

**THE FIVE YEAR PLANS 1964  
GOVT. OF ASSAM**

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ASSAM

AND

## THE FIVE YEAR PLANS

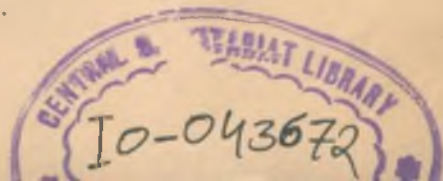
### 1. General Features

1.1 Assam is a land-locked State virtually surrounded by the foreign territories of Tibet, Burma and Pakistan. The State is linked with the rest of the country only by a narrow corridor through North Bengal, while its only river route to Calcutta passes through Pakistan. Politically and economically, Assam forms the core of the entire North-eastern region of India comprising Assam, Nagaland, NEFA, Manipur and Tripura. All communication lines to these outlying areas pass through Assam. Assam suffered heavily in consequence of the partition of India, and the great earthquake of 1950 further disrupted its agricultural economy. By virtue of its geographical location, Assam has of late come to occupy an important position in the political map of India.



### Climate

1.2 Climatically, Assam knows, by and large, only two seasons, namely, the monsoon and the winter. The annual rainfall ranges from 70" in the plains to 250" or more in the north-eastern hills. The southern slopes of the Khasi Hills, wherein is situated Cherrapunjee, have a precipitation as high as 400" to 600". The State is traversed by two principal rivers, the Brahmaputra and the Barak, and their numerous tributaries. During the monsoon the rivers are in spate and overflow the banks. As a result, floods have become almost an annual feature, and since the great earthquake of 1950, the damage to crop and property has averaged to over Rs.4.5 crores annually. The year 1962-63 experienced the worst floods of recent memory and cost to the State's economy in that year alone was estimated at Rs.25 crores.



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1.3 Assam's soil characteristics are generally alluvial and sandy loam in the plains and clay in the hills. Acidic alluvial soils have proved suitable for cultivation of tea; heavy clays with nitrogen content for paddy, and sandy loams for jute. Heavy clays of the hills are suited for perennial cultivation like fruits and for forestry.

## Natural Divisions

1.4 The State has two natural divisions—the hills comprising the four autonomous districts, and the plains comprising the six Brahmaputra valley districts and the district of Cachar. The economy of the plains is dominated by cultivation of rice, jute, oilseeds and sugarcane, by tea plantations and factory industries. The hills also grow a few crops like paddy, maize, cotton, potato, betelnuts and fruits but are deficit in food-grains. Both the hills and plains are endowed with rich mineral resources in petroleum, coal, limestone, sillimanite, koalin, glass sands, etc., and commands an abundance of forest wealth in the form of bamboo, timber and a variety of wild life. Much of these resources are untapped as yet, although when suitably exploited, these could provide a solid base for the State's economic development.

## Area and Population

1.5 The area of Assam is 122 thousand square kilometers which accounts for 4 per cent of the land surface of India. Assam ranks twelfth amongst the States of India in point of area. Of the total area of Assam, 63 thousand square kilometers are accounted by the plains and 59 thousand square kilometers by the hill districts.

1.6 The population of Assam in 1961 was 11,872,772 as against 8,830,732 in 1951. During the decade, Assam recorded a growth of population of 34.45 per cent—the highest among the States of India. Net migration was a major factor of this growth. The big increase in the population of the State has naturally far-reaching implications on the economy of the State. The density of population per square kilometer increased from 72 in 1951 to 97 in 1961 and Assam now accounts for 2.7 per cent of India's population.

1.7 Assam has a small urban population compared to many other States of India, because only



7.7 per cent of the State's population is urban. The total urban population in 1961 was 9,13,028 or roughly a fourth of metropolitan Calcutta's population. The rate of urbanization in the past census decade was, however, striking and several new townships have sprung up in recent years. The State is predominantly agricultural, about 45 per cent of the State National Income being accounted for by agriculture, while about 70 per cent of the working population are dependent on agriculture for their livelihood.

1.8 Assam is rich in her cultural heritage. Racially and culturally, the State presents a picture of unity amidst diversity. It has numerous races and tribes. The tribal population accounts for 17.42 per cent of the total population and the Scheduled Castes for another 6.17 per cent. The State has four major religions and numerous minor religious groups. While the people of the plains speak two major languages, there are many linguistic groups in the hills.

## 2. Five Year Plans

### First Plan

2.1 Assam embarked on her programme of planned development with a modest First Five Year Plan costing Rs.20.5 crores. The First Five Year Plan of Assam was conceived as a modest effort designed firstly, for removing the shortages and disequilibria in the economy following the war and partition, and secondly, for fulfilling the need of the few most essential items of development in which the State was hitherto lacking. High priority was attached to items like agricultural development, setting up and development of essential institutions of higher education and professional learning, development of communication, etc.

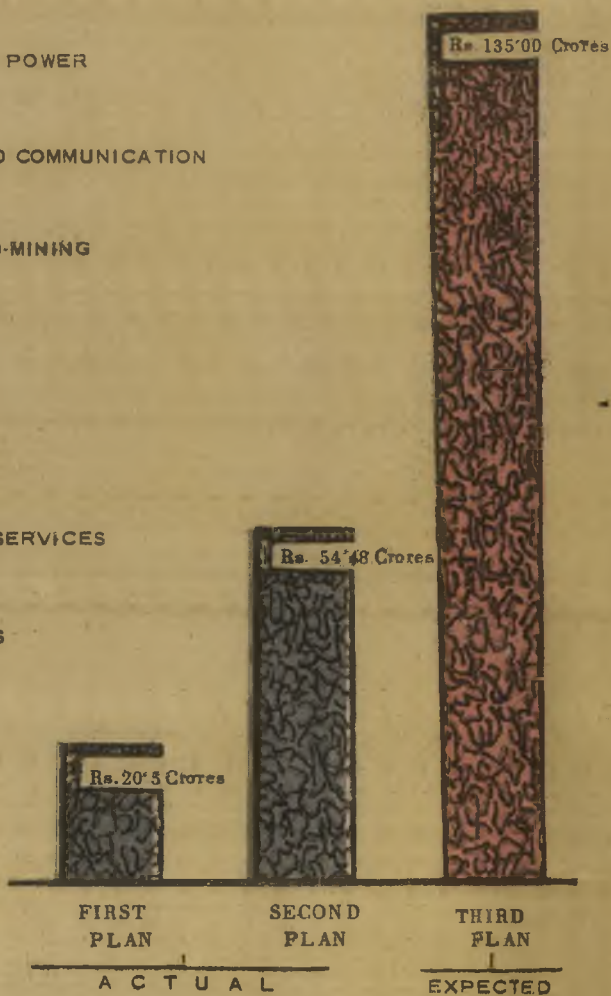
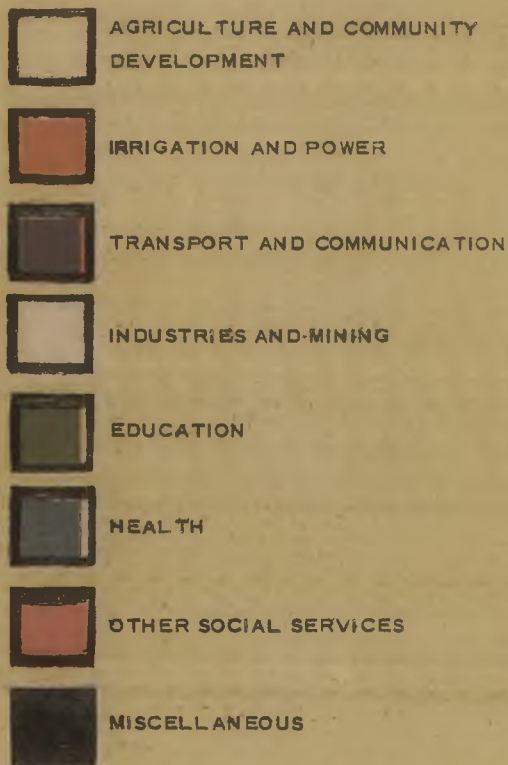
2.2 The programme also had a long-range objective in view, viz., to strengthen the economy at the base and initiate institutional changes which would pave the way for more rapid advance in future. In both these directions, especially in regard to the short term objective, Assam made significant advance during the First Plan period.

