irrigation	5.00	3	2.7
3. Mora-Dhansiri Irrigation	20.00	9	8.1
4. Sukla Irrigation	6.00	3	2.7
5. Patradisa Irrigation	19.00	9	8.1
6. Investigation	10.00	..	..
Total	228.00	88	79.2

The Flood Control schemes included in the State Third Plan envisage benefiting about 3.45 lakh acres from floods.

There is another provision of Rs. 3.90 crores for "Minor Irrigation" made up of Rs.2.50 crores under the Flood Control

and Irrigation Department and Rs.1.40 crores under the Agriculture Department. Efforts will be made during the Third Plan period, to intensify these programmes. The advantages of minor irrigation are that these works can be executed quickly at comparatively lesser outlay and can be undertaken at the initiative of, and, participation by, the local community. The above provision of Rs.390 lakhs has been made for the followings types of minor irrigation:—

	(Rs. in lakhs)
(1) Minor irrigation by Flood Control and Irrigation Department.	250
(2) Minor Irrigation including ring-well	60
(3) Deep Tube-well	30
(4) Power Pump	50
Total	Rs.390 lakhs.

The last three categories of projects, individually costs Rs.10,000 or less and are executed by the Agriculture Department. The first category of projects individually costs more than Rs.10,000 and are executed by the Flood Control and Irrigation Wing of the Public Works Department.

Power.—As power is basic for industrial development, and industrial development is essential for a sustained economic growth, top-most priority has been accorded to the power programme with an allocation of Rs.27.5 crores or about 23 per cent of the State Plan allocation for the Third Plan. The following are the important schemes included in the State Third Plan:—

1. Umiam hydro electric project—Stage I 36,000 K. W.
2. Naharkatiya thermal station 69,000 ,,
3. Garo Hills thermal station 5,000 ,,
4. Umiam hydro electric project—Stage II 65,000 ,,

The Umiam hydro electric project—Stage I, Naharkatiya thermal station and Garo Hills thermal station are expected to be commissioned in 1964. A meter factory has already gone into production. The second phase of the Umiam hydro electric project—Stage II is under investigation. Total installed capacity on the first phase is 17,800 K. W. After the investigations on the second phase are complete total installed capacity

of the Umiam hydro electric project—Stage II will be firmly established. 65,000 K. W. shown for the scheme is tentative at the moment. The State Third Plan also envisages completion of the survey and investigation of the Kopili Project during the Third Plan period in order that construction work could be taken in hand during the Fourth Plan period. The power potential of the Kopili project is estimated to be in the neighbourhood of 400 M. W. At the end of the Third Plan period the *per capita* consumption of electricity is expected to rise to 15 K. W. against 5.63 K. W. at the end of the Second Plan and 0.91 K. W. at the end of the First Plan.

Industry and Mining.—The table below indicates the progress of expenditure under the first two Plans and allocations under the Third Plan among the different sectors of industry.

Head	(Rs. in lakhs)		
	Expenditure		Allocation
	First Plan 1951-56	Second Plan 1956-61	Third Plan 1961-66
Large and medium Industry ..	...	141.82	545.00
Small scale industry ..	4.47		270.00
Sericulture and Weaving ...	5.17	} 295.77	100.00
Handloom Co-operatives ...	...		30.00
Khadi and Village Industry (a) ...	...		30.00
Total ...	9.64	437.59	975.00

Under the First Plan there was no provision for the establishment of large and medium industries. Under the Second Plan a provision of Rs.1.33 crores was made. The Third Plan provides for Rs.5.45 crores. The activities under the First and Second Plans were, by and large, confined to development and diversification of rural industries. It is expected that, during the Third Plan period, a base will be laid around which in future, industrialisation of the State will take place.

Among the important schemes for which provision has been made in State Third Plan, the following are some of them:—

Name of scheme	Estimated cost (Rs. in lakhs.)	Capacity
Public Sector—		
1. Spun Silk Mill (Jagi Road) ...	70.00	(i) 75,000 lbs. of spun yarn per annum.
		(ii) 50,000 lbs. of coil yarn per annum.

2. Natural Gas distribution and Transmission for domestic and industrial use (Lakhimpur District).	175.00	6 million cft. per day in the first phase.
3. Natural Gas Fractionisation Project (Namrup).	150.00 (approx.)	38 million cft. per day in the first phase.
4. Ceramic plant (Goalpara-Garo Hills areas).	15.00 (provisional)	10 tons per day.
5. Meter Factory (Shillong)	56.00	(1) 1,20,000 single phase meter. (2) 18,000 poly phase meter.
Private Sector -- (Participation)		
6. Cement factory (Cherrapunjee)	200.00	250 tons per day.
7. Associated Industries Ltd.—		
(a) Cotton Spinning Mill		25,000 spindles.
(b) Super phosphate		3,000 tons p. m.
(c) Mixed fertiliser	100.00	6,000 „ „
(d) Sulphuric Acid		1,500 „ „
(e) Sulphur dioxide (Gauhati)		3,000 „ „
8. India Carbon Ltd., Calcined petroleum coke (Gauhati).	80.00	50,000 tons per annum.
9. Assam Hard Board Ltd. Hard Board (Gauhati).	100.00	12,500 tons per day.
10. Galvanised pipes (Sibsagar)	80.00	

Under the private sector, without Government participation, the following industries, among others, are also being established in the State:—

1. Cotton spinning mill—		
(a) Charduar		25,000 spindles.
(b) Goalpara		12,500 „
2. Paper—Cachar—		
(a) Paper pulp—		100 tons daily.
(b) Rayond pulp (Two units)		180 and 200 tons daily.
3. Synthetic rubber—		
Namrup		18,800 tons per annum.

4. Polythelene—			
Namrup	...	...	3,750 tons per annum.
5. Carbon Black—			
Namrup/Moran	...	...	12,000 tons per annum.

In the sphere of small scale and cottage industries the emphasis will be intensification and diversification of rural industries, *e.g.*, cottage industries, sericulture and weaving and village industries. Ten Industrial Estates are also proposed for the Third Plan against two Industrial Estates completed during the Second Plan. A Small Scale Industries Corporation and a Marketing Corporation have already been set up for the development of small scale industries and ensuring better marketing for their products.

Transport and Communications.—The table below sets out the progress of expenditure under the First and Second Plans and allocations under the Third Plan under the different sectors of Transport and Communications:—

Head of Development	Expenditure		Allocation
	First Plan	Second Plan	Third Plan
	1951-56	1956-61	1961-66
Roads and Bridges (a)	274.10	575.86	850.00
Road Transport (b)	75.08	68.16	25.00
Inland Water Transport .. .. .	..	1.25	5.00
Tourism .. .. .	..	10.06	10.00
Ropeway ... .. .	..		125.00
Total	349.18	655.33	1,015.00

The transport is not merely an amenity but a key factor in the development process. It provides an enduring foundation for a developing economy and is thus a basic requirement of its 'infrastructure'. This is more so in the case of Assam because of its difficult terrain and near-isolation from the rest of the country. The Five Year plans of the State, therefore have all along accorded priority for development of roads

NOTE.—(a) The sum of Rs.850 lakhs excludes Rs.50 lakhs for tools and plant, staff quarters separately provided under the Miscellaneous head.

(b) The provision was subject to setting up a Transport Corporation. Government has decided not to setup a Transport Corporation and therefore utilisation of the allocation out of the Plan funds has not been agreed to by the Planning Commission from the third year of the Second Plan.

and bridges. The Third Plan also provides for improvement and surfacing of existing roads, building of new roads with special emphasis to road construction in the tribal areas, besides provisions for other minor roads to be improved or built by the local agencies. Provision has also been made for a ropeway from Cherrapunjee to Shillong in the first phase which will be extended to Pandu under the subsequent plans. These services are expected to be the main channels through which benefits of developmental schemes in every sector will be carried to the scattered population, whether they will be in the nature of welfare services like education and public health or facilities for better marketing of produce and opening of the way for utilisation of industries or reaching of financial and technical aids to the people at large in the agriculture and cottage and small scale industries spheres. At the end of the Second Plan, total mileage of existing motorable road is estimated to be about 9822 miles. At the end of the Third Plan period, the mileage is expected to increase by about 1600 miles besides metalling, black-topping and improving a considerable length of the roads existing at the end of the Second Plan.

The Internal Water-Ways of Assam extend over about 6000 miles. Approximately 1000 miles are navigable by steamers, and large country boats and a larger mileage by small country boats.

A Directorate of Inland Water-Transport has since been established which is engaged in the survey of the different systems of Inland Water-Transport for the purpose of preparing long-term proposals for the development of Inland Water-Ways in the State. With provision in the Central sector an inland port at Pandu is being built, besides improvement of the foreshores at Gauhati and purchase of dredgers and launches for the Brahmaputra. The State Third Plan also contains provision for encouragement of tourist traffic in Assam both foreign tourists and home tourists.

Social Services:—The table below sets out the outlay under the first two plans and the allocations for the Third

Plan, in the different sectors:—

				(Rs. in lakhs)		
Head of Development			Expenditure		Allocation	
			First Plan 1951-1957	Second Plan 1956-61.	Third Plan 1961-66.	
		Rs.	Rs.	Rs.		
1. General Education	}	113·87	635·34	1,368·70		
2. Technical Education*			112·98	305·30		
3. Health		193·41	351·35	865·00		
4. Housing	... ..	...	94·29	159·00		
5. Welfare of Backward Classes		436·30	755·99	1,030·00		
6. Social Welfare	... ..	...	28·99	20·00		
7. Labour and Labour Welfare		2·60	38·42	100·00		
8. Statistics	.. ..	...	17·36	22·00		
9. Publicity	.. ..	...	21·83	34·00		
10. Aid to Local Bodies	... ..	...	17·96	25·00		
11. Urban Development	... ..	...	23·96	116·00		
12. Expansion of P. W. D.	... ..	...	72·67	50·00		
Total		... ..	746·18	2,171·14	4,095·00	

Note:—*Includes Rs.75 lakhs for schemes for training of craftsmen,

Under the First Plan efforts were made towards consolidation and re-orientation of the system of general education. The Second Plan laid larger emphasis on basic education, diversification of secondary education, improvement of the conditions of service of the teachers, improvement of collegiate and university education, and extension of facilities for technical and vocational education, etc. The Third Plan provides high priority for extension of the system of the provision of free and compulsory education in the age-groups 6-11 years

extending and improving the teaching of science in the secondary and university stages, extending facilities for technical education, and increasing facilities for training of teachers for all stages of education. The table below indicates total enrolment and percentage of pupils in schools in the age-groups 6-17 years at the end of the Second Plan and targets aimed under the Third Plan:—

Age-group.	Second Plan		Third Plan		Percentage tag of All-India average for Third Plan (6)
	Enrolment in lakhs	Percentage of enrolment	Enrolment in lakhs	Percentage of enrolment	
(1)	(2)	(3)	(4)	(5)	(6)
Primary— (6-11 years)	10.68	66.6	15.08	83	76.4
(Middle 11-14 years)	2.05	28.7	3.25	40	28.6
Secondary (14-17 years)	1.10	13.6	1.71	18	15.6

In the sphere of general education the State will, as in the second plan, continue to be ahead of the all-India averages during the Third Plan.

Under Technical Education, the establishment of a polytechnic for women, two additional polytechnics and eight more industrial training institutes is proposed in addition to improvement and expansion of the existing ones. The admission capacity of the Engineering Colleges for the degree courses will increase from 180 at the end of the Second Plan to 580 at the end of the Third Plan, training facilities for the diploma courses will increase from 420 at the end of the Second Plan to 1080 at the end of the Third Plan. Training facilities for the certificate courses will similarly increase from 1468 to 3492 during the period.

The Health sector envisages completion of the National Programmes as envisaged by the Health Ministry, such as National Malaria Eradication Programme and Small-pox Eradication Programme. Adequate provision has also been made for family planning and other priority programmes like Primary Health centres and National Water supply and sanitation scheme. The State Third Plan also provides for two more additional colleges—one at Gauhati and the other at Silchar with an intake capacity of 100 in each.

Facilities for indigenous and Ayurvedic medicine, research and training have also been provided. Number of hospitals

will increase from 52 to 54 with about 4000 beds against about 2800 beds at the end of the Second Plan. The number of family planning centres will increase from 60 at the end of the Second Plan to 160 at the end of the Third plan. Filaria, tuberculosis, leprosy and goitre control programmes, etc., will also be continued and intensified. A provision of Rs. 144 lakhs has also been made for urban and rural water supply and sanitation schemes.

The Third Plan targets under Housing are 1362 units under industrial housing, 1000 under low-income group housing, 1200 under rural housing, 1250 under plantation labour housing and 485 under slum clearance scheme.

An Act entitled "The Assam Town and Country Planning Act, 1959" has already been enacted and under the provisions of this Act, a Development Authority for the Gauhati Town has already been established. Action is under-way to establish another Authority for the Tinsukia Town. Master Plans for different Municipal towns are also being prepared.

For the welfare of the backward classes, a provision of Rs.10.30 crores has been made, against an expenditure of Rs.7.56 crores incurred during the Second Plan period and Rs.4.36 crores incurred during the First Plan period. This allocation has been made to supplement the activities under the different sectors of development in the general plan.

A provision of Rs.20 lakhs has been made for Social Welfare. This provision will be utilised in providing essential services to the weaker sections of the community like establishment and completion of 3 State Homes and 4 district shelters/centres, a vagrant home, a home for orphans and destitute children, a home for destitute women, besides grants-in-aid to voluntary social welfare organisations. A certified school and a borstal institute are also being established.

In the field of labour welfare, provision has been made for introduction of vocational training in carpentry, smithy, tailoring, weaving, sewing and knitting in the community centres. More welfare centres are also proposed to be established and existing ones further improved.

For publicity and collection of statistics, etc., district organisations are being established in addition to strengthening the headquarter organisations.

These are broadly the main items of the State Third Five Year Plan. To carry out the programme unstinted support and co-operation of the public at all levels will be necessary. During the First and Second Plans, the spirit of self-help displayed by the people of the State was one of the finest in India. It is expected that during the Third Plan period, peoples' co-operation and participation in the implementation of the Plan will be available in an increasing measure. The success of the Plan will depend on the efforts of every one of 11·86 million people who inhabit the State.

Governmental efforts would be successful if they set about the work in a spirit of challenge. This is particularly so, as the Third Plan is expected to lay the solid foundations for the future growth of the State.

CHAPTER V

Income Aspect of the Third Plan of Assam

A rapid growth in the national income and progressive rise in the living standard of the people is the basic objective of any economic planning ; and this object has received major emphasis in the Five Year Plans of the country. The first two Five Year Plans marked the first phase of development aimed at achieving this end. Notwithstanding the stresses and strains, the implementation of the first two Plans has implanted in the economy, a new dynamism and has generated a new spirit of economic resurgence. The crucial point is to maintain the progress in the years to come and to maximise the efforts for a more progressive and diversified economy.

Rise of National Income All-India—Over the period of the first two Plans, India's national income, in terms of 1948-49 prices, has increased by 43% from Rs.8,850 crores in 1950-51 to Rs.12,640 crores in 1960-61. Over the same period, the *per capita* income rose from Rs.248 to Rs.293 or by 18% which is much slower than the increase in the total, because the country's population over the past decade had also been growing at a faster rate than what was originally estimated. On the basis of the experience of the working of the first two Plans and keeping in view the long-term goals as well as the immediate needs of the nation, the Third Plan seeks to raise the level of national income from Rs.12,690 crores in 1960-61 to Rs.16,418 crores or by about 30% at the end of the next five years. With the implementation of the schemes and projects included in the Third Plan, the *per capita* income is likely to go up by about 17% by 1965-66.

Rise of State National Income—Over the past decade the picture in Assam was, however, somewhat different, though no doubt, Assam too must have felt, in a large measure, the repercussions of the diverse national developments. Over the period of the first ten years of planning in Assam, the State national income had increased from Rs.223·6 crores to Rs.299·7 crores, by 34 per cent. Judged by the increase in the size of the State national income, the response of the State's economy to development efforts was by no means discouraging. But taking into consideration such factors as the State's population which showed a marked increase over the figures projected at the time of preparation of the State Third Plan, the resultant *per capita* income is estimated to have increased from Rs.255 to Rs.257 or by less than 1 per cent during the last decade.

The total outlay under the State Third Plan has been approved at Rs.120 crores. The amount does not contain any element of Central share on account of Centrally sponsored schemes and investments under the private sector by private entrepreneurs. It has been estimated that central investment on account of Centrally sponsored schemes will be of the order of Rs.80 crores while the private sector investment will be about Rs.56 crores. With the above investments considered together, estimates of State national income is expected to be as indicated in the table below :—

STATE NATIONAL INCOME IN ASSAM

(1948-49 prices)

(Rs. in crores)

	1950-51	1955-56	1960-61	1965-66
1. Agriculture and allied pursuits	126·3(56·4)	142·8(54·7)	145·3(48·5)	176·3(43·6)
2. Mining and factory establishment.	8·4(3·8)	11·1(4·3)	18·9(6·3)	57·8(14·3)
3. Tea industry	31·7(14·2)	33·0(12·6)	34·0(11·3)	41·2(10·2)
4. Small and Cottage Industries	15·3(6·8)	20·1(7·7)	24·6(8·3)	26·6(6·7)
5. Commerce, Transport and Communication.	24·1(10·8)	27·2(10·4)	40·9(13·6)	52·2(12·9)
6. Professions, Public Service, Other services and Houses Property.	17·8(8·0)	26·9(10·3)	36·0(12·0)	49·8(12·3)
7. Total	223·6(100·0)	261·1(100·0)	299·7(100·0)	403·9(100·0)
Quinquennial increase percentage.	..	16·8	14·8	34·8
Per capita income (in Rupees) ..	255	268	257	308

1. Figures in brackets indicate percentages to total.

2. The estimates of State National Income have been worked out on the basis of the targets of output for agriculture, mining, manufacturing industries and such other productive sectors and extrapolating the concomitant development in public services, trade, transport, commerce and other tertiary activities.

3. When a scheme is fully or partly financed by the Government of India and the Central share is available over and above the State Plan ceiling, it is called a Centrally Sponsored Scheme.

It will be seen that State national income of Assam is expected to go up from Rs.299·7 crores in 1960-61 to Rs.403·9 crores in 1965-66, that is by 34·8 per cent as against 34·3 per cent expected for India as a whole. The realisation of this expectation is, however, dependent on the completion and coming to production of the various new projects according to schedule, working of the existing and prospective industrial units to full capacity and realisation of uninterrupted progress in the agricultural sector. In other words, in case the projects envisaged in the Plan do not begin to yield production during the Third Plan period and adverse climate affects agriculture and tea production—there will be corresponding shortfall from the expectations. On the basis of provisional estimates of population, the *per capita* income in Assam is expected to go up by 19·8 per cent to Rs.308 at the end of the Third Plan period as against Rs.337 expected for the country as a whole.

Plan Outlay and Agriculture.—With the progress of the Plan, it was to be expected that the relative share of agriculture (excluding tea) would gradually come down. In 1950-51 agriculture accounted for 56·4 per cent of the total; in 1960-61 this has come down to about 48·5 per cent. Part of this decrease was due to the fall in agricultural output in 1960-61, a comparatively bad year for agriculture in Assam. During the period of the Third Plan, out of the total anticipated outlay of Rs.256 crores, Rs.27 crores is allocated to agriculture and allied programmes, Rs.170 crores to development of mines (including oil), power and industries, Rs.29 crores for transport and communication and the rest Rs.30 crores to social service, etc. The emphasis on the different sector is obvious. Thus while the income from agriculture and allied pursuits (animal husbandry, forestry, fishery) will rise by Rs.23 crores (or 16·3 per cent over 1960-61), the relative share of agriculture and allied activities to the total State national income will further decline to 42·5 per cent. Thus the economy of the State is certainly moving forward and changing from its present unbalanced structure to a more balanced one.

In the First Plan as well as in the initial stages of the Second Plan there were only meagre provisions for development in the field of power and industries sectors. In these fields really a late start has been given and very few schemes could start production during the Second Plan period. The Second Plan industrial investments, mainly in the Central and

private sectors, will thus start production only sometime after in the period of the Third Plan. These, along with the industrial programme envisaged in the Third Plan, will raise the contribution from mining and manufacturing sectors to the State national income from 18·9 crores to Rs.57·8 crores or by 206 per cent. The relative share of these sectors in the State national income will also go up from 6·3 per cent to 14·3 per cent when all the Second and Third Plan schemes start operating in full swing.

The tea industry occupies an important place in the economy of the State. But with developments in other sectors the relative share of tea industry in Assam's economy is gradually declining. The national target for tea production in the Third Plan is 900 million lbs. as against the present production of 725 million lbs., *i. e.*, an increase by 24 per cent. It has, however, been seen in the past that tea production in Assam is very much dependant upon seasonal variations. Judging by past trends it is felt that it may not be possible to realise more than 15 per cent of increase over the average production level of 365 million lbs. during the past four years. The income from tea will then go up to about Rs.41·2 crores in 1965-66 from Rs.34·0 crores in 1960-61.

An outlay of the magnitude envisaged during the Third Plan period, it is expected, will result in a large expansion of the activities in the tertiary sectors like trade, commerce, transport and professions of all kinds and will open up many avenues of earnings. Income from tertiary activities is expected to go up from 76·9 crores in 1960-61 to Rs.102·0 crores in 1965-66 (32·6 per cent).

CHAPTER VI

Employment Aspect of the Third Plan of Assam

Third Plan and unemployment problem-All-India.—The employment objective of the National Third Plan is to try to prevent further deterioration of the unemployment problem. The Planning Commission has estimated that the Third Plan will provide employment in the country to about 14 million persons (10·5 millions outside agriculture and 3·5 millions in agriculture) against an estimated requirement of 26 million jobs, 17 millions for the new entrants to labour force during the Third Plan period and 9 millions current back-log of unemployed.

There are no specific programmes as such, for taking care of the balance of 3 million new entrants. But finding employment for them is considered to be an essential objective of the Plan in order that there might not result in further deterioration of the unemployment situation by the end of the Third Plan. The Planning Commission hopes that their absorption will be achieved by effective re-deployment of manpower, promotion of village industries, development of industrial estates, rural electrification, other labour intensive projects in rural areas and execution of local works programmes during the plan period.

Magnitude of unemployment in Assam.—The magnitude of the unemployment problem in Assam to be tackled during the Third Plan is summarised below. The figures have been worked out on the basis of the population and labour force frame work provided by the provisional 1961 census results and the various statistical surveys on labour force, employment and unemployment.

	Rural	Urban	Number of persons (in thousands) Total
Current unemployed	107	10	117
New entrants to the labour force ...	398	61	459
Total	505	71	576

In order to eradicate unemployment, the task in Assam will be one of providing 5·76 lakh additional full-time jobs and of creating conditions for supplemental work opportunities for fuller employment of the very large under-employed population of the rural sector. The full time job opportunities thus created should further be, as far as possible, in the non-agricultural sectors so that further congestion on land is avoided.

It has been tentatively estimated that the investment in the Third Plan period in Assam will total about Rs 256 crores [State—Rs.120 crores, Central—Rs.80 crores, Private sector industries (major, medium and small)—Rs.56 crores].

Employment generation during the Third Plan, Assam.—In forecasting the employment effects of the Plan, it is necessary to draw a distinction between construction employment and continuing employment. The nature of the two is different in that the construction employment will be temporary and will call for continuing investment of a certain order even to ensure further employment of the persons engaged in construction.

Forecasts of additional employment generation in the Third Plan, based on currently available data, are set out in the table below.

Additional non-agricultural employment

	thousands
(A) Construction—	
(i) Industries and minerals including cottage and small-scale industry.	45
(ii) Other sectors	26
Total construction employment	71
(B) Continuing employment—	
(i) Agriculture and allied pursuits Co-operation and community development.	48
(ii) Irrigation and power	10
(iii) Industry and mining (including tea industry)	62
(iv) Transport and communication	22

(v) Social services	...	..	...	...	34
(vi) Miscellaneous including administration	..			...	3
					<hr/>
Total continuing employment..				...	179
					<hr/>
Total direct employment	..			..	250
					<hr/>
(C) Indirect employment in Trade, Transport, Commerce, etc., estimated at 56 of the total direct employment.					140
					<hr/>
Grand total	...		...	...	390
					<hr/>

Thus during the Third Plan period the additional employment potential may be of the order of 3.90 lakhs in terms of full-time jobs. And this is perhaps the upper limit imposed by the financial and organisational aspects of the State Third Plan. This leaves a back-log of about 1.86 lakhs unemployed persons or so, at the end of the Third Plan. The spurt in population revealed by the 1961 census is mainly responsible for rising trend of unemployment.

Agricultural employment.—Special emphasis has been given to agriculture in the Third Plan. The national target for increase of food-grains production has been fixed at 32 per cent over the current level and for the State of Assam, it is 22 per cent. Programmes to improve agricultural production including soil conservation, land reclamation, flood control, utilisation of irrigation facilities, afforestation, etc., will provide avenues for employment of some of the new entrants to the labour force apart from giving relief to the under-employed. It is by no means easy to ascertain the benefit of relative share going to the under-employed and the new entrants, but on the basis of experience of the Second Plan, the estimates of additional full-time employment in agriculture and allied activities may be put at 48 thousands. On a rough estimate this will effect a reduction in the share of employment provided by agriculture from 64 per cent to 61 per cent.

Employment of surplus rural man power.—In order to bridge, at least partially, the gap of 1·86 lakhs unemployed, a large number of “rural works projects” will have to be taken up which are intended to absorb surplus rural manpower, especially in areas with high incidence of rural unemployment and under-employment.

