



GOVERNMENT OF THE UNION TERRITORY OF GOA, DAMAN AND DIU
PLANNING DEPARTMENT

DRAFT
FOURTH FIVE YEAR PLAN
1969-74

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MEMORANDUM

I—INTRODUCTORY: A GENERAL PHYSICO- -GEOGRAPHICAL SURVEY

Goa, Daman and Diu were constituted as a separate Union Territory in 1962, after their liberation from Portuguese rule on December, 19, 1961. The Territory comprises three land blocks on the West Coast separated from each other by a distance of over 300 miles. Administratively also, the Territory is divided into three districts, respectively named Goa, Daman and Diu. The boundaries of Goa district are defined, in the north by the Terekhol river which separates it from Maharashtra, in the east and south by Mysore State and in the west by the Arabian Sea. The district of Daman is bounded, on the north by the Bhagwan river, on the east by Gujarat State, on the south by the Kalem river and on the west by the Arabian Sea. Diu, a tiny island in the Gulf of Cambay near Veraval port, is separated from the southern extremity of the Saurashtra peninsula by a narrow channel running through a swamp. The district of Goa is a hilly terrain especially on its western side where lies the Southern end of the Sahadri range. These hillocks branch off westward across the territory with many spurs and ridges. The terrain is intercepted by a number of rivers flowing westwards which provide a network of internal waterways. The important rivers are Mandovi, Zuari, Terekhol, Chapora and Betul which are navigable for a total length of 230 kms. The physiographic characteristics of the area are rich and varied consisting of verdant hills forests, coconut groves and rice fields. There are about half a dozen islets between the estuaries of these rivers, the largest of which is Goa from which the whole territory takes its name. The port of Marmagoa, situated on the southern side of the Zuari river, is the best natural harbour on the West Coast and can shelter large ocean liners.

The soils in general are lateritic. The agricultural lowlands especially in the coastal tract, are alluvial flats formed through sedimentation along the principal rivers. In many cases, they are protected by dykes. Along the coastline there are sand dunes too dry and barren to sustain any agricultural or silvicultural crop, except cashew and casuarina.

Daman is divided by the Damanganga river into two parts. Three rivers flow westwards through the terrain, viz., the Bhagwan River running along the northern boundary, the Kalem River forming the

southern boundary and the Damanganga River lying in between. The last one is navigable with a bar at its mouth. There is a roadstead outside the bar where the vessels of 300 to 400 tonnes can anchor and discharge cargo.

The tiny island of Diu is connected with the mainland by a narrow channel on the north. The channel is navigable only for fishing boats and small country crafts. The topography is generally plain, the hillocks attaining a maximum height of 30.5 meters. The harbour though small is an excellent one where the vessels can lay at anchor in two fathoms of water.

II — LEVEL OF DEVELOPMENT ATTAINED SINCE LIBERATION

a) Progress in the First Three Year Plan:

The Territory of Goa, Daman and Diu has had about 7 years of self-rule since its liberation in December, 1961. However, it had the benefit of only the last three year period viz., 1962-63 to 1965-66 of the country's Third Five Year Plan. Actual expenditure during these three years amounted to Rs. 16.50 crores. The main object of the first (three year) Plan of the territory was to rehabilitate the economy, and usher into a phase of planned economic development. Immediately after Liberation the Administration had to undertake repair and reconstruction of the bridges which were destroyed by the retreating Portuguese army. Six major and seven minor bridges had to be re-constructed.

The erstwhile Administration did not have a proper machinery for the development of animal husbandry, pisciculture, industry, cooperative structure, etc. The present Administration's first requirements was to start Departments for these subjects. Similarly the Departments of Education, Agriculture, Mines, Public Works etc., which though existed the erstwhile administration, needed strengthening in size and resources.

Popular participation in the Territory's development effort was not easy to come by in the absence of a suitable institutional frame work. This was attempted by creating a democratic set up at the village level. A number of village Panchayats were constituted throughout the Territory. In the same way, Community Development blocks were also started in all the talukas. No attempt was made by the former Administration to initiate the cooperative movement in the Territory. This was altogether a new venture taken up immediately after liberation. A Department of Cooperation was organised and adequately staffed. A Central Cooperative Bank was established at Panaji to function as the central financing agency for providing credit to the primary societies, and through them to the cultivators and the rural artisans.

The schemes of Soil Conservation, Plant Protection, distribution of chemical fertilisers, repairs to bunds and of Minor Irrigation were taken up in the first three-year plan. The production of foodgrains is estimated to have increased by 15,000 tonnes. Mechanisation of fishing crafts was

introduced for the first time and financial assistance for the purchase of the requisites was provided to the fishermen and their cooperatives. The cold storage plant at Panaji was modernised, a deepfreezer and an ice factory (of 10 tons capacity) was also set up at Panaji. In all 44 engines and 11 boats were allotted to the fishermen on loan-cum-subsidy basis. The actual catch of fish was raised from 200 tons in 1963 to 400 in 1965-66. The poultry farm was expanded from 200 layers to 1000 layer units. A composite livestock farm was established. 248 boats and sows of large white Yorkshire and Middle white Yorkshire breed were distributed. Five mobile dispensaries and an equal number of stationary dispensaries were also established. Schemes of new forest plantation, establishment of nurseries, survey and demarcation of forest areas were undertaken. An area of 5,400 acres was covered with forest plantation. 1400 cooperative societies were established and a Central Cooperative Bank was also started. The industries were also given financial assistance. The activities of the Maharashtra Financial Corporation were extended to this Territory. Licences were granted for the establishment of three industrial mills, a pelletisation project and a fertilizer unit. Construction of the seven-storeyed Tourist Hostel at Panaji was undertaken as a part of the programme for the development of tourism. Construction of a tourist bungalow at the Calangute beach was started, and action for the improvement of beaches, lakes and springs was taken. Considerable work was done under the Health Schemes. A medical and pharmacy colleges were established. The water supply scheme was also taken up. The number of beds in various hospitals increased from 1,000 to 1,500. Besides 26 rural dispensaries, 5 dental clinics, one mobile and one ophthalmic clinic were established. Three basic nursing schools were started. The Goa Medical Colleges was upgraded with the degree course. So also was the Pharmacy School upgraded into a Pharmacy College. Considerable progress was made in the field of education. As against 17,000 students in 176 Government Schools, there were 63,000 pupils in 716 primary schools at the end of the Plan. The number of Secondary Schools increased from 78 to 191 and the students from 8,000 to 27,000. Four degree Colleges were set up in place of none before. The industrial and commercial school at Panaji was upgraded into a fullfledged Polytechnic.

On the date of liberation, the installed generating capacity of diesel sets at various places in Goa, Daman and Diu was 3885 KW (excluding the installed capacity of 2250 KW of M/s Chowgule & Co., Marmagoa) and power supply was available in only 9 towns and 4 villages. During the Third Plan period, arrangements were made to get bulk power from neighbouring States of Mysore, Maharashtra and Gujarat. For distribution of the power in the Territory 337.5 circuit Kms of 33 KV Transmission lines, 115 Kms of 11 KV sub-transmission lines and 200 Kms of L. T. distribution lines were laid. Uneconomical diesel generating sets were closed down. However, 4 nos. of 33/11 KV, MVA Power Transformers were installed and commissioned during this period commencing power supply in new areas — 2 towns and 11 villages.

b) Achievements in 1966-67 and 1967-68:

A sum of Rs. 13.32 crores was spent during the last two years (1966-67 and 1967-68) on the plan activities. A brief sketch of activities undertaken during this period is given below:

Under the programme of Agricultural Development the introduction of the High Yielding Varieties of seeds was an important landmark. An area of 24,000 acres was brought under the High Yielding Seeds of paddy and other crops. Coverage under the Plan Protection reached to 50,000 acres and that of distribution of fertilizers to 5.200 tonnes at the end of 1967-68. Seedlings, grafts etc. have been distributed for a variety of horticultural crops. About 6,000 acres of area have been brought under green manuring. Under the programme of fishery development, 37 engines and 12 machanised boats were allotted to fishermen and other cooperative societies during the last two years. About 51,000 carp fry were stocked during the same period. The composite Livestock Farm has been expanded with the addition of Murrah Buffalo and accommodation for cattle and residential quarters for staff were also constructed under the Animal Husbandry Programme. The Government Poultry Farm has been expanded to 2,000 layer units. Similarly two Additional Demonstration Units have been started. Work on erecting the Dairy Plant was in progress. About 4,000 acres of forest land have been covered under the Plantation Programme and the roads in forest area which were in a bad condition were repaired and maintained as fair weather roads. The Educational facilities at the primary, secondary and the higher levels of education have been considerably expanded during the last two years. A new Engineering College has also started from the year 1967-68. Under the programme of construction of roads and bridges, about 30.5 Kms of State Highway including roads in the mining area have been improved and 30 Kms. of the West Coast road were improved by blacktopping of the pavement. Construction of Uguem, Paroskodi and Cumbarjua bridges has been completed while that of Mandovi bridge is in progress.

Under the power development programme, one 110 KV, five 33 KV and fifty seven 11 KV sub-stations have been installed upto the end of 1966-67. Additional 32 sub-stations of 11 KV capacity were installed in 1967-68. About 98 Kms of L.T. lines have been erected till end of 1966-67 and additional 89 Kms in 1967-68. Till the end of 1966-67, 18 villages in Goa and 2 in Daman and Diu were served with electricity. 16 more villages in Goa and two more in Daman and Diu got electricity supply in 1967-68.

An area of 64,00 square metres has been acquired for the establishment of an Industrial Estate at Corlim. The Industrial Development Corporation has started construction of the sheds in the Industrial Estates, of which 5 'A' type and 15 'C' type sheds are ready for allotment.

The main activities under the health programme were in respect of the control of diseases and establishment of dispensaries and hospitals. Additional facilities, staff and buildings were provided to the Goa Medical College and the Pharmacy College.

c) **Annual Plan for 1968-69:**

Many of the schemes included in the Plan for 1968-69 are those initiated in 1966-67 or 1967-68. In view of the need for economy, not many new schemes have been included in this year's Plan. A total outlay of Rs. 7.74 crores has been approved for this Annual Plan.

Overall Strategy of Development

a) Agriculture and allied sectors:

The basic strategy to be adopted in the Fourth Five Year Plan in respect of agricultural and other allied sectors is to attain self sufficiency in the production of consumers goods and industrial raw materials. There is at present deficiency of about 20,000 tonnes of rice, which is the principal crop of the area and the staple food of the population. Boosting of rice production to achieve self sufficiency is an important objective of the Fourth Plan. The high Yielding Varieties and other similar programmes which constitute the intensive development approach, are proposed to be given the top most priority in this respect. Since research forms the very backbone of agricultural development, it is decided to equip the existing Research Station with essential personnel, buildings, etc. The Plan also puts due emphasis on development of crops like coconut, cashew-nut, mango, pine-apple etc. which have industrial bias.

The programme of minor irrigation is in its infant stage in this Territory. A Minor Irrigation Division has been started under the P.W.D. There is, however, a considerable potential for the development of minor irrigation in view of the large number of tanks, rivers, rivulets, etc. existing in the different parts of the state. The approach in the Fourth Five Year Plan to the programme of Minor Irrigation consists of creating additional irrigation potential by repairs and maintenance of the existing tanks, construction of bhandaras on small rivers, rivulets and streams, arranging lift irrigation from the perennial rivers and digging new wells. Repairs and maintenance of the existing canal system is also envisaged under this programme. All these works are expected to raise the irrigation potential from 1740 acres in 1967-68 to about 3650 acres by the end of the Fourth Five Year Plan.

Protection of good cultivated and cultivable land from the ill effects and salinity of the sea water, and developing the scope of navigability of rivers, is the objective of the Soil Conservation Programme in the Fourth Five Year Plan. This will involve repairs and maintenance of the river embankments and such other works as, desilting and dredging of rivers, checking of beach erosion, development of pasture lands, survey of river valley projects, etc.

Like agriculture, the programme of Animal Husbandry and Veterinary Services also aims at self-sufficiency in the production of milk, eggs, meat, etc. so as to bridge the gap between the demand and supply. Consolidation and expansion of schemes already initiated will be the general guiding principle in the sector. Stress is being laid on scientific breeding of cattle by introduction of exotic breeds and providing for easy access to the necessary inputs. The main plan is the improvement of Live Stock by cross breeding with exotic proven sires and intensification of the Key Village Programme which has the objective of multifaceted development of cattle. Dairy farming will also be given due attention in the course of the Fourth Plan.

With the restrictions on the import of milk and milk produce after liberation, the Territory has been feeling a shortage of these materials. There has also been a rapid increase in the demand for the same from the urban population. It is therefore imperative that the Fourth Five Year Plan should lay emphasis on development of dairy as an organised rural industry on cooperative basis and also undertake such other schemes of dairy development as will be of help in meeting the increased demand of milk and milk products.

The Forest programmes include introduction of extensive cashew plantations, raising plantation of economic species such as teak, eucalyptus, rubber, bamboo, etc. Survey and demarcation, organisation and publicity, working plan, forest protection, communication, building, etc.

The Cadastral Survey work of Goa Territory was commenced towards the end of the Third Five Year Plan. Since the Cadastral Survey maps are of fundamental importance in carrying out the day-to-day work of the Revenue Department and for effective implementation of the land reforms, it is decided to continue the work in the Fourth Five Year Period also.

Enactment of Goa, Daman and Diu Land Revenue Code Bill which has recently been passed by the Goa Legislative Assembly will be an important measure of land reform to be implemented in the Fourth Five Year Plan. This Code provides for a ryotwari tenure of land in which land is held on occupancy tenure. This tenure would be granted only in respect of Government lands which are disposed off by the Government after coming into force of the Code.

Unlike the other States of the country, there is no land revenue settlement in this Territory. The Land Revenue Code Bill referred to above provides for the survey of land and introduction to settlement of land revenue. These land reform measures are expected to help in development of the agricultural situation in the Territory .

The programme of Fishery Development did not receive due attention during the erstwhile Portuguese regime. During the Third Five Year Plan, the Department of Fisheries laid emphasis on the production of fish. It is proposed to adopt the same basis for formulating the programme under the Fourth Five Year Plan also. Since fish is a widely accepted item of food in the territory and as it is also rich in protein content, the programme is expected to help solve, to some extent, the problem of deficiency of food.

Organisation and development of the regulated markets of agricultural products is the programme envisaged in the Fourth Five Year Plan under the sector of marketing. The Maharashtra Agricultural Produce Market (Regulation) Act, 1963, has been extended to this territory and its provisions will be implemented during the Fourth Plan period.

b) Cooperation and Community Development:

The main objective of the programme of cooperative development in the Fourth Five Year Plan, is to consolidate the achievements of the earlier plan periods, so as to provide a strong footing for furthering the cause of the cooperative movement. It is proposed to develop the village units in such a way that they may stand on their own. In other words, economic viability of the village community is aimed at through the cooperative movement.

The Community Development Programme was introduced in this Territory in the year 1962-63. All the Talukas of the Territory have been covered by the programme and in fact have completed Stage I development phase. The Blocks will be continued in the Fourth Five Year Plan period also and will be provided funds according to the schematic pattern of stage II.

Soon after Liberation, it was decided to usher in the democratic decentralization of rural administration in the Territory, by the creation of Village Panchayats. The Village Panchayats Act was accordingly enacted in 1962. There are 265 of such Panchayats in the Territory. The programme under this sector in the Fourth Five Year Plan, consists of training of the elected members of Panchayats, training of the Panchayat Secretaries, financial assistance like loans, grants to the Village Panchayat Secretaries, etc.

c) Irrigation and Power:

Regarding power, it may be stated that Goa has to depend primarily on the bulk supplies from the neighbouring states of Maharashtra and Mysore. It is expected that by the end of 1971-72, the total availability of power from these two States would be of the order 52 MV. The total expected demand at the end of the year 1973-74 is estimated at 112 MW. It is expected that additional supplies from the neighbouring two States may be able to make up the deficit to some extent. Fourth Five Year proposals have been framed on the assumption that additional supply to the tune of 60 MW would be available from Mysore. In the Fourth Plan it is proposed to electrify the town of Valpoi and 151 villages which have so far not been served with electricity. It is also proposed to acquire the Municipal Undertaking at Vasco-da-Gama so as to bring the supply of electricity in the entire Territory under the Electricity Department.

No Major Irrigation project has so far been constructed in the Territory. The Central Water and Power Commission has made a number of investigations of which, one, relating to the Salauli Project in the

Sanguem Taluka, is in advance stage and is proposed to be taken up in the Fourth Plan. Similarly, the Tillari river Irrigation Project has also been investigated and is under scrutiny of the Central Water and Power Commission. This project is also proposed to be taken up in the Fourth Five Year Plan.

d) Industry and Mining:

The programme of Industrial Development in the Fourth Five Year Plan period aims at ensuring of a prosperous country side with thriving industries as its main objective. Attention is proposed to be given to industries having agricultural, horticultural or piscicultural bias, industries with export potential such as handicrafts and canned fruit products including cashew-nuts., etc. Ancillary and heavy industries such as mining, textiles, chemicals will also be given necessary encouragement in the Plan.

The important schemes taken up for mineral development in the Fourth Five Year Plan period cover supersession and check over the quality and quantity of mineral ore transported and exported, improvement of mining roads by asphaltting, etc. It is also proposed to recruit technical and administrative staff in the Mine's wing and to construct a building for the Directorate of Industries and Mining.

Opening up of avenues of employment and at the same time restricting concentration of wealth in fewer hands, is the aim with the programme of village and small industries has been conceived. It is proposed to assist the village and small scale industries in the matter of procurement of land, construction of factory-sheds and offices, procurement of raw material, provision of facilities of water, electricity, roads, etc. setting up of industrial estates is an important item of the programme.

e) Transport, Communications and Tourism:

The road development programme consists of improvement of the link roads from the different parts of the territory to the National Highway, black-topping of the important roads in the mining areas,, constructing inter-state roads, providing road links to the places of tourist attraction, improvement of district roads and communications means to the villages. A major part of the West Coast Road falling within the Territory has been black-topped, but the two major bridges over the river Zuari and at Colvale ae to be constructed. Advance action in the form and collecting bore data of the river bed, survey of project roads,, etc. has already been started.

The objective of the schemes under the programme of Ports and Harbours is to develop the inland waterways and minor ports. It is proposed to provide additional facilities like navigational lights, terminal sheds, etc. at the different minor Ports. The Survey of inland waterways is also proposed to be carried out in the Fourth Five Year Plan period.. New jetties and ramps are proposed to be constructed at various points.. Similarly, better facilities are proposed to be provided like toilets, rest

rooms, etc. New launches and ferries are proposed to be provided in place of the old ferries and launches which have become outmoded.

The Territory with its beautiful beaches, lakes, water-fall, springs, hills and hillocks and old historical monuments, has a special attraction to the tourist. The Territory, however, lacks in suitable and adequate accommodation arrangements and other tourist amenities. The Third Plan partly met with these requirements. The programme in the fourth Plan include plans for the development of hills and hillocks, dales and valleys, beaches, lakes, provision for low income group bungalows, rest houses, holiday camps, etc. in places of tourist and religious interest, construction of picnic sheds at vantage points, etc.

f) Social Services:

Educational schemes have made considerable progress during the last 6-7 years i.e. since the liberation of the Territory. It is expected that by the end of 1968-69 about 88% of the population will be served with the primary school section either in its own habitation or within the distance of half a mile. Similarly 72% of the total rural population is served with the facility for secondary education within a distance of three miles. A number of higher educational institutions have been started in the territory. The account in the Fourth Five Year Plan will be on consolidation with controlled expansion.

The approach to the Fourth Five Year Plan under the Health programme lays emphasis on the consolidation and expansion of the medical facilities created during the Third Plan period and the subsequent Annual Plans (from 1967-68 to 1968-69). This envisages provision of additional beds, construction of new buildings, provision of polyclinics, dental clinics, ophthalmic clinics, ambulance services, etc. Under the public health side, the programmes of Malaria and Small Pox eradication, T.B. Control, Filaria Control, etc. will be continued. A new Cholera Rabies Control unit is also proposed to be started. The programme of Family Planning and Maternity and child welfare has received considerable importance in the last three years. The programme will be further strengthened and expanded, keeping in line with the national policy in this respect.

The programme of Town and Country Planning was started rather late in the Third Plan. Interim zoning plans have been prepared in respect of 10 towns of the Territory upto the end of 1967-68. During the Fourth Five Year Plan, it is proposed to prepare Regional Plan for Goa, and Master Plans of areas designated on the Regional Plan. Surveys are proposed to be carried out through the basic Survey Unit and also by the Survey of India.

The main approach to the programme of Welfare of Backward Classes in the Fourth Five Year Plan will be to improve the economic condition of the backward class population by providing them financial assistance for taking up suitable cottage industries, professions and avocations, and for improving the existing method of their work. In order to encourage education amongst the children of the backward clas-

ses, schemes like free-ships, construction and maintenance of backward class hostels, etc. are proposed to be undertaken. Besides, it is also proposed to provide post-matric scholarships to the students of the backward class communities.

The programme of Social Welfare consists of Family and Child Welfare Project, eradication of beggary, rehabilitation of the handicapped, grant-in-aid to the voluntary organisations, etc.

Under the sector of public cooperation, it is proposed to provide grants to the voluntary organisations like Bharat Sevak Samaj, Planning forums and other such organisations.

The programme under the head Labour and Labour Welfare consists of schemes for the welfare of the labour-class and for the safeguard of their rights, etc. A Labour Welfare Centre is proposed to be set up. Similarly, Advisory Committees for Labour, Employment, etc. are also proposed to be appointed. An Employment and Evaluation Committee is proposed to be set up for watching the implementations of the code of discipline in industries, industrial truce, resolutions, etc.

g) Miscellaneous:

The General Statistics Department which has been assigned the work of publishing official statistics, maintains statistics relating to both the plan as well as non-plan sectors. All the schemes of collection of statistics useful for planning and administration started during the last plan period, are proposed to be continued in the Fourth Five Year Plan period also.

A Plan Evaluation Unit was started only in the year 1967-68 under the Planning and Development Department. It is proposed to carry out scientific and objective evaluation of the Plan schemes, which will be of help in the proper formulation and effective implementation of the development programmes. The criteria for the selection of such projects for evaluation have been fixed up. The Unit is being properly organised and strengthened to carry out the work efficiently and in time.

The approach to the programme of Information and Publicity in the Fourth Five Year Plan is to disseminate information regarding plan activity and to publicise the plan programmes, so as to make the general population aware of the same. The programme drawn for the Fourth Five Year Plan consists of production of publicity material, field publicity, tours of journalists, community listening sets, etc.

The aspect of improving the rural communication facilities was more or less neglected under the erstwhile regime. In the Third Plan the Local Bodies undertook the programme of developing the rural communication links. It is proposed to carry on the same programme in the Fourth Five Year Plan also. Financial assistance by way of loans is proposed to be granted to the Municipalities for undertaking remunerative schemes. In addition, grants will also be given for execution of the slum clearance programme by the municipalities.

Resources Allocation

The Planning Commission had earlier agreed to a ceiling of Rs. 40 crores for the IV Plan 1966-71. The Commission have indicated that the outlay for the IV Plan 1969-74 should also approximately be the same. We are proposing an outlay of Rs. 60.89 crores.

The increase over the ceiling of Rs. 40 crores is due to the inclusion of certain essential projects/schemes which should be implemented during the IV Plan. These Schemes/projects included now are due to the changed conditions prevailing at present. The schemes are as below:

Schemes/project	Amount proposed in crores
1. Payment of compensation for abolition of Comunidades etc.	Rs. 1.00
2. Cadastral Survey (Land-Reforms) ...	Rs. 0.70
3. Dredgers for Inland-Waterways	Rs. 1.50
4. Irrigation Projects	Rs. 9.00
5. Subsidy on electricity to Industries ...	Rs. 7.50
Total	Rs. 18.70

It would be seen that an amount of Rs. 18.70 Crores is provided for these schemes. If this amount is deducted from the total proposed outlay, the balance comes to 42.19 crores which is only a little higher than the ceiling indicated by the Planning Commission.

2. The provision for Land Reforms is completely a new item. The objective is to acquire the proprietary rights of private bodies like the Comunidades, etc. by paying compensation and then to confer occupancy tenancy rights on the tillers of the soil. Unless this is done it would be impossible to accelerate the development of agriculture and increase production to the optimum level. Besides other developmental works like roads, irrigation channels and tanks can also be accelerated if rights on these lands vest in the Government.

3. The provision for the completion of the cadastral survey started during the course of Third Plan has also been increased from Rs. 30 lakhs proposed in previous IV Plan to Rs. 100 lakhs since it has been found that it would not be possible to complete the survey expeditiously unless greater outlay is provided. Completion of survey and preparation of record of rights etc. can not be allowed to be delayed.

It is possible to reduce the outlay on this account but then the work would be spread over the Fifth Plan. Such a delay is not desirable. The records of rights should be prepared at the earliest. The basic statistics relating to land, its utilization of produce should be prepared without delay. The early completion of settlement of survey may also bring in entire Land Revenue.

The rivers in Goa are getting silted fast. The Mandovi, the Zuari Rivers and the Cumbarjua Canal are used for the transport of iron ore from the mines to the port. The export of the iron ore depends to a large extent on the navigability of these rivers. It is essential, therefore, that a regular and constant dredging programme is undertaken to keep these rivers navigable. A provision of Rs. 150 lakhs has been made as a new item in the Plan therefor.

In the earlier IV Plan, a small provision was made for the Irrigation Projects of Salauli and Tillari. At that time the projects were under survey. Survey of the Salauli Project has already been completed and that of Tillari Project will be completed soon. An outlay of Rs. 10 crores has, therefore, been provided for the construction of these two projects as against an outlay of Rs. 2 crores in the earlier plan. The early execution of these two Irrigation Projects will increase the agricultural production in this territory, which is absolutely essential if self-sufficiency in food-grains for this territory is to be achieved.