356  


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# PLAN OUTLAY



## Second Plan

2.3 The Second Plan of Assam, designed to carry forward the process of development initiated in course of the First Plan, was drawn up as an integrated part of and in conformity with the overall concepts and objectives of the National Second Five Year Plan. It sought to carry forward the institutional changes to make the State's 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 different sectors of development. In particular, it laid emphasis on the development of Agriculture, Irrigation, Power, Transport, Education and Health Services.

2.4 Reckoned in terms of financial outlay, the Second Plan of Assam was much larger in size compared to the First. Over the Second Five Year Plan period, the expenditure actually incurred on the plan was Rs.54.5 crores against the original allotment of Rs.57.94 crores. The total expenditure on the first two plans was Rs.85 crores. The table below brings out the relative shift in priorities given to the different sectors as between the First Plan and the Second Plan of Assam :

### Distribution of Plan outlay by major heads of Developments

	First Plan Expenditure (Rs. crores)	Percentage to total	Second Plan Expenditure (Rs. crores)	Percentage to total
1. Agriculture and Community Development.	4.85	23.7	15.02	27.6
2. Irrigation and Power ..	4.60*	22.4	6.83	12.5
3. Transport and Communication	3.49	17.0	6.55	12.0
4. Industries and Mining ...	0.10	0.5	4.37	8.0
5. Education ..	1.14	5.6	7.68	14.1
6. Health .. ..	1.93	9.4	3.51	6.5
7. Other Social Services ...	4.39	21.4	8.99	16.5
8. Miscellaneous ...	..	..	1.54	2.8
<b>Total</b> ..	<b>20.50</b>	<b>100.0</b>	<b>54.48</b>	<b>100.0</b>

\*Includes expenditure for protection of Dibrugarh town.

2.5 Overall impact of the plans on the economy of the State can be judged from the movement of the State National Income. The State National Income of Assam expressed in terms of 1948-49 prices has risen by 32 per cent from Rs.223.6 crores in 1950-51 to Rs.296.1 crores in 1960-61. Rapidly increasing population have virtually kept the per capita income almost stationary for over the period of the First and Second Plans. The per capita income at constant prices in 1950-51 was estimated at Rs.255.5, while that of 1960-61 was estimated at Rs.253.9.

### Third Plan

2.6 The experience of the first two plans, as well as, the requirements of the future provided the guide lines in the formulation of the Third Five Year Plan. In making the allocation under the different sectors, such factors as the State's population, previous performance, needs under different sectors, etc., have been duly taken into consideration. The outlay programme by major heads of development in the Third Plan, total expenditure during the first three years of the Third Plan and likely expenditure during the whole Third Plan period are given below:

#### Outlay and Expenditure of the State Third Plan

(Rs. crores)

Head of Development	Third Plan	Expenditure 1961-64	Likely Expenditure 1961-66
Agricultural Programmes ...	12.62	5.49	11.00
Community Development & Co-operation.	11.75	5.42	10.50
Irrigation and Power ...	34.78	33.40	56.90
Industries and Mining ...	9.75	3.79	8.50
Transport and Communication ...	10.15	4.08	7.00
Social Services ..	39.64	18.53	39.00
Miscellaneous ...	1.31	0.79	1.20
<b>Total ...</b>	<b>120.00</b>	<b>71.50</b>	<b>135.00</b>

### 3. Progress and Prospects

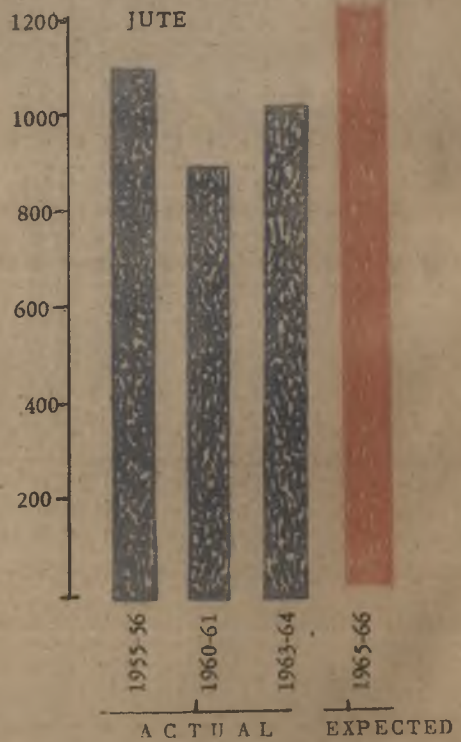
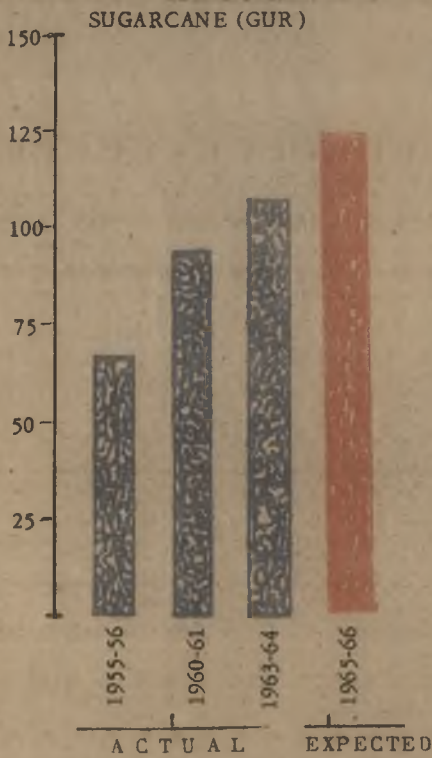
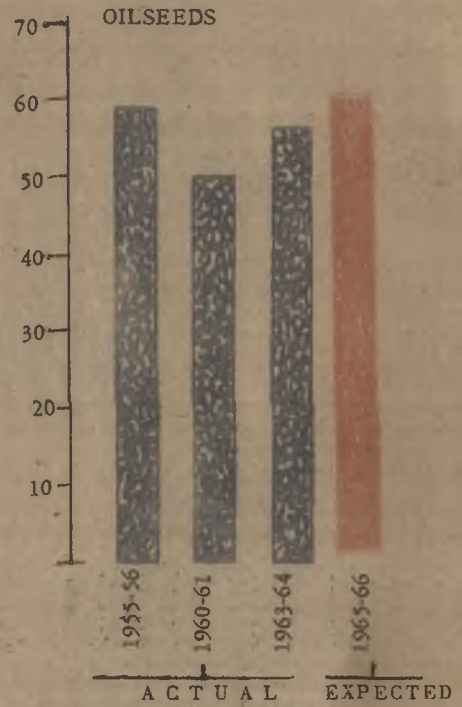
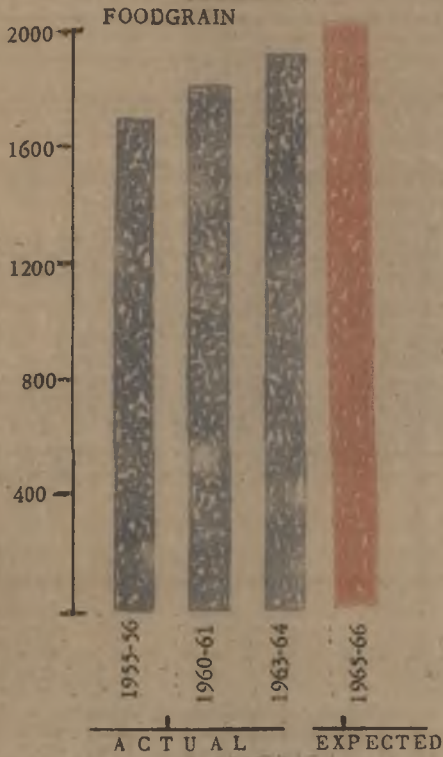
#### Agriculture