Educated unemployed.—Some of the unemployed persons as well, as many of the new entrants to the labour force will, of course, fall under the educated unemployed category, because of very rapid expansion of education at the secondary stage and collegiate stage. However, the growth of industries and the marked change in the attitude to the spirit of dignity of labour in the recent years will open up new opportunities for these categories of unemployed as well.

Technical and skilled personnel.—It is estimated that of the total employment generated by the Third Plan about 4 thousands will be engineers (degree and diploma holders) and about 50 thousands will be skilled workers of several engineering and non-engineering trades. In spite of the impressive start given for expanding technical education facilities in course of the Second and the Third Plans, it is unlikely that adequate technical and skilled personnel to man the jobs in industries, power, mining, transport and construction will be available locally during the Third Plan period. For sometime to come therefore, the State may have to depend for the supply of some categories of technical and skilled manpower on recruitment from outside the State.

Training programmes.—For assessing the requirements and turnouts of technical personnel from the technical institutions in the State, and advising the departments in the formulation of training programmes a Manpower Committee has been constituted and attached to the Planning and Development Department. This Committee has so far made some assessment of likely availability and requirements of technical personnel during the next ten years. According to the assessment carried out by this committee, the position about requirements and availability of technical personnel from the training institutions in the State during the Third Plan is likely to be as indicated in the tables below.

TABLE I

Requirement and availability of technical personnel

Category of technical personnel	Shortage at the end of Second Plan.	Additional requirement during Third Plan	Likely availability during Third Plan	Shortage (-) or Surplus (+) at the end of Third Plan
(1)	(2)	(3)	(4)	(5)
ENGINEERING PERSONNEL.				
Degree—				
Civil	58	367	384	(-)41
Mechanical	43	351	168	(-)126
Electrical	89	252	168	(-)173
Chemical ... ..	...	110	...	(-)110
Other Engineering	4	38	...	(-)42
Total	194	1,018	720	(-)492
Diploma—				
Civil	211	965	1,044	(-)135
Mechanical	23	244	252	(-)15
Electrical	29	187	252	(+)39
Other Engineering ... ..	...	42	...	(-)42
Total	263	1,438	1,548	(-)153
MEDICAL PERSONNEL—				
Specialists	9	46	50	(-)5
Doctors	39	402	480	(-)21
Nurses	20	362	400	(+)18
Nurse-Midwives	10	160	270	(+)100
Pharmacists	10	312	500	(+)178
Sanitary Inspectors ... ..	...	200	250	(+)50
VETERINARY PERSONNEL—				
Graduates	61	290	275	(-)76
Specialists	5	17	10	(-)12
Veterinary Field Assistants	5	450	350	(-)105
AGRICULTURAL PERSONNEL—				
Post-Graduate	4	71	40	(-)35
Graduate ... ..	...	499	290	(-)189
Diploma ... ..	...	800	800	...

TABLE II

Number of technical institutions with their intake capacity at the end of Third Plan

Course	No. of institutions	Intake capacity of these institutions	Remarks	
1	2	3	4	
I. ENGINEERING.				
Degree—				
Civil	}	120	One of these institutions is a Regional Engineering College	
Mechanical		3		120
Electrical				250
Total	3	490		
Diploma—				
Civil	}	720		
Mechanical		4	220	
Electrical			180	
Total	4	1,080		
II. AGRICULTURAL.				
Degree	1	150		
Diploma	4	200		
III. MEDICAL.				
Degree	3	300		
IV. VETERINARY.				
Degree	1	93		
Diploma	1	100		

The assessment made and studies carried out by the Manpower Committee revealed that the Second Five Year Plan of Assam had ended with a shortage of 194 Engineering Degree holders, 263 Engineering Diploma holders, about 100 Doctors and 61 Veterinary graduates. During the Third Plan period more than one thousand Engineering graduates, 14 hundred Engineering Diploma holders, 450 Medical graduates and specialists, about 300 Veterinary graduates and about 450 Agricultural graduates would be required besides other categories of technical personnel.

In order that the problems could be effectively met steps have been taken either to establish new technical training institutions or expand and improve existing ones. In the sphere of Engineering graduates, in addition to two existing Engineering Colleges with 120 annual admission in each a Regional Engineering College with an intake capacity of 250 is proposed to be established. To meet the demand of medical graduates besides improving the Dibrugarh Medical College, two more colleges at Gauhati and Silchar with an intake capacity of 100 in each are being established. The Agricultural College at Jorhat is being provided with Post-Graduate degree facilities. Similarly the Veterinary College at Gauhati is being further strengthened with specialist staff. In addition, candidates are being trained outside the State by awarding stipends. Technical Training is, however, a long term problem. It takes five years or more to give the basic training needed by an engineer or a doctor and a much longer period to provide research and practical experience. Thus in spite of the State Third Plan providing greater emphasis in the training of technical personnel, the Third Plan will end with some shortages of some categories of these personnel as indicated in table I.

In addition to the establishment of institutions for turning out graduates and Post-graduates in technical and scientific fields, the programmes under each head of development also have provided for other training programmes and schemes. For turning out Diploma holders in Engineering 4 institutions have either been established or are being established. For training in certificate courses 6 industrial training institutes have been established. Diploma course training is being given to agricultural personnel in 4 integrated extension centres. A Veterinary field assistants training institute has been established for training of veterinary field assistants. For training

subordinate forest staff the Foresters' school at Jalukbari has been improved. Subordinate staff of Fishery and Co-operative departments, Panchayat Secretaries and Presidents are being trained at Jaysagar. For training of teachers, nurses, sanitarians, midwives, etc. and other categories of personnel elaborate training schemes are already in operation under the different sectors of development. Some research institutes have also been opened. Similarly practical training in several fields of development is being pursued. As the plan proceeds, wherever necessary, reorganisation and expansion of existing training institutions will be carried out and other measures initiated for affording facilities for imparting practical training, research and other specialist training. The Manpower Committee will be reviewing the manpower problems from time to time in the light of changing needs and experience and advise the departments about appropriate measures in order that manpower planning could be carried forward as integral parts of the departmental plans by constant interchange of ideas, knowledge and experience and their own assessment of the situations.

PART II

CHAPTERS VII

Programmes of development

AGRICULTURE

In a country where vast majority of the people live in rural surroundings and a large percentage of the total population is engaged in agriculture for its livelihood, in any scheme of economic development, development of agriculture holds a position of basic importance. It is not only important from the point of view of profession but also because it keeps the wheel of industry moving by supplying raw materials for the industry. During the thirties the State was not only self-sufficient in food-grains but was also a surplus State. During the Second World War the State itself became a theatre of war operations. This resulted in concentration of Military personnel on the one hand, and heavy influx of outsiders on the other. A difficult situation thus arose with regard to supplying the basic necessities of which food supply became one of the foremost problems. After the war, before the position could get stabilised, the State witnessed the influx of refugees as a result of the partition. This was further aggravated by the Great Earthquake, 1950 and earthquakes of lesser dimensions in the following years. The earthquake caused certain pronounced changes in the contours resulting in changes in the courses of the large rivers. The cumulative effect was that the State became deficit in respect of requirements of foodgrains. To meet the challenge, Grow More Food Campaign which was started even during the war, was intensified and programmes of agricultural development continued to receive the highest priority in the First Five Year Plan. Most of the schemes included in the First Five Year Plan, therefore, aimed at increasing production of food-grains only. These schemes were operated on the basis of a seven-point integrated programme. An expenditure of Rs.279.43 lakhs was incurred on the scheme during the First Plan period. A production target of 2.25 lakhs tons was achieved. The table below indicates the position of food grains during the First Plan period, compared to the base year 1950-51.

Items	1950-51		Level of production at the end of First Plan period 1955-56
Food grains. (000 tons).	14.31	...	16.69
Cotton (000 bales) ...	7.1	...	9.00
Jute (000 Bales). ...	7.90	...	10.94
Oilseeds (000 tons). ...	57.00	...	58.00
Sugarcane (000 tons)	68.00	...	66.00
Gur.			

Area under food-grains increased from 42.97 lakh acres in 1950-51 to 44.5 lakh acres in 1955-56. In respect of commercial crops, the production under cotton increased from 7,100 bales in 1950-51 to 9,000 bales in 1955-56. Sugarcane production recorded a downward trend. In case of jute, acreage and production increased by 84,000 acres and about 3.00 lakh bales respectively. Oilseeds recorded increase an increase in production by about 1,000 tons.

Under the scheme for minor irrigation, 4,948 projects were constructed and about 9.00 lakh acres of land were provided with irrigation facilities. Irrigation with power pumps was also continued, mainly for extending the area under spring paddy. During the first plan period 200 power pumps were purchased and installed in the various areas of the State, which benefited about 8,200 acres. A land reclamation scheme was launched at Kaki in the Nowgong district and Subankhata the Kamrup district, extending over a total area of 12,000 acres and 3,160 acres. respectively, and 1,519 flood affected families were re-settled in these areas. All possible methods had been adopted to make people manure minded. Similarly multiplication and distribution of improved seeds was continued. For this purpose 9 seed farms were established in the different areas of the State. Other measures like plant protection, double cropping, better farming practices were continued. To meet the requirements of trained agricultural personnel the Assam Agriculture College at Jorhat was developed and the intake capacity was raised from 30 in 1950-51 to 35 in 1955-56. A horticultural development scheme was implemented with the object of stepping up overall fruit production in the State, by improving the standard of production in the existing gardens, increasing the area under different varieties and economic utilisation of the surplus fruit of the State in the fruit technological laboratory at Gauhati.

For the Second Plan period an allocation of Rs.473-33 lakhs was made under this sector, against which an expenditure of Rs. 475-97 lakhs has been incurred. The Second Plan schemes were, by and large, continuation schemes from the First Plan with particular emphasis to balanced production of food and cash crops and also to develop different aspects of agriculture. It also expected to create conditions for as rapid an improvement in the peasant's standard of living as possible. Particular emphasis was given to the schemes for supply of improved plants, seeds, manures, water supply, crop protection, double cropping, reclamation of waste lands and better farming practices.

The trend of production of major crops over the Second Plan period was as follows:—

Commodity	Unit	1955-56	1958-59	1959-60	1960-61
1. Rice	, 000 tons	1,629	1620	1618	1640
2. Sugarcane (gur)	, 000 tons	66	97	95	81
3. Oil Seeds	, 000 tons	58	65	44	47
4. Potato	, 000 tons	135	160	105	150
5. Jute	, 000 bales	1094	989	1144	813

In agriculture weather conditions are always dominant factors and, therefore, fluctuations in production are inevitable.

The net area irrigated increased from 10.3 lakh acres in 1955-56 to 16.9 lakh acres in 1960-61. For the first time a soil conservation scheme was started under the agriculture sector, mainly to induce settled cultivation in the hills and to protect water catchment of the river basins. With the creation of a Soil Conservation Directorate, the work has since been transferred to that department.

During the Second Five Year Plan Period about 5,000 acres of waste lands were reclaimed ; 34,515 tons Ammonium Sulphate and 6,962 tons of Phosphetic Fertilizers were distributed ; 144 additional seed farms covering an area of about 300, acres were started for multiplication and distribution of foundation seeds locally along with the farms established during the first plan period. The total number of seed farms stood at 153 at the end of the Second Plan in the State. Of these, 100 were in the Brahmaputra Valley, 13 in Cachar District and 40 in the hill districts.

Intensive method of paddy cultivation, frequently described by the name of "Japanese Method of Cultivation" and other improved practices were carried out with encouraging results. Mobile units had been established in all the sub-divisions for

encouraging horticultural development. The intake capacity of the Assam Agricultural College was raised from 35 in the First Plan to 80 in the Second Plan. Four integrated extension training centres were also established. Research work was systematically pursued on problems pertaining to paddy, sugarcane, pulses, vegetables, mycology, plant pathology, soil chemistry, agricultural implements, etc.

For the Third Plan period an allocation of Rs. 902 lakhs, has been made for agricultural development scheme. The third plan period will be crucial from the point of view of food requirement because of a number of factors, the most important of these factors being the very high addition to the population. Agricultural production during the Third Plan period will actually hold the key to the success of the plan. Measures already initiated during the first two Plans will, therefore, be further intensified during the Third Plan period, increased production and productivity in the agricultural sectors being the foremost aim.

The proposals for the Third Plan were discussed with the representatives of the Government of India and the Planning Commission in January 1961. Broadly, it was decided that medium irrigation facilities will be extended to an additional area of 79,000 acres and minor irrigation facilities to another additional area of 3,70,000 acres. An additional area of 18,000 acres will be reclaimed. Additional area proposed to be brought under improved seeds will reach the figure of about 22,00,000 acres, green manuring operation will be extended from 2.00 lakh acres at the end of 1960-61 to 10.00 lakh acres at the end of the third plan. Use of ammonium sulphate and superphosphate is proposed to be increased from 10,000 tons, and 5,000 tons at the end of 1960-61 to 60,000 tons and 25,000 tons, respectively at the end of 1955-66. Area under urban and rural compost is proposed to be raised by 13,000 acres and 2.00 lakhs acres respectively.

The intake capacity of the Agricultural College will be further increased to 100. The intake capacity of the extension training centres will be raised to 75 trainees per centre per annum. It is also proposed to establish a Home science wing and attach it to the Assam Agricultural College. A programme for extensive development of subsidiary food will also be implemented. If it becomes necessary, as the plan proceeds additional allocations for development of subsidiary food crops will be made, as the need for subsidiary food has assumed a position of special importance. The Planning Commission has also attached a great deal of importance to the development of

these food crops. Production of improved agricultural implements will be continued in the regional and district workshops of the Agriculture Department, through production-cum-training centres of the Cottage Industries Department and through private and co-operative agencies.

An experiment of wide significance which is receiving wide support from the public is the formation of Field Management Committees. So far 10,000 such committees have been organised. These committees are designed to bring together the actual tillers of the land to pool their traditional experience, ideas and co-operation in a common platform in order that the drive for Grow More Food becomes a people's movement. Among the other measures, the vital one is the decision of Government to consolidate agricultural holdings on a rational and economic basis. It is proposed to consolidate 18,750 bighas of agricultural lands during the Third Plan period, to begin with.

Distribution of production targets under the main crops and commodities will be as follows :

Crop/commodity	Unit	Anticipated production in 1960-61	Estimated Production in 1965-66	Additional production
1	2	3	4	5
1. Food grains	Lakh tons	17.69	21.89	4.20
(i) Rice .. ..	..	17.27	21.20	3.93
(ii) Other cereals .. ..	..	0.11	0.13	0.02
(iii) Pulses ... ..	..	0.31	0.56	0.25
2. Oil seeds .. ..	..	0.60	0.80	0.20
3. Sugarcane (Gur) .. ..	..	1.00	1.40	0.40
4. Cotton	Lakh bales	0.09	0.14	0.05
5. Jute .. ..	..	11.00	15.00	4.00
6. Coconut	Million nuts	7.40	8.70	1.30
7. Arecanut	Lakh md.	5.00	6.00	1.00
8. Cashewnut .. ..	..	0.27	0.57	0.30

ANIMAL HUSBANDRY, DAIRYING AND MILK SUPPLY

The livestock industry occupies a key position in the rural economy of the State, since the agriculturists solely depend on the motive power of the bullocks and organic manure for the fertility of the soil. Animal husbandry thus forms an integral part of a sound system of agriculture. The milk and milk products are necessary for the maintenance of health and prevention of diseases amongst the children, nursing mothers and adult population. The institutions dealing with the welfare of livestock are yet very few and services rendered through

these handful of units and personnel do not reach many parts of the State, the result being that the livestock population did not receive the necessary animal husbandry and veterinary aid in the past. Before the first five year plan, the veterinary department had only a bare nucleus staff. There were 108 veterinary dispensaries, 4 veterinary hospitals and 4 experimental livestock farms at the beginning of the first plan. Quite a few of these institutions suffered for want of trained personnel. As a result, although the State possesses as many as about 2½ crores of livestock of all-species, the overall production from these stock has been found to be lowest in the country.

During the First Plan period, a beginning had been made to tackle the problems, to the extent possible, consistent with the available human and material resources in the State. The schemes, by and large, aimed at better breeding, better nutrition and control of diseases and schemes like key village centres, extension of veterinary facilities, fodder development, manufacture of goat tissue, ranikhet and fowl-pox vaccine and supplying these to the different places of the State were taken up.

Under the First Five Year Plan, 5 veterinary hospitals, 10 veterinary dispensaries, 11 key village blocks, 29 key village centres and one poultry farm were established. The Assam Veterinary College was improved with the provision of equipment and qualified teaching staff, etc. The intake capacity of the Veterinary college was increased from 45 to 68. A scheme for milk supply was put into operation in 1955-58. 300 buffaloes were purchased and distributed to the cattle farms at Khanapara, Barpeta and Dibrugarh. A veterinary laboratory was also established at Silchar for proper diagnosis of cattle diseases. The biological product section at Gauhati met demands of goat-tissue vaccine, rinderpest vaccine and fowl-pox vaccine not only of the State but also the neighbouring areas such as Manipur and N. E. F. A. An expenditure of Rs.21.77 lakhs was incurred during the First Five Year Plan period.

During the Second Plan period, the veterinary programmes under implementation during the first plan period were improved and expanded and, a few more new schemes were taken up. The Assam Veterinary College was shifted from its original site in Gauhati to an open and commodious site at Khanapara. The intake capacity of the Veterinary College was increased from 68 at the end of the First Plan to 93 during the Second plan period. The College, inspite of various handicaps, has been able to produce 306 veterinary Graduates and 230 veterinary field assistants, thus meeting a part of the requirement of the State and the neighbouring

administrations, during the Second plan period. A veterinary field assistants' training institute was also opened in the veterinary college campus with an intake capacity of 100. The institute has since been transferred to Silchar. The number of veterinary hospitals and dispensaries increased by 7 and 18 respectively, construction work on 9 hospitals and 11 dispensaries was in progress. 3 mobile veterinary dispensaries were also established to render veterinary aid in the rural areas. 2 P. G. Rs. and V. G. Rs. covering an area of 223 acres were improved. 5 rural key village blocks, 42 key village centres, 2 extension centres, and 3 artificial insemination centres were established. Survey was carried out in the villages under the scheme for control and eradication of humpsores and more than 36,00,000 cattle were vaccinated. 2 more poultry farms were established besides one duck breeding farm, one pig farm and three dairy farms. A live stock Research Station was also established for research and study of animal diseases. An expenditure of Rs. 68.58 lakhs was incurred during the Second Plan period, against an expenditure of Rs. 21.77 lakhs during the first plan period.

The Third Five Year Plan of the State envisages further strengthening of the measures initiated under the first two plans. Construction work on the research station, which was started during the First Plan period, will be completed. The number of veterinary dispensaries will increase by 37, veterinary hospitals by 17, mobile veterinary dispensaries by 8 at the end of the Third Plan period. 4 diagnostic laboratories, six more rural key village blocks, 41 key village centres, two extension centres and five artificial insemination centres will also be established. One service training institute and a marketing cell are also proposed to be started. Cross breeding in hilly and heavy rain-fall areas will be extended by starting 4 sub-centres. Improved bulls will be distributed in the villages through the Panchayats. The mass castration of bulls programme will be intensified and 2 pig farms, 2 poultry farms, 6 poultry extension centres, 3 duck breeding centres, 2 hatcheries and 2 marketing cells will start functioning, in addition to such institutions established under the First and Second Plans. The programme of dairy development and milk supply is proposed to be intensified and two dairy farms will be started at Gauhati and Shillong. The Khanapara milk farm will be converted into a milk colony. The Assam Veterinary College will be completed and provided with an extension unit. Cattle shows will be organised in the districts to demonstrate the

importance of scientific breeding, feeding, management and disease control.

An allocation of Rs.140 lakhs has been made for the Third Plan period. While the table I indicates important physical targets achieved during the First and Second Plan periods and proposed for the Third Plan, table II indicates the distribution of veterinary hospitals and dispensaries subdivisionwise.

TABLE I
Physical Targets

Name of Scheme	1950-51	1955-56	1960-61	1965-66	Remarks
1	2	3	4	5	6
1. Dispensaries	108	118	136	173	
2. Mobile Dispensaries .. ..	..	..	3	9	
3. Hospitals	4	9	16	35	
4. Key Village—					
(a) Rural Key Village Block .. ..	..	11	17	23	
(b) Key Village Centre .. ..	..	29	71	112	
(c) Extension Centre ... ..	..	..	2	4	
(d) Urban Artificial Insemination Centre. .. ..	..	..	3	8	
5. Poultry Farm including Piggery. .. ..	..	1	3	3	
(a) Poultry Extension Centre ... ..	..	..	2	8	
(b) Poultry Marketing Centre. .. ..	..	..	..	2	
(c) Duck Extension Centre ... ..	..	..	1	4	
(d) Hatcheries .. ..	..	..	..	2	
6. Diagnostic Laboratory	1	2	2	6	
7. Veterinary College intake capacity.	45	68	93	93	
8. Cattle Farms	4	4	7	8	

TABLE II

Distribution of Veterinary Hospitals and Dispensaries including Mobile Dispensaries Subdivision-wise

Name of Subdivision	1950-51		1955-56		1960-61		1965-66		Remarks	
	Hospital	Dispensary	Hospital	Dispensary	Hospital	Dispensary	Hospital	Dispensary		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1. Dhubri	7	..	7	1	9	4	13	
2. Goalpara	6	..	6	1	6	1	8	
3. Kokraj	1	1	2	1	2	1	2	
4. Gauhati	..	1	11	3	12	3	13	4	16	
5. Barpeta	8	..	8	1	8	2	12	
6. Nowgong	16	1	17	1	18	2	21	
7. Tezpur	1	8	1	8	1	10	2	12	
8. Mangaldoi	5	..	6	1	6	2	8	
9. Jorhat	7	1	7	1	9	3	10	
10. Sibsagar	5	..	5	1	7	2	9	
11. Golaghat	6	..	6	..	7	1	9	
12. Dibrugarh	7	..	9	1	9	2	9	
13. North Lakhimpur	3	..	4	..	6	2	9	
14. Silchar	1	4	1	4	1	5	4	7	
15. Hailakandi	4	..	4	..	4	1	4	
16. Karimganj	4	..	4	1	6	1	7	
17. Tura	3	..	4	..	4	..	5	
18. Shillong	..	1	..	1	..	1	..	1	3	
19. Jowai	1	..	1	..	1	..	2	
20. Diphu	1	..	2	..	2	
21. Haflong	1	..	1	..	1	..	2	
22. Aijal	1	..	1	..	2	..	2	
23. Lungleh	1	..	1	..	1	
Total	..	4	103	9	118	16	136	35	173	

FORESTS

The bulk of the forests in the State are State-owned. The State is also rich in wild life, some of which are of rare species in the country, like the one horned rhino. Besides protective and productive functions for which forests and wild life have to be maintained, the revenues derived therefrom are also an important consideration. The programme of forest development in the State during the First Five Year Plan was, in the main, a continuation of programme which had been initiated earlier under the post-war development schemes. These included schemes for regeneration and plantation, improvement of forest communications, preparation of working plans, training of forest personnel and provision of equipment, etc. The measures also included increasing the supply of timber and other produce. Under the medicinal plant scheme a target of 140 acres had been achieved. Afforestation target of more than 2,000 acres was exceeded. Under communication, 383 miles of existing roads were improved, besides fulfilling a target of 250 miles of new forest roads. A programme of planting 650 acres under wattle was implemented. A foresters' training school was also established for training of forest personnel. Experimental work was organised for the improvement of indigenous canes and for the introduction of Malayan cane. Under the Wild life sanctuary scheme various amenities for tourists visiting Kaziranga and Manas wild life sanctuaries had been provided. A total expenditure of Rs.51.03 lakhs was incurred on all the schemes, during the First Plan period.

During the Second Plan period most of the schemes in operation at the end of the First Five Year Plan were continued on a larger scale, besides implementing certain new schemes, such as botanical garden and zoo, reclamation of *ex-zamindary* forests, timber treatment and seasoning plants, and survey of raw materials. Acreage under wattle cultivation was increased from 650 acres at the end of the First Plan to 750 acres at the end of the Second Plan. Cultivation of the medicinal and economic plant was extended from 140 acres to 272 acres during the same period. Facilities for tourists visiting wild life sanctuaries were further increased by construction and improvement of 226 miles of roads. Communication system in forest areas had been increased by addition of 320 miles of new roads; 718 miles of existing roads were also improved. Regeneration of forests was stepped up and a target of afforestation on 9,927 acres of forest lands was achieved. Khoir plantation was extended to an

additional area of 500 acres, making a total of about 3,300 acres at the end of the Second Plan period. Similarly, total acreage under matchwood plantation was brought to nearly 10,000 acres at the end of the Second Five Year plan. The source of canes, which is an important minor forest produce, had been supplemented by intensive artificial cultivation and the acreages under cane cultivation was stepped up to 568 acres. Owing to the abolition of the zamindari about 600 sq. miles of forest lands under private ownership were brought under State control and the administrative set up was strengthened. Steps had been taken to rehabilitate the *ex-zamindari* forests. A beginning was made for the use of secondary species of timber by provision of an ascu treatment plant as well as a seasoning plant. A botanical garden and zoo was started at Gauhati. Improvement of forest villages by providing wells, schools, medical facilities, etc., under the management of the forest department found an important place in the forestry schemes. An expenditure of Rs.103.89 lakhs is estimated to have been incurred during the Second Plan period.