This territory depends on the supply of power from the neighbouring States of Maharashtra and Mysore. The cost of electricity is very high. No major Industry can be set up in Goa because of the high rate of electricity as compared to its two neighbouring States. It is, therefore, proposed to introduce a scheme of subsidy on electricity for Industries. It is estimated that a sum of Rs. 750 lakhs will be required for giving subsidy in the Fourth Plan Period.

It would thus be seen that the above schemes are absolutely essential. If the Schemes are included in the outlay of Rs. 40 crores only, then the provision for other sectors would be drastically cut and such other usual sectors may suffer. It would not be possible to even maintain the pace of development in the other sectors with an outlay of Rs. 20 crores only.

The above scheme, therefore, may be agreed to over and above, the ceiling of 40 crores indicated by the Planning Commission.

Resume

It will be noted from the foregoing paragraphs that considerable development effort has taken place during the last 6 to 7 years. Government have adopted during the Fourth Plan a strategy of consolidating the work already done and expanding the programme rather cautiously. In other words, the emphasis is on stabilising the development effort so as to obtain results from the schemes already launched, rather than embarking upon new programmes.

Agricultural Programme

1 — Agricultural Production

AGRICULTURAL ACHIEVEMENTS UNDER THE THIRD YEAR PLAN

Condition at the beginning of the Third Plan: The importance that agriculture received during the erstwhile regime, at least during the last decade or two of its rule was practically insignificant. At the most, as it was the primary occupation of nearly three fifth of the working population, its "contribution to the regional income was only Rs. 4/- crores or about one sixth of the total".

Although the soil and other climatic conditions, of the Territory are well suited for development of agricultural crops, many of them dollar earners unit production figures were very low.

The Territory having a total surface of nearly 361.113 hectares, devoted 35.5% of it for agricultural crops. Rice was taken on nearly 65% of the cultivated area, which was responsible for a total production of about 50,000 tons of rice which was sufficient to meet 2/3rd of the requirements of this Territory. Thus, the Territory always had a deficit in rice, its staple food, of about 30,000 tons against the population registered in 1960.

Even though Horticulture crops like coconut, arecanut, cashew, mango, some fruits and vegetables received attention, no systematic development of these crops was taken up, for any substantial increase in production.

POSITION OF AGRICULTURE AFTER LIBERATION

In conformity with the development plans of the rest of India, scheme for systematic development of agriculture were drawn up for this Territory also. Planned attempts for the development of agriculture was initiated only from 1963-64.

Achievements at the end of the Third Plan: This Union Territory had the last two years of the National Third Plan. The main objective during this period was to create a production potential of about 10.000 tons of paddy through the implementation of some basic plan schemes. The schemes embodied in the Plan consisted of short term and long term measures. In short term measures, schemes such as extensive use

of fertilizers, repairs to field embankment, and supply of pumping sets on loans cum subsidy basis for increasing irrigation facilities were included to augment, in a short while, the food output. The long term measures consisted in supply of improved seed by establishing seed farms, plant protection, waste land cultivation, introduction of green manuring, compost utilisation, improved agricultural practices, development of fruits and vegetables, etc., establishment of Research Station an Agricultural Chemistry Laboratory, giving practical training to farmers' children through teaching an Agricultural School, taking up of minor and medium irrigation projects and finally by affording liberal subsidies and loans to the farmers.

The main achievements during the Third Year Plan Period were the following:— Repairs and construction of embankments protecting khazan paddy lands have already directly contributed to increased yields in paddy. Nearly 134 kms. of bunds were attended to protecting an area of 6,600 ha. of fertile land. Works in minor irrigation consisted of repairs to Candepar and Paroda Canals, construction of bhandaras, sluice gates, desilting of tanks, construction of new wells and repair of old ones and distribution of pumping sets. About 1,600 ha. of additional land has received the benefits of irrigation. Side by side, preliminary studies were conducted to gauge the medium irrigation potential of the Territory and some of these studies have been completed.

A start was made during the Plan Period to reclaim the vast stretches of wasteland in the Territory, and about 600 ha. have been brought under plough.

Top priority was given to schemes of distribution of Improved seed, Plant Protection and fertilizers in the Grow More Food Campaign. An area of 1600 ha. of paddy was covered with improved seed and plant protection measures were extended to 13,000 hectares of various crops. 20 ha. of land were put under groundnut and 20 ha. under Hybrid Maize. A beginning was also made in Sugarcane Development.

During 1963-64, 1964-65 and 1965-66, 3,830 tons, 2,338 tons and 3,601 tons of fertilizer were distributed.

Increasing soil fertility through addition of organic matter was greatly encouraged, 12,053 compost pits were dug and filled and 3,600 ha. of land received green manuring facilities. During the Plan a beginning was made to promote the development of vegetables.

Under Horticultural Programme, a beginning has been made to place our cash crops on firm footing. Additional area have been brought under cultivation of banana: 14 ha; Cashew: 8,200 ha; coconut: 950 ha; pineapple: 45 ha; and other fruits: 75 ha.

In the Sector of mechanised agriculture during the Plan Period, 36 new tractors were purchased and service centres established. Nearly 6800 ha. of land received mechanical cultivation.

Research and Training side of Agricultural Development was taken up during the Plan Period. A Research Station has been established and applied work in some of the field problems is being taken up in varietal trial experiments in paddy, maize, ragi, etc., physiologic work in paddy

and other applied trials in vegetables. An Agricultural School has been started to impart Agricultural-Training to farmers' sons and Gramsevikas. Two seed farms have also been started.

As special features of the programme, with the object of giving incentive for greater effort in increasing production, crop competitions were organised. Agricultural shows were also organized. Assessment of productivity of riceland was conducted on all types of land through Crop Estimation Surveys. Loans were also given to the agriculturists for the development of Agriculture.

Thus, during the Third Plan, the achievements in the Agricultural Sector were aimed to bring about, by and large, better confidence in the farming class, which is modestly felt, was established.

ACHIEVEMENTS DURING 1966-67, 1967-68 AND ANTICIPATED 1968-69

To achieve the goal of self-sufficiency in case of all types of crops grown in Goa, Department of Agriculture launched many agricultural development schemes, for increasing the agricultural production by way of producing more yields per acres basis and by bringing new area under plough.

In order to enhance per acre yield of different crops, the High Yielding Variety seeds and improved seeds of food crops, horticultural crops and vegetable crops were supplied to the farmers by producing and multiplying the same at Government Farms. As against the target of 21900 acres and 26900 acres, the area brought under High Yielding Varieties and improved seeds, during 1966-67 and 1967-68 are 13677.5 acres and 25350 acres respectively.

Under plant protection measures an area of 25.611 ha. and 20.168 ha. were covered against the target of 38,800 ha. and 22.280 ha. during the year 1966-67 and 1967-68 respectively.

During the year 1966-67, 10,76,400, fruit seedlings and grafts of fruit crops like coconut, cashewnut, mango, etc., were supplied. While during the year 1967-68, 1,24,250 fruits stocks were supplied to the farmers against the target of 1,36,250 fruit seedlings and grafts of different horticultural crops.

Different types of fertilizers were supplied to agriculturists through cooperative societies or licence dealers. During the year 1966-67 and 1967-68, 9763 M. tons and 5172 M. tons of various kinds of fertilizers were distributed respectively.

Under vegetable Development Scheme an area of 100 ha. and 200 ha. were covered under vegetables, respectively during 1966-67 and 1967-68 with the total production of 1000 tons and 2000 tons.

About 1,123 pits and 1600 pits of compost were opened with the production of 2807 tons and 4000 tons of compost during 1966-67 and 1967-68 respectively. 12 tons of glyricidia seeds were also supplied to farmers.

Tractors with modern appliances are made available to the agriculturists for various agricultural operations. The hours of work carried out by tractors during 1966-67 is 13,470 hrs. and 17,530 hrs. during 1967-68. About 6000 acres of wasteland were brought under plough and distributed to the landless agriculturists.

Various agronomic and varietal trials and experiments, were carried out at Agro-Horticultural Research Station on new strains of various crops. The Chemistry Section, analysed 2000 samples of soil from cultivators and Government Farms. 20 gramsevaks and 21 gramsevikas have completed their training in modern agricultural techniques at Extension Training Centre, Pilerne. During Khariff and Rabi Season of 1967-68 two crop estimations surveys on paddy crop were conducted.

During the year 1968-69, under plant protection measures an area of 19.740 ha. will be covered and 500 tons of seeds will be treated. 14.750 M. tons of different types of fertilizers have been fixed as target to be supplied to the agriculturists. An area of 33.050 acres have been earmarked to cover under High Yielding Varieties and improved seeds of paddy, nachinim, sugarcane, etc., by supplying 434 M. tons of seeds and 50 lakhs of sugarcane sets of Coimbatore varieties. Under horticultural development 3,45,000 fruit seedlings and grafts of mango, pineapple, cashew, coconut, etc., will be supplied. 18000 hrs. of work will be carried out by tractors and 2500 acres of wasteland will be brought under plough. Under local manurial resources, 150 composts pits, will be opened in each Grampanchayat for demonstration purpose and 25000 tons of compost will be produced. In addition to this 10 tons of seeds and 14000 cuttings of green manuring plants will be made available to the agriculturists. 175 demonstration plots will be arranged where trials on different combination of NPK and High Yielding Varieties of Seeds will be carried out. In all 250 pump sets will be distributed to agriculturists on subsidy cum loan basis. 300 ha. of area will be brought under vegetable.

INTRODUCTION TO FOURTH FIVE YEAR PLAN

Agricultural development is an essential condition of economic growth in the Union Territory of Goa, Daman and Diu, as this development is fundamental to the building up of the much needed economic and social overheads in the rural sector.

It may be mentioned that, agriculture, during the erstwhile regime, made little progress under the conditions prevailing then and although attention was directed to the food problem even in those days, a break through in agricultural development was initiated systematically only after liberation which represents the beginning of a new era in the history of the problem. Thus, the years preceding liberation of this Territory are seen to be a period of virtually stagnating agriculture, which either failed to keep pace with the rising population or maintained it on a subsistence or/and above subsistence level with the help of considerable imports of food grains.

Objectives: The main objectives under the 4th Five Year Plan in the Agricultural Sector are the stepping up of food production within the Territory to attain self sufficiency coupled with the providing of

agricultural raw materials required for industry and export and secondly, to place agriculture on a sound footing which will provide, in the future, conditions necessary for a sustained increase in agricultural production.

Steps towards self-sufficiency: The inaccuracy and insufficiency of production and consumption statistics, coupled with unreliable areawise data of various crops grown, give rise to much speculation.

Goa's deficit in rice, its staple food, is put at about 20,000 tons against a population of nearly 7 lakhs people. The deficit, spilling over from the colonial regime to the extent of 30,000 tons, of which 10,000 tons has been lessened since liberation still persists inspite of the production potential that has been created at the end of the Third Plan. During the past five years of planned agriculture, many efforts were nullified due to bad monsoons inspite of significant stepping up of developmental efforts in agriculture. Thus, the target of additional rice production to be attained by the end of the Fourth Plan will be to the extent of a net figure of 35,000 tons, allowing for margins in spoilage, wastage and seed. This figure may appear a little low against the possible increase in population by then both local and the labour force from outside the Territory for mining and other industrial works.

The developmental activities in this Territory in all spheres are to make a definite headway during the Fourth Plan. Assuming that all factors such as the rise in per capita income, the growing population and its rising adult value, industrialisation, urbanisation will tend to increase the demand for food, in the initial stages of development therefore there is likely to be a demand for a greater quantity of food; but with the gradual increase in per capita income the emphasis shifts to quality, and the demand for protective foods such as fruits, vegetables, fish, eggs, meat, etc. increases. Thus, in these circumstances it is felt that vis-a-vis the need for more cereals, the demand for the same will not increase indefinitely.

Boosting up of rice production to achieve the goal of auto-sufficiency will be done through the increase in yield per unit area through intensive agricultural techniques. The high yielding variety and other similar programmes which constitute the "intensive development approach to agriculture" will be given top priority. Thus, high yielding and other improved varieties of paddy will be saturated over an area of 29,000 hectares, which under the intensive package programme will bring in an additional production of 25,000 tons of rice. Paddy areas which are not amenable to the improved seed programme due to their special agronomic characteristics, will receive better and rational fertilizer schedules and soil conditioners coupled with epidemic control of pests and diseases, and the cultivation followed up with improved methods. An additional production of 10,000 tons of rice is expected from this measure.

Thus, it is felt that through a better maintenance of field embankments that protect the "Khazan" lands (low lying, "saline lands") in this territory, through stepping up of our irrigation facility, say just by a further 2000 hectares in the winter paddy areas, through the taking up of high yielding and improved seed programmes in intensive areas, through the saving of all food produced both in field and storage, a target of 35,000 tons of rice would be achieved. The improved seed and

high yielding programme to be taken in intensive package areas alone is expected to contribute a production of approximately 25.000 tons of rice. The remaining 10.000 tons will be achieved through a break through in local agricultural practices substituting them by improved methods with required inputs in the cultivation of paddy.

Nachinim is the next cereal for which there is a great demand. A target of 800 hectares has been fixed for coverage with improved varieties in the final year of the Plan. This is expected, together with the cultural improvement, on local varieties, to contribute towards an additional yield of 1500 tons of nachinim approximately.

Parallel with our efforts to increase cereal output to cover up existing deficits, a break through to improve the nutritional standards of the population are envisaged during the Fourth Plan by increasing the production of fruits and vegetables. Even though the breaking of food habits may appear difficult in low income groups, the possibility of doing it in the middle and higher income groups, are possible. The introduction of technological improvements in agriculture to increase per unit area yields will not only raise the quantity of food grains produced but will release land for protective foods like fruits, vegetables, livestock fodder, and cash crops like sugarcane. The extent of such increase however, will depend upon the availability of water for irrigation and the introduction of improved agricultural techniques in such areas.

There is a considerable scope for increase in the production of fruits and vegetables in this Territory. A substantial increase in the area of sweet potato and tapioca is planned for the possible inclusion of these as substitutes in the diets of the people. By the end of the Plan, an area of 2.500 hectares will be under vegetables with an additional production of approximately 25.000 tons over 1968-69 figures. Development of vegetables will be intensively taken around the important townships of this Territory.

This will sizeably reduce, if not altogether stop, the imports of vegetables from outside the Territory.

Regarding fruit development, by and large, a potential for production of fruit to the extent of about 8.000 tons will be created with crops that come to bearing after 5 years cultivation. Fruits like papaya, banana, anona which take relatively shorter time to come to bearing and which can be raised in backyards will be encouraged. A target of 185 hectares has been set for the Plan. With adequate facilities for marketing of these fruits and vegetables in the local markets, the farmers will be ever willing to take up to them.

Commercial Crops: Yet another activity to be taken during the Fourth Plan, on priority basis, is the intensive and extensive cultivation of the commercial and cash crops of this Territory like cashew, coconut, arecanut, mango, banana, onions and chillies. Wherever possible, these crops will be introduced in the multi-crop programme of the small farmer to enable him to increase his income. The cultivation of banana, pineapple and mango are to be taken on a commercial basis for export purposes over an area of 1.700 hectares by the end of the Plan.

The cultivation of cashew is to be extended to a new area of 16,500 hectares creating a production potential of 3,300 tons by the end of the Plan. Intensive cultivation of the present 18,000 hectares under coconut is envisaged through rejuvenation, fertilization, irrigation, control of pests and diseases, etc.

Scarcity and cost of agricultural labour in this Territory increased the overall cost of production of agricultural commodities in this Territory, thereby reducing the net income of the farmers who have to depend on hired labour. To ameliorate this condition, agricultural machinery and implements were introduced in agriculture. In the implementation of the scheme on machines and implements in the engineering sector, it is proposed to employ tractors and/or with other accessories to cover an area of 35,000 hectares by the end of the Plan. The importance of improved agricultural implements has still to be realised by the farmers. It is proposed to introduce improved implements, better and varied equipment so as to achieve a breakthrough in the traditional practices. The main aspect will be to develop these implements and popularise them through demonstrations, trials, publicity, etc.

The second objective in the Fourth Plan is to establish agriculture on a sound footing. This involves an organisational set up through three facets, viz, Research, Training and Extension, which ultimately is capable of establishing confidence among the farming class of the society.

Research, has to form the very backbone of our development and its findings have to be made use of increasingly for developing scientific agriculture, with this end in view the Research Station initiated two years ago is being geared up to accommodate various farming problems of the Territory, where possibilities exist for raising the all round productivity of crop plants very substantially. It is being equipped with essential personnel, buildings, etc., and its contribution towards the solution of many field problems is expected to be substantial and of direct benefit to the farmers.

The fruits of Research are to be extended to the farmers by personnel who know their job. For meeting the expanding requirements of trained gramsevakas, gramsevikas, associated women workers, the programmes of training are being given due importance. The Extension Training Centre established on the grounds of the Research Station is expected to do the required job. Side by side with the pre-service/in service training of village level workers, a programme towards farmers education will be undertaken through demonstrations, information and publicity through all propaganda media including audio-visual aids. Their spirit of competitions will be encouraged through agricultural exhibitions and shows. This will give a new confidence to the Agricultural Sector to make progress, where the farmers will feel that Agriculture "occupies the foremost place in our economy and development plans".

Credit: Provision has been made during the Plan Period to sanction both medium and long term loans for purposes of land improvement and planting, both through the Department and cooperatives.

Agro-Industries: Agricultural development will have to be linked up with industrial production to ensure the necessary backing to our agricultural development. Thus, during the Fourth Plan an emphasis

will be laid on developing crops, like coconut, cashewnut, mango, pineapple, etc., which have an industry bias.

Although the various measures to step up our agricultural development are well set, some organisation shortfalls are there and will have to be overcome. This aspect will receive due attention in the Fourth Plan with a view to coordinate and channelise activities to reach the farmers. The Zonal Agricultural Staff, Block Development Staff, Cooperatives and Village Panchayats form a big extension team whose assistance is to be assured to the farmers. It is only through their assistance that the rural population will be able to participate in development and share its benefits.

There has been a significant stepping up of development efforts in agriculture since the inception of planned agriculture in a regular way in 1963-64. By the end of the Third Plan i.e. 1965-66 end, an amount of Rs. 59.07 lakhs had been spent. The expenditure incurred during the year 1966-67 and 1967-68 and the anticipated expenditure for the year 1968-69 is as under.

Outlays and Expenditure 1966 to 1969 (Rs. Lakhs)

Sr. No.	Name of the scheme	1966-67		1967-68		1968-69	
		Approved Outlay	Actual Expenditure	Approved Outlay	Actual Expenditure	Approved Outlay	Anticipated Expenditure
1	2	3	4	5	6	7	8
1.	Seed Multiplication	5.39	2.01	5.88	15.00	6.43	5.00
2.	Plant Protection	3.60	9.06	3.00	8.00	5.17	5.03
3.	Fertilizer	5.98	1.48	1.75	1.50	0.77	0.90
4.	Vegetable Development	0.85	0.18	0.50	4.50	0.80	0.80
5.	Agri-Horticultural Research Station ...	5.53	2.03	6.73	6.24	5.04	5.04
6.	Extension Training Centre	6.28	1.09	4.10	2.18	2.43	2.43
7.	Tractor and Bulldozer Organisation & Utilization of Cultivation Wasteland ...	12.00	9.82	12.79	2.82	10.40	10.40
8.	Local Manurial Resources	5.63	0.87	1.00	.40	0.60	0.60
9.	Horticultural Development	7.30	3.12	4.00	4.72	3.53	3.53
10.	Agricultural Statistics	0.58	—	1.50	0.05	1.72	1.32
11.	Development of Pepper & Betelvine ...	0.05	—	0.05	—	0.05	0.05
12.	Improvement of Agricultural Implements	1.50	—	2.25	—	2.25	2.25
13.	Simple Varietal local Manurial Trials ...	1.02	0.02	0.20	0.20	0.33	0.00
14.	Information & Publicity	0.30	0.01	0.20	.09	0.32	0.28
15.	Exhibitions and Shows	0.45	—	0.05	.03	0.10	0.10
16.	Green Manuring	—	0.01	—	—	—	0.00
17.	Cadastral Survey	8.10	3.41	6.00	—	10.00	0.00
	Total	64.56	32.41	50.00	45.19	52.50	37.76

ABSTRACT OF ALLOCATIONS-SCHEMewise

(Figures in Rupees)

Sr. No.	Name of the Scheme	Revenue	Capital	Total Outlay
1.	Improved Seed Programme	19.00	9.30	28.30
2.	Manures and Fertilizers	26.65	25.25	51.90
3.	Plant Protection	43.31	—	43.31
4.	Agricultural Machinery and Implements ...	15.38	19.00	34.38
5.	Commercial crops:			
	a) Horticultural Development	53.33 595	11 88.750	65.77
6.	Agricultural Education	—	—	—
7.	Agricultural Research:			
	a) Agri. Horti-Research and Chemistry Section	8.60	8.74	17.34
8.	Extension Training and Farmer's Edu- cation:			
	a) Extension Training Centre	5.80	1.20	7.00
9.	Agricultural Statistics	2.50	—	2.50
10.	Intensive Cultivation: Programme (I. A. D. P., I. A. A. P., H. V. P.)	—	—	—
11.	Land Development:			
	a) Utilization of Cultivable Wasteland ...	3.00	5.00	8.00
12.	Consolidation of Holdings	—	—	—
13.	Others:			
	a) Agricultural Information and Publi- city	3.00	—	3.00
	b) Agricultural Exhibition and Shows ...	6.00	—	6.00
	c) Subsidy for pumps	7.50	—	7.50
	d) Construction of Departmental Build- ings	5.00	—	5.00
	e) Cadastral Survey	—	1.00.00	100.00
	f) Abolition of varoius tenures in Goa under Land Reforms	1.00.00	—	100.00
	Total	2.94.62.595	1.85.37.950	4.80

The total allocation proposed for the entire Fourth Five Year Plan is Rs. 4.80 crores (Rupees four crores eighty lakhs only).

Details of the Plan Schemes

NAME OF THE SCHEME: **PLANT PROTECTION** —

Aims and objects of Scheme: The infra structure to be laid during the Fourth Plan Period is the one which will ensure self sufficiency in food and aim towards the bettering of the nutritional standards of our people. This aim therefore, calls for all out intensive efforts to increase the per unit yields of our cultivated crops utilising the appropriate inputs, which implies saving and conserving all food produced from the ravages of the many pests and diseases through plant protection measures.

Thus, to meet the challenge of the many organisms that damage different crops in the field and commodities in the stores, a multi-pronged attack on different fronts is necessary. The use of high yielding varieties and improved seed in boosting up of agricultural production, and the growing of commercial crops are to become code words in the well being of our farmers during the Fourth Plan. Plant protection will have to become an agronomic practice like tillage, application of fertilizers etc., without which all hopes for higher increase in yield or unit areas will be a dead letter. This is what is aimed in the scheme: to protect and save food from external organisms; the objects being to make the farmers confident of a sure and definite tool in their hands towards higher productions.

Fourth Five Year Plan Proposals: As has been stated earlier, plant protection as a routine measure in the calendar of operations of the farmer will be established on a firm footing during the Fourth Five Year Plan. It is felt that this will be achieved as many more educated farmers are getting back to the land to make farming as their main business/occupation. Coupled with good prices prevailing for most of the commodities produced on farms, the cultivators would show eagerness to take to plant protection measures.

The following is proposed to be taken up during the Fourth Plan:

CHEMICAL CONTROL OF PESTS, DISEASES AND WEEDS

During the Fourth Plan, chemical plant protection measures will be extended to the below mentioned crops against for various areas shown. The physical targets have been indicated for various crops, even though pest and disease appearances vary from year to year according to environment changes when wide fluctuations are observed. Against these targets, the requirement of pesticides and equipment have been estimated, as also the requirement of man power. Provisions have also been foreseen for such areas of intensive farming as in the case of high yielding variety programmes and commercial crops, where plant protection measures of prophylactic natures have been included.

Targets to be achieved during Fourth Plan under plant protection measures

Figures in hectares

Crops	Target at end of Plan cultivated	Targets during Fourth Plan					Total at end of Plan Net
		1st year	2nd year	3rd year	4th year	5th year	
Paddy (HVP)	16.000	12.000	12.000	14.000	15.000	16.000	16.000
Paddy (Improved)	12.800	4.000	6.000	8.000	10.000	12.000	12.800
Paddy (local)	17.200	4.000	5.000	6.000	7.000	8.000	8.000
Maize (HVP)	200	40	80	120	160	200	200
Groundnut (Imp.)	400	80	160	240	320	400	400
Jawar (HVP)	80	15	30	45	60	80	80
Coconut	18.000	2.000	4.000	6.000	8.000	10.000	10.000
Areca nut	1.300	1.000	1.000	1.000	1.000	1.000	1.000
Fruits	8.000	1.000	2.500	4.000	6.000	8.000	8.000
Vegetables	2.000	400	800	1.200	1.600	2.000	2.000
Cashew	32.000	1.000	2.000	4.000	6.000	10.000	10.000
Pulses and millets	4.000	250	500	1.000	1.500	2.000	2.000
Sugarcane	4.000	500	1.500	2.000	3.000	4.000	4.000
Total	1.15.980	26.285	35.570	47.605	59.640	74.480	74.480

Paddy is the important staple cereal. By the end of the Plan Period the area under high yielding varieties and improved strains of paddy would have been saturated. An ambitious target of 36000 hectares of paddy alone will receive plant protection measures thus guaranteeing together with other inputs, self-sufficiency in rice of which presently there is a deficit in the Territory.

There is not much scope for taking upto maize, jowar, and bajra in Goa, as all the available area both rainfed and irrigated, by and large, goes under paddy. Bajra and maize are however taken in Diu and Daman respectively. Trials with improved strains of groundnut have shown its possibilities of extension, specially in the sandy loams, laterites where there is less water for irrigation against paddy requirements. Being a cash crop, it is expected that farmers would take up to it.

Pest and disease control in coconut not made much headway as yet, even though it happens to be a commercial crop. The reason being that so far, the crop was not intensively managed. Farmers are now taking up to regular rejuvenation of their plantations simultaneously with under planting. In these circumstances, plant protection measures would become popular and gain in momentum by the end of the Plan.