3.1 The main object of the First Plan of Assam in the field of Agriculture was to increase food production to tide over the food shortages in the State and this was sought to be achieved through a seven point programme. With the implementation of the First Plan, the net area benefited from minor irrigation rose from a mere 2 lakh acres to more than 10 lakh acres, while about 7 lakh acres were protected from floods and about 6,000 tonnes of chemical fertilisers were distributed. The problems of agricultural finance and marketing were also sought to be taken care of through the co-operative movement. These efforts were intensified in the Second Plan. During the Second Plan period, 7,753 minor irrigation projects were completed which had an irrigation command of 840 thousand acres of land. Execution of the drainage and reclamation schemes benefited 170 thousand acres of land. The number of seed farms was 144 and about 8 thousand tonnes of chemical fertilisers were distributed. The intake capacity of the Assam Agricultural College was raised from 35 in the First Plan to 80 in the Second Plan and again to 100 in the Third Plan, to meet the growing demand of the agricultural personnel.

3.2 The Third Five Year Plan aimed at diversification of the agricultural programme and to increase the rate of growth of the agricultural production over the five years. Unfortunately for the past few years, agriculture continued to be plagued by adverse weather. The yield of major crops—paddy, jute, sugarcane, tea and oilseed—has been subjected to considerable fluctuations and failed miserably in 1962-63. Nevertheless, the redeeming feature is that in spite of these variations, the trend in the upward direction is unmistakable. A variety of crops have been introduced and are now grown. Special efforts have been made to induce adoption of improved agricultural implements and other improved practices through the Community Development Programme to the entire rural areas of the State, thereby bringing technical assistance and supplies within the reach of the farmers. Summary




# AGRICULTURAL PRODUCTION



trends of major crops production is indicated in the table below:—

### Estimates of Production of important crops

(In '000 tonnes except jute and cotton)



Crop	1955-56	1960-61	1961-62	1962-63	1963-64	1965-66	
						Target	Expected
Rice ...	1,640	1,751	1,772	1,574	1,849	2,154	1,930
Wheat ..	1	3	3	3	3	4	4
Other Cereals	10	8	9	11	12	12	12
All Cereals	1,651	1,762	1,784	1,588	1,864	2,170	1,946
Pulses ...	30	27	31	30	36	33	38
Food grains	1,681	1,789	1,815	1,618	1,900	2,203	1,934
Oil seeds ..	59	50	47	49	56	69	58
Sugarcane (Gur).	66	94	121	105	105	149	122
Cotton ('000 bales).	9	6	6	7	7	10	9
Jute ('000 bales).	1,094	892	1,091	696	1,020	1,500	1,200

All crops (index base 1956-57 = 100.)

1955-56	95.79	98.90	107.31	97.32	105.82	..	111.86
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## Animal Husbandry Dairying and Fisheries



3.3 Development of animal husbandry during the first two plans suffered due to various limitations such as excess of uneconomic and surplus cattle, deficient nutrition and shortage of breeding bulls. In respect of the development of fisheries, only a small beginning could be made and thus a vast potential still remains to be tapped. There were also shortages of trained personnel in these fields during the first two plans periods. In respect of these sectors the pre-plan base had been so weak that even at the end of the Fourth Plan, Assam will find it difficult to meet all its requirements of staple and protective foods.

3.4 The dairy development scheme was undertaken in selected milk pockets of United Khasi and Jaintia Hills and Nowgong at the beginning of the Third Plan. Under this scheme, milk producers are being encouraged by financial assistance in the form of loan, etc. A scheme for supply of milk to civilians and military has been taken up at Gauhati and extended to Shillong in the year 1964-65. Chilling plants have been set up at Khanapara and Bhoi area and a pasteurisation plant is proposed to be set up at Khanapara.

## Forests



3.5 Assam abounds in forest wealth. The ever-green forests are, in the Upper Assam Valley and in the hills. Tropical deciduous forests of sal, sissu and khair form a natural cover in the Lower Assam Region. The coniferous forests are confined to the higher altitudes of the United Khasi-Jaintia Hills and to certain ranges in Mizo Hills. The bamboo forests are spread almost throughout the State, but the highest concentration is found in the districts of Cachar, Mizo and United Mikir and North Cachar Hills. Assam has probably the biggest bamboo and reed resources in India.

3.6 These resources are sufficient to meet all the requirements of raw materials for establishing a big industrial complex based on forest materials. The level of output of Assam forests was 7.5 million cubic feet of timber, 52.8 million cubic feet of cane and 7.1 million bundles of thatch besides considerable quantities of firewood and of bamboos for building purposes. A large quantity of timber is taken by the railways and is also exported. During the last decade, Assam has emerged as one of the foremost plywood

manufacturing States in India producing also materials for tea chests, hard boards, flush doors and ornamental plywood on a large scale.



3.7 Under the forest development programme, the main object has been overall improvement of forests, increase in the area of forest reserves, better communication inside forest areas, regeneration of valuable species and establishment of forest-based industries. The First Plan for forest contained only a few schemes which were successfully implemented. Almost all the targets were reached. The construction of forest roads led to the opening up of many areas, where timber exploitation was not formerly possible and an improvement in living conditions of the forest villages. Under economic and medicinal plantation schemes, the area at the end of the First Plan stood at 50,000 acres, the area under natural regeneration being 24,000 acres. In the Second Plan, the area under economic and medicinal plantations reached 63,000 acres while that under regeneration was 30,000 acres. In the Second Plan, special facilities were created in the game sanctuaries like the famous Kaziranga, and a Zoo was established at Gauhati with a view to foster the growth of tourism in the State.



3.8 In the Third Plan, greater emphasis has been laid on the need for increasing the raw material potential of the State to meet the increasing demand of the forest-based industries and the schemes have been designed to raise plantation of industrial importance. During the first three years of the Third Plan, 1,460 acres of khair, 1,700 acres of teak and 4,500 acres of fast-growing species of plantations were created, and at the end of the Third Plan, it is expected that 2,500 acres of khair, 3,000 acres of match wood, 1,500 acres of plywood, 3,200 acres of teak, and 9,075 acres of fast-growing species of plantation would be completed.