Under the Third Plan, a provision of Rs.140.00 lakhs has been made for forest development schemes including soil conservation in the plains. Broadly, the salient features of the Third Plan schemes are the raising of plantations of industrial importance with a view to meeting the demand from prospective industries, further intensifying and consolidating rehabilitation of *ex-zamindari* forests, increasing the areas under various plantations, strengthening the means of communication. For the benefit of the forest dwellers the existing amenities will be further supplemented by providing 20 additional drinking water wells, 5 additional schools and 25 miles of additional roads. Provision has been made for raising 3,000 acres of matchwood plantation, 3,000 acres of teak plantation, 1,500 acres of plywood and 2,500 acres of khoir plantation, besides providing for additional amenities for the tourists visiting the North Kamrup and Kaziranga Wild Life sanctuaries. Afforestation, rehabilitation and plantation work will be carried out over an area of about 12,000 acres. The forest communications will be further extended by construction of 65 miles of new roads and improving about 300 miles. Facilities for transport in the extraction of timber and forest produce from the forests to markets or to railhead stations will be improved. The botanical garden-cum-zoo will, by and large, have a sufficient number of animals and birds. Their environments will be also improved. The national parks and wild life sanctuaries will have more buildings

and 30 miles of additional roads and patrolling paths. Wattle cultivation will further be extended to an area of 125 acres mainly in reserved forests. Under medicinal and economic plant; an additional area of 100 acres will be brought under cultivation. The Goalpara tramway will be rejuvenated. Under the *ex-zamindary* forests 100 miles of gravel roads and 300 miles of cart tracks will be constructed, besides carrying out regeneration over an areas of 10 sqr. miles and cultural operations on 100 sqr. miles. The Assam Forest School will be further improved and survey of raw materials will be intensified. With the completion of the timber treatment and seasoning plant, it is expected that it will be possible to satisfy increased demands for timber not only of the population of the State but it will also be possible to supply timber to the rest of the country.

A Regional Forest Research Institute is also going to be established at Gauhati near the State Zoo, under the Central sector at an estimated cost of about Rs.1 crore. The work on the project is expected to start soon. Taking this provision also into account, Rs.2.00 crores will in any case, be spent in the State on forestry development schemes during the Third Plan period.

The table below indicates important physical targets achieved during the last ten years and proposed under the State Third Plan.

Item Unit	Physical targets achieved and proposed				Total
	1950-51	1955-56	1960-61	1965-66	
(1)	(2)	(3)	(4)	(5)	(6)
1. Roads in miles—					
(a) New Construction ..	..	250	320	65	
(b) Improvement ..	..	383	780	300	
2. Afforestation in acres ..	11,500	2,000	9,927	12,000	
3. Plantations in acres—					
(i) Medicinal Plant ..	..	147	132½	100	
(ii) Wattle ..	..	650	100	125	
(iii) Khoir ...	..	136	500	2,500	
(iv) Matchwood ..	..	..	3,613	3,000	
(v) Cane ..	..	400	118	..	
(vi) Teak ..	..	..	..	3,200	
(vii) Plywood ..	..	..	..	1,500	
4. Zamindary Forests acquired in square miles.	..	..	600		{ 10 sqr. miles of regeneration. 100 miles of cultural operation. 300 miles improvement of existing tracks into motorable roads conversion of 100 miles of fair weather roads into all weather roads.
			sqr. miles.		
5. Basic amenities for forests dwellers—					
(i) Schools Nos. ..	..	19	14	5	
(ii) Wells Nos. ..	..	132	60	20	

Note.—The figures under columns 3 to 5 indicate additional targets under the Plan expenditure and does not include targets under normal expenditure.

FISHERIES

Rich in proteins, vitamins and mineral salts, fish is a valuable protective food and forms an important constituent of the diet of about 75 per cent of population of the State. The development of fisheries is therefore one of the most promising means of improving the diet of the people. With innumerable rivers and tributaries, natural beels, swamps, low lying areas, tanks and ponds, etc., Assam has great potentialities for the development of inland fisheries. In order to tap these resources to the extent feasible, and thereby increase fish production, the Fishery Department was started in the State in 1950. The department has, since its inception, been concentrating on piscicultural development and, training its staff to be able to take up more and more fishery development work. The development activities carried out by the department during the first plan period consisted, by and large, of survey of fish breeding areas for locating seed collecting centres, organisation of fish farms, stocking of fish seeds departmentally and through private enterprisers, survey of natural fisheries and initiating measures for their improvement, survey of culturable areas, giving technical advice to private enterprisers and assisting them in undertaking development schemes by granting loans and organising pisciculture in community development block areas. Short term training courses were also organised for lower grade personnel including the personnel working in community development areas. An expenditure of Rs.10.54 lakhs was incurred. In concrete terms, 7 fish farms and 17 seed collecting centres were established besides developing 70 acres of water areas.

During the Second Plan period the schemes started under the first plan were continued and further developed. In addition, new schemes relating to the organisation of fishery co-operatives, development of hill fisheries and development of fisheries in the Umtru hydro-electric project area and reclamation of natural fisheries were also taken up, besides intensifying survey works to locate suitable spawning areas in the different districts, initiating conservation measures in selected seed collecting areas, starting additional fish farms and developing hill and natural fisheries. Besides, induced breeding operation was taken up by the State Fishery Department in the year 1958-59 in collaboration with the Pond Culture Unit of the Government of India and Assam which was till then

depending on Calcutta fish seeds has been able to be self-sufficient in fish seeds. Assam is the only State which has been successful in producing fish seeds through induced breeding operations. In physical terms, 6 additional fish farms and 10 seed collecting centres were established which includes six induced breeding operation centres, 1026 acres of additional water area were also developed. A production target of 6710 maunds of fish has been achieved during the Second Plan period. An expenditure of Rs.30.59 lakhs has been incurred.

For Third Plan period an allocation of Rs.50.00 lakhs has been made. Besides intensifying and further developing measures achieved till the end of the Second Plan, the Third Plan schemes, envisage establishment of additional fish farms in each subdivision, fish seed production and distribution, reclamation and development of derelict fisheries, development and exploitation of river and other natural fisheries, induced breeding, storage and distribution, survey of culturable waters, demonstration of fish farms, training of technical personnel and conservation of fisheries, etc. A production target of 81 thousand maunds of fish and 3.00 lakhs of fish seeds is proposed for the Third Plan period. 3000 acres of water areas are expected to be reclaimed during the same period, throughout the State. High priority has been accorded to the fish production programme and for this purpose every effort will be made to spend the plan allocation during the first three or four years of the Third Plan. The question of additional allocation will be considered if the plan allocation is thus exhausted earlier during the Third Plan period.

CO-OPERATION

In our rural economy, where the major agricultural sector is composed of unorganised producers, the tempo of agricultural development is to a considerable extent dependent on the development of agricultural co-operative as a mode of organisation. Provision of credit facilities for agricultural production thus forms the main plank of the co-operative development programme. In Assam the first batch of 12 Co-operative societies that was started some fifty-six years ago were thus agricultural credit societies. For the same reason even to-day the majority of the co-operative societies are agricultural co-operatives though appreciable advance has been made in other directions also. The movement had passed through various difficulties at different times and before the first plan period the societies were, for the most part, in a moribund condition, with a few exceptions here and there. Efforts were, therefore, mainly concentrated during the First Plan period in revitalising the movement. An

expenditure of Rs.20.01 lakhs was incurred out of the plan funds. In addition, an amount of Rs.65.48 lakhs was also received from the Reserve Bank of India. A co-operative training institute was founded in the year 1953 at Jaysagar in the Sibsagar district for training of office bearers of co-operative societies, as well as subordinate officers of the co-operative department. A co-operatives cotton ginning mill was set up at Phulbari in the Garo Hills district for processing of cotton, grown in that district. A ginning mill society was also organised and registered. The society was given a grant-in-aid of Rs.1.32 lakhs for purchase and installation of machinery and construction of factory houses, etc. 10 godowns were started in the subdivisional towns during the First Plan period. Co-operative enterprises in the backward areas were further encouraged by giving interest free loans to the members of the co-operative societies. The number of co-operative societies rose from 2844 to about 5258 and the number of members from 2,52,254 to 3,39,272. During the same period, the working capital of co-operative societies rose from Rs.197.67 lakhs to Rs.652.37 lakhs. Of the 5,258 societies at the end of the first plan, 2,649 were agricultural societies and 2,609 were non-agricultural societies.

Under the State Second Five Year Plan an allocation of Rs.125.40 lakhs was made for development of the co-operative movement in the State. Against this Rs.169.47 lakhs was incurred. A sum of Rs.27 lakhs was also incurred in the establishment of a co-operative sugar mill. In November 1958, the National Development Council had passed a resolution according to which it was decided to start village co-operatives on the basis of village communities and to see that co-operatives are set up for every habitation with a population of not less than 1,000. The resolution also allows for credit unions being formed of such village societies in specially backward areas. As a result of these changes 3,361 service co-operatives have been formed till the end of the Second Plan. Besides one State union co-operative, 37 credit unions were formed in the hill districts. One cotton ginning mill in the Mikir Hills, and one co-operative rice mill in Darrang were also established. 200 large sized co-operatives, 111 primary marketing societies and 181 godowns were established in different parts of the State. A Jute Baling Society was formed in Nowgong. The Central Co-operative Land Mortgage Bank, Ltd. and the Assam Co-operative Apex Marketing Society started functioning. The training institute at Joysagar continued to render guidance and training to the staff of the co-operative societies. 20 Co-operative farming societies were either formed or revitalised in the main

sugarcane producing areas. Altogether 157 of Co-operative Farming Societies were functioning in the different areas of the State. During the Second Plan period, the Assam State Warehousing Corporation had also been established. In the absence of warehouses the corporation was running its business in hired houses. The corporation was financially assisted to the extent of Rs.7 lakhs. The Co-operative Sugar Mill at Baruabamoongaon went into production during 1958-59. The State Trading of Paddy had been taken up through co-operatives since 1959 and the Assam Co-operative Apex Marketing Society was given a license for monopoly procurement of paddy. In addition to the expenditure of Rs.169.47 lakhs from plan funds, a sum of Rs.127.00 lakhs was issued to the agriculturists as short term and medium term loans, from funds made available by the Reserve Bank of India.

An allocation of Rs.230 lakhs has been made for the Third Plan period. The co-operative movement in the state will be further strengthened and improved. The number of service co-operatives will be increased from 3,361 at the end of the Second Plan period to about 5,000 at the end of the Third Plan period. Total number of membership will increase from 2,60,000 in 1960-61 to 10,00,00 in 1965-66.

Short-term credit will be available to the extent of Rs.6.5 crores and medium term credit to the extent of Rs.1.5 crores. 370 more rural godowns, 50 additional consumers' co-operatives and 10 more industrial co-operatives will be set up.

Under the Central Plan a provision of Rs.8 crores has been made by the Government of India to assist the State Governments in accelerating the progress of co-operative farming outside the pilot project areas. A share out of this provision will also be available to Assam should sufficient number of the agriculturists come forward and take up co-operative farming as a means of raising food production.

COMMUNITY DEVELOPMENT

The social, economic and cultural aspects of the life in Indian villages greatly differ from those in urban life. Transformation of the former has, therefore, an important bearing if we have to provide equal opportunities for the rural population. The community development and national extension service programmes which had been evolved during the First

Plan period were designed to provide for the methods of approach to the problems of improving rural life under conditions of democratic planning. The community development programme was first launched on 2nd October 1952, with the above approach as its goal so as to initiate a process of realising these objectives. The programme has, since its inception, been making a comprehensive approach to the social and economic aspects of rural life, and, includes within its scope, activities relating to agriculture, co-operation, animal husbandry, minor irrigation, village and small industries, health and social education. In the formulation of the programmes under the different sectors the activities have been so designed and where necessary so modified, as to take full cognisance of the requirements of the community development programmes and programmes under the national extension service. While the programme was on, it was found from experience that because of the backwardness of the areas where the movement is launched there is an unavoidable time-lag before the people fully understand and appreciate the objectives behind the community development schemes. Again, on account of past associations, special efforts are needed to develop intimate understanding between the people and the extension services which is so essential for the success of the programme. It was, therefore, felt that if, prior to allotting the blocks in particular areas, preliminaries are undertaken in the field of extension services by providing a nucleus staff and transport facilities, it would greatly assist in forging understanding and helpful attitude between the extension service organisation and the people. As an experiment, therefore, a start in this direction was made by initiating a programme of 'Pre-Extension Service Blocks'. This was found to encourage people for taking initiative in the programme put before them. Dovetailing of the project programmes and the sector-wise developmental programmes is guided by the principles evolved at the national level and considered best suited to the State so that the projects form an integral part of the over-all state plan. For instance, starting of the primary health centres in community development blocks has been incorporated in the public health programme; starting of the veterinary dispensaries or key village centres is integrated with development of animal husbandry in the plan; phasing of the social education centres and community centres under the education plan is correlated to the establishment of the Community Development Schemes. Mobile audio-visual amenities are also under the education plan, keeping in view the special needs of the community development and National Extension Service programmes. Extension services in

the fields of agriculture, co-operation, etc., are also dovetailed with similar services under the Community Development Project Administration. The dovetailing of the projects with the similar services under the different developmental heads has been kept in view so that it paves the way for a unified organisation, working under the respective technical departments. The Prime Minister had once said that the Community Development Programme and the National Extension Services are bringing about 'a silent but gigantic revolution in the country side'. Indeed, the Community Development Programme and the N. E. S. to-day constitute a vital part of the over-all development plan of the country in which, the different development departments approach the villagers each from the aspects of its own work, the approach being that a villager comprehends his whole life, positive enthusiasm of the people is aroused and sustained, the aim being to create in the rural population a lasting desire for higher standard of living—a will to live. While the official machinery guide and assist, the principal responsibility for improving their own conditions continues to devolve on the people themselves.

The first series of the Community Development block was inaugurated in Assam in 27 blocks covering an area of 7,859 square miles with a population of 17.50 lakhs in 5,623 villages.

The programme for expansion of the movement has since been revised and under the revised programme the state has since been delimited into 160 blocks. According to the revised programme 57 blocks were taken up under the Second Plan. This was in addition to 27 blocks taken up during the First Plan period. During the first two Plan periods, therefore, altogether 84 blocks were set up. The remaining 76 blocks are proposed for the Third Plan period. 42 blocks have been allotted for the autonomous hill districts. These blocks will be converted to M. P. C. D. blocks. An allocation of Rs.8.35 crores has been made in the Third Plan. In addition about Rs.2 crores will be received from the Ministry of Home Affairs for the M. P. C. D. blocks. Thus although the State plan allocation for the Third Plan for the programme is Rs.8.35 crores, actually a programme of Rs.10.35 crores will be carried out and the entire state will be covered by the community development blocks during the Third Plan period.

Originally started in the year 1952, at the end of the Second Plan period the Community Development Programme covered 14,735 villages with an area of 26,341 sq. miles and a

population of 42·90 lakhs. In other words, about 55·8 per cent of the population and 57 per cent of the total area of the State had been covered. An expenditure of Rs.512·10 lakhs will have been spent during the Second Plan period, against a plan allocation of Rs.551 lakhs.

Of the total allocation of Rs.8·35 crores for the Third Plan period about Rs.4·10 crores will be spent on schemes continuing from the Second Plan period, Rs.1·45 crores on blocks which will pass on to stage II during the Third Plan and Rs.2·80 crores on the 76 new blocks, which will be started during Third Plan period.

Progressive farmers and the Gram Sahayaks are being equipped to be able to extend their production programmes. Crop campaigns are being regularly organised in which gram-sahayaks, members of Panchayats and Co-operatives are working hand in hand with the staff of the Departments of Agriculture, Panchayats, Co-operation, Irrigation and the Block Extension staff. With the advent of the Panchayati Raj the task of planning, execution and supervising the programme of increased agricultural production has devolved on the Gaon and Block Panchayats. In the sphere of irrigation efforts are being concentrated on small schemes. Some vijnan mandirs are being set up in a few blocks for research work. A few projects have also been taken up in selected areas, on pilot basis, for utilising local manpower resources. In these projects emphasis has been given to provide irrigation facilities in order that additional areas could be brought under cultivation. For the local works programme about Rs.7·5 crores will be available from the Central Government in addition to the State Plan allocations. It is expected that 11 lakh acres of lands will be covered by irrigation facilities; 20·20 acres are expected to be provided with fertilisers; improved instruments will be distributed over wide areas. All these measures are likely to yield an additional production potential of 5·07 lakh tons of foodgrains.

Physical targets achieved in respect of certain selected items during the Second Plan period were as follows:—

1.	Distribution of improved seeds (mds.)	...	...	97,000
2.	„ „ fertilisers and manures (mds.)	...	...	210,000

3. Distribution of agricultural implements (Nos.)	...	...	5,000
4. Compost pits (Nos.)	...	...	2,65,000
5. Agricultural demonstrations held (Nos.)	...	...	65,000
6. Improved animals supplied (No.)	...	...	1,000
7. Animal castrated (Nos.)	...	...	1,75,000
8. Area brought under Irrigation (acres)	...	...	8,70,000

It has been decided to make the block a unit of planning for preparation and implementation of integrated development plans. As a first step towards making the block a unit of planning and execution, the agricultural production plan for the the Third Plan is being broken down block-wise. On the administrative side the erstwhile Community Development and Panchayat departments have been amalgamated to ensure a unified approach to the different aspects of development in the State.

PANCHAYAT

Panchayat is not a new thing in Assam. Even during the post-war period a scheme was drawn up which, by and large, conformed to the present community development movement. The scheme envisaged that a compact area should have easy means of communication, facilities for basic education, dispensaries, a model farm and the like. The scheme could not be pushed through with vigour due to cessation of post-war grants. Nevertheless, steps were continued to organise village panchayats. An Act entitled, "The Assam Rural Panchayat Act, 1948" was enacted even before commencement of the First Five Year Plan. The Assam Rural Panchayat Act, 1948 envisaged two tiers of Panchayats—primary panchayats at the village level and rural panchayats at the next higher level, comprising five to seven primary panchayats. Prior to commencement of the First Plan, 29 rural panchayats were already functioning. The number of Rural Panchayats increased by 69 during the First Plan period and by 1959, there were 2,657 Primary Panchayats and 422 rural panchayats, covering the plains districts of the State. During the First Five Year Plan period, an expenditure of Rs. 102.57 lakhs was incurred, which also included self-help grants given to the panchayats for constructions of village roads, tanks, buildings of public utility, etc. The self-help schemes were operated, by and large on the basis of 20 to 25 per cent public contribution in cash or

kind or labour. The spirit of self-help displayed by the people was one of the finest in India. When, therefore, Balwant-rai Mehta Committee recommended in favour of democratic decentralisation, Assam was one of the first few States to decide to launch the programme in all the seven plains districts including the Community development Block and 'Shadow Block' areas. For this purpose the 1948 Act had been repealed and in its place another comprehensive Act entitled, "The Assam Panchayat Act, 1959" was enacted and brought into force with effect from 1st October 1959. As against the original two tier panchayats, the Act provides for three tiers of panchayats, *e.g.*, gaon panchayat at the village level, anchalik panchayat at the block level and mahkuma parishad at the Subdivisional level. The hill districts were excluded from the operation of the Act, the District Council, established under the Sixth Schedule to the Constitution having already been functioning as democratic institutions in the sixth scheduled areas.

The gaon panchayat is to provide for its village amongst other services, the following (i) village sanitation and health, (ii) rural communication, (iii) education and culture, (iv) village defence, (v) improvement of agriculture and preservation of forests, (vi) improved breeding and protecting cattle, (vii) and any other functions as may be assigned by the State Government. The anchalik panchayat in the community development area is to implement community development programmes, in addition to doing its other statutory duties and functions. The mahkuma parishad is mainly a co-ordinating, supervising and advisory body, having practically no executive functions. It is to advise and guide the anchalik panchayats and approve their budgets. It is also to advise in the matter of preparing district plans and how grants-in-aid could be distributed in an equitable way.

By the end of the Second Five Year Plan 2,574 Gaon Panchayats, 120 Anchalik Panchayats and 16 Mahkuma Parishads started functioning in the plains districts of Assam. The Anchalik Panchayats and Mahkuma parishads have replaced the Block Advisory Committees and the Subdivisional Development Boards respectively. The Local Boards so long functioning under the provisions of the Local Self Government Act have also ceased to exist with the enforcement of the Panchayat Act, 1959. The Anchalik Panchayats and Gaon Panchayats are now responsible for exercising their functions. The

training institute at Jaysagar continued to impart training to Secretaries of the Panchayats, the Panchayats were also utilised for executing miscellaneous self-help schemes in the panchayat areas. The Second Five Year Plan has thus set in motion the process of democratic decentralisation in the State and has laid a strong foundation around which the entire administrative structure for national development and bringing the people together in common programme will henceforward move. A total expenditure of Rs. 140.95 lakhs will have been spent during the Second Plan period. During the Third Plan period besides continuing and improving the panchayats already established it is also proposed to establish 120 Panchayati Adalats. Although the Panchayats will continue to contribute their mite for the building of roads, planting of trees, and other works of interest to the community like extension of agricultural operations and the like, to enable them to intensify their efforts grants and loans will be given for creation of remunerative assets. The training schemes will be further expanded and strengthened so that the Presidents, Secretaries of Panchayats, etc., could be given necessary training.

An allocation of Rs. 140 lakhs has been made for the Third Plan period,

IRRIGATION AND FLOOD CONTROL

Of the total area of Assam comprising 47,089 sq. miles the plains districts comprise 24,355 sq. miles, hill districts comprise 22,734 sq. miles. In other words, about half the total area is covered by the valleys and the remaining half by the hill ranges, enclosing the valleys from the north, east and south. Of the total area of plains districts amounting 20,352 miles are in the Brahmaputra valley and 2,680 sq. miles in the Barak Valley. Due to the peculiar geographical position, rainfall in Assam is heavy. The annual rainfall ranges from 70" in the plains to 250" or more in the north-eastern hills. Southern face of the Khasi and Jaintia Hills, where Cherrapunjee is situated, has a precipitation of 400" 600". Because of the topographical features and meteorological conditions obtaining in this region, number of rivers in Assam is very large and consequently frequent and wide-spread floods and extensive water-logging are the inevitable occurrences. The two major rivers-Brahmaputra and Barak have 35 and 9 tributaries respectively, each of which has considerable hill

catchment. These rivers spill over their banks during the monsoon at frequent intervals and inundate large areas damaging standing crops, causing extreme misery to the flood affected people and in the process thereof levy a considerable premium on Government machinery and its coffer, besides presenting other problems of vast magnitude.

After the great earthquake of 1950 which caused extensive landslides in the north eastern mountains and thereby silted up river channels in the plains, flood problems have become more serious and every year since the earthquake, great damage is being wrought to the economy of the State by the recurring floods. Besides causing extensive damage to the crops, dwelling houses and other properties, floods have also created severe erosion of important riverine towns like Dibrugarh, Palasbari, Jamuguri, Bilasipara, etc. This, coupled with heavy influx of displaced persons, has presented serious problems to the agrarian structure which is more or less inelastic in the State. These phenomena highlighted the urgency for flood control schemes. Of late again, the necessity for irrigation has also been keenly felt. There have been droughts prevailing in several parts of the State namely, Nowgong, Mikir Hills, east of Golaghat Subdivision, northern belt of Darrang, Kamrup and Goalpara. This has necessitated taking up irrigation schemes. Thus while the floods are the usual occurrences the droughts have become the precursors of the floods. Unlike some other States in India, therefore, Assam is in need of both flood control schemes like drainage and embankment schemes as well as irrigation schemes. In the case of Assam thus the term "Irrigation" for all practical purposes, embraces irrigation, drainage, flood protection and reclamation schemes also.

Till 1947, there was no separate organisation to devote its attention to the problems. It was in 1947, when the Grow More Food Campaign was initiated, one circle, with two divisions, started functioning under the then unified Public Works Department set-up. During the periods 1940-41 and 1945-49 only 18 schemes costing of Rs.12.00 lakhs were executed. These schemes benefitted about 60,000 acres. It was in 1953, that a full-fledged and independent Irrigation and Flood Control Department was created. The department has now 4 circles with 14 Divisions in the State.

An expenditure of Rs.133·68 lakhs was incurred during the First Plan period, on navigation, embankment and drainage schemes, scarcity areas schemes. The principal project included in the State First Plan was the protection of Dibrugarh town. In addition, a further programme was undertaken from Central Sector funds. This programme included 9 other town protection works (besides Dibrugarh), a programme for construction of flood protection dykes, and a special programme of minor irrigation. Only a few of these projects could be completed to provide for irrigation facilities to about 35,400 acres. Besides Dibrugarh, the town of Palasbari was protected during 1954-55 and the protection work continued in subsequent years also. In addition, 5 other town protection schemes at Sualkuchi, Goalpara, Dhubri, Bilasipara and Nowgong were executed and completed during 1955-56.

For collection of data for long term planning, the Government of India was induced to set up a Central River Research Circle in Assam. The circle began its work of detailed surveys in respect to different river basins. Aerial photography of the entire Brahmaputra valley was also taken up. A special short intensive course of training of surveyors etc., was instituted to provide for the personnel.

(1) Minor Irrigation Schemes—During the Second Five Year Plan, all the continuing schemes of the First Five Year Plan, totalling 77 nos under the three programmes namely (1) P. W. D. Minor Irrigation, (2) Navigation Embankment Drainage and (3) Special Minor Irrigation had been included under the programme “Minor Irrigation” under the agriculture sector. In addition 9 other new schemes were also taken up. Of the 77 continuing schemes, 48 schemes were flood protection schemes, 22 drainage and reclamation schemes, and 10 irrigation schemes. These schemes benefitted about 1,17,400 acres, e.g., 50,000 acres by the flood protection schemes 52,000 acres by the drainage schemes and 15,400 acres by the irrigation schemes.