Areca nut plantations are already being covered by plant protection measures (Mahali disease). Farmers have taken it upon themselves under our technical guidance, to follow up regular spray schedules to save their important cash crop.

During the Fourth Plan, development of fruits and vegetables is to receive top priority both for domestic consumption and for export purposes. A modest target of 10,000 hectares has been fixed to be covered by pest control measures by the Plan end.

Cashew development is to receive utmost attention during the Plan. So far, hardly any plant protection measures have been taken on this crop. During the Plan Period a vast area is to be planted by cashew both in public and private sectors. A target of 10,000 hectares has been fixed for net coverage by the end Plan Period.

During the Fourth Plan, the growing of pulses, Millets (ragi) and Sugarcane will be extended, the latter, depending the materialisation of some irrigation schemes. A target of 6,000 hectares has been fixed for coverage with plant protection measures.

Thus, by the end of the Fourth Plan Period, an area of 74,480 hectares net will be covered by plant protection measures. It is indeed a very ambitious programme when compared against the achievements of the Third Plan or during 1966-69.

Plant protection measures will be taken under the following categories:

a) *Seed treatment*: Seed of paddy, maize, groundnut, bajra and sugarcane will be treated before sowing with organo-mercurials or other appropriate seed dresser. Treatment of seeds with suitable chemicals before sowing helps to give a good stand of the crop and checks certain diseases from further multiplication.

Targets for seed treatment during Fourth Plan

Figures in tons

Crop	Seed to be treated during					Total at end of Plan (Net)
	1st year	2nd year	3rd year	4th year	5th year	
Paddy	450	500	550	650	800	800
Groundnut	8	16	24	32	40	40
Sugarcane	2.500	7.500	10.000	15.000	20.000	20.000
Total	2.958	8.016	10.574	15.682	20.840	20.840

b) Anti-rat measures: During 1967-68, a good response from the farmers was observed in the implementation of the Centrally Sponsored scheme on rat control. This scheme is being implemented during 1968-69 and it is proposed that same may continue during the Fourth Plan Period. On this assumption, a target of 50.000 hectares gross is expected to be covered by the end of the Plan, phased at 10.000 hectares per year, using chemical rodenticides.

c) General pests and diseases: These include all pests and diseases appearing on our cultivated crops and which are responsible for a sizeable lowering in yields. Control measures against these pests are to be greatly intensified during the Plan Period. A target of 74.500 hectares has been marked for coverage with plant protection measures during the final year of the Plan.

d) Intensive Plant protection measures: Under this, the high yielding and improved seeds programme will be thoroughly covered by prophylactic plant protection measures. Vegetables have also been included in this category. A target of 33.500 hectares has been marked for coverage under this category during the final year of the Plan.

e) Weed Control: Weeding forms an important item in the Calendar of operations of the farmers. In paddy, weeds are limiting factors to higher yields. With intensification of cultivation and rising labour wages chemical control of weeds will have to play an increasingly significant role. Control of weeds using weedicides is new to this Territory and thus during the Fourth Plan, this activity will limit itself to trying out some of the promising weedicides in paddy, sugarcane, pineapple, coconut and arecanut. In these circumstances, no target is indicated for coverage during the Plan.

CONTROL OF ANIMAL-NON-INSECT PESTS

Animals like birds, flying foxes, monkeys, bats, pigs, jackals, etc., cause considerable harm to growing crops, specially in the hill/forest boundary Talukas. The use of animal and bird scarers will be continued. As the effective control lies in regular shooting beats, Government will be moved to liberalise the granting of licences for fire arms to cultivators.

RURAL STORAGE

It is estimated that nearly 5% of the produce in storage is lost through insects, fungi, rats, etc. It is felt that even technical guidance of educating the farmers in the magnitude of this problem will go a long way towards minimising of the losses. Parallel with this, hygiene and maintenance of godowns in the farmers own homes will receive attention during the Fourth Plan, where it may not be possible to fumigate them. Spraying of storage rooms with Malathion, Nuvan, etc., already initiated will continue during the Fourth Plan. It is proposed to subsidize the setting of some bins based on ISI standards so as to demonstrate to the farmers improvements in the conventional storage containers. The subsidy to be offered may be 50% towards cost.

PROCUREMENT OF PESTICIDES

Pesticides will be procured by Government and distributed to the farmers at 50% subsidy (This pattern of assistance has the approval of Government of India for the Fourth Plan). The procurement will be made in advance of the season and the material distributed at gramsevak circles within an easy reach of the farmers. Budget allocation considered is under subsidy.

APPLICATION EQUIPMENT

Field appliances in sufficient quantity are to be provided to the farmers, specially in the intensive treatment areas of high yielding and improved strains of paddy and vegetables. Government of India have approved a subsidy of 25% towards the cost of appliances to the farmers during the Fourth Plan. Besides this, Government will have to keep in stock the various appliances in a fair number to be used for demonstration work, as also to lend them to the farmers who cannot afford to purchase their own straight away. Budget allocation considered for equipment is under subsidy and acquisition by Government. During the Plan the following number of appliances are proposed to be purchased:

Equipment	1st year	2nd year	3rd year	4th year	5th year	Total
Low volume	50	50	75	100	100	375
High volume	—	5	5	5	—	15
Hand sprayers	100	100	100	150	150	600
Hand dusters	100	100	100	150	150	600
Total	250	255	280	405	400	1590

BIOLOGICAL CONTROL

A biological control unit for the control of black headed caterpillar of coconut (*Nephantis Serinopa* M) has been started during 1968-69. During the Fourth Plan, the number of parasites and predators for Libe-

ration in the field will be increased. An attempt will also be made to try out some imported varieties. The work will be carried out under the overall technical guidance of the regional Stations of coconut development. Budget allocation has been considered for contingent expenditure.

SURVEILLANCE SERVICE

The Working Group in their paper on Plant protection have suggested the need for a surveillance service for forecasting pest and disease infestations. This becomes necessary in the present circumstances, when bigger areas are to be covered by intensive plant protection measures. It may not be possible to engage special staff for this item in this Territory, but the present staff will benefit from training given at Hyderabad Institute in this line.

CONTROL THROUGH REGULATORY MEASURES

Presently there is no Pest Act in this Territory. The model of Act suggested by the Working Group has been noted for future guidance.

ORGANISATIONAL SET UP

The existing organisation for plant protection work in this Territory is as follows: —

- 1 Dy. Director of Agriculture (Plant Protection & Planning)
Class I.
- 2 Agricultural Graduates (Plant Protection) Class III.
- 1 Mechanic.
- 1 Assistant Mechanic.
- 14 Field Assistants.

Presently there are 5 Agricultural Zones in this Territory with 12 NES Blocks. Every 2 Blocks comprises, by and large of 1 Agricultural Zone.

The proposed expansion of the organisation during the Fourth Plan is as follows: —

- 3 Agricultural Officers — Cl. III (210-425) one in each of the 5 zones (2 posts are filled in) who will also take upto intelligence and surveillance.
- 1 Assistant Mechanic (110-131) in each of the 5 zones.
- 1 Agricultural Assistant (Plant Protection) (110-180) in each of the 5 zones.
- 6 Field Assistants (110-131) in each of the 3 zones.
- 1 Agricultural Assistant (110-180) and 2 Field Assistants (110-131) under Biological control.

CENTRALLY SPONSORED SCHEMES

The following Centrally Sponsored Schemes are proposed to be implemented in this Territory during the Fourth Plan Period:

- 1) Prophylactic treatments — This scheme has been implemented during 1968-69 on paddy. During Fourth Plan, vegetables are being included besides paddy.
- 2) Rat control — This scheme has been implemented during 1967-68 and 1968-69.
- 3) Epidemic control — This is proposed to be implemented as and when epidemics show up in paddy and commercial crops.
- 4) Seed Treatment — This is a new scheme which the Working Group has included in the list of Centrally Sponsored Schemes during the Fourth Plan.

(Figures in Lakhs Rs.)

Items	Budget requirements					Total
	1st year	2nd year	3rd year	4th year	5th year	
Staff	0.95	0.98	1.00	1.03	1.07	5.03
Pesticides	5.00	5.00	6.00	7.00	8.00	31.00
Equipment	0.80	0.90	1.32	1.70	1.60	6.32
Biological Control	0.02	0.02	0.04	0.04	0.04	0.16
Miscellaneous	0.10	0.10	0.20	0.20	0.20	0.80
Loans	—	—	—	—	—	—
Total	6.87	7.00	8.56	9.97	10.91	43.31

Budget allocation during Fourth Plan

(Figures in Lakhs Rs.)

Sr. No.	Item	Revenue		Capital		Total
		Recurring	Non-Recurring	Loan	Others	
1.	Staff	5.03	—	—	—	5.03
2.	Miscellaneous	—	38.28	—	—	38.28
	Total	5.03	38.28	—	—	43.31

The Scheme is to be implemented in the Fourth Plan against budget provision of Rs. 43.31 lakhs as per distribution.

NAME OF THE SCHEME: IMPROVED SEEDS —

Object of the Scheme: — This is a continuing scheme. The object of the scheme is to provide to farmers good and improved seeds of paddy and other crops like ragi, groundnut, pulses, maize, jowar, wheat, sugarcane etc. in order to enhance per acre yield of these crops.

The scheme was initiated during the Third Five Year Plan and in the year 1963-64 and since then it has been continued. To attain the aforesaid objective and to maintain its continuity the scheme envisages a workable permanent type of organisation by establishment of (i) Sufficient number of Seed farms for multiplication of seed and plant stock required to meet the targetted demand and (ii) to import the seed of High Yielding Varieties to continue that programme with greater intensity.

Nature and mode of working: The multiplication and distribution of seed of crops like paddy, ragi, groundnut, pulses and sugarcane will be done mainly through the Government farms and their Extension Services since it has been observed that the multiplication of seed on the established lines of registered growers has not been feasible in the past on account of poor response from farmers who seem to be reluctant to take up the multiplication of seed as registered growers.

In view of these and as an all time solution it is proposed that the multiplication and distribution of seed will be implemented through the Government farms by strengthening the ones established during the Third Five Year plan and by opening two more during the Fourth Five Year plan.

During the Third Five Year plan and the period that followed it, two farms i. e. Durga farm and Kalay farm, with the effective cultivable area of about 18 hectares and 40 hectares have been established. Durga farm is mainly a paddy seed farm while Kalay farm is meant for multiplication of seeds of other crops of ragi, groundnut, sugarcane etc. These farms will be fully equipped and strengthened.

Besides these two farms, two more farms are proposed during the Fourth Plan. One of this with an area of about 100 acres will be established in Goa and the other of about 40 acres will be established in Daman to cater to the demand of farmers of the districts of Daman and Diu.

Thus by establishing these four farms a permanent organisational set up for multiplication and distribution of seed will be established in this Territory to cater to the full requirement of seeds, of paddy, ragi, groundnut, pulses and sugarcane.

On these farms production of certified seed will be taken up.

The foundation seed for this purpose of varieties of All-India importance will be procured from the National Seed Corporation and of other improved varieties will be obtained from the respective Govts. of neighbouring States as recommended by the Working Group. No production of hybrid seed of Corn and Sorghum will be taken up on the farms since the requirement of this Territory are not every great and the entire projected demand will be met by procuring the seed from the National Seed Corporation which will be sold at cost price.

VARIETIES PROPOSED AND TARGETS OF COVERAGE FOR THE PLAN PERIOD

Considering that the present trend of farmers is for short duration varieties which will enable them to take up for multi-cropping pattern and in concord with the recommendation of the Working Group. The varieties proposed under the programme are mainly of short duration which have been popular among farmers since their introduction.

Paddy:

- (i) High Yielding: T.N.I., IR-8 and ADT-27
- (ii) Other improved: Patni-6, PTB-10, EK-70, Chinsura-8, MTU-20

Maize: Deccan hybrid, Ganga 101

Wheat: Lerma Rojo, Sonora-64

Bajra: HB-2, HB-2

Jowar: CSH-1, CSH-2

Ragi: White pearly, Purna and Annapurna

Groundnut: Spanish improved, TMV-2

Pulses: Tur, Black gram, Green gram (all early varieties)

The acreage to be covered during the Fourth Plan under each of these crops is shown in the annexure. The seed renewal period proposed to contemplate is 4 years for paddy, 5 years for ragi and pulses and 3 years for groundnut and sugarcane. Certified seed of hybrids of maize, wheat, jowar and bajra will be renewed every year as said earlier by obtaining seed from National Seed Corporation for general distribution.

IMPROVEMENT OF LOCAL VARIETIES

As can be seen from the proposed coverage under paddy, only about 70% of the total area is planned to put under high yielding and improved variety. This is because the remaining 30% are not amenable to those varieties on account of their peculiar local conditions.

There are some local varieties which perfectly adopt and respond to these conditions. Some of these varieties such as Asgo, Corgut and Kussalgo are salt resistant and short duration varieties in contrast to the improved SR-20 B which is a long duration one. These local varieties to some extent are flood resistant as well as are extensively grown in khazan. Similarly the local Patni, a red grain variety, is to some extent drought resistant short duration one, widely grown on morad land.

Considering the wastness of the area cultivated under these varieties and that they are very much in demand among farmers, it is proposed to take up the improvement of these varieties on pure line selection so that without disturbing the existing pattern and practices on improved strain will be made available to farmers of these varieties of local importance.

SEED PROCESSING AND TESTING

At present no seed testing and processing facilities are available in this Territory. During the Fourth Five Year Plan however it is proposed to install a small primary unit with essential equipments like crop drier, pre-cleaner, seed cleaner, seed treater, grain storage lines and a seed testing unit at Margao Zonal Farm or at the new farm to be established whichever is centrally situated so that the drying facilities can be made available to farmers as well during the Kharif season when unfavourable weather conditions for drying arise.

SUGARCANE DEVELOPMENT SCHEME

This is a continuing scheme incorporated in the improved seed multiplication and distribution scheme.

Aims and Objects: There are vast cultivable wastes in Satari, Sanguem, part of Quepem, Canacona and Bicholim which are on the banks of rivers. These are fertile lands where sugarcane crop can be profitably raised. If proper cultivation and care is taken we can expect an average tonnage of forty tons per acre. Government and private irrigation projects are coming up. These projects will be profitable if money crops like sugarcane can be partly grown along with the food crops. With proper implementation of the scheme it is expected that an area of 4000 ha. will come under sugarcane within next five years and it will be easy to establish a sugarcane factory in this Territory.

Thus it is proposed to undertake intensive and extensive development of sugarcane by introducing new high yielding varieties, modern methods of cultivation and fertilization.

Targets: It is proposed to bring the targets mentioned below during the plan period, subject to availability of water for irrigation.

Year	Target
1968-70	500 Ha.
1970-71	1500 Ha.
1971-72	2000 Ha.
1972-73	3000 Ha.
1973-74	4000 Ha.

Supply of Seed: The main requirement for achieving the target will be supply of good seed material. At present seed is raised at Kalay Government farm. The target fixed for production in this farm of seed and the area to be covered therefore is as below:—

Year	Seed production (In lakh sets)	Area to be covered (cultivate)
1969-70	10,00,000	40 Ha.
1970-71	20,00,000	80 Ha.
1971-72	30,00,000	120 Ha.
1972-73	30,00,000	120 Ha.
1973-74	30,00,000	120 Ha.

The requirement of seed for remaining area will be met from local cultivators and neighbouring States.

Trials on Gur improvement work: In addition to these trials will be conducted to improve the quality of gur and marketing. The cultivators will be taught the modern methods of gur manufacture by conducting classes.

FINANCIAL IMPLICATIONS

A — Capital Expenditure:

(i) For strengthening of the existing farm	3.20 lakhs
(ii) Establishment of new farms	»
1. Daman farm of 40 acres	2.10 »
2. New farm in Goa (100 acres)	4.00 »
Total	9.30 lakhs

B — Revenue:

(i) Labour	8.15 lakhs
(ii) Fertiliser, seeds pesticides etc.	2.55 »
(iii) Equipment vehicles	3.70 »
(iv) Fuel lubricants etc.	1.10 »
(v) Establishment	3.50 »
Total	19.00 lakhs

Year wise break up expenditure

(Figures in hectares)

Year	Revenue		Capital		Total
	Rec.	Non-Rec	Loan	Others	
1969-70	1.30	0.70	—	4.00	6.00
1970-71	1.85	1.05	—	2.30	5.20
1971-72	2.60	1.30	—	2.00	5.90
1972-73	3.50	1.60	—	1.00	6.10
1973-74	3.50	1.60	—	—	5.10
Total	12.75	6.25	—	9.30	28.30

(Figures in lacks Rs.)

Items	Revenue		Capital		Total
	Rec.	Non Rec.	Loan	Others	
Establishment	12.75	—	—	—	12.75
Contingencies	—	6.25	—	—	6.25
Land building equipment	—	—	—	9.30	9.30
Total	12.75	6.25	—	9.30	28.30

The Scheme will have a budget provision of Rs. 28.30 lakhs as shown above.

Phased expenditure during the Plan period (1969-74)

(Figures in lakhs Rs.)

Expenditure	Revenue						Capital				
	69-70	70-71	71-72	72-73	73-74	Grand Total	69-70	70-71	71-72	72-73	73-74
Labour	1.15	1.50	1.50	2.00	2.00	8.15					
Seed, fertilizer, pesticides etc.	0.40	0.45	0.50	0.60	0.60	2.55					
Equip., Vehicle etc.	0.30	0.60	0.80	1.00	1.00	3.70					
Field Lubricants	0.15	0.15	0.20	0.30	0.30	1.10					
Establishment	—	0.20	0.90	1.20	1.20	3.50					
Cost of land & its develop.	—	—	—	—	—	—	1.5	2.0	1.0	—	4.50
Construction of stores and seed proc. plant	—	—	—	—	—	—	1.5	—	—	—	1.50
Construction of Farm structures & residential quarters	—	—	—	—	—	—	—	1.30	1.0	1.0	3.30
	2.00	2.90	3.90	5.10	5.10	19.00	3.0	3.30	2.0	1.0	9.30

Target of coverage for improved H. Y. P.

(Figures in hectares)

Crop	Total area for the Plan	Yearwise distribution				
		69-70	70-71	71-72	72-73	73-74
Paddy:						
(i) High Yielding (H. Y. P.)	16000	12000	12000	14000	15000	16000
(ii) Other improved	12800	4000	6000	8000	10000	12800
Maize	200	40	80	120	160	200
Jowar	80	15	30	45	60	80
Bajra	80	20	40	60	80	80
Ragi	800	200	400	600	800	800
Groundnut	400	80	160	240	320	400
Pulses	2000	250	500	1000	1500	2000
Sugarcane	4000	500	1500	2000	3000	4000
Wheat	200	50	75	100	150	200

NAME OF THE SCHEME: FERTILIZERS AND MANURES:

I—The scheme aims at intensification of use of fertilizers and manures which is a major factor for increasing agricultural production. During the Fourth Plan Period, the consumption of fertilizers is expected to increase considerably specially in view of programmes of High Yielding Varieties, intensive cultivation of paddy, coconut, vegetable, and also export oriented commercial crops like banana, cashew, pineapple.

The crop-wise target of anticipated area to be covered by Fertilizer use in Fourth Plan Period.

Crops	1969-70	1970-71	1971-72	1972-73	1973-74
Paddy H. Y. P.	12,000	12,000	14,000	15,000	16,000
Paddy Improved	4,000	6,000	8,000	10,000	12,800
Paddy Local	4,000	5,000	6,000	7,000	8,000
Maize	40	80	120	160	200
Groundnut	80	160	240	320	400
Jowar	15	30	45	60	80
Coconut	1000	1000	2000	3000	3000
Banana	1000	1000	1500	2000	3000
Other Fruits	100	150	200	250	300
Pulses	250	500	1000	1500	2000
Sugarcane	500	1500	2000	3000	4000

Yearwise targets of N. P. K. fertilizers consumption

(Figures in tons.)

Year	N	P205	K20
1969-70	2000	900	700
1970-71	2100	1000	900
1971-72	2200	1100	1000
1972-73	2400	1300	1100
1973-74	2500	1400	1200

The value of nitrogenous fertilizers is now understood by most of the cultivators and the demand for them will increase. The response to phosphatic and potassic fertilizers is comparatively low, the use of phosphatic fertilizer has increased in recent years while the use of potassic fertilizer has not caught the imagination of most of the cultivators.

During the course of Fourth Plan approximately 60,000 tons of different fertilizers will be consumed. A quantity of 14,000 tons net is expected to be used in the financial Fourth Five Year Plan.

Storage: As per the present system of distribution of fertilizers, the Government stores the allotted and purchased fertilizers in the Central godowns, the capacity of which at present is 6500 tons and which is going to be increased to 7500 tons during the Fourth Plan period, by construction of two more additional godowns.

The fertilizers stored, are distributed directly to the retailed selling agencies at village level which have their own storage facilities, as such no necessity is felt by Government of Goa of having their godown at Village level.

Distribution: In the system of distribution of fertiliser the retail selling agencies are given commission as fixed by Central Government for different fertilizers under the item «Commission to retailers» and half of the godown rent fixed for six months considering the time of storage. It is felt that this distribution margin for retailers is adequate.

Quality Control: The fertilizer control order has been extended to this Territory, and licences for manure mixing and production of granulated mixture will be granted. For the effective implementation of the provisions of the Order, and for the smooth working of fertilizer project additional staff will have to be appointed.

1 — Two fertilizer Inspectors in the grade of Rs. 210-425.

2 — Two storekeepers in the grade of Rs. 110-180.

3 — Five watchman in the grade of Rs. 70-1-80.

The cost of purchase of fertilizers and Soil Conditioners and other incidental expenditure like transport, godown expenses, cost of gunny bags etc. will be provided under Head of Account «124 Capital Outlay on Scheme of State Trading».

II — Soil Amelioration Measures e.g. Liming and River Silt application.

a) *Liming (Soil Conditioners)*: As the soils in Goa are mostly acidic in nature and in order to have an optimum pH 6.0, it is essential to apply Soil Conditioners like lime, basic slag, dolomite etc. These soil conditioners are to be distributed to the farmers at 50% subsidized rate. The targetted area to be covered during the Fourth Plan period is, as follows: —

Year	Area in hectares	Requirements of Soil Condition	
		Ton.	Rs.
1969-70	600	1,500	90,000
1970-71	800	2,000	1,20,000
1971-72	1000	2,500	1,50,000
1972-73	1200	3,000	1,80,000
1973-74	1400	3,500	2,10,000
Total	5000	12,500	7,50,000

b) *Development of Marad Land*: There are about 10,000 hectares of Marad lands in Goa. These are situated on uplands and are poor in clay and humus-contents. Crops taken on these lands badly suffer if there is long drought. The only way to improve these lands is to add river silt, which enriches both the humus contents and moisture retentive capacity of these soils. In the scheme subsidy of Rs. 75 per hectare and Rs. 50 per hectare is provided in respect of areas situated at more than 3 miles and less than 3 miles from the river site respectively.

Yearwise target area (in hectares) expected to be covered during the Fourth Plan Period is given below: —

Year	Morod land area in hectares	Subsidy
		Rupees
1) 1969-70	800	50,000
2) 1970-71	1200	75,000
3) 1971-72	2000	1,25,000
4) 1972-73	2400	1,50,000
5) 1973-74	3200	2,00,000
Total	9,600	6,00,000

Fertilizers

(Rupees in lakhs)

Item	1969-70	1970-71	1971-72	1972-73	1973-74
<i>Revenue:</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Recurring Establishment	0.30	0.30	0.30	0.30	0.30
Non-recurring Subsidies	1.40	1.95	2.75	3.30	4.10
Capital Building (godowns)	1.00	1.00	—	—	—
Total	2.70	3.25	3.05	3.60	4.40

The Fertilizer schemes is budgetted for Rs. 17 lakhs.

III. Demonstrations: In order to popularize the use of balanced dose of fertilizers and soil conditioners, Multicrop (Pilot) Demonstrations by the Extension Staff would be laid on 2 to 4 hectares plots by adopting all the package of practices so as to get maximum returns. A complete demonstration will include at least two crops and preferably three crops in a year on the same field. The inputs like fertilizers and pesticides will be subsidized to the extent of 50% per cents. Each year 25 such demonstrations will be laid out in this Territory.

One Soil Conditioner Demonstration will be conducted each year on 40 hectare compact block, where the soil conditioner will be subsidized to the extent of 100 per cent.

To supervise these demonstrations additional staff has to be appointed.

- (1) One Field Demonstration Officer in the grade of Rs. 210-425.
- (2) Six Field Assistants in the grade of Rs. 110-180.

(Rupees in lakhs)

Item	1960-70	1970-71	1971-72	1972-73	1973-74
<i>Revenue:</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Recurring:					
Establishment	0.40	0.40	0.40	0.40	0.40
Non-recurring:					
Subsidy for Fertilizer pesticides & Soil conditioner	0.50	0.50	0.50	0.50	0.50
Total	0.90	0.90	0.90	0.90	0.90

The total outlay for demonstration will be Rs. 4.50 lakhs for the Fourth Plan period.

Soil Testing: By the end of 1968-69, the construction of Soil Testing Laboratory of 30,000 soil samples capacity will be completed, it will start functioning from 1969 and will be in a position to handle all the Soil samples from this Territory.

Publicity & Propaganda: The publicity and propaganda for fertilizer and Manure will be taken up by the Agricultural Information Unit in Goa.

IV Manures: To increase productivity and fertility of the soil, it is essential to apply organic manure to the soil. The farmyard manure produced at present falls short of minimum requirement of the land under cultivation.

Therefore it is imperative to use all available local manurial resources like farm wastes, night soil, green leaf manure, urban wastes (city sweepings, garbage, sewage, sludge, etc.) for increasing our organic manure production.

a) *Rural Compost:* As recommended by the Planning Commission demonstration will be held in rural areas through all panchayats to demonstrate better way of making available wastes for better conservation of manures.

Subsidies will be given for construction of improved cattle byres flooring, pucca compost pits, gobar gas plants. For opening and filling new and old compost pits.