3.9 During the past few years, the Assam forests have been called upon to feed the new industries in the State and in this task they have already met with success in the case of plywood industries set up mostly in Upper Assam and a hard board factory at Gauhati. A Timber Treatment and Seasoning Plant was constructed and it has gone into production

## Co-operation

3.10 The co-operative movement in Assam passed through various stresses and strains since its inception in 1904 with the enactment of the Co-operative Credit Societies Act and before the First Plan period, the Co-operative Societies were, for the most part, in a moribund condition with a few exceptions here and there. Efforts were, therefore, concentrated during the First Plan period in revitalising the movement. The First Plan initiated a process of development and thereby made it possible for the Second Plan to embark on a more comprehensive programme of building up an inter-related and inter-dependent co-operative sector with close link with other aspects of the economy. In November 1958, the National Development Council decided to form village co-operatives for every one thousand population, and credit union for such villages where the area is backward. In the light of this decision, 2,361 service co-operative societies for the State and 37 credit unions for the hill districts were formed during the Second Plan period. Thus along with the programme for agricultural finance, through different credit institutions, schemes relating to processing, marketing, ware-housing, etc., on co-operative lines were initiated and one Co-operative Sugar Mill, one Co-operative Rice Mill, 181 Godowns, one Jute Baling Society, one Cotton Ginning Mill, etc., in the non-agricultural sector were established.

3.11 During the Third Plan period, schemes, more or less of the same nature, have been taken up, besides a scheme of revitalisation of credit societies in Nowgong, Darrang and Cachar districts. Besides, 8 Co-operative Rice Mills, 400 Godowns, 2 Co-operative Printing Presses and 2 Co-operative Cold Storages are expected to be established during the Third Plan period.

## Panchayat

3.12 The Assam Panchayat Act, 1959, which lays down a three-tier structure, viz., the Gaon Panchayat at the village level, Anchalik Panchayat at the block level and Mahkuma Parishad at the subdivisional level, was brought into force in October 1959. By the end of the Second Plan, 2,570 Gaon Panchayats, 120 Anchalik Panchayats and all the 16 Mahkuma Parishads began functioning. Thus the entire rural area of the plains districts of the State has been covered by the panchayats.

3.13 The aim of the Third Plan is to foster the growth and to ensure the smooth working of these institutions so as to realise the maximum possible development potential based on the effective use of local resources both in terms of men and materials, co-operative self-help and community efforts. The panchayats have been associated with the formulation and implementation of the village production plans in the villages for supply of seeds, fertilisers, implements, works under minor irrigation and the like. In the context of the Emergency, the programme of Village Volunteer Force was organised for the three-fold purpose of food production, mass education and village defence. Side by side, Defence Labour Banks have been created for raising a minimum subscription of 12 days' free labour per adult in the village.



### **Community Development**

3.14 The community development programme has already covered the entire rural area of the State with 160 blocks. Though the Government has accepted the concept of the block as a unit of planning and development, this policy could not be fully implemented owing to certain difficulties faced by the department in transferring the departmental funds to the panchayats. However, pursuant to the recommendation of a recent study team constituted by the State Government to study the working of the Panchayati Raj Institutions, it has been decided to make the Anchalik Panchayats responsible both for the preparation and the implementation of the Block Plans. For that purpose, adequate funds have been disbursed to Anchalik Panchayats as grants-in-aid so that responsibility to account for the same rests with the Panchayats with effect from the current year. A decision has also been taken for transferring the block level schemes of the different departments to these bodies.



### **Industry, Mines and Minerals**

3.15 Assam is rich in natural resources which could provide a solid base for development of resource-based industries. Yet, ironically, Assam still remains one of the industrially backward States of India. Tea, oil refining, match, plywood and saw mills are the only industries worth mentioning.

## Tea

3.16 Tea dominates even now the industrial scene in the State. The industry employs about 60 thousand workers in the manufacturing and another half a million in tea plantation. In 1962, Assam produces 174 million kgs. of tea, which is more than half of India's tea. Except for direct export, the entire output is sent to Calcutta for distribution. Assam's tea is a valuable source of revenue to the Governments of Assam and West Bengal and the Government of India, and is a major foreign exchange earner. The tea industry in Assam is now over half a century old and most of the bushes are over-aged. Most of the gardens have reached or are approaching the point of diminishing returns. The Third Plan has also fixed a high target for tea. Tea cultivation being already intensive, a higher production can be reached mostly by expansion and replanting. The need of replanting fund has long been recognised by the Plantation Enquiry Commission. A proper approach to these problems has to be evolved by the industry and the Governments concerned.



## Jute

3.17 Next to West Bengal, Assam is the largest jute-producing State of India. The entire output from Assam is sent to West Bengal to feed the jute mills there and for export. Like tea, jute and jute goods are major foreign exchange earners. A problem which generally affects Assam's jute is the fluctuation of prices. The low prices on the eve of the emergency will perhaps be long remembered by the jute farmers and the frequent wide fluctuation even in a season will continue to influence their decision to put an area under jute. In the Second Plan, Assam wanted to have a jute mill of its own in the private sector and necessary provision has been made in the plan. But the mill could not be started due to various reasons.



3.18 Assam produces about one million tonnes of sugar-cane annually. The quantity is enough to feed a number of sugar mills but practically all the cane was utilised for gur manufacturing. By about the middle of the Second Plan, a sugar mill in the co-operative sector was set up. The crushing capacity of the mill is very limited and its output being barely 6 to 7 thousand tonnes of sugar annually so far. The

rest of Assam's sugar requirement of 70 to 80 thousand tonnes annually was met by import. There is vast scope for expanding the capacity in the State and another medium-sized mill is being considered for the Fourth Plan.

### Match



3.19 There is one match factory at Dhubri. The current level of production is 3 million gross boxes annually. Assam is self-sufficient in matches and exports a certain quantity.

### Petroleum and natural gas

3.20 Till recently, Assam was the only State to have a petroleum refinery. The capacity of the refinery was very small compared to the known resources in the State. Both the private and the public sector are now associated in the field of oil exploration. Assam was also the first State to have a first public sector refinery but again the capacity of the refinery is also very limited. The Assam oil fields are also feeding another public sector refinery at Barauni outside the State. The known resources of oil are sufficient to meet the requirement of these three refineries for the next two decades or so. What is more, there is always the prospect of locating new occurrences. As a step to making use of the refinery bye-products, a petro-coke calcination plant has been set up recently at Gauhati. A carbon black factory and an integrated petro-chemical complex are also being considered.

3.21 The oil exploration in their course have also led to the discovery of occurrences of natural gas associated and unassociated with oil. The known reserves run into a huge quantity. As a step to utilising this gas, a fertiliser plant, a gas turbine station and a gas distribution scheme have been taken up in the public sector while a scheme for fractionization is awaiting implementation.

3.22 The other known minerals of Assam are coal, limestone, sillimanite, asbestos, corundum, Fuller's earth, fire-clay, white clay, gem stone, gypsum, gold, graphite, kaolin and glass sands. Only the first three are exploited commercially while the rest are awaiting further investigation and exploitation.





## Coal



3.23 The known reserves of coal are understood to be of the order of 2,000 million tonnes. The current rate of raising is less than 1 million tonnes annually which is obviously low compared to the reserves. The bulk of the current output comes from the two districts of Lakhimpur and United K. and J. Hills. By about the first year of the Fourth Five Year Plan, the coal deposits of Garo Hills at Nangalbibra are also being exploited by the Assam State Mineral Development Corporation to feed the thermal power station there. The output of coal from this area is expected to be 20,000 tonnes in 1966-67 and is to be raised to 2,50,000 tonnes by about the third year of the Fourth Plan. There is scope for expansion for both the private and public sectors in the fields of coal production and coal-based industries. A coal briquetting plant and a low temperature carbonization plant are being considered for the Fourth Plan.

## Sillimanite



3.24 Assam's sillimanite is considered one of the best in quality now available. The output of sillimanite now is around 10,000 tonnes annually. The current level of production is much below the demand and it was reported that a number of orders, including foreign, remained unfulfilled. It was also reported that the deposits at the present site are being exhausted but there is prospect of locating fresh deposits in the area around the present site. A refractory plant was considered in the Third Plan, but so far has remained unimplemented.