(2) Improvement of Scarcity Area Schemes.—At the end of First Five Year Plan, there were 17 schemes requiring completion during the Second Plan period. 13 of these schemes were flood protection schemes, 2 drainage and reclamation schemes and 2 irrigation schemes. These schemes are expected to benefit 45,800 acres, 6,500 acres and 9,000 acres respectively making a total of 61,300 acres.

(3) **Flood Control.**—There were 28 embankment schemes and 12 town protection schemes continuing from the First Plan. The total outlay for these schemes was Rs.184.57 lakhs, *e.g.*, Rs.137.27 lakhs for embankment schemes and Rs.47.30 lakhs for town protection schemes. These schemes benefitted about 1,98,000 acres. In addition 31 new embankment schemes along the Brahmaputra, Barak and their tributaries, 6 additional town protection schemes namely, Tarabari, Mangaldoi, Behiagaon, Bhoj, Sibsagar and Nazira and 7 more drainage schemes were also taken up to benefit 3,03,000 acres, *e.g.*, 3,71,000 acres by the embankment schemes and 32,000 acres by the additional town protection schemes. For rehabilitation of the people of Palasbari, a new township at Mirza at an estimated cost of Rs.13.85 lakhs was also taken up.

(4) **Multipurpose Project.**—Under this programme, investigation of 4 river Valley Projects, namely, Kopili, Barak, Noa Dehing and Subansiri was taken up by the Central Water and Power Commission.

(5) **Major and Medium Irrigation Schemes.**—Under this programme, works of collection of hydrological and minimum data and establishment of a River Research Station at Burnihat were taken up at an estimated cost of Rs.19.22 lakhs. Construction work of this station was almost completed.

For the Third Plan period an allocation of Rs.9.78 crores has been made; Rs.5.00 crores will be spent on flood control schemes, Rs.2.28 crores on medium irrigation schemes and Rs.2.50 crores on minor irrigation schemes. Another provision of Rs.1.40 crores has been made under the agricultural sector for minor irrigation schemes. The provision of Rs.5.00 crores for flood control is proposed to be spent as follows:—

(a) Continuing schemes	...	..	...	1.15	crores
(b) New Embankment	...	...	...	0.50	,,
(c) Raising and strengthening existing embankments.				0.50	,,
(d) Town protection and river training	...			0.50	,,

(e) Sluices in embankments	...	..	0.80	crores
(f) Drainage schemes	...	...	1.00	,,
(g) Investigation	...	...	0.55	,,
			<hr/>	
Total			5.00	crores.
			<hr/>	

Of the sum of Rs.2.28 crores provided for medium irrigation schemes, Rs.1.68 crores will be spent on the Jamuna irrigation schemes, 50 lakhs on other medium irrigation schemes and Rs.10 lakhs on investigation. Of the provision of Rs.2.50 crores provided for minor irrigation schemes, Rs.50 lakhs will be spent on continuing schemes and Rs.2.00 crores on new schemes. The table below indicates the benefits likely to be derived during the Third Plan period:—

Schemes	Area likely to be benefited	Production potential of food-grains	Remarks
(1)	(2)	(3)	(4)
(1) Medium Irrigation schemes	.. 79,000 acres.	8,500 tons	....
(2) Flood Control schemes	.. 3,45,000 ;	*9,000 ;	*Approximately only 10 per cent of the total area to be benefitted has been taken as the area for food-production.
(3) Minor Irrigation schemes	.. 1,37,500 ;	300.	....

POWER

Electricity is a motive force in the economic life of a nation. The per capita consumption of electricity is thus the index of the standard of living of people. Although Assam, with its heavy rainfall and extensive hill ranges, commands tremendous hydro-power potential, the per capita consumption of electricity in Assam is still the lowest in India. It was about 0.91 KW at the end of the First Five Year Plan against 28 KW for all India. It was expected to rise to 5.63 KW at the end of the Second Plan against the all India average of 45 KW. At the end of the Third Plan period the State will see a visible rise from 5 KW in 1960-61 to 15 KW against 95 KW proposed for the country as a whole.

It was for the first time in the history of power development in Assam, Tezpur saw the birth of the first electrical undertaking in the year 1913. It was a modest private undertaking intended to distribute electrical energy over a quarter of a square mile only with a 13 K.W.D.C. generator. Till 1950, nine more towns were electrified by private licensees. Prior to the First Five Year Plan, therefore, the matter of power development in the State was completely at the hands of the private licensees. Government had only an Electrical Inspectorate to perform the statutory functions. The development of power in the State was, therefore slow. These nine private electrical undertakings were functioning at Gauhati, Shillong, Jorhat, Dibrugarh, Tezpur, Nowgong, Karimganj, Silchar and Abhayapuri in Goalpara district. During the First Plan period, three more private electrical undertakings were established at Dhubri, Tinsukia and Barpeta, bringing the total number of electrical undertakings in the State to 12. Since then, however, licenses in respect of the Gauhati Jorhat, Nowgong, Tezpur and Karimganj undertakings had to be revoked due to financial and other difficulties of these licensees. By the end of 1960-61 the State Electricity Board had also taken up Charali and improvement of the Abhayapuri undertakings. Necessary renovations and extension to these undertakings are also in progress. The position of the remaining private undertakings is still not sound. In the absence of adequate power, industrial development, in the State was lagging behind the rest of the country. Except for the tea industry and oil industry at Digboi, capital formation in the State was far from satisfactory. While, therefore, growth in social service expenditure had a pronounced upward trend the growth in capital formation was almost static despite vast potentialities. It was decided

take up power development work by Government during the First Five Year Plan.

Umtru hydro electric project, which was again the only productive project under the First Plan—was taken up for implementation by Government during 1953-54. Bulk of the construction work was completed during the period of the First Plan. Encouraged by the success in the implementation of the scheme another scheme for small town and rural electrification was also taken up at Sualkuchi, Nalbari, Mangaldai, Goalpara, Golaghat, Dergaon, Titabar, Hojai, Hailakandi, North Lakhimpur, Diphu, Kokrajhar, Doom Dooma, and Sibsagar-Nazira. The organisational set up was strengthened and the Inspectorate was raised to the status of a major head of department. A total expenditure of Rs.120.75 lakhs was incurred during the First Plan period. The First Plan period was important in that it brought about a change in the policy of power development, Government entering the field as an active instrument of execution and management besides administering the provisions of the Indian Electricity Act.

For the Second Plan period an allocation of Rs.380 lakhs was made for further developing the process which was initiated during the First Plan period so that on the one hand more areas could be electrified and, on the other, a base is laid for industrial development to take place and sustain its growth. An expenditure of Rs.585.28 lakhs has been incurred during the Second Plan period. The Umtru Hydro Electric Project which was taken up under the First Plan was completed and commissioned in July 1957. Under the small town and village electrification scheme, 16 small towns and villages taken up during the First Plan period have been electrified and in addition the towns of Tura, Doom Dooma, Dhekiajuli, etc., were also electrified.

As per electricity (Supply) Act, 1948, the Assam State Electricity Board is now in-charge of overall power development in the State. The State Electricity Board had after its formation reviewed the power position in the State. As a result of the review the State Electricity Board has drawn up a comprehensive programme for power development. The State Electricity Board is currently engaged in the implementation of the Umiyam Hydrel Project and Naharkatiya gas turbine station taken up during the Second Plan period and construction work is now in full swing.

For the Third Plan period an allocation of Rs.27.50 crores has been made. The Umiam Hydel Project having an installed capacity of 36,000 KW in the first phase and the Naharkatiya gas turbine station having an installed capacity 69,200 KW will be completed by 1964. It is also proposed to take up simultaneously the second stage of the Umiam Hydro Electric Project including firming up of the Umtru system. One medium sized thermal power station at Garo Hills. having an installed capacity of 5,000 KW, will also be implemented. Investigation and preliminary works of Kopili Project are expected to be completed. Investigation for exploring possibilities of harnessing water resources of small rivers will also be continued.

A Meter Factory has since been established under the Third Plan and a Testing Laboratory is also proposed to be established.

Before 1950-51 there were only 7 small private utility undertakings, chiefly supplying power to urban localities with an aggregate installed generating capacity of 3,363 KW. In addition, there were private generating stations of Railway, Mechanic Engineering Service, and Assam Oil Company with a total installed capacity of 2,903 KW, thus bringing the total installed generating capacity in the entire State to 6,265 KW only.

The table below indicates broadly the position of power development in the State at the end of the Third Plan which, however, does not include figures of power generated by private utility undertakings or private generating sets.

	1955-56	1960-61	1965-66
Installed capacity in K.W. ...	192	14,789	1,81,000
H. T. Line installed in miles ...	...	157	1,650
L. T. Line installed in miles ...	5	185	551
No. of towns electrified ...	1	25	30
No. of villages electrified ...	...	19	51

LARGE AND MEDIUM INDUSTRIES

Despite the fact there is abundance of raw materials in Assam, the development of large and medium industries in the State is historically slow. Except for the tea and oil, the two well organised and old industries, the State had lagged behind in respect of other industries. Consequently Assam has been hard-hit in the matter of supply of consumer goods needs, etc., which have to be brought over long distances from out-side the State. The position has further worsened after the partition which isolated the State from the rest of the country except for the link railway line.

It has been estimated that there are reserves of 1913 million tons of coal and although entire coal requirements of the State could be met from the potential sources of supply within the State, on an average, one lakh to two lakh tons of coal is imported into Assam annually from outside. Assam produces about 9 lakh bales of jute, the bulk of which has to be transported to Calcutta and the finished products required for consumption in Assam again have to be imported from Calcutta. Assam produces one of the finest quality of oranges, pineapples and other fruits, the consumption of which, within Assam, is rather limited. As a result there is considerable wastage of fruits besides selling them at very cheap rates. The prospect of setting up a paper industry in Assam is immense. In fact, even in the absence of a factory within Assam, existing manufacturers outside Assam are either importing their raw materials in the shape of bamboos, etc., from Assam, or are requesting the State Government to permit them to have long term leases for drawing their raw materials supply. The unemployment and under-employment position in the State on the other hand is gradually growing. About 73 p. c. of its population is engaged in agriculture which by itself does not offer adequate scope for further employment. Even in agriculture, the agricultural worker, on an average, is employed only for about 158 days in the year and 43 per cent of the workers have no slack season employment. Only 39 per cent of the families have one member, earning during the slack season. Due to extreme precipitation in Assam, the large number of rivers and the recurring problems of floods and erosion which have become more acute since the great earthquake of 1950, agriculture as such does not offer a very stable base for the economy of the State. The State Government have therefore, adopted a policy to offer

financial and other assistance as may be required, to private industries so that basic industries could grow up in the State. A provision of Rs.133 lakhs was made in the Second Plan for the establishment of a jute mill with 300 looms, a cotton spinning mill with 25,000 spindles, a sugar factory, a cement factory in the Khasi and Jaintia Hills, a spun-silk mill, a fruit preservation factory, a cold storage plant and a number of other medium sized industrial units. Of these the spun silk mill has been set up in the public sector while the sugar factory has been set up through a co-operative organisation. The jute mill project, despite prolonged negotiations, did not make progress and establishment of this unit is now proposed to be taken up in the Co-operative sector. Progress on the cement factory at Gherrapunji is somewhat mixed and the project is not likely to be completed before the end of 1964. The fruit preservation unit is proposed to be established in the private sector with Government assistance in Cachar District. A re-rolling mill and a cycle factory have since gone into production at Gauhati. Progress on most of the plywood units licensed for the establishment and expansion is satisfactory. A significant development during Second Plan period was the finalisation of the agreement to exploit petroleum resources of the State and setting up of an oil refinery at Gauhati which has since gone into production.

For the Third Plan period a provision of Rs.545 lakhs has been made. This amount will be utilised in promoting industries in the public sector as well as in the co-operative sector. At the same time it is envisaged that the private sector would expand and develop considerably and that a large number of industries would come up in the private sector also. The natural gas available in the Nahorkatiya area is intended to be piped to the various parts of Assam particularly in the Upper Assam area during the Third Plan period. The gas would serve both as fuel and basic raw materials for a number of industries. The project is expected to be completed by the end of 1963. It is proposed to set up a gas fractionisation unit to separate the higher fractions of associated natural gas available from Assam oil fields and supply the different fractions to various industrial units to be set up in the Nahorkatiya area. A project for the manufacture of L. T. insulators, China-ware and sanitary ware, will be implemented to exploit the available raw materials in the Garo Hills and Goalpara area. It is also proposed to participate in a number of major industries projects based on natural gas and refinery gas and other available raw materials.

These industries include projects for manufacture of carbon black, plastics and petro-chemicals, synthetic rubber and fibre from natural gas and refinery gas, paper and rayon pulp projects, manufacturing industries such as electrical goods, refractory bricks, chemicals, engineering industries and other consumer industries. It is also proposed to take up a programme of development of one or two areas such as Gauhati and Silghat for industrial purposes by way of land acquisition and land development including clearance, internal roads, water supply and all other facilities. To sum up the State is expected to see at the end of the Third Plan period the initial optimum utilisation of mineral resources of the State particularly in the field of industries based on oil, natural gas, coal, limestone, sillimanite, kaolin, etc., forest industries particularly bamboo, reeds and pines and agro industries, such as jute, cotton spinning, sugar, fruit preservation together with the establishment of consumer industries and light manufacturing industries. It is thus expected that during the Third Plan period a foundation will be laid for further industrialisation on long term basis, activities under the public and private sectors being supplementary and complementary to one another. These industries are expected to remove, to a great extent, the present imbalance in the economy of the State, and the growing unemployment and under-employment.

In the Central Plan the following provisions have been made for the Third Plan.

1. Naharkatiya fertiliser factory ... Rs.12·0 crores.
2. Nunmati oil refinery Rs. 8·5 crores.

VILLAGE AND SMALL INDUSTRIES

Village and small industries in their different aspects are integral and continuing elements both in the economic structure and in the scheme of national planning. As small industries take root, they go deeper in the life of the people, extend work opportunities, raise income and standard of living of the people and bring about a balanced and integrated rural economy. As the rural economy develops technical changes take place in their different fields and correspondingly the pattern of rural industrialisation also changes from simple crafts, meeting

elementary needs to small industries based on improved techniques to meet the needs of more advanced character. Thus as small industries develop, conditions are created for employment opportunities, larger production and equitable distribution.

The First Five Year Plan envisaged, by and large, the continuance and or elaboration of programmes which had been carried on for many years before. They related, broadly speaking, to strengthening of the departmental organisations, training, marketing, research and assistance to specific but limited schemes of development for selected small industries. As the First Plan proceeded it became clear that for the steady improvement and expansion of the programme it was very necessary to ensure co-ordination, training, marketing, standardisation and designs etc., To assist the Central Government and the State Governments in the formulation of proposals for the various small and cottage industries, a number of All-India Boards like the Khadi and Village Industries Board (since redesignated as Khadi and Village Industries Commission) the Handloom Board, the Handicraft Board, Central Silk Board and the Small Scale Industries Board were set-up by the Government of India. These Boards functioned on a national level and had tried to create condition and evolve facilities for a well balanced small industries programme. Through the efforts of these All-India Bodies, small industries have now not only occupied a place of importance in planning but a process has also been set in motion for diversifying the rural economy and expanding employment opportunities. In Assam, when the First Five Year Plan was started there was only one State level organisation for administration of cottage and small industries, sericulture and weaving, khadi and village industries programmes, rural development and co-operation. In the field of small industries proper hardly any field staff existed. There was no clearly worked out programmes for the development of village and small industries. In the different branches of small industries, merchants and middle-men played the major role. The First Plan period was, therefore, mainly utilised for re-organising the departmental set-up, initiating schemes for training, marketing, research and encouraging individuals for taking up small and village industries. In particular, a cottage industries training institute was started with 4 trades, and subsequently 4 more trades were added. A shellac factory was started at Chaparmukh. Peripatetic weaving parties consisting of 136 demonstration units were engaged in imparting instructions on improved methods of handloom weaving in addition to

such training imparted in the weaving training classes, subsidies were granted, jacquard looms were supplied at 50 p. c. of cost price and loom accessories, free of cost, to weavers to enable them to improve quality and increase their output. To bring the weavers into the co-operative fold, share capital of weavers and working capital of co-operative weaving societies were granted as interest free loans. For development of sericultural industry, besides expanding the existing sericultural farms, 4 additional farms, 1 muga farm, 5 eri seed grainages, 7-boakata societies and 3 reeling units were established. Subsidies were continued to mulberry growers and chowki rearing and tussar rearing were encouraged. A regional sericultural research station was started at Titabar to conduct research on mulberry and non-mulberry silk. A scheme for research on vegetable dyes was implemented. The cottage industries museum was engaged in propagating colourful designs of textile and handicraft products. A khadi and endi production centre was started at Roha. Grants were given to 39 non-official organisations to open ghani centres. Bee-keeping, furniture making, hand-made paper and umbrella making, etc., were encouraged. An expenditure of Rs.9.64 lakhs was incurred.

To assist the Government in the formulation of proposals for the Second Plan period, the Government of India had appointed a Committee in 1955 under the Chairmanship of Dr. Karve and now commonly known as the "Karve Committee". In making proposals the committee had kept the following three principal aims in view :—

- (1) To avoid, as far as possible, during the period of the Second Plan, further technological un-employment such as occurs specially in traditional village industries,
- (2) to provide for, as large a measure of increased employment as possible, during the period through different village and small industries, and
- (3) to provide the basis for the structure of an essentially decentralised society and also for progressive economic development at a fairly rapid rate.

The State Second Plan schemes for village and small industries were designed so as to conform, to the extent warranted by the

situation in Assam, to the objectives set out by the Karve Committee. As a first step towards achieving these objectives the erstwhile department of cottage and village industries etc., under-went a major re-organisation and separate departments were created for small scale industries, sericulture and weaving and handloom co-operatives in addition to the establishment of a State Khadi and Village Industries Board and a State Handloom Advisory Board. Field agencies had also been created in the districts and subdivisions to ensure continued emphasis on the programmes which have now been functioning.

An allocation of Rs.380.0 lakhs was made for the Second Plan period out of which about Rs.295.77 lakhs is likely to have been spent during the period.

During the Second Plan period the Cottage Industries Training Institute at Gauhati was improved and expanded and 235 students received training in the institute. A central workshop was also established at Gauhati to carry out experimental works. Two mobile vans fitted with modern tools and equipment, were used for intensive development of village industries. Two industrial estates—one at Gauhati and the other at Dhekiajuli started functioning. 32 emporia were established under the aegis of the All-India Handloom Board. A sum of Rs.1.4 lakhs was disbursed as advance to these emporia. A pilot project was started at Dhekiajuli (Darrang) for the purpose of intensifying development of small and cottage industries. 12 training-cum-production centres including 6 in the C.D. blocks were also started. 359 trainees received training in these centres. An industrial block (cane and bamboo mill) was started at Gauhati. A central store-cum-emporium was started at Gauhati besides 2 doll and toy making centres, 4 mat weaving centres and 1 cane and bamboo work centre. A marketing corporation was established and Rs.8.30 lakhs paid as share capital. Facilities for encouragement of knitting, embroidery and needle work were also provided.

In the field of sericulture the activities initiated during the First Plan period were intensified and consolidated. At the end of the Second Plan period there were 12 sericultural farms, 4 reeling units, 2 chowki rearing centres, 13 concentration centres, 8 eri seed grainages and 3 muga farms, one community reeling centre, 1 tussar farm and 3 cocoon marketing centres. A modern type rearing house was also constructed. Other activities like grant of subsidy to mulberry growers, muga seed

cocoon growers and supply of eri spinning charkas at concessional rate to deserving sericulturists were continued. Steps were also taken to promote export markets and establishment of cocoon marketing and production centres. The research station at Titabar was further strengthened and the sericultural training institute at Titabar was upgraded to a full-fledged institute. Training was imparted to 12 students in diploma course and 63 in certificate course. One officer of the department was sent to Japan for six months' study tour, 13 officers including 2 science graduates were trained in sericulture outside Assam, 140 sericultural demonstration units were started to render technical help to the sericulturists of the State.

For development of weaving, the weaving institute at Gauhati was upgraded to a full-fledged textile institute providing for diploma, certificate and artisan courses. Training was imparted to 15 students in diploma course, 130 in certificate course by the end of the Second Plan. The number of weaving training classes increased to 21 including 3 training-cum-production centres. Training was imparted to 280 students in the artisan course in these training classes and the Assam textile institute by the end of the Second Plan period. One student was awarded stipend for training in textile technology besides training of 11 departmental officers outside Assam. Subsidies were continued to deserving weavers besides supplying sleys at concessional rate. 140 demonstration units were started anew so as to impart instruction on improved method of weaving to the weavers in the State. Services of a Japanese instructor were secured to train artisans on improved methods of knitting.

A total allocation of Rs.440 lakhs has been made for small and village industries under the Third Plan of the State and distributed as follows :—

				Rs.
1. Handloom Industries	...	...	...	65.00 lakhs.
2. Khadi and Village Industries	...	...	...	30.00 „
3. Sericulture and Weaving	...	...	...	75.09 „
4. Handicraft	...	...	...	10.00 „
5. Small Scale Industries	...	...	...	195.00 „
6. Industrial Estates	...	...	...	65.00 „
				<hr/>
Total	...	...	...	440.00 lakhs.

While executing the village and small industries schemes during the Third Plan period the national objectives will be borne in mind, other factors such as the situation prevailing in the State as well as the experience gained during the last ten years will also guide the policy of the State Government.

The salient features of schemes proposed to be executed during the Third Plan period are outlined below :—

Handloom:—Allocation under this head is Rs.65 lakhs made up of Rs.25 lakhs for development of weaving industry, Rs.10 lakhs for establishment of a cotton spinning mill under the co-operative sector and Rs.30 lakhs for development of handloom co-operatives. The co-operative department have, however, under the handloom development schemes, drawn up a programme entailing a total cost of more than a crore of rupees, for handloom co-operatives alone. The allocation of Rs.65 lakhs for all branches of handloom, therefore, falls far short of the allocation. It is, therefore, proposed that the progress of the programmes will be reviewed every year in the light of available resources and necessary adjustments will be made so that the funds actually required are provided. The schemes under handloom co-operatives envisage consolidation of the handloom co-operative movement by strengthening the existing structure and helping the members of the handloom co-operative societies on the one hand, and, concentrating the attention in places where conditions are favourable for intensive development, on the other. This is proposed to be done by introducing the various schemes formulated on the lines of, and approved by, the All-India Handloom Board. The programme will consist of propaganda and publicity, award of prizes for the best designs, purchase and distribution of samples, improved looms and accessories, establishment of sales depots, advancing of loans for share capital and working capitals, grant of rebate on sales of handlooms cloth, subsidy on cost of transport of yarn, establishment of designing and dyeing centres, training of weavers, establishment of housing colonies for weavers, deputation of weavers for training in important weavers' centres and establishment of collective weaving centres, etc. It is also proposed to revitalize the dormant weavers' co-operative societies. The handloom co-operative programme as a whole is estimated to provide full time employment, by the end of the Third Plan, to about 50,000 persons and part-time employment to 32,000 persons. The beneficiaries will be mostly women as about 90 per cent of the weavers in the State are women. A scheme for conversion of handloom into powerlooms is also being implemented by the co-operative department as an integral part of

the handloom development programme. This is a Centrally Sponsored scheme and will be fully financed by the Government of India, outside the State Plan. An amount of Rs.8.87 lakhs was spent during the Second Plan period and 150 powerlooms were supplied to 6(six) powerloom co-operative societies, in addition to giving them share capital and working capital loans and other financial assistance. The Assam co-operative apex weavers' society had also been given financial assistance for establishment of a preparatory processing plant for the powerloom industry. A training-*cum*-demonstration centre has since been opened at the industrial estate, Gauhati for imparting practical training to weavers of the powerloom societies. Steps are underway for the establishment of a calendaring plant. During the Third Plan period it is proposed to convert 500 handlooms into powerlooms. This scheme is expected to give full time employment to about 700 persons.

Under the handloom schemes, outside handloom co-operatives, the Assam Textile Institute will be expanded to meet the requirements of trained personnel. The number of training classes will increase to 22 against 21 at the end of the Second Plan, 35 weavers extension service units will be started, 4 handlooms production centres will be attached to the training classes, more than 7,000 throw shuttles will be converted to fly shuttles by supplying required sleys and accessories at concessional rates, etc. The research and design centre will be expanded. The weaving schemes are expected to create employment potential for about 10,000 persons. The cotton spinning mill will have a capacity of 12,400 spindles initially and then extended to 25,000 spindles. The mill will, to some extent, meet the irregularity and difficulty of yarn supply and will also give a fillip to cotton cultivation in the State for which there is sufficient potentiality.

Khadi and Village Industries.—The programme of Khadi and Village Industries is being executed in the State according to the schemes prepared by the Khadi and Village Industries Commission and the patterns laid down for it by the Commission. The working capital will be supplied by the Khadi and Village Industries Commission. The State Government is required to bear certain expenses in connection with the supervisory and field staff from the State Plan allocations. Accordingly, a provision of Rs.30 lakhs has been provided in the State Third Plan for staff only. In executing the Khadi and Village industries programme, emphasis will be laid on intensive efforts to secure, as far as possible, integrated rural development of selected

compact areas or gram ekais. It is proposed to organise 17 gram ekais each covering a group of villages. The areas to be selected will be ones in which some work has already been carried out under the intensive area scheme or community development programme, or by some of the voluntary organisations. Another aim of the khadi and village industries programme is gradual reduction of dependence on urban markets and greater production for local use and improving the techniques so as to raise the output and earning. Although traditional charka will continue to play a definite role, greater efforts will be made to popularise the Ambar Charkha. The existing village industries are expected to receive an impetus through the use of improved techniques. Marketing is proposed to be improved through the marketing organisation, 20 sale depots, 10 khadi bandars and 20 khadi production centres. The Gauhati khadi bhaban is proposed to be further improved. The schemes are likely to offer an employment potentiality to about 1·50 lakh persons.