To induce production of compost village leaders will be trained by holding training camps.

Department will undertake the work of preparing compost from forest leaves to induce the farmers in forest area to take up this work.

b) *Green Manuring*: Green manuring seed like Dhaincha and Glyricidia will be supplied to the cultivators at subsidized rates. Green manures demonstrations will be conducted on Cultivators field. Green manure crops will be included in crop rotation. Green manure seed will be distributed to small peasants free of cost.

c) *Urban Compost*: It is proposed to cover all 14 urban centres in this Territory by the end of Fourth Plan. Each Municipality or local body will have its own compost yard and good system of collection of wastes. Loans and subsidy will be provided to accomplish this project.

Mechanical Compost Plant: During the Fourth Plan it is not feasible to set up a mechanical compost plant in this territory, firstly because each municipality is too small, and secondly the daily total collection of garbage in Goa works out to be 70 tons, whereas the capacity of small mechanical compost plant is 150 tons per day.

Sewage Utilization: Drainage work of principal towns in this territory is being undertaken by Public Works Department. It is estimated that about 3 m.g.d. effluent will be available in this territory for irrigation about 300 hectares of land.

Installation of pumping station and laying of main pipes lines and its distributaries will be taken up for Panaji and Margao Municipalities during the Fourth Plan Period.

In order to implement the manure schemes, additional staff of 12 Compost Inspectors in the grade of Rs. 210-425 will be required (one for each block)

(Rs. in lakhs)

Item	1969-70	1970-71	1971-72	1972-73	1973-74
Revenue:					
<i>Recurring</i>					
Establishment	0.80	0.80	0.80	1.00	1.00
<i>Non Recurring</i>					
Subsidies	0.25	0.30	0.35	0.40	0.50
Demonstration	0.13	0.13	0.13	0.13	0.13
Miscellaneous	0.06	0.06	0.06	0.06	0.06
Revenue Total	1.24	1.29	1.34	1.59	1.69
Capital Loan	0.97	0.57	0.57	0.57	0.57
Building & Equipment	10.00	—	—	10.00	—
Capital Total	10.97	0.57	0.57	10.57	0.57
Grand Total	12.21	1.86	1.91	12.16	2.26

The manure scheme is budgetted for Rs. 30.40 lakhs.

Physical targets during the Fourth Plan period

Items	1969-70	1970-71	1971-72	1972-73	1973-74	Total
<i>Preparation of Rural compost:</i>						
a) From forest leaves high soil farms wastes. Tons	15,000	20,000	25,000	35,000	45,000	1.4 lakhs tons
b) Area to be covered (at the rate of 12.5 tons per hectare)	1,200 ha.	1,600 ha.	2,000 ha.	2,000 ha.	3,600 ha.	11,200 ha.
c) Additional Production (tons)	150	200	250	350	450	1,400 tons
<i>Green Manuring:</i>						
a) Paddy	800 ha.	1,200 ha.	1,600 ha.	2,000 ha.	2,400 ha.	8,000 ha.
b) Coconut and other	1,200 ha.	1,600 ha.	2,000 ha.	2,400 ha.	2,800 ha.	10,000 ha.
Additional Production Paddy (tons)	260	390	520	650	910	2,730 tons
<i>Urban Compost:</i>						
a) Urban compost (tons)	500	500	1,000	1,000	1,500	4,500 tons
b) Area to be covered ha. (12.5 tons per hectare)	40 ha.	40 ha.	80 ha.	80 ha.	120 ha.	360 ha.
c) Additional Production (tons) (at the rate of 0.05 tons per acre)	5	5	10	10	15	45
<i>Sewage utilization:</i>						
a) Quantity	—	1.5m.g.d.	1.5m.g.d.	1.5m.g.d.	3.6m.g.d.	7.5m.g.d.
b) Area to be irrigated Paddy	—	200 ha.	200 ha.	200 ha.	400 ha.	1,000 ha.
Coconut	—	—	—	—	—	—
c) Additional Production (tons) (0.5 tons per acre)	—	250	250	250	500	1,250
Total additional production (yearwise)	415	820	1,080	1,260	1,875	5,450

Total additional Production 5,450 tons at the end of Plan Period.

Fertilizers and manures Financial aspect for Fourth Plan

(Figures in lakhs Rs.)

Item	1969-70				1970-71				1971-72				1972-73				1973-74			
	Revenue		Capital		Revenue		Capital		Revenue		Capital		Revenue		Capital		Revenue		Capital	
	Rec	Non-Rec	Loan	Others	Rec	Non-Rec	Loan	Others	Rec	Non-Rec	Loan	Others	Rec	Non-Rec	Loan	Others	Rec	Non-Rec	Loan	Others
I a) Fertilizer	0.30	1.40	—	1.00	0.30	1.95	—	1.00	0.30	2.75	—	—	0.30	3.30	—	—	0.30	4.10	—	—
b) Demonstration...	0.40	0.50	—	—	0.40	0.50	—	—	0.40	0.50	—	—	0.40	0.50	—	—	0.40	0.50	—	—
II Manures	0.80	0.44	0.97	10.00	0.80	0.49	0.57	—	0.80	0.54	0.57	—	1.00	0.59	0.57	10.00	1.00	0.69	0.57	—
	1.50	2.34	0.97	11.00	1.50	2.94	0.57	1.00	1.50	3.79	0.57	—	1.70	4.39	0.57	10.00	1.70	5.29	0.57	—

The total outlay Fertilizers & Manures for Fourth Plan

(Figures in lakhs Rs.)

Items	Revenue		Capital		Total
	Rec	Non-Rec	Loan	Others	
Establishment	7.90	—	—	—	7.90
Subsidy, demonstration and other contingent expenditure	—	18.75	—	—	18.75
Land, building equip- ments	—	—	—	22.00	22.00
Loans	—	—	3.25	—	3.25
	7.90	18.75	3.25	22.00	51.90

The Scheme has been budgetted for Rs. 51.90 lakhs.

NAME OF SCHEME: HORTICULTURE DEVELOPMENT

A. INTRODUCTION

This is a continuing scheme from the Third Five Year Plan aiming to explore fully the vast resources that this Territory offers for a wide range of fruit and vegetable crops. The present Scheme has been drawn up on the basis of the recommendations of the Working Group Report, considering two broad aspects 1) to increase the general production of fruits and vegetables within the Union Territory to be able to supply minimum needs of the people and ii) to increase production of certain fruits with a view to achieve sizeable export of fresh fruits and fruit products so as to earn a significant amount of foreign exchange.

The Scheme envisages to bring about an additional area of 800 Ha. under fruits and 2500 Ha. under vegetables by the end Plan Period to make available, as far as possible, a daily consumption of 2 ozs. (60 grs.) of fruits and 4 ozs. (120 grs.) of vegetables required per capita. It is estimated that 20,000 tonnes of fruits and 30,000 tonnes of vegetables will be required for the population of 6.80 lakhs of people that the territory will have by 1974. The minimum requirements will not however be covered by the targets fixed in the scheme but a positive potential will have been created by the end of Plan period.

To support this large scale expansion of fruit and vegetable production, projects for establishment of progeny orchard-cum-nurseries, training of gardeners and financial assistance by way of loans and subsidies have been incorporated in this scheme, the main handicap to the horticultural development of this Territory has been the absence of reliable planting material. The programme now envisaged is to make available proper quality stock alongwith credit facilities, which will make both new plantations and rejuvenation of old gardens possible.

Developments of exportable fruits will be fully explored in order to supply raw material to the local canning factories.

The local commercial crops — coconuts, cashewnuts, and arecanuts will receive full attention so that these productions are increased substantially.

B. PROGRAMME OF WORK

The following developmental items will be included during the Fourth Five Year Plan in this territory under this Horticultural Development Scheme: —

Name of Items	Physical Target	Financial Outlay	Loan Provision
1. General Development of Fruit production ...	800 Ha	18,87,750	1,96,250
2. Development of Fruit Production for Export Purposes:			
i) Banana	150 Ha	4,68,750	—
ii) Pineapple	100 Ha	1,25,000	—
iii) Mango	100 Ha	42,435	—
3. Training of Gardeners	225 (Nos)	4,94,250	—
4. Establishment of Progeny-cum-Nurseries ...	2 (Nos)	1,28,000	—
5. Development of Commercial Crops:			
(1) Coconut	2,840 Ha	8,31,100	1,81,250
(2) Cashewnut	16,500 Ha	8,13,750	6,25,000
(3) Arecanut	120 Ha	27,560	—
6. Development of Vegetables	2,500 Ha	2,50,000	50,000
7. Development of Pepper and Betelvine ...	25 Ha	25,000	31,250
8. Applied Nutrition Programme	2 blocks	3,00,000	—
9. Organization	—	1,00,000	—
Total		54,93,595	10,83,750

ITEM No. I

GENERAL DEVELOPMENT OF FRUIT PRODUCTION

This is a continuation of the Third Five Year Plan Scheme, with a view to increase the area under fruit production on a planned basis with the aim of providing a minimum of 2 ozs. (60 grs) of fruits per individual per day, which is the minimum recommended by nutritional experts.

Resume of work so far done: It is estimated that 325 acres (130 Ha) banana, pineapple and other fruits were added during the Third Plan period (which in this Territory worked for only two years). *Projection for the Fourth and Fifth Plans:* The demands at the rate of 2 ozs (60 grs) per individual per day works to a gross need of 20,000 tonnes of fruits to achieve this production an area of 14,000 Ha (35,000 acres) is required. Considering our achievements during the only two years of the Third Five Year Plan, it is extremely difficult to achieve this production with the resources at our command.

In view of this, a target of 8000 ha (20,000 acres) has been fixed. Apart from the efforts to bring in new areas under horticulture, which are likely to come into full bearing, only in the Fifth Five Year Plan, with the exception of three crops namely: Banana, Papaya and Pineapple, efforts will be made to intensify cultural orchard operations on improved basis for getting the maximum returns from the existing orchards, by mobilizing Departmental resources towards increased production.

Subsidy to the extent of 50% of cost price is proposed to be given towards fruit plants when sold to the farmers.

The following fruit crops are included in the proposed target of 800 hectares (2,000 acres) under various fruits: —

a) Mango: This crop will be given top priority during the Plan to bring it back to its former high standard in quantity and quality of fruits produced. In order to avoid a dispersion of efforts with many varieties that exist in the Territory, concentrated attention will be given to the improvement of the varieties such as Malcorada, Afonsa, Hilario, Xavier, Monserrate and Fernandina.

Production and distribution of quality grafts: To meet the immediate requirements of planting stock, it is proposed to intensify the production of grafts from the existing mango trees in the Mapusa Govt. Farm and also from quality trees of private gardens. By way of compensation 20% of the successful grafts made will be given to the respective owners, while the entire cost of the production will be borne by the Government. Seedlings will be raised every year for grafting in the various Government Farms.

Grafts will be sold to farmers at subsidised rates of 50% of the cost price.

Loans: Loans will be made available for establishment of new orchards and for rejuvenation of old gardens at the rate of Rs. 100 per acre (Rs. 250 per Ha.) subject to a maximum of Rs. 1,500 per applicant.

Staff: Trained malis in the scale of Rs. 70-85 will be engaged to attend to the work of raising the seedlings, grafting and after care at the rate of one mali for every 5,000 seedlings, i. e. grafts.

The year-wise break up of the physical targets for mango will be as under: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Production of seedlings (no)	10,000	-	-	25,000	30,000	1,00,000
2. Production of grafts (no)	7,500	11,250	15,000	18,750	22,500	75,000
3. Area to be covered under loans (Ha) ...	20	30	40	50	60	220
4. Area to be covered (175 grafts per Ha)...	43	65	86	108	129	431
5. Malis to be engaged (no)	2	3	4	5	6	20
6. Subsidy (Rs.) at the Rate of Rs. 2.50 ...	18,750	28,125	37,500	46,875	56,250	1,87,300
7. Loans (Rs.)	5,000	7,500	10,000	12,500	15,000	50,000

b) Other Fruits: While an intensive development of banana and pineapple will be contemplated mainly under item No. 2 **Development of Fruit production for Export Purposes**, in this group some locally popular fruits will be included to build up local consumption namely guavas, chickus, citrus, anonas and papayas. Banana and pineapple will also be taken up.

For their development it is proposed to import fruit stock of varieties known for their high quality and productivity from other States, and sell them to local farmers at subsidised rates of 50% of cost price.

The yearwise break up of the physical targets will be as follows: —

General Development of Fruit Production

(b). Other Fruits

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Name of Fruits	1969-70		1970-71		1971-72		1972-73		1973-74		Total	
	No.	Area Ha.	No.	Area Ha.	No.	Area Ha.	No.	Area Ha.	No.	Area Ha.	No.	Area Ha.
1. Ananas		6		9		12		15		18		60 Ha
@ 275/Ha.	1,650		2,475		3,300		4,125		4,950		16,500	
2. Chickos		12		18		24		30		36		120 Ha
@ 275/Ha.	3,300		4,950		6,600		8,250		9,900		33,000	
3. Citrus		6		9		12		15		18		60 Ha
@ 275/Ha.	1,650		2,475		3,300		4,125		4,950		16,500	
4. Guavas		12		18		24		30		36		120 Ha
@ 275/Ha.	3,300		4,950		6,600		8,250		9,900		33,000	
5. Papayas		15		30		45		60		75		225 Ha.
@ 1100/Ha.	16,500		33,000		49,500		66,000		82,500		2,47,500	
6. Bananas		20		40		60		80		100		390 Ha.
@ 2500/Ha.	50,000		1,00,000		1,50,000		2,00,000		2,50,000		7,50,000	
7. Pineapple		20		40		60		80		100		300 Ha.
@ 25000/Ha.	5,00,000		10,00,000		15,00,000		20,00,000		25,00,000		75,00,000	
		91		164		237		310		383		1,185 Ha.
Area to be covered under loans — (Hectares)		45		80		120		150		190		585 Ha.
Amount of loan at the rate of Rs. 250/- per hectare (Rs.)		11,250		20,000		30,000		37,500		47,500		1,46,250

Financial implications: Following will be the financial outlay for item No. 1

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	3.600	5.400	7.200	9.000	10.800	36.000
2. Revenue:						
i) Recurring ...	1,43,850	2,54,100	3,64,350	4,74,600	5,79,850	18,16,750
ii) Non-recurring ...	5.000	6.000	7.000	8.000	9.000	35.000
3. Capital	-	-	-	-	-	-
	1,52,450	2,65,500	3,78,550	4,91,600	5,99,650	18,87,750
4. Loan	16.250	27.500	40.000	50.000	92.500	1,96,250

ITEM No. 2

DEVELOPMENT OF FRUIT PRODUCTION FOR EXPORT PURPOSES

(Centrally Sponsored Scheme)

The objective of this scheme is to increase the production of banana, mangoes and pineapples of selected varieties for export purposes in area ideally suited for these fruits.

(i) **Banana:** The scope for export of bananas to Russia, Japan, East-European and Scandinavian countries is very vast and has not been explored so far. As the Dwarf Cavendish is the only exportable variety, a start was made during the 1967-68 to extend local cultivation by importing about 40,000 suckers and establishing a stock multiplication centre at the Govt. Farm Kalay. This activity has been continued during the year 1968-69. During the Fourth Five Year Plan Period, it is proposed to build up a vast area of 1,500 hectares (3,750 acres) to make Goa one of the centres of export of banana. The harbour facilities navigable rivers, a good road system a large number of trucks, etc. are some of the factors that assure a good development for this programme.

To cover this area, the present centre for stock multiplication at Govt. Farm Kalay, will not be sufficient and a 75 hectare farm will be established. Suckers imported from disease free centres in other States will be planted for multiplication and distribution. The pattern of assistance will be as per Govt. of India's directive. However, a token provision for dispersive subsidy at 50% of cost price towards banana stock has been made.

Loan facilities will have to be made available at the rate of Rs. 3,750 per Ha. on the pattern of the model project established by the Banana and Fruit Development Co-operation, Madras, and the Syndicate Bank, Manipal for a 2,000 hectares banana project at South Kanara, Mysore.

The yearwise break up of the physical targets will be as follows:—

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Area to be covered (Ha)	50	100	150	200	250	750
2. Suckers to be distributed at the rate of 2500 per Ha (lakhs)...	1.25	2.50	3.75	5.00	6.25	18.75

(ii) **Pineapple:** The development of this crop started during the Third Five Year Plan with a wide distribution of suckers of the Giant kew variety at subsidised rates. It is estimated that so far an area of about 100 ha. (250 acres) has been covered, the produce of which has already been canned and exported.

Suckers will be procured from the neighbouring pinneries and from those already established in the Territory and made available to the farmers at subsidised rates of 50% of cost price.

The pattern of assistance will be as per G. O. I's directives. However, a token provision for dispensive subsidy at 50 % of cost price towards pineapples stock has been made. Multiplication centres have already been established at the Kalay Farm and at the Agro-Horticultural Research Station, Ela, Old Goa.

Loan for this purpose will have to be obtained from the Agricultural Refinances Corporation or such other financing institutions.

The yearwise break up of targets will be as follows:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Area to be covered (Ha)	10	15	20	25	30	100
2. Suckers to be distributed on the basis of 25,000 per (Ha) ...	2,50,000	3,75,000	5,00,000	6,25,000	7,50,000	25,00,000

(ii) **Mango:** In view of satisfactory acceptances from canning factories, it is proposed that attention under this item for export purposes should be given to the Ratnagiri Alphonso variety of Mango so as to cover 100 Ha during the Plan period. For this purpose, grafts of that variety will be imported from Ratnagiri area and distributed as subsidised rate of 50% of cost price.

The pattern of assistance will be as per Government of India's directive. However, a token provision for dispensing subsidy at 50% of cost price towards Mango stock has been made.

The establishment of an orchard-cum-nursery at Buipal (Satari) has been contemplated under No. 4 to provide for quality plant stock.

Besides this, it is proposed that in order to get immediate benefit of increase in production during the Fourth Plan Period itself, intensive

cultivation programme specially including plant protection and application of fertilizers will be taken up to cover 200 Ha.

The year wise break up of the physical targets will be as follows:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Area to be covered (Ha)	10	15	20	25	30	100
2. Grafts to be distributed at the rate of 175 per Ha.	1,750	2,625	3,500	4,375	5,350	17,600

Financial implications:: Under item No. 2, Government will not incur any expenditure directly. The plant stock required will be supplied to the party concerned through nurseries directly to them. Subsidy provision for centrally sponsored schemes has been however made.

Subsidy rate at 50% of cost price	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Banana	31,250	62,500	93,750	1,25,000	1,56,250	4,68,750
Pineapple	12,500	18,750	25,000	31,250	37,500	1,25,000
Mango	4,375	6,570	7,175	10,940	13,375	42,435
Total	48,125	87,820	1,25,925	1,67,190	2,07,125	6,36,185

ITEM No. 3

TRAINING OF GARDENERS

During the Third Five Year Plan implementation in this Territory, this Scheme was in force and some 12 youngmen were sent to Poona and Bangalore for a one-year training course. In the subsequent years, there was no response from candidates due to the low allowance given to the trainees. Now that the working group has enhanced the stipend to Rs. 80 per month plus the journeys to and from to the training centres, it is proposed to re-introduce the scheme.

One of the great difficulties found in the horticultural development of this territory has been the almost lack of trained gardeners. This difficulty has to be overcome by providing trained personal. The target for the Fourth Plan Period for trained gardeners has been fixed up at 150.

Under this scheme it is also proposed to provide short-term training for fruit growers of 3 months duration at the Ganeshkind Fruit Station, Poona and Lalbaug Garden, Bangalore, with the same financial help with a target of 75 gardeners for the whole Plan period.

The yearwise breakup of the physical targets will be as follows:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Gardeners (nos) ...	25	50	75	100	125	375
2. Short term training for fruit growers (nos)	5	10	15	20	25	75
	30	60	90	120	150	450

Under the same item it is proposed to establish a training course for the prisoners of the Central Jail, Aguada.

The scheme aims at rehabilitating prisoners at the Aguada Central Jail through productive and useful work. The object being to make them feel conscious of the duties and obligations of good citizens through a reformation of their criminal shortcomings, as away the many prisoners there would be same who would like to embrace a normal life through repentance.

Nature of Scheme: Among the prisoners there would be some who have an agricultural background and could profitably be trained to become good agriculturists. The scheme will consist of a precise training in Agri-Horticultural practices to teach them the improved techniques in growing of field and orchard crops. Accordingly, practical instructions will be imported in growing of paddy, ragi, vegetable, banana, papaya, pineapple etc. The scheme will also provide other items of agricultural and Horticultural produce for the use in the Jail and so bring about overall increase in Jail department expenditure. For this purpose, the land available in the Jail compound will be made use of in the first instance.

However, there would be necessity of acquiring a further area of about 1/2 hectares in the vicinity of the jail for the growing of paddy etc.

The scheme will be under the supervision of an Agricultural Assistant directly on the spot and will be under the technical guidance of the Department of Agriculture but under the overall control of Jail Department. The pay scale of the assistant will be Rs. 110-180. He will be incharge of the training and practical classes.

Financial implications: the year-wise break up of the expenditure for item No. 3 is as follows:—

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	3,500	3,500	3,500	3,500	3,500	17,500
2. Revenue ...	31,450	58,900	86,350	1,13,800	1,41,250	4,31,750
3. Capital ...	45,000	-	-	-	-	45,000
Total ...	79,950	62,400	89,850	1,17,300	1,44,750	4,94,250

ITEM No. 4

ESTABLISHMENT OF PROGENY-CUM-NURSERY

One of the difficulties encountered for a faster horticultural development of this Territory has been the lack of a progeny-cum-nursery where fruit stock of reliable parentage and genuine quality could be raised for supply to growers. The now existing Government Farm at Duler with its four hectare area, is too small to cope up with the demand, as it happens to be Govt. demonstration farm.

It is therefore proposed to establish two progeny-cum-nursery orchards during the fourth plan period, one in the Northern area in the Government land at Buipal and the other in the Southern area of Goa, with an area of about 50 hectares each.

Nurseries will be established to:—

1. To raise stock of fruit trees of such varieties, specially of mango, that have given outstanding performances either at the Govt. experimental orchards or with individual growers in the State who have won prizes at All India and State Shows.
2. To keep performance records of the trees in the progeny orchards.
3. To stock bud wood for raising adequate number of pedigreed nursery plants.
4. To raise suitable root stock material with a view of furnish standardised root-stock materials in adequate quantities.

Staff: each nursery will have one agricultural assistant and 2 malis.

Financial implications: The yearwise expenditure will be as follow:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	4,500	4,500	9,000	9,000	9,000	36,000
2. Revenue ...	4,000	4,000	8,000	8,000	8,000	32,000
3. Capital ...	5,000	—	55,000	—	—	60,000
Total ...	13,500	8,500	72,000	17,000	17,000	1,28,000

ITEM No. 5

DEVELOPMENT OF COMMERCIAL CROPS

1. **Coconut:** Coconut production has been decreasing in Goa substantially due to lack of intensive rejuvenation programme and proper cultural practices specially a regular manuring schedule plant protection measures. During the last years an intensive campaign has been conducted in this direction and the Department has distributed about 3 lakhs seedlings.

a) *Production and distribution of quality seedlings*: In order to continue the developmental programme already initiated, it is proposed to raise seedlings of the local types—Benaulim and Calangute—at the Government Farms of Ela, Kalay and Agro-Horticultural Research Station (Ela, Old-Goa).

Loan will be made available for expansion of new area at the rate of Rs. 750 per acre (Rs. 1,825 per hectare) subject to a maximum of Rs. 7,500 admissible to any applicant.

Staff: no special staff will be engaged for this purpose as the selection of the nuts and raising of nurseries will be conducted by Departmental staff.

The yearwise break up of the physical targets will be as follows: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. No. of coconuts to be planted (in lakh) ...	1.00	1.00	1.25	1.25	1.50	5.50
2. Seedlings to be distributed (75% of no. 1 above) ...	0.75	0.75	0.82	0.82	1.12	4.26
3. Area to be covered (Ha) ...	500	500	546	547	747	2,840
4. Area to be covered under loans (Ha) ...	10	10	10	10	10	50
5. Loan (Rs.) ...	18,250	18,250	18,250	18,250	18,250	91,250
6. Subsidy @ 0.60 p/seedling ...	45,000	45,000	49,200	49,200	67,200	255,600

Financial implications: The yearwise expenditure under this programme will be as follows: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	-	-	-	-	-	-
2. Revenue ...	1,25,000	1,25,000	1,56,250	1,56,250	1,87,500	7,50,000
3. Capital ...	-	-	-	-	-	-
4. Loan ...	18,250	18,250	18,250	18,250	18,250	91,250

b) *Coconut demonstration scheme*: Present low yields obtained in coconut cultivation could be stopped up if the use of fertilizers was more widely followed. For this purpose and to popularise their use a Centrally Sponsored Scheme on coconut demonstration was implemented during 1968-69. The same may be continued during the Fourth Plan period as a State financed scheme, in the following pattern of assistance:

1. Subsidy on fertilizer ... 50%
2. Subsidy on pesticides ... Rs. 10.00 per hectare
3. Subsidy on pumpsets ... 25% subject to the maximum of Rs. 500

It is proposed to organise a total number of 50 demonstration plots every year with an area of one hectare each.

Staff: It is proposed to provide one Agricultural Assistant in the pay scale of Rs. 110-180 for the supervision of the work of arranging, conducting and collecting data of the demonstration plots.

Policy: The following points will be taken into consideration while selecting the plots for demonstration purpose.

1. The plots will be located as follows: —

Year	Talukas
1969-70	Pernem-Bicholim-Satari.
1970-71	Bardez-Ilhas.
1971-72	Salcete-Murmagoa.
1972-73	Ponda-Sanguem.
1973-74	Canacona-Quepem-Pernem-Bicholim-Satari.

2. Coconuts gardens where the application of manures, chemical fertilizers and irrigation is not practised will be given preference, as in such gardens, the trees are likely to respond much better to the adoption of improved practices than those already some attention.