## Limestone



3.25 Assam has huge reserves of limestone. The way in which the deposits are worked at present is primitive and the level of production varied from year to year from almost 50 to 100 thousand tonnes. At present limestone is used for building purposes and as an insecticide. A large quantity is also exported to East Pakistan to feed the cement factory there. As a step towards better utilization of the mineral, a medium sized cement factory is now under construction and awaiting completion, and another fairly big factory at Bokajan is being considered for the Fourth Plan.

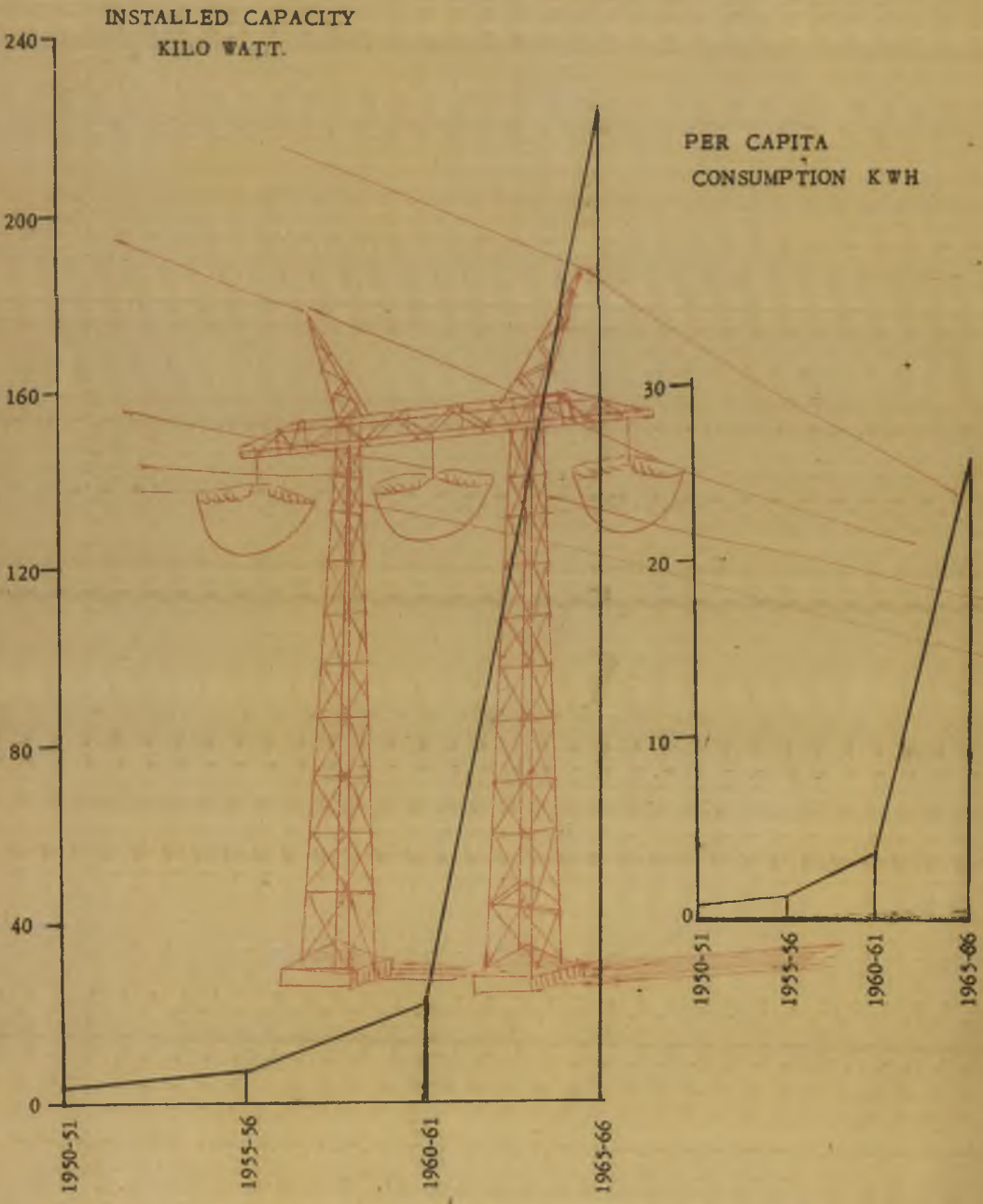
3.26 As part of the plan programme, schemes for utilising kaolin and glass sands are under consideration. A number of investigations have been carried out and more are being planned by the State Directorate of Geology and Mining. The most interesting discoveries are the occurrence of gold and germanium in the Khasi Hills.

## New Industries

3.27 Towards the later part of the Second Plan and in the early part of the Third Plan, a few small and medium industrial units were set up. These are the Bicycle Factory, a Spun Silk Mill, two Cotton Spinning Mills, a household Metre Factory, some Re-rolling and Fabrication Units, a Mixed Fertilizer Plant, a Hard Board Factory, a Jax Board Factory and a Fruit Processing Plant. The Spun Silk Mill was taken up in the State Government sector and was located at Jagi Road some 40 kilometers from Gauhati. The capacity of the mill is 75,000 lbs. of spun yarn and 50,000 lbs. of noil yarn. The Bicycle Factory has a capacity of about 50,000 units annually with a capacity to manufacture allied products. The two Cotton Spinning Mills located at Charduar and Chandrapur have a total capacity of about 25,000 spindles. The Jax Board Factory had already made valuable contribution to defence production during the emergency. There has also been expansion in the capacity of the existing industries, notably in Plywood and Saw Mills, Flour and Oil Mills, Motor Repairing and General Engineering.

3.28 Serious thoughts have been devoted to the problems of industrialization of the State for some time past now. The First Plan with the meagre provision could obviously do nothing. In the Second Plan, a start has been made and some of the industries mentioned in the foregoing paragraphs were taken up. The Third Plan envisaged considerable expansion in the field of industry on the existing, as well as new lines, both in the private and public sectors. Among the new schemes envisaged were the schemes of distribution and fractionization of natural gas, plastics, synthetic fibres and other petrochemicals, paper and rayon pulp, refractory and bricks and fruit preservation. In order to facilitate Industrialisation, the State Government undertook expansion of the transport system and the development of electrical power. A number of other facilities were provided or offered as incentive to private industrialists and these incentives were quite liberal. Actually, the Third Plan started well in the industrial front but later the Chinese aggression in the NEFA region in October, 1962 virtually arrested the development of the Private Sector Industries in the State. Private capital is now shy to invest in industries in Assam. It also appears that except in the case of a few, they are scared to come to Assam

# POWER



after the aggression. For the Fourth Plan a still bigger programme is under consideration but unless sufficient private capital comes forth, it will be difficult to see the programme through.

## Cottage Industries

3.29 Cottage industries in Assam have flourished from time immemorial and have given employment to a fairly large number of the rural and semi-urban population. But the development of cottage industries prior to the introduction of planning was neither systematic nor comprehensive.

3.30 The First Plan attempted to develop and expand the cottage industries on a systematic basis. The measures taken during the First Plan related, broadly, to strengthening the departmental organisation, training, marketing, research and assistance. While a beginning was made in the First Plan, the Second Plan attempted an all-round development of the village and small scale industries and, therefore, an attempt was made to create the necessary climate and to extend required facilities and encouragement for artisans and small entrepreneurs to take industrial ventures. The schemes under the Third Plan are intended to improve the productivity of the workers and reduce production costs, financing of cottage and small scale industries by way of loans, rural industrialisation, marketing of products and training of artisans in various trades and industries. In the context of the national emergency, greater stress has been laid on increased production in shorter time to suit the defence needs. Accordingly, greater emphasis has been laid on schemes like Small Scale Industries Development Corporation, Raw Material Depots, Central Workshop, Cluster Type Training Centres, etc., and also other schemes aimed at increasing production of sericulture and weaving industries. Also there are schemes relating to the development of khadi and village industries, handloom, industrial estates and handicrafts.