Sericulture and Weaving.—The programmes for the Third Plan period are, by and large, elaboration and diversification of measures initiated under the first two Plans and aim at reducing the cost of production, creating suitable market facilities and exploring the possibilities of increasing production. In addition to 12 sericultural farms, 13 concentration centres, one community reeling centre, one tussar farm, 3 cocoon marketing centres, there will be 4 muga farms, 11 eri seed grainages, 6 chowki rearing centres and 8 reeling units and 50 silk co-operatives at the end of the Third Plan. The sericultural research station at Titabar will be further expanded and improved. Training will continue to be imparted in the existing training institutes and All-India sericultural training institute at Mysore. Financial assistance to private institutions and organisations will continue to be given. The schemes are expected to create employment potential for about 20,000 persons.

Handicraft.—Greater emphasis will be laid on the improvement of the quality of products of a few selected handicrafts. It is proposed to start two production units for encouraging production and sale of decorative textile fabrics with colourful tribal designs. For development of cane and bamboo works, it is proposed to develop cane and bamboo works in the Cachar District where there is abundance of bamboo mats, sital pati, etc. Improved tools will be supplied side by side providing specialised training and advancing finance to the handicraft artisans.

Small Scale Industries.—The programme undertaken in the Second Plan related mainly to provision of credit, training, technical advice and assistance, supply of improved tools and marketing facilities. Loans and subsidies were also advanced to individuals and organisations for encouragement of small scale industries. In the Third Plan it is proposed to consolidate and enlarge this programme and take up a few other schemes. In particular, three depots will be established to assist in procuring and supplying raw materials. Quality marking and control is proposed to be improved by providing necessary testing machines and equipment. A Small Scale Industries Development Corporation and a Marketing Corporation have been established for the purpose of better marketing and management of the productive units now under the private sector. A scheme for production and supply of agricultural implements is also proposed. To provide for servicing of machines, tools and equipment, etc., ten common service facility workshops are proposed to be taken up in the new industrial estates. Besides advancing loans and subsidies for encouragement of small scale industries, a mobile van fitted with up-to-date tools, etc., will be used to educate the rural artisans about the importance of Small Scale Industries in the rural economy.

Industries Estates.—During the Second Plan period two industrial estates were established at Gauhati and Dhekiajuli. During the Third Plan period it is proposed to establish ten more industrial estates at Nalbari, Makum, Sibsagar, Barpeta, Golaghat, Golakganj, Sorbhog, Shillong, Nowgong and Goalpara.

ROADS AND BRIDGES

In any scheme of economic development, the importance of transport and communications cannot be too strongly emphasised. In the case of Assam the need for an efficient system of communications is all the more greater; because, except for the Link Railway Line, the State is separated from the rest of the Union on the one hand, and on the other, surrounded almost entirely by foreign States, the State occupies a place of strategic importance. Road development programme in the State has, therefore, been given high priority under the Five Year Plans.

The road development programmes in the first two Plans were formulated with a view to achieve the objectives set out in the "Nagpur Plan" which was drawn up as far back as 1943 by the Chief Engineers' Conference at Nagpur, in the perspective of a 20-year road development plan. Meanwhile a

second conference of Chief Engineers was held which had formulated a revised road development programme covering the period 1961-81. According to the decisions taken in the Second Chief Engineers' Conference Assam should have, by the end of 1981, about 22,000 miles of motorable roads. Against the target of 22,000 miles of motorable roads, the State is likely to have 8822 miles, including National Highways at the end of the Second Plan period as indicated below:—

			State Road	National Highway	Total
1. Black-topped	...	...	915·96	683·66	1599·62
2. Metalled	...	...	173·31	0·50	173·81
3. Gravelled	...	...	5,496·33	45·25	5541·58
4. Earth	...	...	1501·00	6·20	1507·20
Total	...	...	8086·60	735·61	8822·21

Along with the construction of new roads, about 600 miles of existing low standard roads were brought upto Public Works Department standard and black-topping was done over a length of 184 miles during the Second Plan period. Adding approximately 1,000 miles of motorable roads under the Local Bodies, the total mileage of existing motorable roads at the end of the Second Plan is expected to be about 9,822 miles, leaving approximately 12,000 miles to be done during the 20-year period.

Under the Third Plan an allocation of Rs.8·50 crores has been made under the General Plan and Rs.370·00 lakhs under Welfare of Backward classes. In addition, there is a provision of Rs.50 lakhs for tools and plant, etc. There is thus a total provision of Rs.12·70 crores for road development in the State, against the total State outlay of Rs.120 crores for the Third Plan period. It is proposed to construct 1,600 additional miles, besides metalling and black-topping 225 miles and improving 500 miles of existing low standard roads to Public Works Department standard. Strengthening of a number of weak bridges and construction of 9 major bridges and also some timber bridges is also envisaged under the Third Plan. 23 major bridges were taken up for construction during the period of the first and second plans at an estimated cost of Rs.171·00 lakhs. 9 of these major bridges have so far been

completed, *e. g.*, Buroi, Dikrong and Dhansiri on T. N. Road, Gangang on Garobhadha Road, Dikhu, Jhanji and Dessoi on Dhodar Ali and two Bridges on N. T. Road in Kamrup. The remaining 14 bridges are expected to be completed during the Third Plan period. The bridges which have already been taken up and proposed for completion during the Third Plan are Kopili at Bhakatgaon, Kopili at Kampur, Suffrai, Jhanji, Dhansiri, Mangaldoi bridge, Adabari, Baruabari, Moranadi, Sonai, Matijiri, Longai, Amraghat and Barak. Under Third Plan 9 more major bridges are proposed to be constructed.

It was proposed to purchase two steam vessels for crossing over the Brahmaputra under the Second Plan. Due to difficulty in getting foreign exchange for purchase of a new vessel it has been decided to construct two vessels within the country, by a foreign firm at an approximate cost of Rs.10.00 lakhs. The Government of India have agreed to release the small amount of foreign exchange required for the construction of the engine.

A scheme for construction and improvement of State roads of Inter-State and economic importance was also sanctioned by the Government of India which is under implementation. The schemes include construction of North Trunk Road from Beki to Sonkosh, bridge over Jia-Bhareli, Garobhasa-Hatzar Road, improving and black-topping Karimganj-Patharkandi-Churaibari Road. While the State Government is required to bear 10 per cent of the expenditure on account of the bridge over Jia-Bhareli and Karimganj-Patharkandi-Churaibari Road, out of the State plan allocations, the remaining 90 per cent of the expenditure being borne by the Central Government, other projects are fully financed by the Government of India, out of Central Plan allocations. A further programme of metalling and black-topping of 107 miles of certain important roads including Shillong-Jowai-Passi Road, involving a total estimate of Rs.65.50 lakhs, is also under execution by sharing the expenditure between the Central Government and the State Government in the ratio of 50:50. The projects are expected to be completed during the Third Plan period.

Under the Central Plan for the Third Plan provision has been made for completion of the bridge over Brahmaputra, conversion of the road from the North Salmara to the Brahmaputra bridge into National Highway and also completion of the construction of Passi-Badarpur Road. A scheme for improvement of the North Trunk Road from North Gauhati to Dhemajli is also under execution out of Central funds.

The statement below indicates the total mileage of motorable roads subdivisionwise, at the end of the Second Plan period.

Serial No.	Name of Civil Subdivision (P.W.D.)	Road constructed before First Plan	Road constructed during 1st Plan period	Road constructed during 2nd Plan period	Total
(1)	(2)	(3)	(4)	(5)	(6)
1	North Lakhimpur ..	216.50 miles	14.07 miles	74.764 miles	305.334
2	Dibrugarh ..	416.075 ,,	94.015 ,,	125.52 ,,	635.61
3	Sibsagar ..	236.00 ,,	11.05 ,,	78.93 ,,	325.98
4	Jorhat ..	278.045 ,,	10.50 ,,	57.89 ,,	346.435
5	Golaghat ..	267.379 ,,	46.008 ,,	98.01 ,,	411.397
6	Nowgong ...	397.175 ,,	98.680 ,,	264.240 ,,	670.095
7	Tezpur ..	346.74 ,,	33.968 ,,	130.862 ,,	511.57
8	Mangaldai ..	189.99 ,,	52.80 ,,	93.07 ,,	335.86
9	Barpeta ..	202.76 ,,	56.53 ,,	82.71 ,,	342.00
10	Gauhati ...	576.55 ,,	145.23 ,,	315.56 ,,	1037.34
11	Silchar ..	226.76 ,,	33.54 ,,	71.43 ,,	831.73
12	Karimganj ..	123.88 ,,	77.52 ,,	102.72 ,,	304.12
13	Hailakandi ..	81.73 ,,	20.62 ,,	31.08 ,,	133.43
14	Kokrajhar ..	105.71 ,,	69.79 ,,	260.02 ,,	435.52
15	Dhubri ..	242.29 ,,	27.818 ,,	29.837 ,,	299.945
16	Goalpara ..	184.55 ,,	87.66 ,,	29.82 ,,	302.03
17	North Cachar ..	107.30 ,,	52.23 ,,	22.50 ,,	182.03
18	Aijal ..	170.75 ,,	29.27 ,,	74.71 ,,	274.73
19	Mikir Hills	33.25 ,,	83.00 ,,	71.82 ,,	1,88.085
20	Lungleh ..	30.50 ,,	12.50 ,,	105.0 ,,	148.00
21	Shillong ..	262.87 ,,	32.423 ,,	132.566 ,,	427.869
22	Jowai ..	117.315 ,,	38.82 ,,	55.885 ,,	212.02
23	Tura ..	229.74 ,,	34.82 ,,	307.14 ,,	572.00
	Total ..	5,043.859	1,162.162	2,616.189	8822.21

ROAD TRANSPORT

First put into operation during 1948, with the idea of gradual nationalisation of road transport on important highways, there has been expansion of passenger services and short-length haulage of goods. Up to the end of the Second Five Year Plan period, 1,149 miles of important routes were nationalised, *e.g.*, 342 miles before the First Plan, 263 miles during the First Plan period, and 539 miles during the Second Plan period including 204 miles nationalised out of a State funds. The Plan programmes included South Trunk Road from Goalpara to Saikhowaghat, North Trunk Road from Jogighopa to Dhubri, North Gauhati to North Lakhimpur, hill route from Pandu to Shillong, Shillong to Khliehriat, Shillong to Tamabil and Cachar Zone from Silchar to Karimganj and Silchar to Hailakandi for passenger services, besides Pandu-Shillong route for passenger and goods services and Gauhati-Dibrugarh routes, for passenger services. There were 534 vehicles plying on the nationalised routes, compared to 226 vehicles in 1950-51. An expenditure of Rs.75.08 lakhs was incurred during the First Plan period.

Under the Second Plan an allocation of Rs.104.0 lakhs was made. During 1958-59, the Planning Commission had advised the State Government to set up a corporation under the Road Transport Corporation Act, 1950 to manage the nationalised routes in which the railways, and, if possible, the private operators should also participate. It was felt that corporation system of transport management would not be suitable for Assam, and, therefore, no corporation was set up in the State. Thereupon, the Planning Commission did not agree to the utilisation of plan funds for implementation of the scheme. As a result, the scheme was being operated upon out of State resources for the remaining period of the Second Plan. 335 additional miles were nationalised out of plan funds and 204 miles from State resources outside the State Plan.

For the Third Plan, an allocation Rs.197.0 lakhs was proposed. The Planning Commission have, however, agreed to a nominal provision of Rs.25 lakhs, provisionally and again advised the State Government to set up a corporation. It has, however, been decided not to set up a corporation and therefore, the provision of Rs.25.00 lakhs in the Plan will be utilised for other schemes.

OTHER TRANSPORT

(1) **Inland Water Transport.**—Inland water plays a vital role in the economic activity in the north-eastern region of the country comprising Assam, West Bengal and Bihar. It is estimated that of the existing traffic of over 12½ lakh tons between Assam and Calcutta about one half is carried by river, the remaining half being shared between the railways and other means of transport. During the First Plan period the Government of India had set up the Ganga Brahmaputra Board as a joint venture between the Central Government and the concerned State Governments including Assam. The Board had taken up the task of co-ordinating the activity of the participating Governments in regard to the development of water transport on the Ganga and Brahmaputra system and of administering pilot projects for testing the feasibility of operating modern craft on shallow waterways. During the Second Plan period the Government of India also advanced conservancy grants to the joint-steamer companies which carry water-borne traffic between Assam and rest of India and a loan of Rs. 2 crores to enable them to replace their fleet. Construction work for an inland port at Pandu was also taken up. Under the State Second Plan, a directorate of inland water transport was set up and an expenditure of Rs. 1.23 lakhs was incurred.

The Government of India had set up an Inland Water Transport Committee which submitted its report to the Government of India in 1959. The Committee had made long-term proposals for the development of inland waterways all over the country. The Third Plan, for inland water transport has been formulated by the Government of India in the light of recommendations of the above Committee. The Central Plan includes the following provision for Assam:—

- (i) Loan Assistance to the joint steamer companies.
- (ii) Completion of inland port at Pandu.
- (iii) Purchase of dredgers and launches for the Brahmaputra.
- (iv) Improvement of the foreshores at Gauhati.

In the State sector a provision of Rs. 5 lakhs has been made for the State Inland Water Transport Directorate.

(2) **Ropeway.**—It is proposed to construct a ropeway from Shella to Pandu. The scheme will be taken up in two phases—the first one from Shella to Shillong and the second from Shillong to Pandu. The survey work was completed during the

Second Plan period and project report of the scheme is also now ready. A provision of Rs. 125 lakhs has been made for first phase of the project. Global tenders have since been invited and construction work is expected to start during 1962-63.

TOURISM

Rich in scenic beauty, dense forests, hills and dales, rivers and tanks and other natural environments Assam offers great potentiality for development of tourism. A beginning was made during the Second Plan period mainly to provide accommodation, transport and recreational facilities at important tourist centres. Due to late initiation of the scheme not much progress could be made. The Third Plan therefore envisages completion of the works which were taken up during the Second Plan period. The programme is divided into 3 parts :

Part I.—Contains schemes for promotion of foreign tourists and entire cost of such schemes is available from the Central plan. For Assam, provision has been made by the Government of India in the Central plan for an upper-class rest house at Kaziranga, development of natural lagoons inside Kaziranga game sanctuary and its conversion to a swimming pool and facilities for boating, shikar and a rest house at Gauhati. An expenditure of Rs. 5.80 lakhs is likely to be incurred on these schemes during the Third Plan period.

Part II.—Contains schemes for encouragement of home tourists in places which are important from the point of view of foreign tourists, as well. Cost of such schemes is shared equally by the Government of India and the State Government, Centre's share being available from Central funds, outside the State Plan allocations. A rest house at Cherrapunji is nearing completion under this scheme.

Part III.—Contains schemes of local interest and the entire cost is to be borne from the State Plan allocations. A provision of Rs. 6.05 lakhs has accordingly been made in the State Third Plan for construction of Low Income Group rest houses at Sibsagar and Tezpur, upper class rest house at Shillong, a tourist lodge at Chandobi lake, improvement of Golf club, Shillong, tourist rest houses at Naphuk, Tura, improvement of Ward Lake, Shillong and a rest house at Thadlaskein, K. & J. Hills.

A tourist bureau at Gauhati has already been established for the benefit of the tourists. At the State level, a directorate of tourism has been established with a nucleus staff.

EDUCATION—(General)

In a developing economy, the system of education has a determining influence on the rate of economic progress: economic development makes growing demands on human resources and in a democratic set up it calls for values and attitude in the building up of which the quality of education is an important element. It is the system of education which, if properly modelled and directed, keeps the wheels of economic development forging ahead. Before the First Five Year Plan period, there were disparities in the provision of educational facilities; there was shortage of trained teachers; scales of pay and conditions of service of teachers were generally unsatisfactory, and these factors were partly responsible for low standard of teaching.

Under the First Five Year Plan efforts were made, in the main, towards consolidation and re-orientation of the system of education. The Second Plan provided for larger emphasis on basic education, diversification of secondary education, improvement of the standard of the collegiate and university education, extension of facilities for technical and vocational education and implementation of programmes of social education and cultural development. In the Third Plan, emphasis will be laid on extending facilities for the education of children in the age groups 6-11 years, extending and improving teaching of science at the secondary and university stages, encouraging vocational and technical bias at all levels, increasing facilities for training of teachers at all stages of education, increasing the number of scholarships and free-studentships. All elementary schools will be converted to the basic pattern so that difference between the basic and the prevailing system is narrowed and certain minimum training is provided to all children. The gap between the education of girls and boys will be reduced. The university education will be re-organised on the line of research work and post-graduate studies will be expanded and improved.

In Assam prior to the launching of the First Five Year Plan, there were 10,154 primary schools, 840 middle schools, 254 secondary schools and 20 colleges. Total average annual expenditure for all types of education was about Rs.174 lakhs. Ratio of expenditure between girls and boys was 17:40 while expenditure per student was about Rs.20. About 18 per cent of the population was literate. The percentage of literates between males and females was 45:13.

During the First Five Year Plan an expenditure of Rs.113·87 lakhs was incurred out of Plan funds. During the Second Plan period Rs.635·34 lakhs was similarly spent. For the Third Plan period an allocation of Rs.1365·70 lakhs has been made under the general plan and Rs.135·00 lakhs under the Art. 275 programme.

The distribution of plan expenditure during the three Plan periods is given below:—

(Rs. in lakhs).

	Expenditure first plan	Expenditure second plan	Allocation third plan	Remarks
Elementary education	199·01	286·78	942·00	
Secondary Education		277·92	218·50	
University „		54·98	85·00	
Social „		4·49	5·00	
Cultural and other „		11·17	115·20	
	199·01	635·34	1365·70	

Elementary Education.—One of the directive principles of the State policy laid down by the Constitution is that free, universal and compulsory education be provided to all children upto the age of 14 years. At the end of the First Plan 13,967 elementary schools of all kinds were functioning with a total enrolment of about 8,15,367. Seven basic training institutes were started and 969 primary school teachers were trained during the Second Plan period. 4132 additional primary schools including junior basic schools and 542 middle schools including senior basic schools were also started, besides converting a number of primary schools into the basic pattern bringing the total number of elementary schools to 18,461 with about 11 lakh pupils. 2 additional teachers' training institutes were started and 3,276 teachers were trained both in Assam and outside. The total number of pupils enrolled by the end of the Second Plan is estimated to be 66 per cent of the total children population. The total number of boys attending schools was 674,000 while in the case of girls it was 389,000.

During the Third Plan period the number of elementary schools is expected to rise to 20,742, and provide for schooling facilities to about 1,508,000 pupils or about 83 per cent of the children under this age group.

Secondary Education.—A good system of secondary education is essential to sound economic development. While piecemeal reforms were proposed and introduced from time to time in the past the problems of secondary education, as a whole, were not carried out in a comprehensive manner until the appointment of the Secondary Education Commission in 1952. The secondary schools are important in that these schools supply teachers for elementary schools and students for higher institutions. The Secondary Education Commission had recommended that the system of secondary education should be made more broad-based, and greater diversity in syllabus should be allowed for and wastage prevented to the maximum extent possible. The Commission had envisaged that a period of 4 or 5 years of primary or junior basic education should be followed by 3 years in middle or senior basic or junior secondary stage. After this schooling of about 12 years' including high school education, till the age of 17 years, the first degree course should be of 3 years' duration. The Commission had also recommended the establishment of multipurpose schools and provision of facilities for agricultural education in rural schools.

In Assam, with a modest beginning during the First Plan period, during the Second Plan period emphasis was laid on:—

- (1) conversion of high schools into higher secondary and multipurpose schools as a measure of diversification of the system of secondary education,
- (2) betterment of the service conditions and pay scales of teachers,
- (3) expansion of training facilities for training of teachers,
- (4) expansion of secondary education for meeting increasing demands of teachers in primary and basic schools, to supply students for university education and professional and higher technical education.

During the Second Plan period 31 high schools were converted to higher secondary pattern. 6 teachers' training centres were improved and expanded. Agricultural bias was introduced

in 33 schools, 340 teachers were trained and conditions of service and pay scales of teachers were improved. Financial assistance to the aided institutions was increased, besides prescribing enhanced rates of dearness allowance and model scales of pay on par with Government institutions. A guidance bureau was established in the education directorate to acquaint the students and guardians in regard to the choice of vocations.

During the Third Plan period it is proposed to convert 100 more high schools so as to introduce humanities and science provide better teaching aids like book grants for libraries to 100 high schools, provide facilities for starting of crafts and agricultural gardening to 50 more secondary schools. Increased provision has also been made for training of teachers and bettering their emoluments. Substantial provision has also been made for scholarships and free-studentships and other schooling facilities.

Enrolment in classes IX-XI is expected to increase to 170,000 in 1965-66 against 110,000 in 1960-61. This enrolment represents about 18 per cent in the age group 14-17 years at the end of the Third Plan, against 13 per cent at the end of the second plan. The enrolment of boys is likely to increase to 130,996 at the end of the Third Plan against 87,496 at the end of the Second Plan, while the corresponding figures for girls are 39,830 and 23,330 respectively.

University education.—With expansion at the elementary and secondary stages, demand for higher education has also increased. When the Gauhati University was established, it was faced with an acute problem for want of accommodation and buildings. Under the First Plan a grant-in-aid of Rs.43 lakhs was given to the university for the construction of essential buildings. During the Second Plan period a further grant-in-aid of Rs. 57.55 lakhs was given to the university. During the Third Plan period, it is proposed to increase the intake capacity of the existing science departments, create departments of Applied Geology, Geo-physics, Zoology and Home Science and Post-graduate departments for 'Sociology' and 'Labour'. A teachers' training college is also proposed to be opened for training of higher secondary school teachers. Two research councils—one for science and the other for promotion of research are also proposed to be established. The number of science students at the university stage increased to 3,554 in 1955-56 and to 5,308 in 1960-61. The number is expected to reach the figure of 7,908 at the end of the Third Plan.

Social Education.—A wider concept of social education includes, besides literacy, health, recreation, home life, some knowledge of civics, training in simple crafts and citizenship training. The social education programme thus broadly embraces literacy centres, community centres, rural libraries, etc. During the First Five Year Plan period, 800 literacy centres, 5 community centres and 1,000 village libraries were organised. 24 selected primary schools were also converted to school-cum-community centres. During the Second Plan period the programme was continued on an enhanced scale. The Third Plan envisages further intensification of the programme.

Cultural and other schemes.—The programme under this head, by and large, includes schemes of value for cultural development like fine art, literature, dance, drama and music. During the Second Plan period schemes like introduction of Hindi in the secondary schools, revision of district gazetteer, promotion of cultural activities, development of regional languages, etc., were taken up. For the Third Plan period enhanced provision has been made to encourage these activities. A hindi training college will be established, besides an archive for the maintenance of Government records in a better condition. Provision has also been made for extension of buildings for the State museum and children museum. Number of instructors for training in physical education will be increased, besides training teachers and supervisors. The ACC and NCC schemes will be continued. Scouting and guiding will be encouraged among the students; grants-in-aid will continue to be given to the State Sports Council for offering facilities for coaching and other measures to develop competitive excellence among the people. Grants-in-aid will also be given to schools for development of play grounds on self-help basis. Classical education in Sanskrit and Arabic will be reorganised. The activities under the guidance bureau will be extended to the subdivisions in order that pupils all over the State receive guidance and advice in the selection of their vocations.

While the table I below summarises the important physical targets achieved under the first two Plans and proposed for the Third Plan period, table II indicates the distribution of the different kinds of educational institutions according to education subdivisions.

Stage	Position in 1955	Position in-1960- 61	Position in 1965- 66	Targets 1965-66 Col. 4+3	Re- mar- ks
1	2	3	4	5	6

A. No. of Institution.—**1. Primary School—**

(i) Total	12,610	16,742	20,742	4,000
(ii) Junior Basic .. —	612	2,388	4,388	2,000

2. Middle Schools—

(i) Total	1,357	1,899	2,549	650
(ii) Senior Basic	28	211	361	150

3. High/Higher Secondary School—

(i) High	376	631	728	97
(ii) Higher Secondary .. ..	..	22	145	100
(iii) Multipurpose	14	23		
(iv) High/Higher Secondary Schools with General Science.	45	98	198	100

4. Colleges for General Education—

(Arts, Science and Commerce)

(i) Total	21	36	..	..
(ii) Four year degree colleges including pre-university classes.	17	28	..	..
(iii) Intermediate colleges	4	8	..	..
(iv) Universities	1	1	1	..

5. Teachers' training colleges—

(i) Total	24	35	50	15
(ii) Basic	19	21	36	15

6. Teachers' training schools—

(i) Total .. ..	..	2	3	1
(ii) Basic .. ..	..	1	1	..