3. Plots selected each year will not be selected again for demonstration.

4. If the target of 50 plots is not achieved by the Talukas, 5 for each year, the demonstration will be extended to the Talukas earmarked for the subsequent year.

Inputs: The requirements of fertilizer is worked on the basis of 150 palms per hectare, thus for 50 hectares to be taken every year, the the area will be 7,500 palms. It is recommended to apply fertilizers mixture in 6:6:12 or P. 34 kg of No. 0.34 kgs of P 205 and 0.60 kgs of K 20 per tree per year. The equivalent quantity of ammonium sulphate, superphosphate and muriate of potash will be 1,75 kgs, 2 kgs, and 1 kg respectively.

The yearwise physical target will be as follows: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. No. of demonstration plots	50	50	50	50	50	250
2. No. of trees at the rate of 150 Ha ...	7,500	7,500	7,500	7,500	7,500	30,000
3. Area to be covered (Ha)	50	50	50	50	50	250

Pumping sets: Pumping sets will be distributed as per approved pattern of assistance already in force in this territory.

The required amount of loan for pumping sets will be made available from the provision made under Q loan advances for Minor Irrigation.

Pesticides: Under the Plant Protection scheme 50% subsidy has already been foreseen under the pattern of assistance approved by the Government of India. The same assistance will be made available to the coconut growers, and the cost of the purchase of pesticides will be met from that scheme.

Financial implications: The expenditure break up for the Plan period will be as follows:—

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	4,500	4,500	4,500	4,500	4,500	22,500
2. Revenue	11,720	11,720	11,720	11,720	11,720	58,600
3. Capital	—	—	—	—	—	—
4. Loan	—	—	—	—	—	—
	16,220	16,220	16,220	16,220	16,220	81,100

c) *Package Programme for Coconut:* Among the short term schemes suggested for implementation during the Fourth Plan Period this is the only and important one that is capable of enhancing coconut production to a considerable extent within the plan period itself. The principal part of the scheme lies in the adoption by every cultivator of package of practices such as regular inter-cultivation, manuring, irrigation and plant protection measures.

To get full benefit during the plan period itself, it will be necessary to cover the entire targeted area of 1,000 hectares during the very first year of the plan.

Facilities to be provided: It is proposed that the coconut growers may be advanced at low interest loan at the rate of Rs. 300/- per ha. for three consecutive years, recoverable with interest in three yearly instalment commencing from the 4th year onwards. The loan is given to meet the following items of expenditure:

1. Fertilizers	Rs. 200.00
2. Cultural practices	Rs. 30.00
3. Pests and diseases	Rs. 10.00
4. Irrigation	Rs. 60.00

Rs. 300.00 per hectare

The loan will be given in kind on items 1 and 3 and on the assurance that the recommended practices will be adopted.

Financial implications: The estimated amount required for giving loans will be Rs. 30,000 for the first year and Rs. 90,000 for the period of 3 years.

The yearwise break up will be as follows:—

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment	—	—	—	—	—	—
2. Revenue	—	—	—	—	—	—
3. Capital	—	—	—	—	—	—
4. Loan	30,000	30,000	30,000	—	—	90,000

Financial implication under coconuts: The yearwise break-up of expenditure of the developmental programme for coconut under the above mentioned items a), b) and c) will be as follows:—

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment	4,500	4,500	4,500	4,500	4,500	22,500
2. Revenue	1,36,720	1,36,720	1,67,970	1,67,970	1,99,220	8,08,600
3. Capital	—	—	—	—	—	—
4. Loan	48,250	48,250	48,250	18,250	18,250	1,01,250
	1,89,470	1,89,470	2,20,720	1,90,720	2,21,970	10,12,350

2. Cashewnut: Next to the iron and manganese mines, this crop is known to be the second largest source of foreign exchange of this Territory, inspite the low productions estimated to be about 3,000 tonnes per year, which is far from sufficient to the demands of the local processing units. At the same time all India demand for cashewnut faces a deficit of 1.93 lakhs tonnes and Goa has got vast potential to paly an important role to cover the dificit. The area of cashew in Goa was estimated to be to the extent of 32,000 hectares by a survey conducted as early as 1904. Based on this local production per tree work to a very low figure of half kilo per tree compared to 15 kilos per tree observed in Kerala.

During the two years that the Third Five Year Plan was in operation in this Territory and the two subsequent years (1966-68), efforts were made to distribute seedlings free of charge for new areas and for rejuvenation of old ones.

The approach to cashew development programme during the IV Plan period is to increase the production of nuts by establishing a potential through extension of acreage. Items which can be depended upon for immediate increase in production is a package programme for plantations a going more than 5 years, coupled with a programme of long term objective of new plantations which would help to wipe out the deficit in the succeeding plans. The following programmes are proposed to be taken up for cashew during the Fourth Plan.

a) *Expansion of Area (Cashew)*: Under this item the following year-wise targets are proposed:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
A. Departmental Plantation (Ha.)	100	200	300	400	500	1,500
B. Non-departmental (Ha.)	1,000	2,000	3,000	4,000	5,000	15,000
	1,100	2,200	3,300	4,400	5,500	16,500
Area to be covered under loan (Ha.)	10	20	30	40	50	150

Financial implications: The total financial implications at the rate of Rs. 500 per Ha. for departmental plantations as per working group's recommendation is as under: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
A. Departmental (Rs.)...	50,000	1,00,000	1,50,000	2,00,000	2,50,000	7,50,000

New plantations will be insured through production of quality seedlings and production of air layers.

Production of seedlings: Seedlings will be raised in polythene bags in nurseries established in villages under the control of the Zonal Agricultural Officers, and sold at subsidised rate of 50% of the cost price. As the production cost works to about 10 paise each, the sale price will be five paise each.

Production of air-layers: This scheme worked for the period of one year as Centrally Sponsored, and now will be incorporated in the regular programme of the Union Territory. As the Government does not have its own plantations, mother trees will be selected from the private gardens and layers prepared with the following yearwise breakup.

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
No. of layers	5,000	10,000	15,000	20,000	25,000	75,000
No. of staff	1	2	3	4	5	15

The cost of production of air layers works out to about 30 paise each, and so will be sold out to farmers at the subsidised rate of 15 paise each.

Staff: Agricultural Assistants will be engaged for this purpose in the scale of Rs. 110-131 at the rate of one for every 5000 air layers targeted thus during the 4th plan; one, two, three, four and five respectively for each year of the Plan. They will be first sent to the Central Cashewnut Research Station, Ullal, for a training.

Financial implications: The following will be the financial break-up of the expenditure to be incurred under this scheme for the Plan period.

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	3,500	7,000	10,500	14,000	17,500	52,500
2. Revenue	50,750	1,01,500	1,52,250	2,03,000	2,53,750	7,61,250
3. Capital	-	-	-	-	-	-
4. Loan	25,000	50,000	75,000	1,00,000	1,25,000	8,75,000
	79,250	1,58,500	2,37,750	3,17,000	3,96,250	11,88,750

b) *Package Programme (Cashew)*: At present no cultural operations and manuring or plant protection measures are followed by cashew growers as they are not convinced of the beneficial results that can be achieved out of them. Under this programme it is proposed to offer loans for the introduction of package practices in the private gardens, made available to the cultivators in the form of fertilizers and plant protection materials. The minimum unit for getting the assistance under the scheme is proposed to be one hectare, with a loan of Rs. 500 which is the cost for introduction of the package of improved practices.

The assistance under this scheme will be extended to the same area for a period of five years.

The area to be covered year-wise will be as follows: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Area to be covered (Ha)						
New	100	100	100	100	100	500
(Ha) Old	-	100	200	300	400	1,000
	100	200	300	400	500	1,500

The financial implications for the same period will work as follows:

50,000 50,000 50,000 50,000 50,000 2,50,000

Financial implications for cashewnut programme: The yearwise break up expenditure of the developmental programme for cashewnut under the above mentioned activities will be as follows:

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	3,500	7,000	10,500	14,000	17,500	52,500
2. Revenue	50,750	1,01,500	1,52,250	2,03,000	2,53,750	7,61,250
3. Capital	-	-	-	-	-	-
4. Loan	75,000	1,00,000	1,25,000	1,50,000	1,75,000	6,25,000
	1,29,250	2,08,500	2,87,750	3,67,000	4,46,250	14,38,750

The summarised financial implications for the three programmes — Coconut, Cashewnut and Arecanut — under this programmes are as follows: —

	1969-70	1970-71	1971-72	1972-73	1972-73	Total
1. Establishment ...	15,500	16,000	19,000	22,500	27,000	1,00,000
2. Revenue ...	1,87,982	2,38,732	3,20,732	3,71,482	4,53,482	15,72,410
3. Capital ...	-	-	-	-	-	-
4. Loan ...	1,23,250	1,48,250	1,73,250	1,68,250	1,93,250	8,06,250
	3,26,732	4,02,982	5,12,982	5,62,232	6,73,732	24,78,660

ITEM No. 6

DEVELOPMENT OF VEGETABLES

The up-take of vegetables as protective food is now well recognised. Nutrition and food research has shown that the health promoting properties of vegetables offer a good check against commonly prevalent diseases. The need for our local population of 6.5 lakhs of people as in mid-1968 is to the extent of 23,000 tonnes at the rate of 120 grs (4 ounces) per head per day. Presently, it is estimated that our area under vegetable is about 400 ha. with a average production of 7.5 tonnes per ha. our local production is of about 3,000 tonnes. Thus there is a deficit of 20,000 tonnes per year.

The local population will shoot upto about 20,000 people by the end of the Plan period, thus increasing the local need of vegetables at the same rate of 120 grs per head per day, about 900 tonnes.

To build up the local production and erase the deficit as much as possible, the following programme is proposed for the Fourth Plan.

1. Seed multiplication: Vegetable seeds of local vegetable will be produced at the Government Farms of Chimbel, Mapusa, Margao and Ela during the two seasons, in order to supply seed to the local farmers.

2. Supply of seeds and seedlings: Vegetable seeds and seedlings raised at the Government farms will be distributed at subsidised rates. Though these seedlings will be distributed freely to farmers from any area, a concentrated effort will be made to create "green belts" around the towns of Goa, Daman and Diu to make the impact of the vegetable development better felt. Further, to avoid a dispersion of efforts, the programme will emphasise on the development of certain types of vegetables only as follows:

For Khariff: Cucubitacous, Ladies fingers, etc.

For Rabi: Sweet potato, cabbages, Knolkhol, Dadish, Brinjals, Tomatoes, Amaranthus, beans, Lettuce, Watermelons, etc.

Seed for the above purpose will be brought from the Pusa Institute, National Seed Corporation, etc., in quantities sufficient to cover up the targets.

Financial implications the yearwise break up of the expenditure to be incurred under this item will be as follows: —

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	—	—	—	—	—	—
2. Revenue	5,000	5,000	5,000	5,000	5,000	25,000
3. Capital	—	—	—	—	—	—
4. Loan	6,250	6,250	6,250	6,250	6,250	31,250

C. APPLIED NUTRITION PROGRAMME

It is proposed to implement the applied Nutrition Programme, partly financed by U.N.I.C.E.F. and the State Government in selected Blocks in this Territory.

A lump sum of Rs. 3.00 lakhs is proposed as the share of expenditure of the State Government for the implementation of School, Gardens under the Horticultural development of the Applied Nutrition Programmes.

Yearwise Expenditure	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	60,000	60,000	60,000	60,000	60,000	3,00,000

D. ORGANIZATION

The implementation of this Scheme of a tremendous magnitude can be fully achieved only with a staff to handle the various activities planned.

The following pattern of organization is proposed to be created after approval of the plan.

1. One Horticultural Development Officer in the scale of Rs. 350-800.
2. Three Agricultural Assistants in the scale of Rs. 210-425.
3. Three Field Assistants in the scale of Rs. 110-131.
4. One U.D.C. in the scale of Rs. 130-300.

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
1. Establishment ...	17,280	18,088	18,916	19,744	20,572	94,600
2. Revenue	720	912	1,084	1,256	1,428	5,400
3. Capital	—	—	—	—	—	—
4. Loan	—	—	—	—	—	—
	18,000	19,000	20,000	21,000	22,000	1,00,000

Phased expenditure during the Plan period (1969-74)

S. No.	Items of expenditure	Revenue					Total	Capital					Total
		1969-70	1970-71	1971-72	1972-73	1973-74		1969-70	1970-71	1971-72	1972-73	1973-74	
1.	Non - Recurring ...	5,16,127	7,55,464	10,28,441	12,69,328	15,35,135	51,04,495	-	-	-	-	-	-
2.	Recurring ...	44,380	47,488	57,616	63,744	70,872	2,84,100	-	-	-	-	-	-
3.	Loans ...	-	-	-	-	-	-	1,55,750	1,92,000	2,29,500	2,34,500	2,72,000	10,83,750
4.	Land, buildings etc. ...	-	-	-	-	-	-	50,000	-	55,000	-	-	1,05,000
		5,60,507	8,02,952	10,86,057	13,33,072	16,06,007	53,88,595	2,05,750	1,92,000	2,84,500	2,34,500	2,72,000	11,88,750

SUMMARY

1. Non-Recurring	...	...	...	51,04,495
2. Recurring	...	...	...	2,84,100
3. Loans	...	...	...	10,83,750
4. Land-buildings etc.	...	...	...	1,05,000
Grand Total	...	...	...	65,77,345

D. EXPENDITURE SUMMARISED**A. Capital Expenditure:**

1969-70	50,000
1970-71	—
1971-72	55,000
1972-73	—
1973-74	—
	1,05,000

B. Revenue:

1. Establishment	2,84,100	Recurring.
2. Revenue	51,04,495	Non-recurring.

YEARWISE BREAKUP OF EXPENDITURE

Years	Revenue		Capital		Total
	Rec.	Non-Rec.	Loan	Others	
1969-70	44,380	5,16,127	1,55,750	50,000	7,66,257
1970-71	47,488	7,55,464	1,92,000	—	9,94,952
1971-72	57,616	10,28,441	2,29,500	55,000	13,70,557
1972-73	63,744	12,69,328	2,34,500	—	15,67,572
1973-74	70,872	15,35,135	2,72,000	—	18,78,007
Total	2,84,100	51,04,495	10,83,750	1,05,000	65,77,345

BUDGET PROVISION FOR SCHEME

Items	Revenue		Capital		Total
	Rec.	Non-Rec.	Loan	Others	
Staff	2,84,100	—	—	—	2,84,100
Subsidies, contingent expenditure	—	51,04,495	—	—	51,04,495
Land, building	—	—	—	1,05,000	1,05,000
Loan	—	—	10,83,750	—	—
	2,84,100	51,04,495	10,83,750	1,05,000	65,77,345

The scheme is budgeted for Rs. 65.77 lakhs during the Fourth Five Year Plan.

Name of the Items	General Development of fruit production	Development of fruit production for export purposes	Agricultural production			Horticultural development			Fourth Five Year Plan (figures in Rs.)	
			Training of gardeners	Establishment of progeny-cum-Nurseries	Development of commercial crops	Development of vegetables	Development of pepper & betelvines	Applied nutrition programmes	Organization	Total
1	2	3	4	5	6	7	8	9	10	11
1. Establishment										
1969-70	3,600	-	3,500	4,500	15,500	-	-	-	17,280	44,380
1970-71	5,400	-	3,500	4,500	16,000	-	-	-	18,088	47,488
1971-72	7,200	-	3,500	9,000	19,000	-	-	-	19,916	57,616
1972-73	9,000	-	3,500	9,000	22,500	-	-	-	19,744	63,744
1973-74	10,800	-	3,500	9,000	27,000	-	-	-	20,572	70,872
Total	36,000	-	17,500	36,000	1,00,000	-	-	-	94,600	2,84,100
2. Revenue										
1969-70	1,48,850	48,125	31,450	4,000	1,87,982	30,000	5,000	60,000	720	5,16,127
1970-71	2,60,100	87,820	58,900	4,000	2,38,732	40,000	5,000	60,000	912	7,55,464
1971-72	3,71,350	1,25,925	86,350	8,000	3,20,732	50,000	5,000	60,000	1,084	10,28,441
1972-73	4,82,700	1,67,190	1,13,800	8,000	3,71,482	60,000	5,000	60,000	1,256	12,69,328
1973-74	5,88,850	2,07,125	1,41,250	8,000	4,53,482	70,000	5,000	60,000	1,428	15,35,135
Total	18,51,750	6,36,185	4,31,750	32,000	15,72,410	2,50,000	25,000	3,00,000	5,400	51,04,495

3. Capital	1969-70 ...	...	-	-	45,000	5,000	-	-	-	-	-	50,000
	1970-71 ...	...	-	-	-	-	-	-	-	-	-	-
	1971-72 ...	...	-	-	-	55,000	-	-	-	-	-	55,000
	1972-73 ...	...	-	-	-	-	-	-	-	-	-	-
	1973-74 ...	...	-	-	-	-	-	-	-	-	-	-
Total ...	...	-	-	45,000	60,000	-	-	-	-	-	-	1,05,000
4. Loans	1969-70 ...	...	16,250	-	-	-	1,23,250	10,000	6,250	-	-	1,55,750
	1970-71 ...	...	27,500	-	-	-	1,48,250	10,000	6,250	-	-	1,92,000
	1971-72 ...	...	40,000	-	-	-	1,73,250	10,000	6,250	-	-	2,29,500
	1972-73 ...	...	50,000	-	-	-	1,68,250	10,000	6,250	-	-	2,34,500
	1973-74 ...	...	62,500	-	-	-	1,93,250	10,000	6,250	-	-	2,72,000
Total ...	...	1,96,250	-	-	-	8,06,250	50,000	31,250	-	-	-	10,83,750
Grand Total ...	...	20,84,000	6,36,185	4,94,250	1,28,000	24,78,660	3,00,000	56,250	3,00,000	1,00,000	-	65,77,345

NAME OF THE SCHEME: EXTENSION TRAINING CENTRE —

Nature and Scope: This is a continuing scheme. The Extension Training Centre was established in December, 1964, by amalgamating the Agricultural School at Pilerne and the Rural Welfare Centre at Guirim. This was effected by Government order No. CDS/2508/65, dated 4-7-1965. At the beginning the centre was conducting, two courses. a) Two years course for Training of Farmers sons and b) One year course for training of Gramsevikas. The Centre has brought out two batches of Farmers sons and three batches of Gramsevikas. The course of training of farmers sons was discontinued with effect from April 1967 and a new 2 years course for training of Inservice Gramsevikas was started during 1967-68. The first course was started on 2-1-1967 and 20 Gramsevikas in service with the Community Blocks were taken up for this course. This batch will complete the course in December 1968. A second batch of another 20 Gramsevikas will be admitted in the course on 2-1-1969.

The Extension Training Centre is at present housed temporarily in sheds at Pilerne on a farm of 10 acres. The centre will be shifted to the site of the Research Station at Ela during the course of the current year. The necessary step in construction of school, Hostel buildings, etc. are taken up. The Farm store-cum-workshop building taken up in 1966-67 has been completed. The work of hostels for boys and girls was started at the end of 1967-68 and will be completed during the current year. The Administrative-cum-school building will be constructed during the current year. Special emphasis will be laid on Farmers Training and Education. This Training will be through demonstrations, audio-visual aids and Farms Group Discussions. The demonstration programme will include multiple cropping with emphasis on important food crops and intensive area programmes. A mobile unit moving from one village to another organising production cum demonstration camps in the farmers fields. Farmers discussions and radio broadcasts will be conducted where farmers will be taught to use farm machinery such as tractors, oil engines, and other equipment at the workshop wing existing at the Research Station. Training of Associate women workers will be taken up. The trainees will be selected by the Block Development Officers and will have monthly stipend of Rs. 75/- per month and travelling allowances as per Government Rules. The training will be of one month. During their training programme they will be taken to different Farms in Goa, 20 Associate women workers will be admitted for each course. Gramsevikas besides their regular curriculum at the Institution will be taken up on tour to other well developed farms inside and outside Goa. The Pre-service training will be for two years and inservice for one year. The Gramsevika training will be of one year. The gramsevikas, Associate women workers and Farm women will be given practical classes in the Home Science, cooking, and Applied Nutrition programme. The material for practicals will be provided by the Training Centre. A Pilot Kitchen will be set up with the help and guidance of the Regional Home Economist. The Centre will have a Balwaddi attached with a capacity for 25 children to give them practical training in child care. Refresher's course for Mukhya Sevikas will be held in Agriculture, Animal Husbandry, on Applied Nutrition and Home Science.

Requirements of Staff: Additional staff is required. The Perifatic team will consist of a qualified experience agriculture Specialists as Trai-

ning Officer. For Farmers area two Demonstration Assistants to help and assist to conduct the field demonstrations, Instructor in Domestic Science, Instructor in Animal Husbandry. The other staff that will be required from time to time will be loaned from respective Departments for giving lectures.

Physical targets during the Fourth Plan

Training	1st year	2nd year	3rd year	4th year	5th year	Total
1. Gramsevak (Preservice)	40	40	40	40	20	180
2. Gramsevikas (for Refreshers course) ...	20	20	20	20	20	100
3. Associate women workers	100	100	100	50	—	350
4. Farmers Groups (each group of 20)	—	100	100	—	100	300
5. Farm women	—	—	10	—	—	10
6. Mukhya sevikas	—	—	—	10	—	10

Budget requirements

(Figures in lakhs Rs.)

Items	1st year	2nd year	3rd year	4th year	5th year	Total
Staff	0.16	0.16	0.16	0.16	0.16	0.80
Contingencies stipends, furniture, etc....	1.00	1.00	1.00	1.00	1.00	5.00
Buildings, etc.	—	1.20	—	—	—	1.20
Total	1.16	2.36	1.16	1.16	1.16	7.00

Budget provision of Scheme

(Figures in lakhs Rs.)

Items	Revenue	Capital	Total
Establishment, allowances, etc.	0.80	—	0.80
Contingencies, stipends, furniture, etc.	5.00	—	5.00
Buildings, etc.	—	1.20	1.20
Total	5.80	1.20	7.00

The Scheme is budgeted at Rs. 7.00 lakhs during the Fourth Plan.

NAME OF THE SCHEME: **AGRI-HORTICULTURAL RESEARCH AND CHEMISTRY SECTION —**

Nature and Scope: — This is a continuing Scheme. The object of the scheme is to carry out various kinds of investigation work consisting of conducting various experiments with new varieties of seed and plant stock to study their adaptability under local conditions, to conduct various agronomical experiments to study optimum doses of fertilizers, to evolve new strains of crops, to set up progeny orchards of important Horticultural crops and to carry out regular soil analysis work from cultivators fields.

The Research Station has three sections at present namely, Agronomy, Horticulture and Soil testing.

The Research Station has a cultivable area of about 60 acres out of which about 20 acres are under permanent plantation of coconut crop. About 20 acres area is utilized for experimental purpose. Since inception in 1965, the Research Station has released pure multiplied seed of a number of outstanding varieties of crops like Paddy, Ragi, Groundnut Banana, Pineapple Papaya and Tapioca. Among these, mention may be made of Taichung Native I and IR-8. The two high yielding varieties of Paddy, Purna and Annapurna varieties of Ragi, Spanish improved, TMV2 and Faziapr varieties of Groundnut, Cavendish variety of banana, Giant Kew and Mauritius varieties of Pineapple, cricket ball and kalipatti varieties of chikoo, Malayan-4 and Malabar Special varieties of Tapioca.

The Farm is serving as the main centre for the supply of nucleus seed. A vegetable development centre established during 1967-68 has been able to produce sufficient quantities of vegetables seeds for distribution to the public. The developmental work till 1967-68 consisted of clearance of 30 acres area of forest growths, construction works like compound wall, internal roads, administrative buildings, staff quarters, soil testing laboratory.

Systematic plantation of Horticultural crops was taken up on the cleared forest area during 1967-68, and orchards of mango, chikoo lime established. During 1968-69, planting of other Horticultural crops like guava, custard apple, pomogrenate, pimelo etc, will be taken up. On the hilly tract plantation of cau and arecanut will be started. The new laboratory set up the site of the Research Station will be commissioned during 1968-69 and full fledged work on soil analysis will be taken up during the Fourth Plan.

The construction works like barbed wire fencing, farm store cum threshing yard, two class III quarters, four class IV quarters which were taken new works like desilting of two irrigation tanks, laying of irrigation channels in fields construction of internal road, cattle shed, etc. will be taken up, and are expected to be completed during 1968-69.

In order to take up full research work in the fields of Agronomy and Horticulture and Plant Protection it is very essential to fill up the posts of the three Senior Research Officers, in the scale of Rs. 350-800.

During the Fourth Plan a further 20 acres of land adjoining the Station will be acquired. Rs. 6.74 lakhs have been proposed in the 2nd year of Plan. In the third year a further provision of Rs. 2.00 lakhs is made for buildings.

Yearwise break up of finance requirements

(Figures in lakhs Rs.)

Items	1st year	2nd year	3rd year	4th year	5th year	Total
Staff	23.040	20.940	21.840	22.740	23.640	1.09.200
Implements, books, periodicals, furniture, fertilizers, pesticides maintenance of core-stock, machine and other cont. expenditure	1.47.000	1.50.000	1.50.000	1.50.800	1.50.000	7.50.000
Cost of land building etc.	—	6.74.000	2.00.000	—	—	8.74.000
	1.70.040	8.44.940	3.71.840	1.73.540	1.73.640	17.34.000

Scheme budget break-up

(Figures in lakhs Rs.)

Items	Revenue	Capital	Total
Staff	1.10	—	1.10
Contingencies	7.50	—	7.50
Land, building etc.	—	8.74	8.74
Total	8.60	8.74	17.34

The Scheme is budgeted for Rs. 17.34 lakhs as shown above in the Fourth Plan.

NAME OF THE SCHEME: AGRICULTURE MACHINES AND IMPLEMENTS—

Nature and Scope: This is a continuing Scheme. Tractor ploughing and cultivation of soils by mechanical means is a necessity in Goa. This scheme aims at to provide cultivators with right type of machinery and improved implements for ploughing and other agricultural operations such as harrowing, inter-cultivation, sub-soil opening, terracing, threshing and for bringing cultivable wastelands under cultivation. For this purpose it is proposed to better utilize the present tractor and bulldozer services by exploiting to the maximum advantage the existing tractors, supplementing them with new ones wherever required and by maintaining them on economic basis.