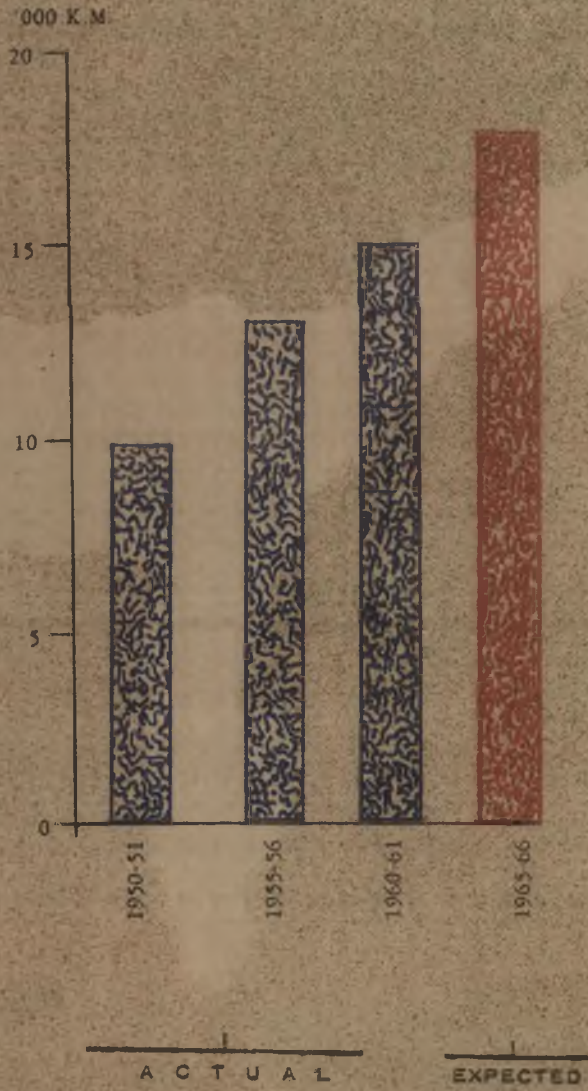


## Power

3.31 According to an estimate of the Central Power Commission, Assam commands one-fourth of India's 40 million kilowatt hydro-power potential. The total power resources of the State is indeed considerably bigger considering the energy potential of coal, oil and gas. But despite this enormous potential, Assam till now remains one of the most backward States in the development of electric power. The per capita consumption of electricity in Assam in the comparable period (1960-61) was 3.56 Kwh. as against 41.49 Kwh. in Bihar, 83.89 Kwh. in West Bengal and 38.12 Kwh. for all-India.



# R O A D S



3.32 Before the First Five Year Plan, there were electric installations in only a few town areas. The total installed capacity was 3,343 Kw. A few schemes were taken up in the First Plan. These include the Umtrew Project which could not be completed during the plan period. The installed capacity at the end of the First Plan was 5,280 Kw. The Umtrew Project was commissioned in 1957 and its capacity is 8,400 Kw. More schemes were taken up in the Second Plan and the installed capacity at the end of the Second Plan was around 20,000 Kw. Towards the end of the Second Plan, the Umiam Project with a capacity of 36,000 Kw. and the Naharkatiya Gas Turbine Station (67,000 Kw.) were also taken up, and in the next few months these will be completed. These Projects along with other smaller schemes under the Third Plan will raise the installed capacity to about 225 Mw. by the end of the Third Plan. Alongside, there has been considerable expansion in electrification of towns and the country side. In the Fourth Plan, a number of electricity schemes are being considered. These include the Umling Hydro Project, Mawphlang Project and Garo Hills Thermal Station for which advance action has already been taken.

## Transport and Communication

### Road

3.33 The land transport system of Assam consists of Roads, Railways and Waterways. The southern slopes of the Khasi Hills were also once served by ropeway which was inactivated by the partition.

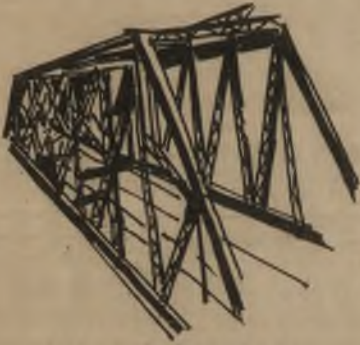
3.34 The road development of Assam was retarded in the past because of difficulties like the existence of numerous ranges of hills of varying heights, rivers and streams which have changing courses requiring considerable extent of bridging, circuiting of roads in the hilly regions, etc.

3.35 According to the all-India road plan, Assam is to be served by a network of roads with a total length of about 35,200 kilometers by about 1981.

3.36 During the first decade of Planning ending in 1961, the road length in Assam increased from 9,759 kilometers in 1950-51 to 14,859 kilometers in 1960-61 of which 1,188 kilometers are under the national highways. With the fulfilment of the Third Plan target, the total length of road in Assam will go



upto 17,808 kilometers at the end of 1965-66 leaving about 17 thousand kilometers to be constructed over the next 15 years or so.



3.37 The Five Year Plan, besides construction of new roads, also envisage upgrading the sub-standard roads and bridging a number of river crossings including major bridges over the Barak, Dikhow, Jhanji, Dhansiri, Buroi, Kopili, Longai, etc. They also include gravelling, reconstruction of weak bridges and culverts and construction of roads in connection with industries. During the Second Plan 2,264 kilometers of roads were metalled or black-topped and another 800 kilometers were gravelled. Upto the end of the Second Plan, nine major bridges including those over the Desang, Jhanji, Dhansiri, Kopili, Longai were completed, and in June 1962, the longest road bridge in Assam over the Jia-Bharali was also completed.

## Road Transport

3.38 The policy followed in respect of road transport has been one of increased nationalization of routes gradually. The programme was started as long back as 1948 and upto 1950-51 the length of nationalized routes totalled 547 kilometers. An ambitious programme was taken up under the Second Five Year Plan, but during 1958-59, the Planning Commission had advised the State Government to set-up a corporation under the Road Transport Corporation Act, 1950. It was felt that the 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. Upto the end of the Second Plan, 1,838 kilometers of routes have been nationalized and the length of nationalized roads at the end of 1963-64 stands at 2,330 kilometers. The gross capital invested in nationalized transport increased from Rs.30.77 lakhs in 1950-51 to Rs.285.54 in 1960-61. Over the same period, the average number of passengers handled daily increased from 3,110 to 24,952 and goods from 6,124 mds. to 9,894 mds. Net profit increased from Rs.15.60 lakhs in 1951-52 to Rs.23.83 lakhs in 1955-56, but declined to Rs.20.83 lakhs in 1960-61. Net profit of 1962-63 stands at Rs.8.40 lakhs.



## Railways



3.39 The length of railways in Assam at the end of 1960-61 was 1939 kilometers. The north-bank rail line was extended further with the completion of the bridge over the Subansiri. Priority has been accorded to the extension of the line to Muikongselek and extension of the broad gauge line upto Jogighopa. The Brahmaputra bridge was commissioned in 1962. Work on the broad gauge line from Siliguri to Bongai-gaon was in progress.

## Waterways



3.40 The inland waterways of Assam cater largely to inter-State traffic. The internal waterways of Assam extend to over 9,600 kilometers. About 500 kilometers are navigable by steam boats and another 1,100 kilometers by large country boats. The rest of the length could be navigable only by rafts and small country boats. The waterways play a very important role in maintaining communication between Assam and the rest of India. At present, the annual traffic to and from Assam carried by steamer companies amounted to 8/9 lakh tonnes each way.