B. Enrolment—**1. Schools—stage—****(i) Classes I—V**

Total*	*8,15,367	10,68,000	15,08,000	8,99,000
Girls	2,86,873	3,89,000	6,09,000	2,20,000

(ii) Classes VI—VIII

Total	1,45,619	2,05,000	3,25,000	1,20,000
Girls	34,532	56,000	1,05,000	49,100

Stage	Position in 1955	Position in 1960- 61	Position in 1965- 66	Targets 1965-66 Col. 4-3	Re- mar- ks.
1	2	3	4	5	6
(iii) Classes IX—XI Total	67,532	1,10,826	1,70,826	60,000	
Girls	10,863	23,330	39,830	16,500	
2. University Stage (Arts and Science)—					
1. (a) Degree stage (total) ...	3,254	5,214	7,214	2,000	
(b) Science classes (including intermediate science clas- ses).	3,475	5,159	7,659	2,500	
(ii) (a) Post graduate stage (total)	326	1,036	2,036	1,000	
(b) Science classes	79	149	249	100	
3. Teachers' training schools including teachers' training classes attached to Secondary schools Colleges—school level—					
(i) Total	2,087	2,367	8,417	6,050	
(ii) Basic	1,262	1,465	6,165	4,700	
4. Teachers' training College (including training classes attached to second- ary schools/colleges—college level—					
(i) Total	56	154	1,004	850	
(ii) Basic ... ..	..	17	117	100	
C. No. of Teachers—					
1. Primary Stage—					
(i) Total	25,427	30,140	41,140	11,000	
(ii) Trained	7,933	11,213	14,913	3,700	
(iii) Untrained	17,494	18,927	26,227	7,300	
2. Middle Stage—					
(i) Total	5,684	9,980	14,080	4,100	
(ii) Trained	688	1,226	2,826	1,600	
(iii) Untrained	4,996	8,754	11,254	2,500	
3. High and Higher Secondary Stage—					
(i) Total	2,136	3,374	4,874	1,500	
(ii) Trained	402	539	1,289	750	
(iii) Untrained	1,734	2,835	3,585	750	

TABLE II

Statement showing the number of institutions of the stages from Primary to Collegiate Education and their Enrolment educational (Subdivision-wise).

Figures as on March, 1960

Name of educational Sub-division	College		High School		Middle School		Primary School	
	Nos	Scholars	Nos	Scholars	Nos	Scholars	Nos	Scholars
1	2	3	4	5	6	7	8	9
Kamrup— Gauhati	6	5,565	66	32,839	259	29,960	1,871	131,888
Barpeta	2	696	38	12,572	101	12,848	859	61,632
Goalpara— Dhubri	1	741	25	8,623	70	6,263	597	36,814
Kokrajhar	1	74	13	3,989	59	4,450	609	30,782
Goalpara	2	344	24	6,518	95	8,906	714	42,932

Sibsagar— Jorhat	—	...	...	..	2	2,135	38	16,539	94	10,928	785	56,654
Golaghat	—	...	..	...	1	449	27	9,619	77	7,353	586	59,568
Sibsagar	..	..	...	..	2	1,001	52	17,739	133	15,096	804	66,331
Nowgong— Nowgong	..	..	..	..	3	1,514	46	19,873	142	17,339	1,044	75,187
Marigong	—	...	...	...	..	...	11	3,123	46	5,452	422	29,966
Darrang— Tezpur	..	...	...	...	1	762	32	12,031	92	12,435	676	45,752
Mangaldai	..	..	...	...	1	160	23	5,258	57	5,768	744	42,565
Lakhimpur— Dibrugarh	...	...	...	—	2	2,046	51	22,368	148	17,968	1,116	77,061
North Lakhimpur	...	...	...	...	1	261	22	6,418	89	9,647	638	41,587
Cachar— Silchar	..	..	...	...	1	1,671	40	13,389	98	9,819	717	54,234

Name of Subdivision	College		High School		Middle School		Primary School	
	Nos	Scholars	Nos	Scholars	Nos	Scholars	Nos	Scholars
	1	2	3	4	5	6	7	8	9
Hailakandi	1	385	12	4,424	43	4,215	318	22,742
Karimganj	1	721	26	8,783	61	5,997	506	36,875
Garo Hills	1	47	9	1,625	49	3,467	750	24,761
Mikir Hills .. ..	..	..	6	603	33	1,956	371	15,081
North Cachar Hills .. ..	..	..	2	165	7	340	157	4,073
Mizo District— Aijal	2	142	9	1,272	56	3,779	361	27,034
Lungleh ... ..	..	..	5	689	16	852	210	9,314
K. and J. Hills— Jorvai ... ..	..	..	6	771	15	621	200	7,835
Shillong	6	3,988	22	11,140	59	6,840	547	26,785
Total	36	22,703	625	2,20,870	2,899	2,04,269	1,564	10,27,444

Technical Education

In each sector of development, requirement of technical personnel is inescapable, and, with the increased tempo of developmental activities, adequate supply of technical manpower has occupied a significant place among the basic conditions of economic development. To meet this basic condition satisfactorily, there must be quantitative as well as qualitative improvement of the facilities for technical education. Besides, the programme for development of technical education needs long-term planning as it takes 3 to 4 years to complete the engineering courses.

Before the First Plan there were practically no facilities for technical education in the State. Under the First Plan, the Engineering College, Gauhati started functioning with an intake capacity of 60 in civil engineering course and the Assam Engineering Institute with 40 in civil engineering. A 3-year diploma course was also introduced in the Prince of Wales Institute, Jorhat with an annual intake of 20 in electrical engineering and 20 in mechanical engineering. Training at the certificate level was started in the technical schools at Tezpur, Nowgong and Silchar and the Prince of Wales Institute, Jorhat. These institutes have provided for 258 seats per session for training in trade courses like blacksmithy, carpentry, welding, fitter, etc. A total amount of Rs.17.00 lakhs was spent under the First Plan.

Under the Second Plan, the Engineering College at Gauhati had been expanded by opening electrical and mechanical engineering departments. The college now offers 60 seats in civil engineering, 30 in electrical engineering and 30 in mechanical engineering, per year. Work was also started for opening the second engineering college at Jorhat. The first batch of 60 students in civil engineering was admitted to the Jorhat engineering college in 1960. At the diploma level, the intake capacity of the Prince of Wales Institute, Jorhat and Assam Engineering Institute, Gauhati had been expanded. Each of them is now offering 180 seats, *i.e.*, 120 in civil engineering, 30 in electrical engineering and 30 in mechanical engineering. Another new institute was started at Silchar with 60 students in civil engineering. Preliminary work for starting another institute at Nowgong was also taken up. In addition to these institutes (polytechnics) for diploma courses, there are at present 6

full-fledged industrial training institutes for craftsmen training at Jorhat, Srikona, Tezpur, Nowgong, Gauhati and Bongaigaon, offering training facilities in 16 trades with a total enrolment of 1,468 students. Grants-in-aid had also been given to private commercial and vocational training institutes. In addition, 98 students were awarded scholarships for training in selected institutions in India. Eleven students had also been sent abroad on scholarships for training in engineering subjects. A separate directorate had been also created in 1959 in order that the technical education schemes receive undivided attention. Besides, two Advisory Bodies, the State Council for Technical Education and State Council for Training in Vocational Trades had been formed with prominent educationists, industrialists, and other experts to assist Government in the formulation and implementation of technical education schemes. During the Second Plan period 109 candidates passed in the degree examinations, 461 in diploma examinations and 1,733 in certificate examinations. A sum of Rs.112.98 lakhs is estimated to have been spent during the Second Plan period.

The State Third Plan envisages further development and expansion of the facilities for technical education and craftsmen training. The Engineering College, Jorhat will have a total intake capacity for 120 seats per year, against 60 during the Second Plan period. A Regional Engineering college with 280 seats per year, 70 in civil engineering, 90 in electrical engineering, 90 in mechanical engineering and 30 in chemical engineering has also been approved under the Third Plan. The Assam Engineering College, Gauhati will be expanded by 30 more seats in electrical engineering and 30 in mechanical engineering, raising the total intake capacity to 180, against 120. At the diploma level, Nowgong and Silchar polytechnics each will offer 180 seats in electrical engineering, 120 in civil engineering and 30 in mechanical engineering and 30 in electrical engineering per year. Two new polytechnics, with similar intake capacity, *i. e.*, 120 in chemical engineering, 30 in electrical engineering and 30 in mechanical engineering in each, will be established at Dibrugarh and Shillong. Besides, one technical school for women, one for training in applied art and another for training of chemical operators have been approved. In the craftsmen training side, the existing industrial training institutes will be expanded and 8 more industrial training institutes are proposed. Two industrial training institutes at Tura and Diphu will be completed. These institutes will provide for 2,024 seats. A Commerce institute is also proposed to be established at Gauhati. Provision

for financial aid to non-Government technical and vocational schools, scholarships and stipends, teachers' training has also been made.

An allocation of Rs.430 lakhs has been made for technical education including craftsmen training for the Third Plan period.

The table below indicates achievement of physical targets under the First and Second Plans and targets visualised under the Third Plan.

	First Plan	Second Plan	Third Plan
Degree (a)	60	180	580
Diploma (b)	80	420	1,080
Certificate (c)	67	1,468	3,492

HEALTH

The general aim of health programmes is to expand facilities for health services to cover as large a population as possible and to promote a progressive improvement in the level of health. The programme thus embraces establishment of institutional facilities, development of technical manpower resources through appropriate training programme and employment of persons trained, control of communicable diseases, improvement of environmental hygiene and sanitation, family planning and other supporting programmes including ayurvedic and homeopathic system of indigenous medicines. During the First Five Year Plan period the health activities were, in the

Note.--Location of institutes will be as follows:—

(a) Gauhati, Jorhat and Regional College.

(b) Jorhat, Gauhati, Silchar, Nowgong, Dibrugarh, Shillong.

(c) Jorhat, Srikona, Tezpur, Nowgong, Gauhati, Bongaigaon, Dibrugarh, Shillong, Tinsukia, Lakhimpur, Dhubri, Mangaldoi, Barpeta, Aijal, Tura and Diphu.

main, confined to the urban areas in the State. This was done by extension and continuance of the schemes initiated under the post-war period. Among the important schemes implemented under the First Plan, five district headquarters hospitals*, were improved and eight† subdivisional headquarter hospitals were provincialised. The Assam Medical College was provided with more staff and equipment. The first batch of the medical graduates came out in 1952 and altogether 211 candidates secured M. B. B. S. degree during the period of the First Plan. New departments of occupational therapy, social and preventive medicine were also opened in the medical college. A scheme for training of nurses, dhais, etc., was also continued. In the field of public health, in addition to carrying out B. C. G. campaign, 5 T. B. clinics with 6 observation beds were established at Barpeta, Tezpur, Nowgong, North Lakhimpur and Silchar. The Reid Chest Hospital which had only 50 beds in it at its start was provided with 50 additional beds bringing the total bed strength to 100. An operation theatre and an X-ray block was also established in the hospital. Three maternity homes were established at Kokrajhar, Gauhati and Nowgong. These maternity homes were in addition to 20 maternity centres established in the other areas. 5 leprosy control centres and 5 malaria control units were also established. In order to be able to take up water supply schemes on a sound basis, a Public Health Engineering organisation has been established which is now engaged in implementing various water supply schemes in the State.

A total expenditure of Rs.193.41 lakhs was incurred during the First Five Year Plan period.

During the Second Plan period besides intensifying the measures initiated under the First Five Year Plan, additional

*...Jorhat, Dhubri, Tezpur, Nowgong and Silchar.

†...Goalpara Barpeta, Mangaldai, Sibsagar, Colaghat, North Lakhimpur, Karimganj and Hailakandi.

schemes were started to extend health facilities to the rural areas as far as practicable. Total number of beds in the different hospitals increased from 2829 at the end of 1955-56 to 4003 at the end of 1960-61. The number of dispensaries increased from 311 to 568. These hospitals were provided with various up-to-date equipment and appliances. Particular emphasis was laid on the training of technical personnel like medical graduates, nurses, auxiliary nurses, midwives, pharmacists, sanitarians, etc. The national malaria control scheme was converted and, measures initiated to make it a malaria eradication programme, the aim being to eradicate malaria by about 1964. Intensified drive was also continued in the sphere of other communicable diseases. These schemes played an important part in combating communicable diseases in the State like filaria, tuberculosis, leprosy, small-pox, etc. The Public Health Engineering organisation took up for implementation 16 projects in the different subdivisions under the programme. Under the urban water supply scheme the first phase of Shillong and Gauhati water works was taken up. The Government Ayurvedic College at Gauhati continued to impart education in the ayurvedic system of medicine to students on modern scientific lines. Subsidies were continued to private dispensaries. A scheme for rural health units was introduced in the Community Development areas. An expenditure of Rs.351.35 lakhs is estimated to have been spent during the Second Plan period in executing the health programme.

Health programmes in the Third plan, as in the Second may be broadly divided into six groups, namely, improvement of environmental hygiene, especially rural and urban water supply, control of communicable diseases, provision of adequate institutional facilities to serve as a base for organising health services, provision of facilities for training of medical and public health personnel, family planning and public health services. Increased provision has been made for maternity and child welfare, health, education and nutrition.

The outlay for the State Third Plan for the health sector is Rs.865 lakhs against a likely expenditure of Rs.351.35 lakhs under the Second Plan. The table below shows the outlays likely to have been incurred under the Second Plan and the outlays allocated under the Third Plan.

				(Rupees in lakhs).	
Programme				Second Plan anticipated outlay	Third Plan allocation
(1)				(2)	(3)
1.	Water supply and sanitation (rural and urban).			93·73	144·00
2.	Primary health units, hospitals and dispensaries.			114·56	140·00
3.	Control of communicable diseases ...			80·37	353·00
4.	Education and training			47·79	174·35
5.	Indigenous system of medicine ...			0·58	3·75
6.	Family Planning			1·12	35·00
7.	Other schemes			13·20	14·90
Total				351·35	865·00

Education and Training.—Training of medical and para-medical personnel was and is one of the important functions of the medical department. Although substantial progress has been made in the field of health and other supporting programmes, shortage of technical personnel continued to be felt during the Second Plan. To tide over this difficulty, the rate of admission in the Assam Medical College has been raised from Rs.65 to 110 and the bed strength of the medical college hospital has been raised from 500 to 813 beds. New departments of social and preventive medicine were also established and attached to the college. A training centre is also functioning at Chabua imparting training to sanitarians. Training facilities for nurses and auxiliary nurse-midwives have been considerably expanded. One health education unit has been established in the State to impart training to the rural population about sanitation and environmental hygiene, etc. To provide for specialised training to medical personnel a scheme has been put into operation for deputation of medical graduates for higher studies abroad in various branches of medical sciences like medicine, surgery, gynaecology and obstetrics, ophthalmology, etc. Thirty doctors have since returned after completion of their training abroad and now they are serving the Medical Department.

During the Third Plan period, Post-graduate classes are proposed to be opened in the Assam Medical College, Dibrugarh. The State Third Plan also provides for two medical colleges, one at Gauhati and the other at Silchar, with an intake capacity of 100 admission in each. Classes have already been started with 100 admission at Gauhati in temporary accommodation in the buildings of the Ayurvedic College, pending construction of the required buildings, etc. Training of paramedical personnel, *viz.*, Nurses, Auxiliary Nurses, Midwives Sanitarians Laboratory assistants, X'ray technicians, etc., will continue. The Ayurvedic College is proposed to be further improved.

Control of communicable disease.—The Third Plan provides for increased provision for control of communicable diseases like malaria, tuberculosis, small-pox, venereal diseases, leprosy and goitre, etc. The schemes for eradication of malaria and small-pox are intended to be completed by 1963-64.

Tuberculosis.—During the Third Plan period in addition to increasing hospital facilities for treatment of T. B. cases, number of T. B. clinics will be increased from 7 at the end of the Second Plan to 19 at the end of the Third Plan. The number of T. B. beds will increase from 342 during the period. B. C. G. campaign will be continued on a mass scale.

Malaria.—Malaria was one of the most devastating diseases in India effecting about 100 million people prior to 1947 of whom 1 million died annually. The national malaria control programme, which was launched during 1953-54 and was switched over to a programme of eradication in April, 1958, is being continued in the State on a mass scale. 14 malaria eradication units are now operating throughout the State. A concentrated drive is now proposed to be taken in hand in order that malaria may be totally eradicated by about 1964. The programme includes spraying of insecticides and surveillance involving house to house visit by the surveillance workers for detection and treatment of this disease and investigation as to the origin of infection, etc. The malaria institute at Shillong was developed by providing necessary research facilities on malariology and parasitology and the institute is imparting training to the Malaria Inspectors engaged in the work.

Small-pox.—An intensive fight against small-pox is being carried out with the object of completely eradicating this disease by about 1964. The programme includes intensive

vaccination and re-vaccination. A pilot scheme was launched in 1960-61. The Third Plan envisages bringing the small-pox cases under control.

Leprosy.—This disease is still fairly wide spread in India. Over 2 lakh people are suffering from it. Assam is one of the States where incidence of this disease is high, being between 20 to 40 per thousand population. With a view to combating the menace, a leprosy pilot project has already been started at Dotoma in Goalpara district. Steps are also underway to establish 6 more subsidiary centres in places where the incidence of the disease is marked, e.g., Boko in Kamrup district, Dimakuchi in Darrang district, Masalpur in Kamrup district, Pahumara in Sibsagar district, Umden in United Khasi and Jaintia Hills and Daldali in United Mikir and North Cachar Hills.

Filaria.—In order to carry out survey of filaria cases and also to offer treatment facilities one filaria unit has been established at Jorhat. This unit will attend to intensive anti-larval measures and mass-Hetrazan treatment.

Goitre.—For control of goitre two goitre control units have been established one at Diphu and the other at Gauripur. These units will continue to carry out survey and render treatment to persons suffering from goitre. If possible a mobile goitre unit will also be established during the period of the Third Plan.

Hospitals and dispensaries

Primary health units.—Establishment of primary health units is one of the important items of the community development programme. During the Second Plan period 70 primary health units have started functioning in rural areas. Five referral hospitals were also established and attached to 5 subdivisional hospitals. During the Third Plan period it is proposed to start 90 more primary health units in the different rural areas of the State. At the end of the Second Plan period, the number of hospital-beds increased to 4003 while the number of dispensaries increased to 568. In addition, the majority of

the provincialised L. B. dispensaries will be remodelled and brought upto the standard. A Cancer hospital is also proposed to be taken up under the Third Plan.

Family Planning.— Family planning is a long-term programme. The success of the programme will depend on the extent to which the people of the rural areas could be educated to understand the necessity of the programme. Some attempts in this direction have already been made during the Second Plan and 60 family planning clinics were started—9 in urban areas and 51 in rural areas. One regional family planning centre was also started at Shillong. During the Third Plan period 120 more family planning centres will be established. Six training institutes for the training of Auxiliary Nurse, Midwives will be established during the Third Plan period. The family planning programme in the Third Plan also provides for education and motivation for family planning, publicity and propaganda, etc., through Governmental as well as voluntary institutions like the Red Cross, Mahila Samities, etc.

Laboratory Services.—The Public Health Laboratory at Shillong has been developed. Steps are also underway for the establishment of another laboratory at Gauhati.

Water Supply and Sanitation—(a) Urban.— During the Second Plan period, an allocation of Rs. 45 lakhs was made by the Government of India. With this allocation two water works at Gauhati and Shillong were taken up. These works will be completed during the Third Plan. Anticipated expenditure on these two projects during the Second Plan is also Rs. 45 lakhs. For the Third Plan an allocation of Rs. 195 lakhs has been made. Besides completing the Shillong and Gauhati Water works new water works at Rangia, Nowgong, North Gauhati, Kokrajhar, Hojai, underground drainage at Tinsukia and sewage at Gauhati, have been proposed.

(b) Rural.—During the Second Plan period, 16 works were executed, entailing a total expenditure of Rs. 90.00 lakhs. The table below indicates the names of these projects, total estimated cost of each project, number of villages covered and the number of people likely to be benefitted.

Name of Project	Estimated cost in lakhs of rupees	No of villa- ges covered	No. of peo- ple benefi- ted.
(1)	(2)	(3)	(4)
1. Hajo-Rangia-Tamulpur ..	13.91	362	170,000
2. Dudnoi-Resu-Belpara ...	8.65	101	51,000
3. Bokajan	8.07	310	75,000
4. Lanka-Kaki	9.55	260	140,000
5. Patharkandi	10.58	196	150,000
6. Bhoi area in Khasi and Jaintia Hills.	4.33	30	12,000
7. Cherrapunjee	0.27	6	6,000
8. Chabua	4.05	165	44,200
9. Charring	4.05	97	52,000
10. Thengal-Titabar	4.00	51	18,000
11. Dotoma-Kakrajhar ..	4.14	94	40,000
12. Jalah	4.14	154	40,000
13. Uda'guri	4.05	204	40,400
14. Dambuk	1.43	6	6,000
15. Tangla	2.90	8	8,000
16. Diphu	2.92	N.A.	6,000

For the Third Plan period 15 more projects are proposed for supply of pipewater supply in different places.

Indigenous system of medicine.—The need for development of indigenous system of medicine, *e.g.*, Ayurvedic and Homeopathic, has been fully recognised. With a view to popularising these systems the Ayurvedic College at Gauhati is being considerably developed. Liberal grants-in-aid are being given to voluntary homeopathic organisations. Construction works of the Ayurvedic College is proposed to be completed during the Third Plan period. During the Second Five Year Plan 40 Ayurvedic subsidised dispensaries in rural areas have been established. Six Ayurvedic sections have also been established and attached to six district hospitals in the Plains Districts. During the Third Plan period 30 more Ayurvedic subsidised dispensaries and eight additional Ayurvedic sections in eight subdivisional hospitals will be established. The statement that follows indicates the distribution of dispensaries and hospitals subdivision-wise.

Statement showing Subdivision-wise Hospitals and Dispensaries in Assam

Name of subdivision	1950-51		1955-56		1960-61		1965-66		Remarks						
	Hospital.	Beds	Hospital.	Beds	Hospital.	Beds	Dispensaries.	Hospital.		Beds					
1	2	3	4	5	6	7	8	9	10	11					
1. Tura	3	111	3	132	5	182	22	5	220	
2. Dhubri	2	62	2	71	2	71	43	2	116	
3. Kokrajhar	1	12	1	24	10	1	50	
4. Goalpara	1	32	2	56	2	56	36	2	70	
5. Gauhati	4	155	4	240	4	295	90	4	1045	
6. Barpeta	1	22	1	34	1	34	33	1	50	
7. Tezpur	5	853	5	853*	5	943	22	5	1018	
8. Mangaldai	1	22	1	26	2	26	36	2	50	
9. Jorhat	2	66	2	66	2	66	31	2	110	
10. Sibsagar	1	24	1	26	1	26	19	1	50	

Name of subdivision	1950-51		1955-56		1960-61		1965-66			Remarks				
	Hospital.	Beds	Hospital.	Beds	Hospital.	Beds	Dispensaries.	Hospital.	Beds					
1	2	3	4	5	6	7	8	9	10	11				
11. Golaghat	4	117	4	117	4	117	19	4	142
12. Dibrugarh	5	471	5	502	5	723	24	5	800
13. North Lakhimpur	1	16	1	28	1	34	15	1	50
14. Shillong	4	191	4	269	4	396	16	5	501
15. Jowai	1	16	7	1	1	58
16. Silchar	2	79	2	79	2	136	19	3	736
17. Hailakandi	1	16	1	16	1	16	6	1	45
18. Karimganj	1	30	1	30	1	30	18	1	55
19. Diphu	52	19	1	60
20. Haflong	1	27	1	34	1	34	..	1	60
21. Aijal	2	92	2	102	2	108	3	2	136
22. Lungleh	2	32	2	32	2	38	11	2	61
23. Nowgong	2	67	2	76	2	67	65	2	114
Total	45	2485	47	2801	52	3490	564	54	5597

HOUSING

The productive efficiency of a person depends upon the health he enjoys, while his health, to a very large extent, depends upon the house and its surroundings in which he lives. There is, therefore a close relationship between housing and health on the one hand, and, on the other hand, the productive efficiency of a person and, as such, housing occupies an important place in any scheme of economic development.

While there has been steady growth of population with consequent needs for more houses, no housing scheme was taken up in Assam in a planned manner to cover the rural and urban population till the First Plan period, except for a scheme of advance of loan funds to Government servants out of the State coffer for construction of residential houses. The vast majority of the population, therefore, had to depend upon their own mite with the result that but for a small percentage of the moneyed man, others had mostly to live in unhygienic houses. The position was still worse in the case of the industrial and plantation workers and the sweepers. According to an estimation recently carried out about 13 lakh houses were required to be built in rural areas and about a lakh houses in the towns even by 1961. To this is to be added the additional requirement due to population growth and the houses requiring replacement. The size of the problem is vast and may be pursued only by a long term plan of development. Towards the close of the First Five Year Plan, the Government of India had initiated a scheme for loan assistance to the low-income group to enable them to have standard houses. The State Government had readily seized the opportunity and to be able to prepare for the task in a systematic way, established a department of Housing in 1958-56. Despite limited man power and other difficulties which a new process entails, the department had addressed itself to the implementation of the following schemes :—

- (i) development of building sites in and around Nowgong,
- (ii) loan assistance to Local Bodies for construction of tenements for sweepers, and (iii) loans to individuals and co-operatives for construction of residential houses.

An amount of Rs.10 lakhs was disbursed, but the physical targets could not be attained as the loans were paid mostly by the end of the year. These physical targets have since been achieved and included in the figures for the Second Plan.

Under the Second Plan an allocation of Rs.141 lakhs was made to Assam. Besides continuing the low-income group housing scheme, a scheme for subsidised industrial housing, and a scheme for plantation labour housing, were taken up. An expenditure of Rs.94.29 lakhs was incurred. Under the low-income group housing scheme 900 houses were constructed, besides taking up development of about 50 acres of lands at Nowgong. Under the industrial housing scheme 279 tenements were constructed and under the plantation labour housing scheme a target of 28 houses was reached, while under the slum clearance scheme 362 tenements were under construction for the same number of slum families. Under the village housing scheme 42 villages were selected for implementation of the scheme, but due to non-fulfilment of necessary preliminaries the scheme could not be executed during the Second Plan.