There is a good scope for mechanical cultivation in Goa due to:—

1. Shortage and high cost of hand labour due to mining industry.
2. Inability of bullock drawn ploughs to work in Khazanlands which needs deep ploughing.
3. Presence of large areas of cultivable wastelands which could be brought under cultivation.
4. Traditional bullock drawn implements to be replaced by improved one.

Thus the Goan farmer always welcomes mechanical cultivation. There are approximately 18,000 hectares of Khazanlands forming 40% of the total area under paddy which forms the fertile paddylands of the Territory. Besides ploughing, the tractors would be used by the farmers for other agricultural operations like, threshing, terracing, seed-drilling, etc. in order to reduce the labour cost and accelerate the farming operations. Similarly, the vast uncultivated wastelands which are existing in this Territory are required to be cleared to extend sugarcane area with the help of Bulldozers and tractors for bringing them under cultivation. It is proposed to purchase two bulldozers if available for this purpose during the first year of the Plan. Thus, the main objective of the introducing machinery in farming operations is to ensure all possible agricultural productions through utilisation of cultivable land, which due to scarcity and high cost of labour might have been left fallow. Mechanisation of agriculture, wherever possible will also, eventually bring down the cost of production.

Further to provide time to time servicing and repairs to those costly equipments the existing Garage-cum-workshop at Tonca will be strengthened by the addition of workshop equipments such as welding equipments, lathe, hack-saw machine, hand tools, etc.

For providing field services for the tractors during the breakdown in the fields, it is proposed to procure a Mobile Workshop. This was included in the plan programme during 1967-68 but D. G. S. & D. could not effect the delivery in time. This will be purchased during the current year.

Tractors are given on hire basis for agricultural operations. It is quite necessary to have the checking on the proper working of the tractors and to realise the exact revenue. At present there is no measure to check the working hours of tractors, therefore, it is proposed to fix hour meters to the tractors.

So far, the mechanization of agriculture is limited for preliminary operations such as Ploughing and Terracing. It is proposed to mechanise other operations such as Puddling, Ridging, Harrowing, etc. For this purpose it is proposed to purchase other attachments to the existing tractors, which in turn is expected to utilise the tractors during off season and reduce working cost.

Regarding supply position, presently there are 40 tractors in working condition which are capable of turning out 20,000 hours of work, covering an approximately 8,000 hectares. During the Fourth Plan Period, it is proposed to cover an area of 40,000 ha. with mechanical cultivation. No purchase of new tractors is foreseen during the early period of the Plan. The existing fleet of machines will be put to maximum use. It is proposed to mechanise other farm operations, and thus operate the tractors for more hours during the year.

Due to smallness of the Territory, no separate organisation of Agro-Industry Corporations to promote hire and sales of agricultural machinery will be possible. This aspect will be continued to be looked after by the Department.

Repairs and maintenance of service centres is already being undertaken in Government Workshops both at the Centre and North and South

of the Territory. Presently, almost the total fleet of machines are owned by the Government. During the Fourth Plan, it is expected, with the advent of some Agro-Commercial units being set up in the private sector, that some farm machinery will be owned by these private farms. It might not always be possible for such of the private parties to provide for a workshop to repair and service their machinery. Such services are proposed to be given through Government Workshops under a paying system.

Training and Demonstration: The Working Group has recommended the establishment of a training centres and demonstrations for farmers to get them acquainted with different types of machines and cultivation by mechanical means. Provision for demonstrators and technical workers has been made during the second year of the Plan for training and demonstration purposes.

Subsidies: As per Working Group's suggestions no subsidies are proposed for this scheme on tractors. Provision has however been made to grant loans to farmers and other institutions to help them acquire their own machinery.

Organisation: The following new staff is proposed to be engaged during the Plan Period to further assist in the intensive working of the scheme: —

- One Accountant (210-380)
- One Supervisor (180-380)
- Two Senior Mechanics (130-212)
- Two Assistant Mechanics (110-131)
- One Blacksmith-cum-carpenter (125-180)
- Two demonstrators (180-380)
- Two Diploma holders mechanical (210-380)

DISTRIBUTION OF IMPROVED AGRICULTURAL IMPLEMENTS

This Scheme was taken up during 1968-69 as a separate scheme. Thus, it is a continuing item which is being amalgamated to the scheme on Machines and Implements.

The main object of the scheme is to popularize the use of various improved agricultural implement among the cultivators.

This scheme will be implemented by procuring improved implements like iron plough, hand operated intercultivating hoes, paddy thresher, groundnut and maize shellers etc., for distributing to the cultivators at 25% subsidized rates. Necessary demonstrations will also be conducted in cultivators fields for popularising the use of improved agricultural implements. Side by side, designing of some of the improved implements will be taken up at the Mechanical Workshop. It is also proposed to advance loans to cultivators for the purchase of improved agricultural implements according to the Rules in force.

A budget provision of Rs. 1.25 lakhs for subsidy and demonstration purposes is made during the Fourth Plan. A provision of Rs. 5.00 lakhs has been proposed to be utilised for the disbursement of loans to the cultivators for the purchase of improved agricultural implements.

Yearwise break-up of budget

(Figures in lakhs Rs.)

Items	1st year	2nd year	3rd year	4th year	5th year	Total
Staff	0.21	0.30	0.32	0.34	0.36	1.53
Revenue	2.75	2.75	2.75	2.75	2.85	13.85
Capital	8.00	2.00	2.00	1.00	1.00	14.00
Loans	1.00	1.00	1.00	1.00	1.00	5.00
Total	11.96	6.05	6.07	5.09	5.21	34.38

Budget break-up of scheme

(Figures in lakhs Rs.)

Items	Revenue	Capital		Total
		Loan	Others	
Establishment	1.53	-	-	1.53
Subsidies, spares, diesel etc.	13.85	-	-	13.85
Equipment, Bulldozers, etc.	-	-	14.00	14.00
Loans	-	5.00	-	5.00
Total	15.38	5.00	14.00	34.38

Thus, the scheme on machines and Implements is budgetted for Rs. 34.38 lakhs as shown above.

NAME OF THE SCHEME: LAND DEVELOPMENT UTILIZATION OF CULTIVABLE WASTELAND —

Aims and Objects of Scheme: Vast wastelands suitable for cultivation are shown to be available in this Territory. Approximately 92,000 ha. are registered as cultivable wastelands. During the 3rd Five Year Plan a beginning has been made, and an area of 400 ha. of land has been cleared. These wastelands are held partly by Govt. private parties, Comunidades and Devalaias. Survey and categorisation of wastelands has not been completed and will be undertaken as per directives of Govt. based on report of Committee for wasteland.

During the 4th Plan, an area of 2000 ha. is prepared to be claimed for cultivation, at the rate of about 400 ha. per year. The achievement of this target depends on the availability of bulldozers to do the job of reclaiming, as the costly man labour in the Territory makes it too uneconomic.

Expenditure is foreseen mostly for issue of loans to cultivators under loan Rules.

Resettlement of Kumeri Cultivators: This is a continued Scheme. The purpose of this Scheme is to resettle kumeri cultivation of the Talukas of Satari, Sanguem, Pernem, Bicholim, Ponda, Canacona and Quepem who as a result of ban imposed by Government on cultivation of hill millets by kumeri system have been deprived of their usual mode of livelihood.

It is estimated that since as a result of imposition of ban by Government on kumeri cultivation about 1800 families have been denied of their usual mode of livelihood in Talukas of Sattari, Sanguem, Bicholim, Ponda, Quepem, Canacona and Pernem.

With a view to rehabilitate these families a scheme of resettlement of kumeri cultivation (landless agricultural growers) was initiated in the year 1965-66 and continued in subsequent year 1966-67. Under the scheme to alignate the kumeri growers from their usual practice of shifting cultivation and fix them to a definite patch of land which they should feel as their own, Government wasteland was allotted to them for cultivation of hill millets like ragi, vari, etc. and fertilizers for manuring the crop were given free of cost during the first year and at 75% subsidised rate during the subsequent year. Since the use of implementation of this Scheme it may be said that out of 1800 families affected nearly half of them i.e. about 980 have been resettled in Talukas of Satari and Canacona.

As there are still about 820 families to be resettled and fixed to land and assistance to the resettled ones is to be kept up, it is proposed to continue the Scheme during the 4th Plan Period on the following lines:—

(i) In pursuance of the Government policy each family of kumeri growers which are yet to be resettled will be given 2 hectares of land from Government wasteland and reverted aforamentos.

(ii) Improved seed of ragi variety and Vari will be supplied to each family at cost price.

(iii) Fertilizers at the rate of 20 kg. N for hectare will be made available to them on loan basis at 25% subsidised rate to be recovered at the time of harvest in cash or kind which will be at the discretion of the cultivators.

(iv) To demonstrate and popularise improved practice of cultivation by use of Improved Seed and application of proper doses of fertilizers, demonstration plots under supervision of the Department will be laid out. A provision of Rs. 3.00 lakhs during the 4th Plan under Revenue is being made towards cost of seed, subsidy, etc.

Items	Revenue	Capital		Total
		Loan	Others	
Subsidy, cost of seed and other contingencies	3.00	—	—	3.00
Loan	—	5.00	—	5.00
Total ...	3.00	5.00	—	8.00

The Scheme is budgetted for Rs. 8.00 lakhs.

NAME OF THE SCHEME: **AGRICULTURAL INFORMATION AND PUBLICITY—**

The object of the Scheme is to educate the cultivator on modern methods of agricultural practices for increasing production. To educate him brochures, covering all aspects of cultivation of important crops like paddy, coconut, arecanut, pineapple etc. will be brought out and distributed. An agricultural calendar indicating agricultural operations to be carried out in each month will also be published for free distribution. Crop posters on seasonal basis will also be published for distribution. A news bulletin of the Department, indicating the activities of the Department and its future programme will be published quarterly. Audio-visual education will also be undertaken by exhibition of films and slides.

Agricultural Information Unit has been set up in the Department of Agriculture in Goa to collect the agriculture information and carry out publicity work.

An expenditure of Rs. 0.60 lakhs in each of the Five Years has been considered under *Revenue* to meet contingent expenditure.

Thus the Scheme is budgetted for Rs. 3.00 lakhs during the Fourth Five Year Plan.

NAME OF THE SCHEME: **AGRICULTURAL EXHIBITION AND SHOWS —**

Description of Scheme: The object of the Scheme is to conduct exhibition and shows depicting the activities of the Department as well as the results achieved by adopting improved agricultural practices. Exhibitions of fruits, vegetables etc. will be held at the appropriate season. Exhibitions on mechanisation of Agriculture, use of improved agricultural implements etc. will also be held.

Prizes will be awarded for the best exhibits.

Expenditure on the Scheme is anticipated to be Rs. 1.20 lakhs in each of the Five Years, all under *Revenue* to meet contingent expenditure.

Thus, the Scheme is budgetted for Rs. 6.00 lakhs during the Fourth Plan.

NAME OF THE SCHEME: **SETTING UP AN AGRICULTURAL STATISTICAL SECTION —**

Brief Description of the Scheme: The object of the scheme is to improve the machinery for collection of agricultural statistics which suffers today mainly from three major defects viz. lack of i) timely news ii) complete coverage and iii) reliability of primary data. For this purpose a separate statistical wing has been initiated during last year in the General Statistical Deptt.

These would be three main Sections viz: —

- i) Crop Estimation and ad-hoc survey.
- ii) Design and analysis of field experiments and large scale trials on cultivators fields and

- iii) Survey and planning and training unit which will collect complete and publish material on agricultural statistics. The scheme will also provide for staff assessment of additional production.

It is also proposed to carry out a critical study of the data pertaining to rainfall, prices, areas, production of crops etc. collected by the Department in the past with a view to ascertaining the trend and periodicity if any, and expand the present work of collection, compilation and publication of primary agricultural statistics.

However the general details and methodology of working will be designed by General Statistics Department under whose guidance the work will proceed.

An expenditure of Rs. 0.50 lakhs in each of the Five years has been proposed all under *Revenue* to meet contingent expenditure.

Thus, the Scheme has been budgetted at Rs. 2.50 lakhs in the Fourth Plan.

NAME OF THE SCHEME: **SUBSIDY FOR PUMPS** —

Brief Description of the Scheme: This is a continuing Scheme. During the Third Five Year Plan, the scheme was implemented through other Plan Schemes like Horticultural Developments, Seed Multiplication, etc. where subsidies were given. During the Fourth Five Year Plan it is proposed to subsidise the distribution of pumps under one scheme of subsidy for pumps as per the recommendation of Planning Commissioner.

Pumps will be distributed for two categories of cropings:

- a) Food Crops
- b) Horticultural Crops

Under food crops, it is proposed to subsidise the distribution of pumpsets for irrigating additional lands brought under cultivation as also in conversion of single crop lands to double cropped. During the Fourth Five Year Plan, 650 pumpsets will be distributed for irrigating an additional area of 1960 acres under food crops.

Under horticultural crops, pumpsets will be subsidised for the development of coconut, pineapples, vegetables, areca, etc. 350 pumpsets will be distributed for irrigation an additional area of 1050 acres under horticultural crops.

Subsidy: The subsidies to be given throughout the Fourth Plan will be as follows:

For Diesel sets:

Upto 5 H.P.	50% Subsidy.
From 5-10 H. P.	37½% Subsidy.
Above 10 H. P.	25% Subsidy.

For all kerosene/Petrol engines and electric motors, 25% subsidy will be given without any reference to the Horse Power.

A budget provision of Rs. 7.50 lakhs is made for the entire Plan, for payment of subsidies under Revenue.

NAME OF THE SCHEME: CONSTRUCTION OF AGRICULTURAL DEPARTMENT BUILDING AND THREE ZONAL AGRICULTURAL OFFICES-CUM-RESIDENCES —

Brief Description of the Scheme: The activities of Agriculture Department have increased with the extensive development programmes. Additional Sections have been provided, additional staff has been recruited. Besides Accounts, Administration, and few technical Sections i. e. Plant Protection, Horticultural, other Sections have been operating from the Headquarters.

Now three more Sections will be operating from Headquarter in Panaji, 1) Fertilizer Section, 2) Agricultural Statistics, 3) Agricultural Information Unit.

With the expansion of the Agriculture Department, the Economy Committee in 1967, has made its recommendation that the Agricultural Department should immediately make efforts to have a building of its own in the Fourth Plan Period.

Five Zonal Agricultural Offices were created in 1967, as per the recommendation of Economy Committee by the Government of Goa, Two of the Divisional Agricultural Offices were converted into Zonal Agricultural Offices, while three new Zonal Agricultural Offices were sanctioned at Bicholim, Ponda and Curchorem. It is proposed to have Office-cum-residences at these new Zonal places.

Provision for the land and building at Panaji, Bicholim, Ponda, and Curchorem, in Fourth Plan is as follows. Accordingly, the constructions of a building for Department of Agriculture and 3 Zonal buildings for office-cum-residences are proposed during the Fourth Plan.

Item	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Capital Land and Building	2.00	2.00	1.00	-	-	5.00

The Scheme is budgetted for Rs. 5.00 lakhs.

NAME OF THE SCHEME: CADASTRAL SURVEY —

SCOPE: — To prepare, upto-date cadastral maps for implementation of Record of Rights, Tenancy Act and various other land reforms and also to Scientifically classify the lands for fixation of land revenue by regular settlement operations.

INTRODUCTION

The upto-date cadastral maps and Record of Rights are the essential basis for better agrarian situation in the territory and facilitate imple-

mentation of various land reforms in connection with the improvement of agriculture. They are also necessary for formulating town planing schemes, acquisition of lands for public purpose viz. development of communications, implementation of rural development programme. The cadastral maps are also required to be made available to the public on demand for evidence in the Court of Law, improvement of agriculture and settlement of boundary disputes. This work is of enormous magnitude. The total survey work and soil classification work of this territory is estimated to be of 20 years for the existing staff. In order to speed up the progress it is proposed to double the existing staff and complete the work within a period of 7-10 years. The total cost for completion of the survey work is estimated to be Rs. 1.60 crores and for classification of lands is Rs. 1.00 crore (i.e. in all the estimate of this scheme is Rs. 2.60 crores).

ACHIEVEMENTS

The cadastral survey work has been commenced in this territory from November, 1965 by the surveyors taken on deputation from the Government of Maharashtra. Surveyors were also recruited locally and imparted training (9 theodolite and 42 plane tablers) by the two Inspectors from the survey of India deputed to this Government. The new trainees commenced actual field survey work from November 1967 on completion of their training. Thereafter the second batch consisting of 9 theodolite surveyors and 45 plane table surveyors were locally recruited in December 1967 and March, 1968, respectively. They have completed training by the end of May, 1968 but they could not be put on field survey work due to commencement of monsoon. Besides this, 18 persons are now deputed by the Government of Maharashtra. Thus the staff as shown below in column no. 2 is now available for survey work from November, 1968.

Sanctioned strength and designation	Existing strength	Additional Staff to be recruited shortly	Total to be employed for plan period
1	2	3	4
15 Head Surveyors	15	13	28
30 Field Surveyors (Theodolite)	30	18	48
100 Field Surveyors (PT)	100	100	200

Yearly phasing of physical programme: In each field season (i. e. from November to May) the existing staff will be able to complete field measurement of 20 villages. The yearly phasing is as shown below: —

Sr. No.	Item	Years					Total
		1969-70	1970-71	1971-72	1972-73	1973-74	
I.	Theodolite Survey	40	45	50	60	65	260
II.	Detail Mapping	30	40	40	40	40	190
III.	Scientific classification of lands	—	—	17	20	20	57

In order to accelerate the progress of survey work it is proposed to double the existing staff so as to complete more than half the area by the end of the Fourth Five Year Plan.

Yearly phasing of the Financial Outlay: The total financial outlay for the 'Fourth Five Year Plan' period is 1 crore for the scheme of cadastral survey (Survey and Classification of land). The yearly phasing is as shown below:—

1969-70	1970-71	1971-72	1972-73	1973-74	Total
20.80	19.80	19.80	19.80	19.80	1,00-00

GENERAL

It is proposed to accelerate the progress of cadastral survey work and also to take up the work of scientific classification of lands for fixation of land revenue by drafting about 40 persons from the existing survey staff from the year 1971-72 as by that time they will gain thorough knowledge of survey and will be useful for commencement of scientific classification of lands with training for about a month of soil. By this arrangement this department will be able to progress both the items of survey as well as classification work speedily.

Statement showing the estimates of Cadastral Survey work in Goa Territory

Sr. No.	Name of the Taluka	Total No. Villages	Total Area in Ha.	Approx. No. of tenanted holdings	Remarks
1	2	3	4	5	6
1.	Pedne	27	24200	121000	The information regarding the No. of holdings is approximate as calculated at 5 holdings per Ha. The exact No. is not available.
2.	Dicholi	30	23633	118165	
3.	Marmagao	15	7831	39155	
4.	Sanguem	53	88660	443300	
5.	Kanakona	8	34736	173680	
6.	Satari (Valpol)	85	51284	256420	
7.	Salcete (Margao)	48	27719	138595	
8.	Quepem	39	34731	173655	
9.	Ilhas (Goa)	39	16612	83060	
10.	Bardez (Mapusa)	38	26480	132400	
11.	Ponda	28	25229	116145	
	Total	410	361115	1805575	

Physical targets to be achieved

Sr. No.	Name of Scheme	1969-70	1970-71	1971-72	1972-73	1973-74	Total	Balance
1	2	3	4	5	6	7	8	9
Part I								
I. Cadastral Survey	...	(A) 40 Vill.	45 Vill.	50 Vill.	60 Vill.	65 Vill.	260 Vill.	110 Vill.
		35,000 Ha.	40,000 Ha.	50,000 Ha.	55,000 Ha.	60,000 Ha.	2,40,000 Ha.	40 Vill. are expected to be completed by 1968-69.
		(B) 30 Vill.	40 Vill.	40 Vill.	40 Vill.	40 Vill.	190 Vill.	200 Vill.
		15,000 Ha.	25,000 Ha.	30,000 Ha.	30,000 Ha.	30,000 Ha.	130,000 Ha.	20 Vill. are expected to be completed by 1968-69.
Part II								
II. Scientific Classification of lands for settlement operations	...	—	—	17 Vill.	20 Vill.	20 Vill.	57 Vill.	353 Vill.
				8,000 Ha.	10,000 Ha.	10,000 Ha.	28,000 Ha.	

Notes: — (A) Theodolite Survey.
 (B) Plane Table Survey.
 Vill. Villages.

NAME OF THE SCHEME: **ABOLITION OF VARIOUS TENURES IN GOA UNDER LAND REFORMS —**

In order to bring the Land Revenue Administration in this territory on par with that obtaining in the neighbouring States, the Goa, Daman and Diu Land Revenue Code Bill has already been introduced in the Legislative Assembly of Goa and will be passed shortly to become an Act in due course.

This Code provides for a ryotwari tenure of land in which land is held on occupancy tenure. This tenure would be granted only in respect of Government lands which are disposed off by the Government after the coming into force of the Code. It would also apply to the lands which have been granted to the proprietors as well as the tenants under the provisions of the Daman (Abolition of Proprietorship of Villages) Regulation, 1962. A similar type of legislation, namely the Goa, Daman and Diu (Abolition of Proprietorship of Lands in Diu) Bill, 1958 has also been formulated and is under consideration of the Government of India. Under this Bill also the existing tenures in which the lands are sold in Diu by the various proprietors under sale deeds will be abolished and the lands will be re-granted to the proprietors and the cultivating tenants on occupancy basis.

In Goa, however, as mentioned earlier, it is only so far as the Government lands which are to be disposed off hereafter that this tenure will come into existence. It is, however, necessary that the various tenures under which land is held at present in Goa are also abolished and all lands are brought under occupancy tenure, subject to the provisions of the Land Revenue Code. The various tenures on which lands are held in this territory are as under: —

- 1) Lands which have been purchased by sale from the State;
- 2) Lands which have been given on provisional concession from the States;
- 3) Lands which have been given on emphyteusis (permanent lease);
- 4) Lands granted on annual or triennial lease from the State;
- 5) Lands held by the Comunidade;
- 6) Lands purchased from the Comunidade;
- 7) Lands granted under provisional concession by the Comunidade;
- 8) Lands granted on emphyteusis by the Comunidade;
- 9) Lands granted on annual or triennial lease by the Comunidade.

Out of these, persons holding lands under emphyteusis, provisional concession or annual or triennial lease, pay "foro" or rent to the Government or the Comunidade from whom the land has been granted. Further the land which is cultivated is subject to the payment of "Contribuição Predial" which is a payment made to the State and is equal to about 10% of the net annual income. This predial had been assessed as far back as in 1905 and has not been revised inspite of the developments which have taken place in the land and the rise in prices of agricultural produce. The total amount of predial recovered now is about Rs. 9 lakhs.

There is no land revenue settlement as is known in the rest of the country. The Land Revenue Code Bill provides for the survey of lands and introduction of settlement of land revenue. However, this could be done in respect of lands held on occupancy tenure. The Comunidades and also other holders of land are today holding a very large area of uncultivated and waste lands, which in the neighbouring States are generally held by Government and are available for disposal to landless persons, small holders, etc., or for other developmental activities. The public utility lands, like grazing land, roads, tanks, bunds, etc., are also vesting in the Comunidades. It has been the experience of this Administration that as a result of this position there have been considerable handicaps in implementing the various developmental schemes under the Plan Projects. In fact at present Govt. has been required to acquire some of these lands under the provisions of the Land Acquisition Act for the various activities of this Govt. as well as the Central Government and very heavy compensation was required to be paid for such lands. If these tenures are not abolished Govt. will have to continue to pay in future heavy compensation for such land.

In view of all these circumstances it has become quite imperative to abolish all these tenures and to replace them by the occupancy tenure, commonly called the ryotwari tenure. This can, however, be done by undertaking a suitable land tenure abolition legislation as has been done in most of the States in the country. It is proposed by this Administration to enact such a Legislation. Obviously the vesting of uncultivated lands and lands useful to the community in the Government will require payment of compensation to the holders of these lands. The rate of compensation would obviously be decided by the Legislative by the enactment of such a Bill. However, it can be estimated very roughly at this stage. An amount of about Rs. one crore will be needed during the Fourth Five Year Plan period to pay compensation to the holders of the lands which would be vested in Government. A provision on this account has, therefore, to be made in the Fourth Five Year Plan.

The payment of compensation can be made only after a legislation to abolish the various tenures is passed and enquiries are held by the Officers as may be authorised in this behalf by such legislation, to determine the compensation payable to individual tenure holder in respect of the land which will vest in Government. These orders would obviously be subject to appeal and revision and consequently the actual payment of compensation can be made by the Government only after the claims for compensation are finally decided in the manner provided in the tenure abolition legislation.

Since even the legislation has yet to be drafted and approved by the Government of India and passed by the Assembly, it would be difficult to state with any definiteness, the compensation that would have to be paid by Government during the various years of the Fourth Plan Period. It can, however, safely be assumed that in the year 1969-70 no payment will have to be made since all this period will be required in the passing of the legislation and the commencement of its implementation. From the subsequent years we can expect that the compensation enquiries would start and be completed in some cases at least and compensation become payable. As years pass, the number of enquiries which are completed would increase and consequently the amount of compensation would also increase.