3.41 The Third Plan for inland water transport has been formulated by the Centre in the light of the recommendations of the Inland Water Transport Committee. The scheme for the Assam river services include loan assistance to the Joint Steamer Companies, construction of an Inland Port at Pandu, purchase of Launches and Dredgers for the Brahmaputra and improvement of foreshore at Gauhati. Under the State Plan, a Directorate of Inland Water Transport has been created to look after the problems arising in connection with inland waterways development.

## Ropeways

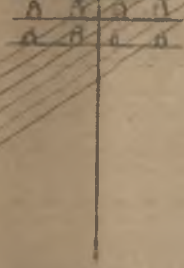


3.42 The Third Plan contains a proposal of a ropeway project in the State linking Shella-Shillong-Pandu. This scheme is designed to help rehabilitating the economy of the southern slopes of the Khasi Hills which was shattered by the partition. The cost of transport, on completion of this project, will be less than the present cost by road transport.





## Post and Telegraph



3.43 Post office services have increased appreciably over the past few years. The number of post offices increased from 1,365 in 1955-56 to over 2,000 at the end of the Second Plan. Letter boxes increased from 2,249 to 3,000 and rural delivery staff from 1,168 to about 1,500 over the same period. At the end of the Second Plan, the distance over which mails were carried was about 19,000 kilometers as against 14,500 kilometers in 1955-56 and about  $3\frac{1}{2}$  million telegrams were transmitted. Licenses for broadcast receiving sets numbered 35,628 in March 1961 as against 9,643 in 1951-52.

## General Education

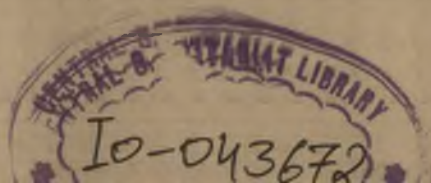
3.44 Before the First Five Year Plan period, there were disparities in the provision of educational facilities; pay scales, and service conditions of teachers were generally unsatisfactory and there was shortage of trained teachers. These factors were partly responsible for low standard of teaching.



3.45 Under the First Plan, efforts were made, in the main, towards consolidation and re-orientations of the system of education. The Second Plan provided for larger emphasis on basic education, extension of facilities for technical and vocational education and implementation of programmes of social education and cultural development.



3.46 In the Third Plan, emphasis is on the provision of facilities for the education of all children in the age group 6-11 years, extension and improvement of 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, increase the number of scholarships and free studentships, conversion of elementary schools into basic pattern and reduction of the gap between the education of girls and boys. The following two tables will indicate the progress in the field of general education during the successive plan periods.



## Progress of enrolment

Item	Unit	1950-51 posi- tion	1955-56 posi- tion	1960-61 posi- tion	1965-66 estima- ted
	2	3	4	5	6
<b>1. Primary—</b>					
Class I-V— Age group 6—11 years					
Girls ...	No. in lakhs	2.12	2.87	4.14	6.13
Total ...	„	6.71	8.15	11.25	15.69
Percentage of total enrol- ment to the age group.	P. C.	53.9	55.5	67.5	82.0
<b>2. Middle—</b>					
Class VI-VIII— Age group 11—14 years					
Girls ...	No. in lakhs	0.18	0.35	0.60	1.01
Total ...	„	1.07	1.46	3.19	3.20
Percentage of total enrol- ment to the age group.	P. C.	17.7	17.7	25.3	33.4
<b>3. Secondary—</b>					
Class IX-XI— Age group 14—17 years					
Girls ...	No. in lakhs	0.03	0.06	0.25	0.60
Total ...	„	0.24	0.35	1.26	2.30
Percentage of total enrol- ment to the age group.	P. C.	4.6	5.5	12.2	20.0

**Total number and percentage of trained teachers**

Schools	Unit	1960-61 position actual	1965-66 estimated position
1	2	3	4
<b>1. PRIMARY SCHOOLS—</b>			
Total teachers	lakhs	0.27	0.36
Percentage of trained teachers	P.C.	37.9	41.7
<b>2. MIDDLE SCHOOLS—</b>			
Total teachers	lakhs	0.09	0.13
Percentage of trained teachers	P.C.	2.59	26.2
<b>3. SECONDARY—</b>			
Total teachers	lakhs	0.09	0.13
Percentage of trained teachers	P.C.	15.1	15.9

## Technical Education

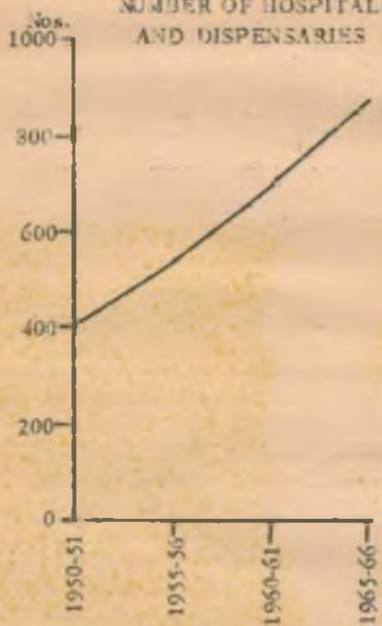
3.47 In Assam, development of technical education began practically from scratch. Before the First Plan, there was no Engineering College in the State. During the First Plan, one Engineering College at Gauhati was started with an intake capacity of 60 students annually. During the Second Plan, another college was started at Jorhat. The total intake capacity of both the Colleges was raised to 180. Besides, 3 Polytechnics were functioning during the Second Plan period with an intake capacity of 420 students per year.

3.48 The State's Third Plan envisages the establishment of one Regional Engineering College, two more Polytechnics, expansion of existing Engineering Colleges and introduction of five year integrated course, expansion of Silchar Polytechnic, establishment of six Junior Technical Schools and one Technical Institute for girls.