In addition, a scheme for middle income group housing was also taken up in 1960-61 with funds from the Life Insurance Corporation and Rs.1.24 lakhs were paid as loan against Rs.1.94 lakhs sanctioned for 14 houses, which were under construction. The progress under the plantation housing scheme was slow due to the fact that all the crops and assets of the tea estates were already mortgaged to their bankers, in most cases. During the Third Plan period it is proposed to create a 'Pool Guarantee Fund' to get over the difficulty, by sharing the residual loss, if any, between the Government of India, State Government and the Indian Tea Board.

For the Third Plan period an allocation of Rs.159 lakhs has been made. The schemes already initiated during the first two Plan periods will be further expanded and improved. Under the low-income group housing scheme 1,000 houses and tenements are proposed to be constructed, besides continuing financial assistance to housing co-operatives. The subsidised industrial housing scheme envisages construction of 1,362 houses for industrial workers, while the plantation housing scheme aims at construction of 1,250 houses for plantation workers. The slum clearance scheme has a target of 485 houses in view for rehousing 485 slum families at Gauhati. It is also proposed to develop 450 acres for development into 2,500 plots near the Gauhati town under the Land Acquisition and Development scheme.

The middle income group housing scheme will be implemented with funds from the Life Insurance Company, in addition to the allocation under the other plan schemes. 400 houses

are expected to be constructed under this scheme during the Third Plan period. The rural housing scheme aims at construction of 1,200 houses in selected villages.

The table below summarises the physical targets achieved during the first two plan periods and programme of work envisaged for the Third Plan period.

Name of Scheme	Houses tenements	Physical targets achieved and proposed		
		First Plan	Second Plan	Third Plan
(1)	(2)	(3)	(4)	(5)
1. Low Income Group Housing	Houses	..	900	1,000
2. Subsidised industrial Housing	Tenements	..	279	1,362
3. Plantation Labour Housing ..	do	..	28	1,250
4. Slum Clearance	do	..	..	485
5. Village Housing	Houses	..	..	1,200
6. Middle income group Housing	do	..	..	400
7. Land Acquisition and Development.	do	..	..	2,500 plots out of 450 acres.

Note:—Figures under cols. 4—5 indicate additional physical targets.

TOWN AND COUNTRY PLANNING

Urban development in Assam has been marked by a haphazard and unrestrained growth of most of the urban areas in the State and more especially of larger towns such as Gauhati, Shillong, Silchar, Dibrugarh, etc. The municipalities have, in general, been unable to exercise any substantial degree of control in respect of such expansion and development. The result is that the towns have expanded, and are expanding, in an unplanned manner. The other problems are the lack of drainage and sanitation, uncontrolled growth, both within the towns and on the periphery of the towns, inadequate and sub-standard housing, appearance of slums, etc. On

the other hand, the economic, social and political importance of towns has now increased considerably. It has become increasingly clear that urban development should be viewed in its correct perspective. As, however, this is a long term process, appropriate policies are necessary, followed by determined efforts, with the support and co-operation of the enlightened public opinion. The process involves survey and preparation of master plans, and enactment of town and country planning legislation. As a first step towards tackling the problems, a department of Town and Country Planning was set-up in Assam during Second Plan in order that whole time attention to this growing problem is available. The department has so far prepared master plans for Gauhati and Tinsukia, besides taking up preparation of master plans for the remaining 13 municipalities. The department has also financially helped the municipalities for developing urban areas by advancing grants. To man the department with technically qualified persons, scholarships are being granted for training in the Indian Institute of Technology, Kharagpur and the school of Town and Country Planning, Delhi. An expenditure of Rs.23.96 lakhs was incurred during the Second Plan period, on town planning Schemes.

For the Third Plan period an allocation of Rs. 116.00 lakhs has been made under this head. Works initiated during the Second Plan period will be intensified during the third plan period. An Act entitled "The Assam Town and Country Planning Act, 1959" has already been enacted. Under the provisions of the Act a Development Authority for Gauhati town has been established. A Development Authority for Tinsukia is also being constituted. As the work proceeds similar authorities will be set-up for the other towns also. The existing railway line at Gauhati is proposed to be diverted from the present site. The scheme of sewerage and water supply taken up during the Second Plan period will also be completed. The Municipalities and the Town Committees will be financially assisted to enable them to provide basic amenities and developing additional sites in a planned manner. To meet the growing need of technical personnel the Plan provides for scholarships in civil engineering and architecture.

WELFARE OF BACKWARD CLASSES

The description "backward classes" is commonly applied to the following four sections of the population:—

- (1) Scheduled tribes living in the hills and plains,

- (2) Scheduled castes,
- (3) Communities formerly described as "criminal tribes",
- (4) Other socially and educationally backward classes.

In Assam there is no community falling under the category of 'criminal tribes'. Of the remaining groups, the scheduled tribes constitute the largest group among the backward classes. The great majority of this population live in the autonomous hill districts of Khasi and Jaintia Hills, Garo Hills, Mikir Hills, North Cachar Hills and Mizo district covering an area of about 22,734 square miles against 47,089 square miles comprising the total area of the State. They are popularly known as the hill tribals. About 6.96 lakhs of scheduled tribes, according to the 1951 census, live in the plains either in pockets or mixed with the other population of the State. They are known as the plains tribals. There were about 5 lakhs of the scheduled castes population according to the 1951 census who live interspersed with the general population of the State. The other backward classes are actually part and parcel of the general population. The total population of these sections of the people according to the 1951 census and projected estimates of present population are indicated below :—

	1951 Census	Projected present population.
Hills tribes	8.21 lakhs	13.14 lakhs
Plains tribes	6.96 ,,	9.04 ,,
Scheduled caste	4.19 ,,	5.44 ,,
Other backward classes	18.60 ,,	24.10 ,,

While the hills tribals are concentrated in the 5 autonomous hill districts of the State, the plains tribals, scheduled castes and other backward classes form part of the total population of the plains districts.

The problems of the backward classes vary from one section to another section, each section having its own special problems. During the pre-independence period these sections of the population were left to their own devices and it was only after the independence that a comprehensive programme for the development of all these under-developed and backward people was taken up. One of the directive principles of State policy laid down by the Constitution is that the State shall promote with special care the educational, social and economic interests of the weaker sections of the people, and in particular of the scheduled castes and scheduled tribes and shall protect them from social injustice and exploitation. To give effect to the aforesaid directive, Art. 275 of the Constitution has provided for grants-in-aid out of the Consolidated Fund of India to meet the cost of schemes of development undertaken to promote the welfare of such tribes and to raise the level of administration in the tribal areas to that of the other areas of the State. Accordingly welfare measures initiated under the general plan are being supplemented by special programmes under Art. 275 of the Constitution for these classes of the population. The development programmes under the Art. 275 of the Constitution may be broadly grouped under four heads—

- (a) Communications,
- (b) Education and culture,
- (c) Development of tribal economy,
and
- (d) Health and water supply.

The First Five Year Plan aimed at meeting the inescapable and by far the most special needs of these sections of the population. The Second Five Year Plan broadly followed the lines of those adopted under the First Plan. The Third Plan substantially retains the same approach with this difference that economic development *per se* is sought to be given a some what higher emphasis in terms of implementation of the programmes.

The allocations for these sections of the population under the three plan periods are as follows:

(1)	(Rs. in lakhs)				
	First Plan		Second Plan		Third Plan
	Alloca- tion	Expen- diture	Alloca- tion	Expen- diture	Allocation
	(2)	(3)	(4)	(5)	(6)
Scheduled tribes—					
(a) Hills	343·54	313·02	70·900	540·25	710·00
(b) Plains	121·00	104·58	199·50	178·56	225·00
Scheduled castes	8·00	7·80	47·50	37·18	60·00
Other backward classes .. .. .	..	..	..	..	35·00
Total	472·54	425·40	950·00	755·99	1030·00

During the Second Plan period the Government of India have appointed a Scheduled Areas and Scheduled Tribes Commission under the Chairmanship of Shri U. N. Dhebar. The financial provisions for scheduled tribes under the annual plans may be reviewed according to the recommendations of the Commission.

Salient features of developmental activities undertaken for these sections of the population in the State under the first two plans and proposed for the Third Plan period are indicated hereafter.

Hills tribes

Communications.—The major problems in these areas are communications. They are sparsely populated and the areas abound in forests ; they have heavy rainfall , the communications are difficult and limited to allow for the basic amenities to reach the people, more especially in the areas bordering Pakistan. The partition of the country had disrupted the economy of the three autonomous districts of Garo Hills, K. and J. Hills and Mizo district, bordering on Pakistan. Prior to the partition the economy of these districts was bound up with that of the adjoining districts of East Bengal. The produce of the border areas of these districts—perishables like oranges, pineapples, pan leaves and forest produce like bamboo, bay leaves, dugouts and timber—used to find a ready market in East Bengal and such produce could conveniently be transported to the East Bengal markets through the various rivers and streams flowing from the hills into the plains. The trade across the borders had suffered in varying degrees since the partition, and, consequently, the people of the border areas lost their purchasing power. A long-term solution for the restoration of the economy of these areas lies in the construction of roads to link the border areas with the important marketing centres within Assam. Under the First Five Year Plan 15 roads were constructed with a total mileage of about 350 miles entailing an expenditure of Rs.163·24 lakhs. During the Second plan period 25 roads with a total mileage of 600 miles were taken up at an estimated cost of Rs.377·36 lakhs. Against this, an expenditure of Rs.234·41 lakhs has been incurred, during the Second Plan period. The progress on these roads was, however, slow and most of them will be completed during the Third Plan period. Six roads were also undertaken for construction during the First Plan period from the State revenues and five roads from Petrol Tax Fund.

Two more roads were also constructed under the motor vehicle fund. Some of the important achievements in respect of roads programme in the hill areas so far are given below:

Serial No.	Name of Road	Total length constructed or improved (Mile)	Names of civil subdivisions where the roads are located
(1)	(2)	(3)	(4)
1	Medhipara-Phulbari Road	77.42	Tura.
2	Phulbari-Holdiganj Road	33.90	Tura.
3	Dalu-Bagmara Road	44.45	Tura.
4	Medhipara-Tikrikilla-Phulbari Road	31.00	Tura.
5	Shillong-Jowai-Garampani Road	47.00	Jowai.
6	Jowai-Badarpur Road... ..	50.13	Jowai.
7	Mawphlang-Bajat Road	55.00	Shillong.
8	Mawsmat-Shella-Ishamati Road	27.00	Shillong.
9	Mairang-Markasa Road	18.00	Shillong.
10	Aijal-Lungleh Road	51.00	Lungleh.
11	Silchar-Aijal Road from Veirengate to Aijal.	13.39	Aijal.
12	Aijal-Lungleh Road (portion in Aijal Sub-division).	76.63	Aijal.
13	Shillong-Silchar Road (Garampani Dolia-section).	99.50	North Cachar Hills, Haflong.
14	Mahur-Maibong-Kalachand-Hajar d i s a -Kuladisa Road.	31.00	North Cachar Hills, Haflong.
15	Mohendijua-Dimapur Road	60.13	Mikir Hills
16	Barpathar-Dinapur Division Road	33.12	Do

The following important bridges were also constructed in the hill districts.

Serial No.	Name of road	Name of bridge	Total length	Name of District where located
(1)	(2)	(3)	(4)	(5)
1	D'iphu-Mohendijua Road ..	25/1 Jamuna Bridge	127'—0"	Mikir and North Cachar Hills.
2	D'iphu-Mohendijua Road ..	21/5 Jamuna Bridge	211'—0"	Do
3	Road to N. E. S. Headquarter including a bridge over the river Jumuna at Howraghat.	1/1, Jamuna Bridge	227'—0"	Do
4	Tura-Mankachar Road ..	16/1, Mukdangara bridge.	186'—0"	Garo Hills.
5	Tura-Mankachar Road ..	20/4, Garobadha bridge.	225'—0"	Do
6	Dalu-Baghmara Road ..	2/3, Bakla bridge	180'—0"	Do
7	Dalu-Baghmara Road ..	5/3, D a l c h a m bridge.	180'—0"	Do
8	Phulbari-Holdiganj-Garobadha Road.	11/2, Raj a b a t a bridge.	200'—0"	Do
9	Dawki-Muktapur Road ..	Bridge No.7/6 ..	110'—0"	U. K. & J. Hills.
10	M. B. Road ..	47/8, Balat Bridge	105'—0"	Do

Under the Third Five Year Plan an allocation of Rs. 280.0 lakhs has been made. This amount will be utilised in completing the schemes carried over from the Second Plan. Besides, a number of new projects will be taken up during the Third Plan period.

Education and culture.—Considerable importance is being paid to education of the tribal people. To facilitate teaching through tribal dialects, special text books have been prepared. So far eight tribal dialects have been taken in this manner. Assistance has been given through scholarships, grants for books, hostel fees and other ways to tribal students. About 1000 scholarships were given under the First Plan and 6,755 scholarships under the Second Plan. The Third Plan also envisages a large number of scholarships. By the end of the First

Plan a number of Higher and Middle English school buildings were constructed, grants-in-aid had been given to non-Government high and Middle English schools for maintenance, improvement and expansion. Grants-in-aid were also given to non-Government colleges for construction of hostel buildings and expansion of libraries, etc. Grants had also been given to the Gauhati University for research on tribal culture. The department of folk-lore and tribal culture in the Gauhati University has taken up a scheme for collecting data relating to the social and cultural life of the tribals. There were about 2,500 Government lower primary schools and private lower primary schools out of which 225 schools were established from Art. 275 grants. At the end of the Second Plan, there were 173 Government and non-Government Middle English schools in the hill areas, out of which 30 Middle English schools and 49 junior basic schools were established with Art. 275 grants. In the field of technical education, 2 industrial training institutes one each at Tura and Diphu are being established. The results so far achieved in the field of education is encouraging. For instance, enrolment in the primary schools rose from 30,942 in 1951-52 to 89,831 in 1955-56 and to 1,07,246 in 1958-59, in middle schools, enrolment rose from 7,609 in 1951-52 to 13,426 in 1955-56 and to 16,439 in 1958-59 and that in high schools it rose from 7,848 in 1951-52 to 10,638 in 1955-56 and to 16,072 in 1958-59. Under the Third Plan, a provision of Rs.85.00 lakhs, has been made. The programme comprises a wide variety enabling assistance in terms of scholarships, stipends, book and stationery grants, boarding grants and hostel seats, etc. Construction of buildings for high school and middle schools, construction of quarters for teachers, grants-in-aid to non-Government schools and colleges, provincialisation of middle schools, conversion of junior basic schools into senior basic schools, besides completion of the institutions which could not be completed during the Second Plan period.

Development of tribal economy.—The reconstruction of tribal economy presents a number of problems. Among the more significant of these is the question of shifting cultivation and its replacement by settled cultivation. To encourage settled agriculture, 9 demonstration centres had been opened, 3 in Garo Hills, 3 in Mikir Hills, 2 in Mizo District and one in the North Cachar Hills, where improved pattern of land utilisation are being demonstrated to the tribal people. These include afforestation of hill tops and slopes with wattle plantation ; cultivation of coffee, cashewnut,

along the slopes and soil conservation measures. Where jhuming continues people are being educated to avoid indiscriminate cutting down of forests. To encourage grow-more-food campaign, seeds and manures are being distributed at subsidised rates. Students are also being offered scholarships for training in agricultural subjects. Small irrigation schemes are also being constructed in suitable places.

During the First Five Year Plan, some cottage industries centres had been established for encouraging subsidiary industries like bee-keeping, basket-making, sericulture, spinning and weaving and manufacture of palm gur. Grants-in-aid are being given to individuals for encouraging subsidiary industries. Grants-in-aid are also being advanced to a number of industrial schools run by private individuals. 5 Sericultural farms and grainages had either been established or improved, besides running 3 weaving training classes. Development of hill fishery is also being pursued. In the field of veterinary, 6 veterinary dispensaries and 2 key village centres were established under the First Plan. Candidates are also being trained in veterinary assistant surgeon's course and veterinary field assistant's course by award of stipends. 8 veterinary dispensary-cum-artificial insemination centres, 4 rural animal husbandry centres and one sheep breeding research station have been taken up. To tackle the problem of indebtedness, simple type co-operative societies were formed during the First Plan period, and these societies were financially assisted by grants-in-aid for share capital, etc. For the Third Plan period an allocation of Rs. 214.00 lakhs has been made. The programmes for the Third Plan period are, by and large, continuation and expansion of the activities taken up during the First and Second plans.

Health.—In the field of health, 25 dispensaries were started under Art. 275 programme during the First Plan period. During the Second Plan period besides completing the civil hospital at Jowai, 6 T. B. wards in different hospitals, construction work on 22 more dispensaries and 6 child welfare and maternity centres was taken up. Grants-in-aid were given to non-Government hospitals and dispensaries and other non-official organisations for treatment of leprosy cases, etc. Assistance for constructing drinking water-wells was also continued. Under the water supply scheme, 5 sizable projects have been provided.

PLAINS TRIBALS

Communication.—During the Second Plan period, 10 big road projects and 60 small village roads had been constructed at an estimated expenditure of Rs.83·04 lakhs. During the Third Plan period more roads are contemplated for which purpose Rs.90 lakhs have been provided.

Education.—During the First Plan period about 94 basic schools and 2 adult education centres were established for the benefit of the plains tribal pupils under the Art. 275 programme; 100 middle schools and 400 high schools received grants-in-aid for expansion and maintenance. Hostel accommodation was provided in several high schools and colleges. About 440 students were awarded special scholarships.

During the Second Plan period 515 non-Government schools were given grants-in-aid, hostel accommodations were provided in 133 secondary schools and 10 colleges. Besides, 43 junior basic schools and 14 senior basic schools were established. About 2,500 students had been awarded special scholarships. Three plains tribals were also sent abroad for higher studies by grant of overseas scholarships.

The programmes for the Third Plan period follow the patterns of the Second Plan schemes. Provision has accordingly been made for special scholarships, cultural activities, improvement and expansion of non-Government schools and colleges, accommodation of hostel facilities and establishment of more primary, secondary and high schools.

Economic uplift.—During the First Plan period 5 Agricultural demonstration farms were established to help the plains tribal agriculturists in the improved methods of cultivation. Some plains tribal boys were trained in improved agricultural practices and seeds, manures, tools and equipment had been distributed at subsidised rates. The Third Plan aims at intensifying demonstration of improved agricultural practices, distribution of seeds and manures and encouragement of Boro paddy cultivation. Cottage industry is the subsidiary occupation of the plains tribal people. They are engaged in simple form of cottage industry like bamboo and cane work, bee-keeping, black-smithy, pottery and the like. The Third Plan lays special emphasis in the development and diversification of rural industries. This will be done by expanding the activities already initiated under the First and Second Plans.

Under the veterinary programme, 5 key village centres and 3 veterinary dispensaries had been established during the First Plan period. During the Second Plan period 8 rural animal husbandry centres, 8 veterinary dispensary-cum-artificial insemination centres and one mobile veterinary dispensary were established. A number of scholarships was also awarded for training in veterinary field assistants course. Grants-in-aid had been given to private individuals for encouraging poultry farming. During the Third Plan these activities will be further expanded. Co-operative activities will also be pursued by grants-in-aid to co-operative societies towards share capital, etc.

Health.—During the First Plan period, 5 static and travelling dispensaries and 10 public health dispensaries were established besides a 20-bedded kala-azar hospital at Dudnai.

During the Second Plan period several dispensaries including travelling dispensaries and maternity and child welfare centres were taken up. 156 students were trained in pharmacist's course, etc. Leprosy treatment was continued through the Assam Seva Samity. Grants-in-aid were given for construction of tanks and wells to provide for pure drinking water.

The Third Five Year Plan envisages continuation and elaboration of the measures started during the Second Plan period.

Scheduled Caste.—Untouchability is practically non-existent in Assam. There are, however, certain classes of the population who are vulnerable from several stand points, more especially in respect of education. With a view to raising their standard of living and social status, special programmes like special scholarships, free education, development of subsidiary industries, co-operative movement, fishery and promoting hygienic and better housing, etc., are being pursued.

During the First Plan period an expenditure of Rs. 7·80 lakhs was incurred. An amount of Rs. 37·18 lakhs is likely to have been incurred during the Second Plan period. The Third Plan provides for Rs. 60 lakhs.

Other Backward Classes.—The other Backward Classes, by and large, constitute a substantial part of the general population. Living mixed with the general population they are getting all the benefits from the development programmes

under the general plan equally with the other classes. Under the First and Second Plans no separate programme was undertaken for this class of the population. They are, however, considered educationally backward. Under the Third Plan, therefore, a provision of Rs. 35 lakhs has been made, mainly for special scholarships and free studentships in the secondary stage of education.

SOCIAL WELFARE

Traditionally social welfare means raising the fallen, strengthening the weak and helping the under-privileged and the handicapped. A programme of social welfare thus embraces in its scope welfare of women and children, family welfare, youth welfare, physical and mental fitness, crime and correctional administration and welfare of the physically and mentally handicapped. In other words, a social welfare programme, has as its basic objective, assisting those groups of persons who are in a vulnerable position and are in need of special treatment. In the past social welfare activities were mainly confined to the voluntary agencies. These agencies again mainly depended on donations from private persons. As a result not much progress was realised under this sector. As a part of the First Five Year Plan the Central Government had set up the Central Social Welfare Board with the main object of organising, encouraging and financially assisting the voluntary agencies. In the State, the Assam State Social Welfare Advisory Board was set up to liaise between the Central Social Welfare Board and the State Government on the one hand, and the various departments of the State Government and voluntary agencies, on the other. The State Government have been bearing 50 per cent of the expenditure on account of the State Board, the other 50 per cent is being borne by the Central Social Welfare Board.

At the initiative of the State Social Welfare Advisory Board under the First Five Year Plan 17 welfare extension projects were started. A sum of Rs.66,250 was given to the Assam State Social Welfare Advisory Board, representing the State Government contribution for running these institutions.

During the currency of the First Plan the Central Social Welfare Board had appointed two Advisory Committees to go into the question of, and make proposals for, social and moral hygiene and after-care services. The Committees recommended establishment of State Homes and shelters/centres for rescued women and *ex-convicts*, for whom a fairly

long period of social and environmental adjustment may be necessary. In September, 1955 the Ministry of Education had constituted a National Advisory Council for the education of the Handicapped to advise the Central Government on problems concerning the education, training, and employment, and to formulate schemes for the physically and mentally handicapped, besides providing liaison with the voluntary organisations working in the field. The Ministry of Home Affairs also meanwhile formulated proposals relating to juvenile delinquency, beggary or vagrancy and probation. The Second Plan was prepared in the perspective of the recommendations of the two advisory committees constituted by the Central Social Welfare Board, National Advisory Council for the handicapped and the proposals of the Home Ministry. The Second Plan also sought to consolidate and expand the scheme of welfare extension projects, supplement private efforts and to bring about a measure of co-ordination between the efforts of the public authorities and of voluntary organisations.

Under the State Second Plan an allocation of Rs. 50.72 lakhs was made for social welfare. An expenditure of Rs. 28.99 lakhs is likely to have been incurred. The Second Plan envisaged establishment of more welfare extension projects, a training institute of social welfare, a certified school, a borstal institute, a vagrant home, three State Homes and eight district shelters/centres, a protective home, financial assistance to voluntary organisations and training. Although during the First Plan period welfare extension projects were started outside the C. D. Blocks, during the Second Plan period it was decided to start welfare extension projects only in C. D. Blocks. The first category of the welfare extension projects were called welfare extension projects of the original pattern and the latter category of these projects were called welfare extension projects of the co-ordinated pattern. During the Second Plan period 10 welfare extension projects of the co-ordinated pattern were started. This included two welfare extension projects of the original pattern converted to the co-ordinated pattern. Thus at the end of 1960-61 there were 25 welfare extension projects made up of 15 projects of the original pattern and 10 projects of the co-ordinated pattern. There were 72 multipurpose projects covering a population of 2.64 lakhs in 623 villages and providing employment opportunities to 179 women under the original pattern projects. The co-ordinated projects covered 1292 villages in the stage I. C. D. blocks, embracing therein a total population of 4.2 lakhs. The main activities under

these projects were balwadi, maternity and health centre, social education for women, recreational activities, training in crafts and distribution of milk to children. These activities were under the guidance and supervision of 104 officials and 2167 non-official members of the project implementation committees.

A decision has since been taken to hand over the activities of the original pattern welfare extension projects to voluntary organisations. Accordingly, 12 projects have been handed over to Bharat Sevak Samaj, Borama Aahram, Bajali Pragati Sangha, Sreemanta Sankar Mission and local committees have been formed for the purpose. In the hill districts, District Councils, except the District Council, K. & J. Hills, have been requested to take over the activities. The vagrant home was decided to be run through the Gauhati municipality which has constructed the buildings. Two State homes for females and one State home for males have been started at Gauhati, Nowgong and Silchar. Six district shelters and district centres have also been started in the different subdivisions to act as feeders to the State homes.

The State Social Welfare Advisory Board had also sanctioned grants amounting to Rs. 3.55 lakhs to 135 voluntary welfare institutions during the First Plan period and Rs. 9.70 lakhs to 354 institutions during the Second Plan period, out of funds provided by the Central Social Welfare Board. While the other institutions received grants on annual basis, 28 of these institutions received Rs. 4.97 lakhs for the Second Plan period. The State Social Welfare Advisory Board had also carried out socio-economic programme under which 29 craft instructors had been trained in Ambar Charkha till the end of 1960. Three Ambar Parishramalayas have also been started during the period. Two handloom training-cum-production centres have also been started at Barama and Tezpur. During the period two pilot welfare extension projects (urban) have been sanctioned by the Central Social Welfare Board. These projects cover a population of 1,130 and are being implemented by the district branches of the Indian Red Cross Society at Nowgong and Shillong. Under the condensed course of training scheme 8 training institutions for training of adult women have been started and grants-in-aid of Rs. 2.09 lakhs has been received from the Central Social Welfare Board in this connection. The programmes under-taken during the Second Plan period by the State Social Welfare Advisory Board out of funds

provided by the Central Social Welfare Board are expected to be further expanded during the Third Plan period.