2 — Minor Irrigation

Introduction: Goa with its peculiar topography and copious rainfall has a ample scope for the development of minor irrigation. Until this date there was no proper staff for conducting investigation on the water potential and the situation has slightly improved presently by having a division under P. W. D. From the preliminary findings it appears that the administration can very well utilise the water for irrigating land. Preliminary investigation is in progress. It is therefore hoped that the division will be fully developed exclusively for minor irrigation to investigate and implement project which can decidedly give thorough benefits to Goa, Daman and Diu. With a view therefore to boost up the production, the following schemes are proposed to be taken up during the 4th five year plan: —

Tanks: There are a number of tanks in Goa some of them are perennial, but in most of the cases they are seasonal. The tanks belong to private parties like Comunidades, Devalayas or individuals. Being old structures much of the water trapped of the post monsoon showers is lost due to seepage in bund and sluices. It is proposed to repair a few of such major tanks and maintain them for proper utilisation of water in case the tanks are handed over to Govt. as gifts. Action has already been taken in this direction to accept such tanks through the agency of B. D. O's and Mamlatdars. Study is also made of some ideal sites which can be converted into tanks to unbound water.

A provision of Rs. 12.00 lakhs is therefore made to renovate such tanks, which will also be utilised for the repairs and renovation of tanks in Daman and Diu area.

Bhandaras: Goa is having a net work of rivers and tributaries. Since these rivers originate from the Ghats, for most of their run they carry sweet water, except when they come to plain the effect of salinity is experienced for a length of about 10 miles. These small streams can be dammed for dual purposes.

- i) To prevent the effect of salinity damaging the fields.
- ii) Also to retain sweet water which can either be taken by gravity flow or lifted and used for irrigating some cash crops. A number of such sites have been selected and it is felt that we may succeed in this endeavour, as a few constructed areas have become very popular among the public and there is great demand.

It is therefore proposed to construct at least 50 such bandharas in the next five years at a cost of Rs. 22.00 lakhs.

Lift Irrigation: There is a good scope for the use of water of the perennial rivers and their tributaries irrigation purposes. A few such

which have been studied indicate that lift irrigation would be the only alternative to bring the isolated patches under plough which otherwise cannot be cultivated. Installation of High medium H. P. pumps can give double advantage.

1. The water can be used for the area when monsoon fails.

2. Second crop can be raised. Both these crops can be of the type of cash crop, in places where until these days, pulses were grown which thrived on soil moisture.

The administration has taken up a few plot projects and hope to succeed with them. Subsequently the administration is thinking in terms of installing more pumps and raise cash crops. There is also a proposal to apply Irrigation Act to this territory and by large it is hoped to cover up practically all such areas by the end of 4th five year plan. The pumps will work on electricity wherever it can be availed and in place where electricity will not be available, diesel pump sets will be installed.

A provision is therefore made to spend Rs. 22.50 lakhs on the State owned lift irrigation schemes.

Wells: So far no detail study of the water table is available but from the experience obtained by the technical personnel on observation in various Talukas show that patches of lands speed out as a few acres can be only irrigated by well irrigation. The water table seem to be not too low as most of the farmers dug ponds and have horticulture between November and April generally onion, chillies, sweet potatoes, water melons and other vegetable are grown.

It is proposed to construct about 400 such wells each costing about Rs. 5000/- each with a small pump and engine. A sum of Rs. 20.00 lakhs is provided to be spent in the 4th five year plan.

There are two weirs one at Khandeapar and the other at Paroda. There is a pucca canal to these which take off the water and on the whole irrigate about 1500 acres. The cannals have been extended to bring additional 100 acres under irrigation. The maintenance of these cannals have to be done. A sum of Rs. 2.50 lakhs is provided for the 4th year plan for the repairs and maintenance of this system.

6. Government of India have already liberalised the pattern of assistance to farmers for minor irrigation works like construction of wells, desilting of wells and tanks, renovation of tanks and on pump sets. A sum of Rs. 12.00 lakhs has been provided for this purpose.

In order to implement this programme the Division of Minor Irrigation will have to be strengthened. Some scientific equipments and vehicles have to be purchased. A sum of Rs. 10.00 lakhs is provided for establishment.

Irrigation works such as construction of Bandharas are also to be taken up shortly in Daman and Diu.

Desilting of a number of tanks has already been taken up and the same is under execution.

Besides the above, a number of lift irrigation schemes have already been proposed and plans and estimates are prepared for execution.

3 — Soil Conservation

The importance of river embankments to Goa need no more emphasis, as it has been an accepted fact that the river embankments have to be repaired and maintained to protect the low lying areas, producing paddy from the ill effects of salinity, to maintain the navigability of the rivers etc. particularly so at present with the implementation of Tenancy Act when neither the tenants nor the owners are taking care of them, resulting in flooding the areas. The sluices in the embankments have to be repaired and maintained to effect drainage from the catchments. It is hoped that the Khar Land Board if comes, will take care of this but until such time, these embankments and sluices have to be looked after.

Every year this Administration repair on the average about 25 to 30 Km. of such embankments. In the fourth five year plan it is proposed to cover at least 150 to 200 kms. of such embankments, construct a few sluices and maintain the already repaired one. A sum of Rs. 60.00 lakhs are provided for the purpose.

It has been observed that the tenants do not respond well to the clauses in the Agricultural Tenancy Act, 1964. There has been gross negligence on the part of tenants towards the repairs and maintainance of the river embankments. Government have therefore decided to bring in the «Goa Khar Land Board» on lines with a similar one existing in Maharashtra and it is hoped that this Board will be in a position to control the day to day problems arising out of river embankments. Until such Board comes the funds provided for river embankments will be operated by P. W. D. and as soon as the Board starts working the balance of the funds provided will be passed on to the Board, being Rs. 5 lakhs as subsidy on staff and establishment and remaining amount will be treated as a loan to the Board, to be spent on such works of repairs and maintainance to bunds sluices etc. which the board may decide. The loan shall be repayable to Government in such years and at such interest as the Government may decide.

The remaining amount of Rs. 36.00 lakhs shall be operated by P. W. D. on various Soil Conservation Schemes.

The rivers and their branches have been found to be silted up. The barges carrying Mineral Ore ply close to embankments exerting hammering action detrimental to the embankments. Due to eddycurrents a few portion have become shallow and in monsoon the catchment water does not find its way. Overtopping of the embankments and consequent failure are feared to occur. In order to prevent this it is proposed that the river portion for steady flow be dredged and this can be achieved by dredgers.

Beach erosion: The extension of Marmagoa Harbour has resulted in ill effects on the beaches at Sirdona. The beach at Calangute, Colva and

other places is experiencing beach erosion. This has got to be checked. The only manner by which we can do this is by having walls which can take this shocks of the waves, putting spurs and groyne. The shifting sand dunes in Goa and Daman can be controlled by planting trees like casuarina, equisitifolia and such other species, in consultation with the Forest Department. A token provision of Rs. 8.00 lakhs is provided for the purpose.

Treatment of Mining Areas: Panic is caused among the cultivators, who are pretty certain that in the next 5 to 6 years some of the fields which used to yield a good paddy produce, may have to be abandoned in view of the hard pan of mining slurry brought down in these fields. It is therefore necessary that the problem be studied and solution be applied. One of the way is to put some diversion trenches or graded banks and water ways and dispose the slurry into pits ment for it or through the nallas into the river. We may also plant trees and grasses. The problem is serious and it is expected that in the 4th Five Year Plan we may take up this. Hence a token provision of Rs. 10.00 lakhs is made.

Development of Pasture Lands: — There are no pasture lands developed in Goa. However with ample water available and with the Soil type, it is possible to establish a few pasture lands as pilot schemes in such places where we have cattle or introduce them and sponsor cattle breeding as per the carrying capacity. This would require taking of the area, top dressing it, putting some contour bunds, and waterways, fencing the areas, etc. A sum of Rs. 3.00 lakhs is provided for the purpose.

Soil conservation in River valley project: — Two major irrigation projects are contemplated to come up for execution during the 4th five year plan. It has been the accepted fact in the river valley projects, adequate soil conservation measures if not taken right in earnest, the life period of the reservoirs get reduced more than 50% at times due to siltation.

Siltation of reservoirs is a serious problem in most of the cases where dams are constructed in India. Hence if the project are to start, side by side we may have to effect catchment treatments, in these river valley projects. It is proposed to provide a sum of Rs. 5.00 lakhs as token for the purpose.

Catchment treatment: — Drainage from the catchment areas is not adequate. Most of the nallas have been silted up and thereby at number of places changing of the course of the nallas have been experienced. While a check to this course changing can be effected by adopting some mechanical structures like construction of border, desilting of nallas, plantation of species of trees, etc. treatment of the catchment for soil loss due to excessive run off cannot be overlooked. It is therefore suggested that we may take up this catchment treatment scheme for which a token provision of Rs. 5.00 lakhs is proposed.

Subsidies: — The Goa, Daman and Diu Agricultural Tenancy Act provides for a subsidy upto 50% to protective bunds. The Government of India also provides subsidy for soil conservation works. Hence a provision of Rs. 5.00 lakhs of subsidy to the farmers on institution for taking up any

type of soil conservation work, like control of bank erosion effecting drainage in water logged areas, terracing, construction of graded water-ways or any other types of water-ways, putting graded banks, or diversion banks, putting contour trenches, etc. is provided for the 4th Five Year Plan.

An ambitious planning during 4th Five Year Plan is done taking into consideration the basic important problems. It is absolutely essential that a soil conservation Division be set up right in earnest with different sub-divisions for handling various schemes.

4 — Animal Husbandry

POSITION BEFORE THE IMPLEMENTATION OF THE THIRD PLAN

During preliberation days the Territory had no separate Department of Animal Husbandry and Veterinary Services and it was the most neglected sector in the Territory's economy. No schemes of any developmental nature were implemented and food products of animal origin like milk and milk products and meat were imported.

After the two plans were implemented in rest of the country, a planning was introduced for the first time towards the middle of the Third Plan in order to develop the local resources as a step towards self sufficiency in various Livestock products.

With this aim in view, it was necessary to streamline the existing machinery and a separate Department of Animal Husbandry & Veterinary Services was organised in order to take up the Development Programme more effectively and consequently to improve the Territory's economy.

Practically all the cattle and buffalo population is of non-descript type with very poor productive capacity both with regard to production and draught. Therefore, any attempt at improvement of the local livestock would be directed towards the upgrading of local stock either by cross breeding or introduction of superior breeds, their management, better feeding and disease control.

It was to achieve the desired results, therefore, that for the first time in the history of this Territory, development schemes were introduced in 1963-64 with the introduction of the following schemes:—

1. Organisation of a separate Department of A. H.V. S.
2. Schemes of Animal Health.
3. Manufacture of Biological products locally.
4. Training and Education Schemes for training of B. V. Sc., I. D. D., Stockman training to Department Officers in various advanced Post Graduate Courses under artificial Insemination and Poultry Husbandry.
5. Premium Bull Scheme.
6. Distribution of improved breeds of boars and sows.
7. Establishment of Breeding Farm.
8. Establishment of Regional Poultry Farm.
9. Establishment of Intensive Poultry Development Blocks.
10. Milk Supply Scheme.

IMPACT OF THE THIRD PLAN

Animal Health: As a result of the Schemes all the Taluka places including Daman were provided with a Veterinary Dispensary supported by aid centres at remote places to treat the livestock and to control epizootic, scientific practices of feeding and managements was propagated and extension carried out to the remotest places. This has resulted in bringing down the mortality in livestock and the spreading of various livestock diseases which have exerted a heavy toll on the poultry and domestic animal of the Territory. Widespread vaccination campaign against epidemic diseases was undertaken.

Cattle Development: In order to upgrade local nondescript cattle and buffaloes, premium bulls of superior quality like Sindhi, Murrah, Kankrej were located at suitable places.

In order to produce breeding bulls of superior quality a Composite Livestock Farm was established with a herd of Sindhi and Murrah buffaloes. The bull calves are reared and distributed under the Premium Bull Scheme. Also the Farm has got a cultivation section where various types of fodder crops and grasses of high nutritive value are cultivated both for the supply of fodder to the Farm and seed material for distribution to progressive farmers. The Farm also prepares silage and hay. The Farm, in addition to producing superior bulls, also serves as a Demonstration Farm for the scientific management, breeding and feeding practices and cultivation of improved fodder.

The most rapid and all round development of cattle is accomplished by the introduction of Key Village Scheme which includes breeding by artificial insemination and natural service, feeding, management, disease control, mass castration of scrub bulls, etc.

A beginning was made by the training of subordinate staff in various technical aspects involved in the Scheme and trial artificial insemination have been initiated at the Government Farm. Establishment of Central Semen Collection Centre, acquisition of bulls, both exotic and indigenous, necessary equipment and training of the staff and bulls is already under way. The location of sub-centres is already finalised and the farmers are already being familiarised with the practices so that that they will avail of the facilities without any hesitation.

As there was a problem of assured and continuous supply of balanced feed at economic prices, a Feed mixing Plant was commissioned having 4 ton capacity per day to meet the requirement of cattle feed of the farmers at a reasonable price.

To prevent the dry animals finding the way to the slaughter house a Salvage Farm was established for maintaining dry cows and buffaloes with feeding cost to be recovered from the owners. The animals will remain the property of the owners and provision of facilities for breeding are made. At present only Government animals are maintained.

Poultry Development: The Farm was existing during pre-liberation days consisted of a flock of 200 birds of Hampshire and White Leghorn breed was expanded to 1000 birds to serve as a Regional Farm for supply of chicks of improved breed to poultry keepers.

As there was a heavy demand for breeding stock, it was found necessary to expand the Farm and a strength of 10,000 birds is envisaged. The previous site was found to be inadequate to cope with the demand and so a new site at Ela, Old Goa, was selected. The necessary construction of poultry houses, residential quarters was undertaken. At present the strength of the Farm has reached to 3000 birds and this will be expanded in stages to 10,000 birds capacity during the course of Plan with requisite poultry birds. Only pure breed, White Leghorn or Rhode Island Red Chicks were being hatched and supplied so far.

It was observed that the limiting factor for poultry development is the high cost of feed and an assured supply of balanced feed. To ensure a regularly supply of feed at a reasonable price a feed mixing plant has been put up and grains are obtained in bulk and this will contribute to some extent in bringing down the cost of production of eggs and table birds.

With a view to provide gainful occupation to farmers and consequently to improve their economic level, three Intensive Poultry Developments Blocks were organised and in each Block a cooperative consisting of poultry breeders was formed with the main purpose for providing common facilities in disease control, technical knowledge, production, collection, storage and marketing of eggs and poultry products as well as supply of balanced feed. The Societies were assisted by providing financial assistance in the form of loan, share capital contribution and managerial subsidy.

The working of Poultry Societies has not been very satisfactory in practice due to individualistic view of the members which has hampered the effective working of the Scheme especially in relation to marketing of eggs and poultry products and thus they could not strengthen the organisation on sound economic footing. However, individual members have shown promising progress having expanded their original units even upto the strength of 1000 birds.

Due to this setback a fillip could not be given to the Societies to expand their activities as originally anticipated. As a result of the implementation of the Scheme despite the shortcomings, the production of eggs has considerably been increased and now it is time to take marketing at state level as these Societies are unable to cope up with this aspect of the Scheme due to various reasons.

Recently, Applied Nutrition Programme has been introduced in two blocks for which initial measures necessary have been taken. The equipment has been received from the UNICEF and implementation in the blocks is on the way.

Pig Development: The Territory affords good scope for piggery development as practically every christian family maintains indigenous pigs for meat consumption. They are mostly maintained on the kitchen and farm waste and scavenging. They develop slowly and it was therefore felt necessary to introduce improved breed of pigs which are fast growing and prolific breeders. Large white Yorkshire is the main breed which was introduced by free distribution of Boars and Sows.

Again, here the same problem as with poultry has been experienced as regards high cost of maintenance as they cannot be merely maintained

on kitchen waste and scavenging. However, it is worth mentioning that some of the Institutions having large number of boarders have succeeded in maintaining profitable herds of these improved pigs due to the large quantities of left-over available from their Institutions.

To maintain an assured supply of breeding stock a Pig Breeding Farm has already been established and piglings are being supplied at a concessional price to breeders.

Financial assistance mainly by way of loan for better housing and feeding are given to encourage the development of the improved breed of pigs.

Technical advice in management, feeding, disease control, is being provided freely through the technical staff.

With the implementation of the Scheme a noticeable improvement is perceptible in the areas where pigs have been supplied among the indigenous swine population. However, much is yet to be done especially in the matter of providing cheap feed and marketing of pork and preservation of products.

Training & Education: Due to dearth technical staff in the Territory and to provide for the expansion of the various development Scheme, it was felt necessary to have the requisite technical personnel, Local candidates and Departmental Officers were trained in B. V. Sc., Stockman and Artificial Insemination, Advanced course in Poultry Husbandry.

Special Schemes:

a) *Slaughter Houses:* There was a proposal to modernise the existing slaughter houses in the Territory and accordingly a budget provision was made in the Third Plan. However, subsequently the prospect of setting up of Meat Rendering complex with F.A.O. aid was studied and found feasible. Since this would also include a Modern Centralised Slaughter House for the entire Territory, the proposal of proceeding with the modernisation of the slaughter houses was held in abeyance.

b) *Carsass Utilisation:* Similarly a proposal to take the Scheme of Carsass Utilisation did not materialize for the same reason as stated in the case of Slaughter Houses.

APPROACH TO THE FOURTH PLAN

Cattle Development: The salient features of the Fourth Plan would be the adoption of various measures to achieve the goal of self sufficiency in milk, eggs and meat at an early date in this Territory so as to bridge the gap of shortfall. Therefore, all our efforts would be directed towards adaption of Schemes in various sectors of Animal Husbandry to consolidate and expand the efforts already made and the adoption of new Schemes. Stress is being laid on scientific breeding by introduction of exotic breeds and providing for easy access to the inputs.

The main plank in the policy is the improvement of the Livestock by cross breeding with exotic proven sires and the intensification of urban

Key Village programme which has the objective of multifaceted development in cattle. The number of Key Village Blocks will be increased to six during the Fourth Plan supported by sufficient number of sub centres located at appropriate sites. Inaccessible areas will be served by natural breeding by locating superior quality breeding bulls.

The Composite Livestock Farm be expanded further to meet the increasing need for quality sires and the area under cultivation will be extended and necessary provision for housing Livestock will be undertaken. The existing salvage farm will be expended to accommodate at least 200 dry animals and 100 calves and dry animals calves from the farmers will be also reared at the Farm at a nominal cost.

A new Scheme for assistance to specialised Dairy Farms will be introduced during the Fourth Plan each with not less than 10 breeding cows for enabling them to take to cattle breeding and milk production as an application and during the Plan period, 5 such Farms will be developed.

It is proposed to distribute calves from high yielding dams for the utilization of genetically potential calves. The calves will be purchased or obtained from the State Breeding Farm and made available to the members of Dairy Societies. During the plan period it is envisaged to distribute free of cost about 250 calves at the rate of 50 calves per year.

Feeds & Fodder Development: Intensive campaign will be launched by introducing forage crops of high nutritional value in milk shed areas and areas covered by Key Village Scheme. The programme envisages establishment of Forage Demonstration cum Fodder Seed Farm, popularisation of forage conservation methods, development of grass lands and Establishment of Farm for cultivation of maize and forage for use in compounding livestock feeds.

Sheep and Goat Development: Being a heavy rainfall track, the area is not suitable for sheep development. Goats, however, are kept on a small scale by shepherds in hilly areas and goat rearing under range conditions has not been favoured in view of the browsing habits and damage they cause to the vegetation. In view of the above factors it is advisable to drop this sector of development in the Territory.

Poultry Development: The existing State Poultry Farm will be expanded from 3000 birds to 10,000 during the Fourth Plan period to produce adequate number of genetically superior stock and to enable the Farm to run on commercial basis. The programme envisages essential facilities such as additional buildings, equipment and feeding charges to enable them to run poultry on economic lines.

The working of the Intensive Poultry Development Blocks will be streamlined and marketing facilities for eggs and poultry products will be taken up in order to provide economic price to the producers. Financial assistance to Societies will be provided in the form of loans, share capital, managerial subsidy, etc.

Credit Facilities: Necessary credit facilities will be made available to Societies as well as to individuals to take poultry production on commercial lines. The loan will be advanced at the rate of Rs. 15/- per bird for setting up commercial egg production farms of 500 to 1000 birds.

Poultry Development in hilly/tribal/backward areas: This Scheme will be implemented for the benefit of the weaker section of population to supplement their source of income and improve their nutritional standards. Each family will be provided with loan and 50% subsidy in the form of birds for maintaining 25 birds. During the plan period it is proposed to take up 100 families under the programme. It is also envisaged to provide feed on subsidized rate for first two years.

Poultry Demonstration Units: The existing Poultry Demonstration Units at the Taluka level will be maintained and strengthened in order to disseminate the modern methods of Poultry farming on commercial lines.

Applied Nutrition Programme: To provide protective food to expectant and nursing mothers and pre-school age children through the setting up of poultry units in rural areas, two Blocks are allotted to the Territory and the same will be strengthened during the Fourth Plan to provide the protective food on a wider scale. If necessary, additional blocks will be taken up during the plan period.

Pig Development: The existing pig Breeding station which serves as a nucleus for the supply of improved breed of pigs will be expanded to supply the increasing demand of pigs in the Pig Development Blocks. An average of 200 pigs per year will be produced and supplied to Farmers in the development blocks. Farmers will be instructed as to the scientific, commercial maintenance of these exotic animals and they will be assisted in the form of loan and subsidy and technology of pork products especially bacon and ham. Efforts will be made to set up at least 100 units of each consisting of five sows and one boar including smaller units.

During this stage it is not envisaged to set a Bacon Factory as the development of piggery is not expected to feed the Bacon Factory even of a moderate size. In case the development is satisfactory, efforts will be made to take up Bacon Factory towards the later stage of Fourth Plan or beginning of Fifth Plan.

Particular stress will be paid to the swine spizootic by immunising the animals mainly of the exotic breed against swine fever.

Feeds will be made available at economic prices from the Feed Mixing Plant. of the Department.

Animal Health:

Expansion of Veterinary Aid facilities: The existing dispensaries will be further strengthened and expanded to provide better facilities to Livestock. The Dispensaries will be supported by the sufficient Aid Centres especially at remote places which are not easily accessible to the Dispensaries. No new Dispensaries are proposed to be established as the existing ones are adequate to cater to the needs. However, about 20 Aid Centres will be established in areas which need them most.

During Fourth Plan it is proposed to convert two of the Dispensaries into full fledged hospitals with inpatient ward with a mobile unit attached.

Rinderperst is practically nonexistent in this area but now as there is free flow of cattle from neighbouring States it will be advisable to take up the immunisation especially of the bordering belts.

At present there are no facilities for disease investigation. It is therefore proposed to establish one clinical and investigation centre during the Fourth Plan to serve the entire Territory. This will help in speedy diagnosis and treatment of infectious and obscure diseases.

Special Schemes:

1. *Feed Mixing Plant*:—As there was great difficulty in getting assured supply of balanced cattle, poultry and pig feeds at a reasonable price, the Feed Mixing Unit was commissioned during 1967-68 having 4 tons capacity. The response is satisfactory and with the development of Livestock it is expected that the demand will considerably increase during the course of time. Hence it is proposed to expand the unit to cater to the growing demands. For this the necessary additional equipment will be purchased. The scheme will be run on commercial lines on no profit no loss basis. The ingredients, required for compounding feed will be partly purchased and partly produced at the Departmental Farm.

2. *Modernisation of Slaughter Houses*:—The modernisation of the existing Slaughter Houses is of immediate need but the programme was not taken up so far due to the non-materialising of Meat Complex which is under consideration. The Meat Complex Project provides for Central Slaughter House and in case this materialises the modernization of Slaughter Houses will be redundant. However, provision is made to take up the Modernisation of Slaughter Houses.

Training & Education: Due to dearth of technical staff it is necessary to undertake training programme in various branches of Animal Husbandry and Veterinary especially in B. V. Sc., Stockman, Fodder Development and Swine Husbandry. Also the Department Officers will be sent to Government of India Institutions for availing specialised training in modern techniques.

SUMMARY STATEMENT OF ALLOCATIONS

Group of Schemes	Provision in lakhs
1. Cattle Development	40.00
2. Feeds and Fodder Development	12.50
3. Poultry Development	21.00
4. Pig Development	3.75
5. Animal Health	15.71
6. Special Schemes	7.04
Total	100.00

CATTLE DEVELOPMENT

8

Outlay proposed Rs. 40.00 lakhs

S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes changes suggested programme in respect continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Key Village Scheme.	Enlargement of the area and increased coverage by adding five blocks to the existing blocks.	One block and six sub-centres and Central Semen Collection Centre.	Six blocks.	11.00	The blocks located in area which are potentially milk pockets.	Phasing Two blocks 1969-70 Two blocks 1970-71 Two blocks 1971-72
2.	Composite Live-stock Farm—Breeding Farm.	Expansion of the Farm to produce more superior bulls for breeding programme.	Consists of a Shindi Herd with 34 adult animals, 25 young stock, 6 bulls, 74 calves and Murrah herd consisting of 62 adult she-buffaloes, 26 young stock, 58 calves 9 bulls.	Herd size of Sindhi adult 100, Bulls 15, Hurrah She-Buffaloes 200, Bulls 20 & increase in cultivation area.	23.00	No changes are suggested except introduction of Rahti herd.	
3.	Cattle Salvage Farm.	Enlargement of the Farm to accommodate a larger number of dry animals and calves. Also 50 acres of land will be developed for fodder cultivation.	Only Govt. animals numbering 50 are maintained and an area of 25 acres are developed for cultivation of fodder crops, water source for irrigation is developed.	The number of animals maintained will be increased to 200 dray animals and 100 calves and area under cultivation will be increased to 50 acres.	3.04	No changes are proposed except expansion.	