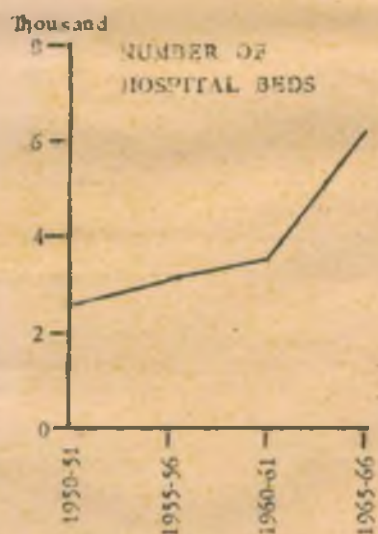


# H E A L T H

NUMBER OF HOSPITALS  
AND DISPENSARIES

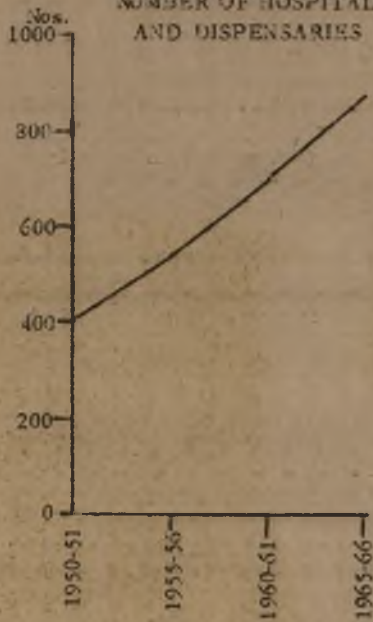


Thousand  
NUMBER OF  
HOSPITAL BEDS

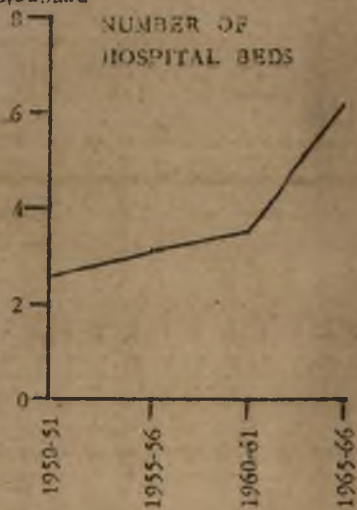


# H E A L T H

NUMBER OF HOSPITALS  
AND DISPENSARIES



Thousand  
NUMBER OF  
HOSPITAL BEDS



3.49 At present, the intake capacity of the existing 2 Engineering Colleges is 270 in different branches of engineering which will be raised to 330 at the end of the Third Plan. In respect of Polytechnics, 4 are already functioning with a total intake capacity of 610. The estimated intake at the end of the Third Plan is 1,040. In addition, there are increased provision for rendering training in different trades and crafts in order to meet the increasing requirements of technical personnel.

## Health

3.50 In the past, the incidence of **kala-azar** and malaria was very high in Assam and used to carry a heavy toll of lives every year. Contagious diseases like, tuberculosis, cholera and small-pox were rampant and infant mortality was high. Leprosy is another disease which took within its grip a large number of our tribal people. Lack of medical facility was the chief cause of high incidence of diseases and mortality.

3.51 The First Plan attached considerable importance to medical education and training. The Assam Medical College was provided with more staff and equipments. During the First Plan, the number of hospitals and dispensaries were increased. Subdivisional headquarter hospitals were also provincialised. 5 tuberculosis clinics, 5 malaria control units, 41 leprosy centres and 24 maternity homes and centres were established. For effective implementation of the water supply schemes, a Public Health Engineering Organisation was started. Besides intensifying the measures initiated under the First Plan, steps were taken up during the Second Plan period to extend health facilities to the rural areas. The total number of beds in hospitals and dispensaries increased from 3.1 thousand at the end of 1955-56 to 3.5 thousand in 1960-61 and that of hospitals and dispensaries from 534 to 708. The medical education and training programmes were pursued with greater intensity so as to cope with the increased demand for doctors, nurses, midwives, etc. Following the encouraging progress in the First Plan, the National Malaria Control Programme was converted into an Eradication Programme during the Second Plan period. Drive was continued in the sphere of other communicable diseases like filaria, tuberculosis, leprosy, small-pox, etc. The Public Health Engineering Organisation took up a number of projects for supplying drinking water. A scheme



for rural health units was also introduced in the Community Development areas. 70 primary health units in the block areas and 60 family planning clinics were opened. The Government Ayurvedic College at Gauhati continued to impart education on ayurvedic system of medicine to students.

3.52 The principal development that took place under the Third Plan relates to expansion and improvement of medical facilities and services, control and eradication of communicable diseases, training of medical and para-medical personnel, water supply, sanitation, family planning, etc. It has been estimated that the number of beds in hospitals and dispensaries will go up from 3.5 thousand at the end of the Second Plan to about 6.3 thousand at the end of the Third Plan. It has also been estimated that at the end of the Third Plan, the number of Primary Health Units will be 115. During the first three years of the Third Plan, 120 family planning clinic and 12 sterilisation units have been opened. The intake capacity of the two Medical Colleges will go upto 250 at the end of the Third Plan. The table below summarises the progress made during Third Plan under the health Sector :

Items	Unit	1950-51	1955-56	1960-61	1963-64	1965-66 (estimated)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Hospitals and dispensaries.†	No.	408	534	708	835	871
2. Primary (State) Health Centres.	No.	Nil	Nil	70	77	115
3. Beds in hospitals and dispensaries in '000.	No.	2.5	3.1	3.5	5.5	6.3
4. Medical Colleges	No.	1	1	1	2	3
5. Intake ..	No.	65	65	110	210	250
6. Family Planning Clinics.	No.	..	..	60	180	180
7. Sterilisation Units	No.	..	..	..	12	12

† All types under State Government.



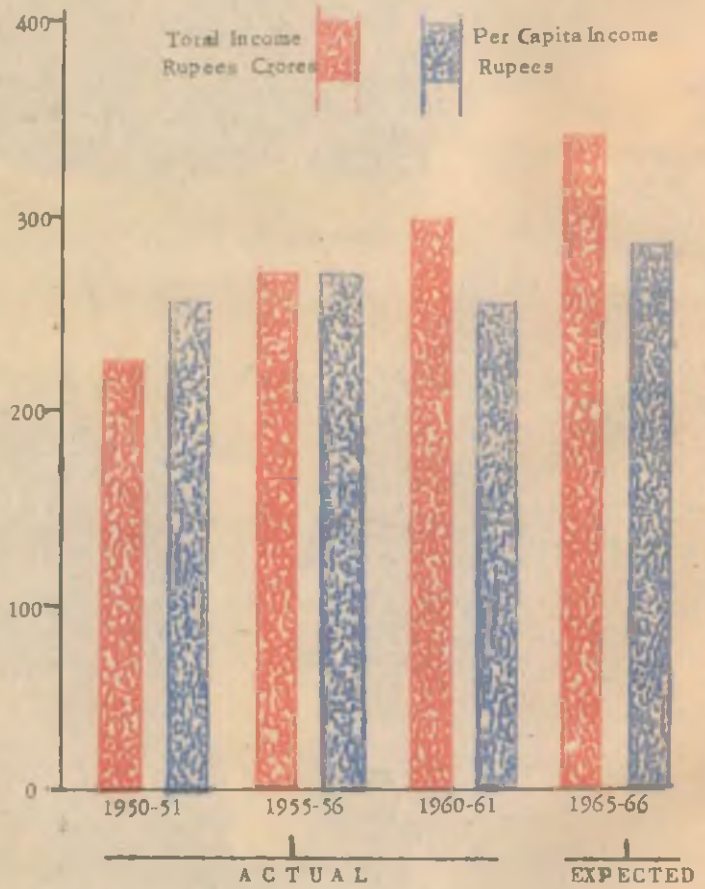
3.53 The Thrd Five Year Plan of the State envisages a rise of the State National Income at 1948-49 prices by 34.8 per cent and per capita income in the State by 19.8 per cent on the basis of the provisional estimate of the population worked out at that time. During the first three years, the State National Income at constant prices rose from Rs.296.2 crores in 1960-61 to Rs.339.2 crores in 1963-64 and it is expected to rise to Rs.379.9 crores in 1965-66. Expressed in terms of percentage, the State National Income is expected to rise by 28.3 per cent by the end of 1965-66. The per capita income is expected to rise to Rs.283.2 in 1965-66 from Rs.253.9 in 1960-61, i.e., by about 12 per cent only.

## Concluding Remarks

3.54 The successful implementation of the plans not only calls for unstinted effort of the administration but also wholehearted support and co-operation of the people. The enthusiasm shown and the co-operation offered by the people of the State so far has been heartening and it is hoped that the people of the State will come forward to take the fullest advantage of the plan in future by actively participating in the various development schemes. Transforming the economy of the State from its present predominantly agrarian structure into a more diversified one through rapid industrialisation is the most urgent task. Industrialists from outside the State have an important part to play in this respect. They will be welcome in the State and it is hoped their participation in this mighty task of industrialising Assam will be forthcoming in ever-increasing measure than what was forthcoming in the past.

# STATE NATIONAL INCOME

( At 1948-49 prices )



MAP OF ASSAM