Under the State Third Plan an allocation of Rs 20.0 lakhs has been made. This provision will be utilised in financing the 10 welfare extension projects of the co-ordinated pattern started during the Second Plan; completing the vagrant home, improving the State homes, and district shelters/centres and starting a few other institutions left over from the Second Plan, besides taking up a new scheme of probation services.

A Directorate of Social Welfare has meanwhile been started to ensure that sufficient attention is available from Government side in the furtherance of the social welfare measures.

LABOUR

Assam is primarily a plantation area and the plantation labour population constitutes about 1/10th of the total population of the State. The tea estates are scattered all over the State from the East Pakistan border on the west to the Burmese border on the East, from the foot-hills of the Himalayas on the north to that of the Naga Hills on the south. Because of their migrant and primitive character the tea garden labourers are very backward and their standard of living is extremely low. Ever since the independence it has been the endeavour of the State Government to raise the standard of living and to bring about all-round improvement in their living condition. Besides administering the labour legislations enacted for the benefit of the workingclass, a separate department called the Labour Department had been started in 1947. Since its establishment, the department has addressed itself to the task of bringing about a gradual improvement in the standard of living of this vast labour population, by legislative measures, by persuading the employers to provide education and undertake welfare activities and by enabling a rapid growth of the trade union movement. As a first step towards launching a bigger programme of welfare measures, among the plantation labour, a scheme was implemented in 1950-51 out of the State revenues, entailing a total outlay of Rs.1 lakh. With a view to mobilising the support of the voluntary organisations in the furtherance of the programme the execution of these measures had been left to the Hindusthan Mazdoor Sevak Sangha, the Kasturba Gandhi Memorial Trust and the Assam Seva Samity. A State Labour

Welfare Board was also constituted. These voluntary organisations carried out welfare measures among the plantation labour under the general guidance and supervision of the State Labour Welfare Board. The purpose of the schemes was to open welfare centres in the tea garden areas ostensibly for providing recreational facilities to the labourers by imparting practical education to them in labour welfare. The labourers at the end of the day's work meet each other at the centres where there are opportunities for participating in such recreational activities as outdoor and indoor games, dramatic performances, folk dances, cinema shows, magic lantern shows and the like. Through these recreational activities, the workers are taught sanitation, health, hygiene, better way of living, etc. Side by side, training is also imparted on subjects like social service, elementary knowledge of trade unionism, labour laws, evils of drinking, gambling. The classes are held in the morning for the benefit of workers' children and in the afternoon for the benefit of the adult workers. Under the above scheme, 20 welfare centres had been opened in different tea garden areas. 5 of these welfare centres are for men, 5 for women and 10 for *ex-tea* garden labourers. The Hindusthan Mazdoor Sevak Sangh had been entrusted with the working of the scheme for male workers, Kasturba Gandhi Memorial Trust for female workers and Assam Seva Samity for *ex-tea* gardens labourers. The Welfare Training Centre for male workers at Rowriah, Jorhat was started by the Hindusthan Mazdoor Sevak Sangh which is now subsidised by the State Government and used as a welfare training centre for male workers with a qualified principal and a lecturer and other necessary staff. Selected workers in batches of 20 from different tea gardens are admitted to this institution for a period of 6 months and given intensive training, both theoretical and practical, in such subjects as cleanliness, sanitation, hygiene, first aid, proper use of labour quarters, proper use of latrines, etc., and also in such vocational subjects as tailoring, carpentry, smithy and the like. The labourers are also given practical demonstration on how to keep the quarters and the latrines clean and in hygienic conditions, how to use them properly, how to maintain water sources and bathing places in proper order.

The State had received a sum of Rs.2 lakhs in 1951 from the Central Tea Board for welfare work among the tea garden labourers. 5 welfare centres for men, 4 welfare centres for women and 10 welfare centres for *ex-tea* garden labourers were opened with this grant.

Under the First Plan the Rowriah Labour Welfare Training Centre was expanded and further improved. Another training centre for female workers was opened at Mazenga near Nazira on the lines of the Rowriah Labour Welfare Training Centre. The running of the Mazenga Welfare Training Centre has been entrusted to Kasturba Gandhi Memorial Trust. In addition, 8 blacksmithy shops were started as part of vocational training programme in the existing welfare centres.

An allocation of Rs.32.32 lakhs was made for the Second Plan period against which an expenditure of Rs.14.13 lakhs was incurred. The Labour welfare training centres at Rowriah and Mazenga were re-organised by provision of additional buildings and equipment and additional staff; 7 Community centres for plantation workers and 2 urban welfare centre for industrial workers were also constructed.

An allocation of Rs.43 lakhs has been made under the Third Plan for labour welfare. It is proposed to introduce vocational training (craft-training) in such subjects as carpentry, smithy, tailoring, weaving, sewing and knitting, etc., in the community centres already constructed and also in those which will be constructed during the Third Plan, with a view to providing employment to unemployed workers and surplus labours of the tea industry. It is also proposed to introduce cultural activities in the existing community centres for establishing cultural relationship between tea garden workers and the villagers living in the vicinity of the estates through such recreational measures as dramatic performances, folk dances, etc., organised by cultural troupes. There is a programme for opening four more centres for industrial labour under the Plan. The Rowriah Labour Welfare Training Centre and the female welfare training centre at Mazenga will also be further improved.

Under the housing sector a further provision of Rs.45 lakhs has been made for housing of industrial workers and another provision of Rs.30 lakhs for the housing of the plantation workers. 1362 houses are proposed to be constructed under the former scheme and 1250 houses under the latter scheme.

Under the Central Plan a small provision has been made for financial assistance to charitable organisations, municipal bodies, panchayats and voluntary organisations to enable

them to initiate welfare measures for the benefit of the physically handicapped, old persons and women and children. A special fund will also be opened at the Centre—

- (1) to help industrial units which are temporarily in financial difficulties but have otherwise a reputation for efficiency and good management,
- (2) for taking over units for temporary management and
- (3) for financing cooperative ventures of workers threatened by closure, in suitable cases.

STATISTICS

Accurate and reliable statistics and their analysis and interpretation on scientific lines are essential for the formulation of correct policies and planning agricultural and industrial production. In the Second Plan steps were taken to strengthen the statistical machinery and thereby develop a sound statistical system. The anticipated expenditure in the Second Plan is about 17.36 lakhs. An allocation of Rs.22 lakhs has been made under the Third Plan. It is proposed to further strengthen the statistical organisation during the Third Plan period. The existing technical section, units and cells at the head-quarter will be strengthened and expanded. A small mechanical tabulation unit has already been set up which will be further expanded. The administrative intelligence unit which was set up to look after the statistical work in the community development areas will be expanded. Statistical Offices will also be functioning in all the districts.

PUBLICITY

Publicity forms an integral part of developmental activity. The schemes under this head have been formulated with a view to bring to the people the achievement under the Plan and to make them plan-minded. They cover in general, production of publicity materials, like pamphlets, leaflets, booklets, and posters, publicity through field publicity units, information centers at district head quarters, production of documentary films, organisation of peripatetic exhibitions and songs and dramas on the plan. An allocation of Rs.23.75 lakhs was made for publicity scheme under the Second Plan, against which an expenditure of Rs.21.83 lakhs is likely to have been incurred. For the Third Plan period, an allocation of Rs.34 lakhs has been made. The process already set in motion in the past is proposed to be accelerated during the third plan period so that a widespread understanding of the plan could be brought about among the masses.

Aid to Local Bodies.—With a view to developing the productive resources of the Local Bodies, such as markets, hats, pounds, water supply etc., and thereby provide better amenities to the public, under the Second Five Year Plan a provision of Rs. 47 lakhs was made. This provision was distributed to the municipalities, panchayats and district councils. An expenditure of Rs. 17·96 lakhs was incurred.

Under the Third Plan a provision of Rs. 25 lakhs has been made. This provision is proposed to be advanced to the Municipalities, Town Committee's and District Councils.

This is a very modest provision but efforts will be made to see what additional funds could be allotted from year to year. This will, however, depend on the size of annual plans that may be approved by the Planning Commission from year to year.

STATEMENT I

Selected economic indicators

Item	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
1	2	3	4	5	6	7	8	9	10	11	12
State National in-come 1948-49 prices (Rs. crores).	224	219	230	235	250	268	270	269	282	280	300
Per capita income (Do.) ...	255.5	243.4	252.6	254.8	266.6	268.0	261.7	253.6	257.4	247.3	256.7
Plan outlay (Rs. crores) ...	..	1.34	2.01	3.11	5.00	9.05	9.21	10.12	8.98	11.32	14.85
Index of wholesale prices (based 1953=100).	N. E.	N. E.	N. E.	100.0	115.9	103.8	117.7	131.8	124.0	123.7	131.4
Cost of living Index Gauhati (based 1949=100).	98	110	111	102	95	87	96	103	103	98	102
Index of employment-factory employment (base 1952-53=100.)	N. E.	97	100	99	95	105	108	103	108	N. E.	N. E.

	1	2	3	4	5	6	7	8	9	10	11	12
Index of agricultural production (base 1949-50=100).	91.7	94.8	100.9	99.3	101.3	103.2	105.9	103.3	108.1	107.2	102.3	
Index of foodgrains production (base 1949-50=100).	79.8	86.0	94.0	94.2	96.3	91.5	99.1	90.9	93.9	93.4	95.0	
Area under foodgrains (thousand acres).	4,218	4,334	4,366	4,391	4,335	4,450	4,506	4,423	4,574	4,430	4,562	
Area under rice (thousand acres).	3,958	4,086	4,146	4,169	4,101	4,209	4,252	4,236	4,336	4,208	4,319	
Area under oil seeds (thousand acres).	343	317	312	308	308	313	329	320	316	318	309	
Area under fibre crops (thousand acres).	278	345	351	321	317	369	332	356	357	370	330	
Area under tea	382	390	385	383	385	386	384	391	394	393	396	
Area under miscellaneous crops.	140	141	155	154	150	157	156	161	168	168	161	
Production of foodgrains (thousand tons).	1,411	1,521	1,661	1,667	1,701	1,673	1,757	1,655	1,660	1,650	1,678	
Production of rice (thousand tons).	1,372	1,482	1,625	1,624	1,661	1,629	1,710	1,613	1,620	1,618	1,640	

STATEMENT I—contd.

Item	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
1	2	3	4	5	6	7	8	9	10	11	12
Production of oilseeds (thousand tons).	59	54	48	48	48	58	64	59	65	44	47
Production of fibre crops (thousand bales).	802	767	929	911	758	1,102	905	1,034	995	1,123	818
Production of tea (thousand tons).	145	152	147	141	158	150	164	169	168	168	155
Production of miscellaneous crops (thousand tons).	200	189	223	224	190	209	164	211	264	228	238

N. E.—Not estimated.

(a) Foodgrains—rice, maize, wheat, other cereals and millet, gram, arahar, and other rabi pulses.

(b) Rice—autum, winter and spring rice.

(c) Oilseeds—rape and mustard, sesamum, linseed, castor.

(d) Fibre—jute and cotton.

(e) Miscellaneous crop—sugarcane, potato and tobacco.

STATEMENT II

Summary Statement of Development Expenditure on the State First Five Year Plan

Rupees in lakhs.

Head of Development	Total allocation during 1951-56	1951-52 Actuals	1952-53 Actuals	1953-54 Actuals	1954-55 Actuals	1955-56 Actuals	Total for 5 Years 1951-56	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. AGRICULTURE DEVELOPMENT—								
(a) Agricultural Programmes—								
1. Agriculture	323.53	42.15	63.72	60.21	55.48	57.87	279.4	
2. Animal Husbandry	14.82	1.51	1.18	1.94	3.86	13.28	21.77	
3. Forests	47.43	6.46	6.93	7.11	13.48	17.00	51.03	
4. Fisheries	10.53	0.81	0.95	1.85	2.47	4.46	10.54	
5. Co-operation	15.31	...	..	0.22	4.16	15.63	20.01	
Total—(a)	411.62	50.93	72.33	71.33	79.45	108.24	382.78	

(b) Other Programmes—

6. Village Panchayats	..	...	98.00	14.86	20.71	21.00	17.51	28.49	102.57
TOTAL—I	..	..	509.62	65.79	93.54	92.33	96.96	136.73	485.56

II. IRRIGATION AND POWER—

7. Irrigation including scarcity area programme.			177.20	0.87	4.78	16.05	35.98	76.25	138.88
8. Dibrugarh Protection	...	..	160.00	..	3.00	8.13	59.30	135.38	205.81
9. Power	..	..	157.59	..	0.27	8.41	30.89	81.18	120.75
TOTAL—II	..	..	494.79	0.87	8.00	32.59	126.17	292.81	460.44

III. INDUSTRY AND MINING—

10. Village and Small Industries other than Sericulture and Weaving.			5.63	..	...	0.20	0.54	5.73	4.47
11. Sericulture and Weaving	..	..	5.46	...	..	0.15	2.07	2.95	5.17
Total—III	..	..	11.09	..	..	0.35	2.61	6.68	9.64

STATEMENT II

Head of Development	Total allocation during 1951-56	1951-52 Actuals	1952-53 Actuals	1953-54 Actuals	1954-55 Actuals	1955-56 Actuals	Total for 5 Years 1951-56	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
IV. TRANSPORT AND COMMUNICATION—								
12. Roads and bridges	265·00	2·41	15·87	55·72	77·40	122·70	274·10	
13. Road Transport	62·12	8·92	9·45	16·06	11·21	29·44	75·08	
TOTAL—IV	327·12	11·33	25·32	71·78	88·61	152·14	349·18	
V. SOCIAL SERVICES—								
14. Education	111·15	6·99	6·39	21·27	31·64	47·58	113·87	
15. Medical	176·59	29·62	30·98	30·15	25·68	67·93	184·36	
16. Public Health	10·12	0·71	0·74	1·00	2·76	3·84	9·05	
17. Welfare of Backward Classes ..	441·80	18·28	36·36	61·08	125·44	195·14	436·30	
13. Labour Welfare	2·60	..	..	..	..	2·60	2·60	
TOTAL—V	742·26	55·60	74·47	113·50	185·52	317·09	746·18	
GRAN TOTAL	2,084·88	133·59	201·33	310·55	499·87	905·45	2,050·79	

STATEMENT III

Summary statement showing progress of expenditure during the Second Plan period

(Rupees in lakhs.)

Head of Development	Second Plan Outlay	Progress of expenditure					Total	Remarks
		1956-57 Actual	1957-58 Actual	1958-59 Actual	1959-60 Actual	1960-61 Actual		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I.—AGRICULTURE AND COMMUNITY DEVELOPMENT—								
1. Agriculture (including Minor Irrigation and Land Development).	473.33	89.50	108.30	64.11	94.36	99.70	475.97	
2. Animal Husbandry, etc.	131.10	0.75	8.14	11.05	22.76	25.88	67.58	
3. Forests and Soil Conservation	100.98	17.03	18.76	24.14	21.83	22.13	103.89	
4. Fisheries	38.95	2.30	5.63	6.44	7.70	8.52	30.59	
5. Co-operation and Warehousing	125.40	15.02	27.74	33.18	46.20	47.32	169.46	
6. Community Project and N. E. S. /	551.00	101.65	100.45	88.04	94.10	127.86	512.10	
7. Panchayats	67.45	50.86	48.26	9.01	11.87	20.95	140.96	
TOTAL—I	1,488.21	277.11	317.28	255.97	298.82	352.36	1,501.54	

STATEMENT III—*concl'd.*

(Rupees in lakhs).

Head of Development	Second Plan Outlay	Progress of expenditure					Total	Remarks	
		1956-57 Actual	1957-58 Actual	1958-59 Actual	1959-60 Actual	1960-61 Actual			
1	2	3	4	5	6	7	8	9	
II.—IRRIGATION AND POWER—									
8. Large and Medium Irrigation	..	63·65	29·05	20·02	10·63	15·57	22·06	97·33	
9. Power	380·00	104·42	61·62	53·41	105·83	260·00	585·28	
TOTAL—II	..	443·65	133·47	81·64	64·04	121·40	282·06	682·61	
III.—INDUSTRIES AND MINING—									
10. Large and Medium Industry	133·00	18·00	31·16	16·74	20·76	55·16	141·82	
11. Village and Small Industry—									
(a) Cottage Industries	190·00	17·52	28·32	25·93	27·92	44·26	143·95	
(b) Sericulture and Weaving & handloom co-operative.		142·50	21·44	28·96	23·79	24·40	29·69	128·28	
(c) Khadi and Village Industries	47·50	0·57	4·87	1·70	9·40	12·00	28·54	
TOTAL—III	..	513·00	57·53	88·31	68·16	82·48	141·11	437·59	

IV.—TRANSPORT AND COMMUNICATION—

12. Roads	665·00	96·56	149·35	111·50	115·34	103·11	575·86
13. Road Transport	104·59	49·52	18·64	..	..	..	68·16
14. Other Transport .. .. .	..	0·16	0·63	0·67	4·61	5·24	11·31
TOTAL—IV	769·50	146·24	168·62	112·17	119·95	108·35	655·33

V.—SOCIAL SERVICES—

15. Education—							
(a) General	606·09	74·85	89·42	106·96	153·55	210·56	635·34
(b) Technical	106·62	32·27	21·85	17·69	17·84	23·33	112·98
16. Health	495·86	29·47	65·69	76·54	93·52	86·13	351·35
17. Housing	123·50	21·00	16·58	22·84	20·19	13·68	94·29
18. Welfare of Backward classes	950·00	119·55	119·91	126·20	180·93	209·40	755·99
19. Social Welfare	50·72	2·98	3·88	7·77	5·06	9·30	28·99
20. Labour and Labour Welfare	35·88	0·98	3·91	5·82	12·56	15·15	33·42
TOTAL—V	2,370·67	281·10	321·24	363·82	483·65	567·55	2,017·36

VI.—MISCELLANEOUS—

21. Statistics	19·61	1·45	2·70	3·97	4·50	4·74	17·36
22. Publicity	23·75	3·62	2·36	4·85	4·00	7·00	21·83
23. Aid to Local Bodies	47·50	5·79	6·75	2·77	1·50	1·15	17·96
24. Urban Development	22·80	1·81	2·37	2·82	3·38	13·58	23·96
25. Expansion of Public Works Department Organisation.	95·00	13·29	21·19	18·94	12·73	6·52	72·67
TOTAL—VI	208·66	25·96	35·37	33·35	26·11	32·99	153·78
GRAND TOTAL	5,793·69	921·41	1,012·46	897·51	1,132·41	1,484·42	5,448·21

STATEMENT IV

Summary Statement showing Phasing of total State Plan outlay for the Third Plan period

(Rs. crores).

HEAD	1961-62		1962-63		1963-64		1964-65		1965-66		1961-66		Estimated foreign exchange
	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	
I	2	3	4	5	6	7	8	9	10	11	12	13	14
AGRICULTURAL P R O-													
GRAMME.													
1 Agricultural production ..	0.72	0.10	0.94	0.13	1.04	0.14	1.16	0.13	1.26	0.14	5.12	0.64	..
2 Minor Irrigation ..	0.55	0.45	0.70	0.58	0.81	0.67	0.87	0.70	0.97	0.80	3.90	3.20	0.05
3 Soil Conservation ..	0.03	0.02	0.15	0.06	0.12	0.02	0.10	..	0.10	..	0.50	0.10	..
4 Animal Husbandary ..	0.19	0.11	0.23	0.11	0.25	0.12	0.25	0.10	0.24	0.08	1.16	0.52	0.06
5 Dairying and Milk Supply ..	0.01	0.01	0.04	0.02	0.05	0.02	0.06	0.03	0.08	0.04	0.24	0.12	0.02
6 Forests	0.20	0.14	0.20	0.16	0.19	0.14	0.16	0.12	0.15	0.11	0.90	0.67	0.01
7 Fisheries	0.09	0.04	0.10	0.04	0.10	0.04	0.10	0.05	0.11	0.05	0.50	0.22	0.03
8 Warehousing and marketing ..	0.13	0.10	0.13	0.11	0.19	0.15	0.20	0.17	0.25	0.22	0.90	0.75	..
Total	1.92	0.97	2.49	1.21	2.75	1.30	2.90	1.30	3.16	1.44	13.22	6.22	0.17

HEAD	1961-62		1962-63		1963-64		1964-65		1965-66		1961-66		Estimate foreign exchange
	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CO-OPERATION AND COMMUNITY DEVELOPMENT													
1 Co-operation	0.22	0.03	0.31	0.06	0.30	0.06	0.29	0.10	0.28	0.12	1.40	0.37	..
2 Community Development	1.25	0.38	1.50	0.46	1.67	0.51	1.84	0.57	2.09	0.63	8.35	2.55	..
3 Panchayats	0.21	0.01	0.25	0.01	0.29	0.02	0.31	0.02	0.34	0.02	1.40	0.08	..
Total	1.68	0.42	2.06	0.53	2.26	0.59	2.44	0.69	2.71	0.77	11.15	3.00	..
IRRIGATION AND POWER													
1 Irrigation	0.32	0.32	0.41	0.41	0.48	0.48	0.50	0.50	0.57	0.57	2.28	2.28	0.06
2 Flood Control	0.75	0.75	0.85	0.85	1.05	1.05	1.10	1.10	1.25	1.25	5.00	5.00	0.11
3 Power	4.85	4.85	4.19	4.19	7.81	7.81	7.52	7.52	3.13	3.13	27.50	27.50	13.79
Total	5.92	5.92	5.45	5.45	5.45	9.34	9.12	9.12	4.95	4.95	34.78	34.78	13.96
INDUSTRY AND MINING													
1 Large and Medium Industries	0.75	0.75	1.81	1.81	2.18	2.18	0.38	0.38	0.13	0.13	5.25	5.25	2.18
2 Mineral development .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
3 Village and Small Industries.	0.69	0.41	1.18	0.70	1.02	0.53	0.87	0.39	0.74	0.27	4.50	2.30	0.18
Total	1.44	1.16	2.99	2.51	3.20	2.71	1.25	0.77	0.87	0.40	9.75	7.55	2.26

HEAD	1961-62		1962-63		1963-64		1964-65		1965-66		1966-61		Estimated foreign exchange
	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
TRANSPORT AND COMMUNICATION.													
1 Roads	1.19	1.19	1.53	1.53	1.78	1.78	1.87	1.87	2.13	2.13	8.50	8.50	0.13
2 Road Transport	0.05	0.05	0.07	0.07	0.07	0.07	0.04	0.04	0.02	0.02	0.25	0.25	..
3 Ports and Harbours ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..
4 Inland Water Transport	0.01	..	0.01	..	0.01	..	0.01	..	0.01	..	0.05	..	..
5 Tourism and Ropeway	0.19	0.18	0.29	0.28	0.39	0.38	0.47	0.47	0.01	..	4.35	1.31	0.45
Total	1.44	1.42	1.90	1.88	2.25	2.23	2.39	2.38	2.17	2.15	10.15	10.06	0.58
SOCIAL SERVICES													
1 General Education	1.94	0.21	2.37	0.15	2.60	0.16	2.99	0.17	3.43	0.19	13.33	0.88	..
2 Technical Education	0.42	0.31	0.55	0.43	0.64	0.50	0.71	0.56	0.73	0.48	3.05	2.28	0.15
3 Scientific Research	0.09	..	0.10	0.01	0.10	..	0.04	..	0.03	..	0.36	0.01	..
4 Health	1.30	0.67	1.54	0.53	1.75	0.52	1.94	1.07	2.12	1.21	8.65	4.00	0.18
5 Housing and Town Planning	0.39	0.34	0.51	0.44	0.56	0.48	0.62	0.54	0.67	0.59	2.75	2.39	..
6 Welfare of Backward Classes	1.85	0.80	2.01	0.88	2.09	0.92	2.14	0.95	2.21	0.99	10.30	4.54	..
7 Social Welfare	0.04	0.01	0.05	0.01	0.04	..	0.04	..	0.03	..	0.20	0.02	..
8 Labour and Labour Welfare	0.14	0.10	0.16	0.11	0.21	0.14	0.24	0.15	0.25	0.14	1.00	0.64	..
Total	6.17	2.44	7.29	2.56	7.99	2.72	8.72	3.44	9.47	3.60	39.64	14.76	0.33

HEAD	1961-62		1962-63		1963-64		1964-65		1965-66		1961-66		Estimated foreign exchange	
	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital	Total	Capital		
	1	2	3	4	5	6	7	8	9	10	11	12		13	14
MISCELLANEOUS														
1 Statistics	0.03	0.01	0.04	..	0.05	..	0.05	..	0.05	..	0.22	0.01	0.01	
2 Information and Publicity ...	0.05	..	0.13	..	0.05	..	0.05	..	0.06	..	0.34	..	-	
3 Local Bodies	0.03	..	0.05	..	0.05	..	0.06	..	0.06	..	0.25	..	..
4 State Capital .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 Others.	0.07	0.07	0.09	0.09	0.10	0.10	0.11	0.11	0.13	0.13	0.50	0.50	0.08	
Total	0.18	0.08	0.31	0.09	2.25	0.10	0.27	0.11	0.30	0.13	1.31	0.51	0.09	
GRAND TOTAL ..	18.75	12.41	22.49	14.23	28.04	18.99	27.09	17.81	23.63	13.44	120.00	76.88	17.39	