4. Distribution of female calves of buffaloes & cows.	Utilisation of genetically potential calves for stepping up of milk production.	New Scheme.	250 calves.	0.75	The calves will be distributed in milk shed area. They will be purchased at weaning time from the milk colonies and from the Breeding Farm and distributed free to progressive breeders.	Phasing 1969-70 calves 50. 1970-71 calves 50. 1971-72 calves 50. 1972-73 calves 50. 1973-74 calves 50.
5. Assistance to specialised Dairy Farm.	Formation of groups, specialised dairy farms each with not less than 10 breeding cows or buffaloes for enabling them to take cattle breeding and milk production as an application.	New Scheme.	5 Farms.	1.50	It is proposed to select five specialised dairy farmers who have adequate resources of land and livestock. These farmers will be provided with loan assistance of Rs. 30,000/- each for enabling them to strengthen their herd by addition of 10 cows or buffaloes. The assistance also includes provision for housing agricultural equipment, etc.	Phasing 1969-70 1 Farm. 1970-71 1 Farm. 1971-72 2 Farms. 1972-73 1 Farm.
6. Premium Bull Scheme.	Distribution of superior breeding bulls in areas which are not covered by Key Village Scheme.	38 bulls distributed.	50 bulls.	0.71	No changes are proposed and the scheme is continuing.	
				<hr/> 40.00		

I. Cattle Development:

1) *Key Village Scheme*: In order to enlarge area and increase coverage it is proposed to take up five additional blocks of cattle supported by sub-centres ranging from 6 to 8 sub-centres depending upon breedable cattle population in milk shed areas. The programme will be closely integrated with other cattle development schemes, Feed and Fodder Scheme, Rural Dairy Extension Service so that all round development of cattle is achieved. The Central Semen Production Centre which is established will be further expanded to cope with the programme. Tentative budget provision proposed is Rs. 11.00 lakhs and details are as follows:

- 1) *Staff*: Consists of Key Village Officer, six Veterinary Officers supported by subordinate staff like Stockman, Bull Attendants, Drivers, Laboratory Assistant and Administrative staff.
- 2) *Equipment*: Consists of 35 trevis cum insemination crates, thermoflasks, semen preservation equipment, Refrigerators electric/kerosene, five Jeeps and other miscellaneous equipment like glassware, chemicals, etc.

Provision required for five years:

1) Pay of staff and allowances	Rs. 4.00 lakhs
2) Non recurring expenditure on equipment, buildings	Rs. 4.50 lakhs
3) Recurring expenditure on rent, electricity, water, office expenses, maintainance of vehicles, etc.	Rs. 2.50 lakhs
Total	Rs. 11.00 lakhs

2) *Expansion and Reorganisation of the State Breeding Farm*: The existing Farm will be consolidated and expanded during the Plan so as to adequately stable the increasing herd of Sindhi, Murrah and young stock. Also a Rathi herd will be introduced at the Farm. The purpose of the expansion of Farm is to strenghten and reorganise so that the existing Farm may take up scientific breeding through progeny testing technique and produce proven bulls. The strength of the herd will be raised from 35 cows to 100 cows and the strength of Murrah buffaloes will be raised from 60 she buffaloes to 200 she buffaloes. It is expected that about 15 Sindhi bulls coming from high yielding dams and 30 Murrah buffalo bulls will be available for the breeding programme in the Fourth Plan.

The area under cultivation of fodder crops will be increased from 30 acres to 76 acres by providing lift irrigation devices so that sufficient feed is available for the enlarged herd.

Tentative budget provision proposed is Rs. 23.00 lakhs and details are as follows:

- 1) *Staff*: Additional staff consisting of Supervisors, Milkmen, Herdmen, Mechanic, Shed cleaners, will be recruited.

- 2) *Equipment*: Consists of milk cans, milking pails, farm cooler, agricultural implements, trolleys, bullock carts, tie chains, buckets, gamellas, pump sets, etc.
- 3) *Buildings*: Cattle sheds, calf sheds, bull pens, calving shed, residential accommodation, fencing.
- 4) *Miscellaneous Stores*: Feeds, seeds, chemicals, detergents.

Provision required for five years:

1) Pay of staff and allowances	Rs. 5.00 lakhs
2) Capital expenditure on buildings	Rs. 4.00 lakhs
3) Non-recurring expenditure on equipment	Rs. 2.00 lakhs
4) Recurring expenditure on cattle feed, medicines, chemicals, detergents, hay, daily labour wages, maintainance of vehicles, office contingencies	Rs. 9.00 lakhs
5) Purchase of Livestock	Rs. 3.00 lakhs
Total	Rs. 23.00 lakhs

3) *Cattle Salvage Farm*: The Salvage Farm, already established will be consolidated and the benefit extended to the farmers to salvage dry cows and buffaloes which otherwise are wasted. Feeding cost will be recovered from the owners and the animals will remain the property of the owners. Breeding facilities both natural and artificial will be provided. Sufficient area for grazing and cultivation of fodder crops will be developed to support about 200 big animals and 100 calves.

Tentative budget provision is Rs. 3.04 lakhs and details are as follows:

- 1) *Staff*: Additional staff consisting of one Stockman, one Agricultural Assistant, six grazers, Assistant mechanic.
- 2) *Equipment*: Pump sets, pipes, agricultural implements, buckets, gamellas, spades, bullock carts, trolleys.
- 3) *Buildings*: Temporary sheds to house animals especially during monsoons.

Provision required for five years:

1) Pay of staff and allowances	Rs. 1.00 lakh
2) Expenditure on development of land	Rs. 0.50 lakhs
3) Construction of temporary sheds	Rs. 0.50 lakhs
4) Non recurring expenditure on equipment	Rs. 0.25 lakhs
5) Recurring expenditure on feed, hay, daily wages on labour, office contingencies	Rs. 0.79 lakhs
Total	Rs. 3.04 lakhs

4) *Free Distribution of Female Calves of high yielding cows and buffaloes:* In order to utilise the genetically potential calves from high yielding dams, it is proposed to purchase 250 female calves of both buffalo and cow at weaning and to distribute free of cost to farmers especially in milk shed areas. The calves will be provided from the Govt. State Farm or under Calf Rearing Scheme of Govt. of India or from breeding tracts. The cost of calf is expected to round about Rs. 300/-.

The total expenditure envisaged for five years is Rs. 0.75 lakhs.

5) *Assistance to specialised Dairy Farm:* Assistance to specialised Dairy Farm is a new Scheme which aims in promoting of formation of group of specialised Dairy Farms each with not less than 10 Breeding Cows for enabling them to take to cattle breeding and milk products as an application. It is proposed to assist five farmers who have got adequate resources of land and livestock. Each will be provided with a loan to the maximum of Rs. 30,000/- and the location of such Farms will be within the area covered by the Key Village programme. The entire assistance will be in the form of medium type of loan under usual conditions.

Tentative provision is @ Rs. 30,000 for Farm.

For Five Farm Rs. 1.50 lakhs

6) *Premium Bull Scheme:* It is proposed to distribute superior breeding bulls of cows and buffaloes in areas which are not covered by the Key Village Scheme. The bulls will be distributed free of cost to Panchayats and maintenance allowance at the rate of Rs. 180/- per quarter will be reimbursed if the conditions are fulfilled. During the Plan period about 50 bulls will be distributed in suitable areas.

Tentative budget provision proposed is Rs. 0.71 lakhs.

Details of expenditure are as follows:

1) Cost of 50 bulls 	Rs. 0.50 lakhs
2) Payment of premium towards maintenance 	Rs. 0.21 lakhs
Total	Rs. 0.71 lakhs

FEEDS AND FODDER DEVELOPMENT

Outlay proposed: Rs. 12.50 lakhs

S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes-changes suggested in programme in respect continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Establishment of Forage Demonstration-cum - Fodder Seed Farm.	To demonstrate improved practices of forage production conservation and utilization, seeds for recommend fodder crops.	On a limited scale this function was performed at the Breeding Farm.	One Farm.	5.00	To undertake studies and organise demonstration on various forage crops and multiplication of foundation seed.	
2.	Forage Conservation.	To popularise conservation of seasonal surplus of forage.	New Scheme.	40 silage demonstrations, 30 hay making demonstrations.	1.50	Organise demonstration of silage making and hay making on cultivators fields and demonstrate the advantages of forage conservation.	
3.	Development of Grasslands.	Improvement of grasslands and their better management on demonstration basis.	New Scheme.	—	1.00	Proper management of areas including seeding and introduction of legumes, moisture conservation, bush clearance fertilizer application, proper grass conservation, rotational grazing, etc.	
4.	Establishment of cultivation of maize and jowar for compounding of livestock food.	To produce maize and jowar locally for utilization in manufacture of Livestock feeds and thus lower the cost of feed.	New Scheme.	One Farm of 100 acres.	5.00	The cultivable waste land will be availed for establishment of Farm having 100 acres area.	
Total of Feeds & Fodder Development Scheme					12.50 lakhs		

II. Feeds and Fodder Development Schemes:

1. *Establishment of Forage Demonstration cum Fodder Seed production Farm:* Hitherto the cultivation of fodder crops was solely confined to cattle breeding Farm for its own use and supply of planting material of fodder crops in small scale to progressive farmers. These increased activities under cattle development, however, have necessitated the establishment of a separate Forage Demonstration cum Fodder Seed Production Farm to undertake studies on agronomic and other aspects of fodder crops, conservation of forage and its utilisation and production of foundation seeds suited to the region. The Farm will be linked up to specific Key Village Blocks. It will also serve as a demonstration Farm to disseminate the cultivation of fodder crops. This will supply the seeds due to inadequacy regarding the availability of reliable quality seeds of recommended fodder crops.

With this aim, it is proposed to select a suitable site with natural resources having an area of 50 acres and develop it on the above lines.

Tentative provision proposed is Rs. 5.00 lakhs and details are as follows:

1) Land development including irrigation facilities, fencing, levelling, etc. ...	Rs. 0.50 lakhs
2) Equipment like agricultural implements, oil engine, pipes construction etc. ...	Rs. 1.00 lakh
3) Buildings, quarters, cattle sheds, pump sheds, stores, etc.	Rs. 1.00 lakh
4) Pay and Allowances of staff consisting of Development Officer, 2 Agricultural Assistants, permanent labourers, mechanics, watchman, drivers, etc.	Rs. 1.00 lakh
5) Recurring expenditure on seeds, fertilizers, labour wages, maintenance of vehicles and machinery, feed of bullocks	Rs. 1.50 lakhs
Total	Rs. 5.00 lakhs

2. *Forage conservation:* To popularise conservation of seasonal surplus of forage, it is proposed to organise demonstration on silage making and hay making from cultivators holding in milk shed areas of Dairy Project, Key Village Blocks and other selected areas. During the plan period it is proposed to have 40 demonstration pits of silage and 30 hay making demonstrations.

Tentative provision proposed is Rs. 0.75 lakhs for five years.

3. *Development of Grassland:* There are extensive areas of grassland which are utilised at present for livestock grazing or grass harvesting. These areas are generally overgrazed and yet no efforts are made towards

proper management and improvement. Therefore it is proposed to develop the grass resources by proper management by rotational grazing, soil and moisture conservation measures, bush cleaning, seeding and planting, introduction of legumes, application of fertilizers and timely harvesting of grass and its curing and proper utilization. The territory has got vast areas under wild grasses which are mostly burnt and thus wasted. If the development of grass is taken up it will go a long way to provide sufficient forage. About 50 hectares will be taken up for development by introducing the various measures for improvement. Also baling of hay for easy transport will be undertaken.

Tentative provision proposed is Rs. 1.00 lakh which includes purchase of fertilizers, baling presses, seed material, labour, fencing and supervision.

4. *Establishment of Farm for cultivation of maize and jowar for compounding Livestock Feeds:* As there is great scarcity of maize and jowar used in compounding Livestock Feed, thus leading to import of grains from distant places, the cost of feed is prohibitive and which has repercussion on the Animal Husbandry Development. These crops are not grown locally owing to the pressure on land by cultivation of paddy which is the staple food of this Territory. It is therefore proposed to raise these crops Departmentally on cultivable waste land to have assured support of grains to the Feed Compounding Factory and consequently to provide feed at a reasonable rate.

The area will be selected with due regard to all economic factors so as to run the Farm on economical basis. About 100 acres will be taken and average production expected of 150 tons of maize during the season.

Tentative budget provision proposed is Rs. 5.75 lakhs and details are as follows:

1) Land Development including irrigation facilities, fencing, levelling, etc. ...	Rs. 0.50 lakhs
2) Equipment like agricultural implements, trucks, bullock carts, oil engine etc. ...	Rs. 1.50 lakhs
3) Construction of residential quarters, store-room, godown, bullock shed, etc.	Rs. 1.00 lakh
4) Pay and allowances of staff consisting of Agricultural Officer, Agricultural Assistant, permanent labourers, mechanic, driver, watchman	Rs. 1.00 lakh
5) Recurring expenditure	Rs. 1.75 lakhs
Total	Rs. 5.75 lakhs

POULTRY DEVELOPMENT SCHEME

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Outlay proposed Rs. 21.00 lakhs

S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes-changes suggested in programme in respect continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Expansion of State Poultry Farm.	Provision of additional facilities at the Poultry Farm to produce large number of genetically superior stock and to enable the farm to run on commercial lines.	3000 layer unit.	Farm of 10000 layers.	10.00	Additional facilities to run on economical lines.	
2.	Consolidation of Intensive Poultry Development Blocks cum organisation of marketing centre for eggs and poultry products.	Development of poultry industry in an integrated manner and to provide marketing facilities for the produce.	Three blocks established.	Consolidation of working of three blocks and establishment of one marketing centre.	4.50	Working of the Co-operatives will be streamlined to bring them on commercial footing. Provision of marketing facilities will help the produce in attaining this objective.	
3.	Credit facilities to Poultry farmers including share capital and managerial subsidy to societies.	To enable the Poultry keepers to meet the capital requirement and consequently to increase the business.	3 Poultry Societies: Rs. 40,000/-, 15 individuals — Rs. 3500/- each, 8 individuals — Rs. 1000/- each, 10 individuals — Rs. 2500/- each, 10 individuals — Rs. 500/- each, individuals — Rs. 2000/-.	10 large farms having 500 to 1000 layers. 50 units of 25 layers, 25 units of 75 layers.	2.50	Loans will be advanced at rate of Rs. 15/- per bird for setting up 500 to 1000 layer units. Loans to set up units of 25 to 75 layers at the rate of Rs. 500/- to Rs. 2500/- respectively.	

4. Poultry Development Hilly/Tribal/Backward areas for benefit of weaker section of population.	To provide supplementary source of income and improve the nutritional standard of the economically weaker section of the population.	New Scheme.	100 units.	0.50	Each family will be provided 20-25 cross breed chicks of 2 to 3 months old birth on 50% subsidy. Feed concentrate will also be supplied on subsidised rates for two years.
5. Poultry Demonstration Centres.	To popularise and supplement the work carried out by the State Poultry Farm in the remote areas by extending modern poultry development method and production of genetically potential stock.	Five centres each of 100 layers unit.	Construction of Poultry houses.	1.00	The centres are located at Talukas which are situated at a distance from State Poultry Farm. Each centre maintains 100 layers of exotic breed under modern management practices.
6. Applied Nutrition Programme.	To provide protective food to expectant and nursing mothers and pre-school age children through the setting up of poultry units in rural areas.	Two blocks each with 20 units with 32 birds each.	Three blocks.	2.50	Backyard poultry keepers in the Block area will be provided with loan and subsidy for production of eggs required for the scheme.

Total for Poultry Development

Rs. 21.00
lacs

III. Poultry Development Schemes:

1. *Expansion of State Poultry Farm:* The existing State Poultry Farm will be provided with additional facilities to produce a larger number of genetically superior stock to enable the farm to run on commercial lines. In view of this the State Poultry Farm will be provided with essential facilities such as additional buildings, equipment, feeding charges. It is proposed to increase the strength from 3000 birds to 10,000 birds during the Plan to achieve the objective and make available sufficient number of breeding stocks of superior quality to poultry keepers.

The tentative outlay proposed for five years is Rs. 10.00 lakhs and details are as follows:

- 1) *Staff:* Additional staff like one Poultry Assistant, one store-keeper, four Poultry Attendants, will be recruited.
- 2) *Equipment:* Feeders, water fountains, nests, debeakers, furniture.
- 3) *Building:* Poultry houses, residential quarters, store room.

Provision required for five years:

1) Pay and allowances of staff	Rs. 1.50 lakhs
2) Non recurring expenditure on equipment	Rs. 0.50 lakhs
3) Recurring expenditure on purchase of day old chicks, feeding charges, labour wages, postage, maintenance of equipment etc.	Rs. 3.00 lakhs
4) Expenditure on building programme ...	Rs. 5.00 lakhs
Total	Rs. 10.00 lakhs

2. *Consolidation of Intensive Poultry Development Blocks cum Marketing Organisation of eggs and poultry products:* The existing Intensive Poultry Development Blocks will be consolidated and organised on sound economic basis by providing necessary financial assistance and technical assistance to them. The working of the Cooperatives will be streamlined in order to have the benefit of cooperative efforts instead of individualistic approach and thus maintain their units on commercial line.

A marketing organisation at state level will be set up to market eggs and poultry products so that collecting and bargaining power will enable the breeders to obtain economic prices throughout the year and regulate the market in poultry products.

The marketing organization will have facilities to store eggs in cold storage and deep freeze for poultry meat. The organization will be run on no profit no loss basis and on commercial lines with a P.L.A. account.

Also feed will be made available to Societies from Government Feed Mixing Plant at no profit no loss basis.

The tentative outlay proposed for five years is Rs. 4.50 lakhs and details are as follows;

1. *Staff*: Additional staff for marketing organisation, packers, attendants will be recruited.
2. *Equipments*: Deep freeze cabinet, egg collection boxes, filler flats, etc.

Provision required for five years:

1) Pay and allowances of staff	...	...	Rs. 1.50 lakhs
2) Non recurring expenditure on equipment			Rs. 0.50 lakhs
3) Recurring expenditure on maintenance of vehicles, equipment, electricity, water, labour wages	...	...	Rs. 0.50 lakhs
4) Amount required for P. L. A.	...	...	Rs. 2.00 lakhs
			<hr/>
Total	...	...	Rs. 4.50 lakhs

4. *Credit Facilities*: Necessary credit facilities will be made available to Societies as well as to individuals to take up small and large units on commercial lines. The loan will be advanced on usual terms and conditions.

The loan will also be advanced at the rate of Rs. 15/- per bird for setting up commercial egg production Farms of 500 to 1000 birds. During the plan 10 large Farms having 500 to 1000 birds capacity will be set up and also small units having 25 to 75 layers will be assisted.

Tentative provision proposed for five years is Rs. 2.00 lakhs.

4. *Assistance to Societies in the form of Share Capital Contribution and Managerial Subsidy*: The Societies will be helped with Government Share Capital Contribution on matching basis to enhance the financial position of Societies.

Also Societies will be provided Managerial Subsidy to cover the cost of managerial expenses during the initial stages of organisation.

Outlay proposed for five years:

1) Share Capital Contribution	...	...	Rs. 0.40 lakhs
2) Managerial Subsidy	...	...	Rs. 0.10 lakhs
			<hr/>
Total	...	...	Rs. 0.50 lakhs

5. *Poultry Development in Hilly/Tribal/Backward areas for the benefit of weaker section of population:* This is a new Scheme and its aim is to provide supplementary source of income and to improve their nutritional standards. Each family will be provided with loan and 50% subsidy on birds for maintaining a flock of 20 to 25 birds. It is also envisaged to provide feed on subsidised rates for the first two years. During the plan it is proposed to assist 100 families under the Scheme.

Tentative provision proposed for five year is Rs. 0.50 lakhs.

6. *Poultry Demonstration Centres:* The existing five Demonstration Centres which were established during third Plan have reached the maintenance stage and expenditure on maintenance is provided under Non Plan. However a provision of Rs. 1.00 lakh has been proposed for consolidation and construction of houses.

Tentative provision proposed is Rs. 1.00 lakh.

7. *Applied Nutrition Programme:* This programme is envisaged to provide protective food to expectant and nursing mothers and preage school children through the setting up of poultry units in rural areas. During this year two blocks are allotted to the Territory. In each block about 25 backyard poultry keepers will be given an amount of Rs. 520/- each, of which Rs. 130/- is by way of subsidy and Rs. 390/- as loan. They will be also provided subsidised feed for first two years. The loan is payable under usual terms and conditions. During this period each poultry keeper will contribute 2 eggs per day from October to March for the feeding programme.

During the Fourth Plan, the Programme will be extended either by the inclusion of new villages in the Block or setting up of additional Blocks.

Tentative outlay proposed is Rs. 0.50 lakhs.

PIGGERY DEVELOPMENT

Outlay propose Rs. 3.75 lakhs.

S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes-changes suggested in programme in respect of continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Pig Breeding Farm.	To produce improved pigs for distribution in Intensive Piggery Blocks and serve as a demonstration for improved practices.	One farm having three boars and 12 sows is established.	200 piglings per year.	1.50	The pig breeding farm will have capacity of 50 sows and five boars. The breed mainly kept is White Yorkshire.	
2.	Piggery Development Blocks.	To increase the production of pigs so as to make available sufficient raw material for manufacture of pork products.	One block has been established wherein pigs produced at the Breeding Farm are distributed for multiplication and upgrading.	Consolidation of Block by distribution, increase in number of breeding stock. 100 units will be established.	0.75	Pigs of improved breed will be distributed in Blocks. Each unit will be provided with financial assistance in the form of grant for construction of pig stys. Besides loan facilities will be made available separately.	
3.	Credit Facilities.	To help the pig breeders to extend the existing units by availing financial assistance.	Amount of loan allotted this year Rs. 10,000/- for setting up Piggery.	Financial assistance for 25 large units and 75 small units.	1.50	Loans will be advanced to prospective breeders so that they may be induced to take up the breeding of exotic breed on scientific line. The rate of loan will be Rs. 1000 to 3000 depending upon the size of undertaking i.e. a pair or one boar and five sows.	
Total for Pig Development					Rs. 3.75 lakhs		

IV. Piggery Development:

1. *Piggery Breeding Station:* The existing piggery breeding station which serves as a nucleus for the supply of improved breed of pigs will be expanded to supply the increasing demand of pigs in the Piggery Development Blocks during the Plan. On an average 200 pigs will be bred and supplied to farmers in the Development Blocks.

Tentative outlay for five years is Rs. 1.50 lakhs and details are as follows:

- 1) *Staff required:* One Stockman and three attendants.
- 2) *Equipment:* Platform balance, buckets, gamellas, feeding troughs.
- 3) *Building:* One farrowing pen.

Details of expenditure for five years:

1) Pay and allowances of staff	... ..	Rs. 0.30 lakhs
2) Non recurring expenditure on equipment		Rs. 0.10 lakhs
3) Building	... ..	Rs. 0.10 lakhs
4) Recurring expenditure on feed, chemicals, medicines, labour wages, etc.	... ..	Rs. 1.00 lakh
Total		Rs. 1.50 lakhs

2. *Intensive Piggery Development Blocks:* The development of piggery will be confined to three Talukas, where there are potentialities for such development. In these Talukas exotic breeds will be supplied from the Piggery Breeding Station and the farmers will be provided technical assistance to rear the pigs on modern methods. Balanced feeds will also be made available and technical details for construction of stys will be furnished.

The farmer will be assisted in the form of grant-in-aid at the rate of Rs. 1500/- for construction of model pig sty to maintain five sows and one boar. In all 50 units will be set up under this programme.

Tentative outlay proposed for five years is Rs. 0.75 lakhs.

3. *Credit Facilities:* As the piggery breeding is to be carried out on scientific lines it requires investment in initial stages. It is therefore necessary to encourage prospective breeders in the Blocks by advancing loan on easy terms. The amount of loan in each case would be Rs. 1000/- in the case of small nit of pairs and Rs. 3000/- in the case of a big unit consisting of one boar and five sows.

Tentative outlay for five years is Rs. 1.50 lakhs.

ANIMAL HEALTH

Outlay proposed: Rs. 15.75 lakhs

S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes-changes suggested in programme in respect continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Dispensaries and Aid Centres.	To provide better veterinary aid to the farmers by strengthening the existing dispensaries & Aid Centres.	11 Dispensaries, 4 Aid Centres.	Aid	5.00	Consolidation of Dispensaries and establishment of additional Aid Centres.	Dispensaries and Aid Centres will deal with the treatment of animals; control of diseases by mass vaccination programme and rendering of technical assistance.
2.	Conversion of Dispensaries into Hospitals.	To provide better veterinary aid.	New Scheme.	2 Hospitals.	9.46		Construction of hospitals with adequate facilities for inpatients.
3.	Rinderpest Immunisation.	To prevent lossess caused by Rinderpest by immunisation.	New Scheme.	The border area of the neighbouring States will be taken up for immunisation.	0.25		Vaccines will be obtained from Production Centres and utilised for immunisation in areas contiguous to the neighbouring States. The vaccination will be taken up by the existing staff of the Vet. Dispensaries.
4.	Establishment of clinical and investigation unit.	To provide diagnostic facilities for prompt diagnosis of diseases and their timely treatment.	New Scheme.	One unit.	1.00		At present there are no facilities for prompt diagnosis of diseases. The Clinical unit will be kept incharge of Disease Investigation Officer with laboratory.
Total for Animal Health					Rs. 15.71 lakhs		

V. Animal Health:

1. *Expansion of Dispensaries:* To provide better veterinary facilities and to prevent and control livestock diseases in the area, it is proposed to maintain the existing Dispensaries and expand them by providing better equipment, construction of accomodation and increase the number of Aid Centres to cater to far off places which are not served by the Dispensaries. The expenditure on maintainance of Dispensaries has been provided under Non Plan. However a provision of Rs. 5.00 lakhs is provided under Plan to purchase equipment and construction of accomodation for housing Dispensaries and First Aid Centres and other equipment.

Tentative outlay proposed for five years is Rs. 5.00 lakhs and it is as follows:

1. Construction Work	Rs. 3.50 lakhs
2. Equipment for expansion	Rs. 1.50 lakhs
Total	Rs. 5.00 lakhs

2. *Conversion of Dispensaries into Hospitals:* At present there are no full fledged Hospitals for the maintenance of inpatients and necessity of these is keenly felt, especially in case of large animals. During the plan it is proposed to convert two of the Dispensaries into fullfledged Hospitals with necessary equipment and wards.

Tentative outlay proposed for five years is Rs. 9.46 lakhs and details are as follows: —

1) <i>Buildings:</i> Two Hospitals with residential accomodation	Rs. 4.50 lakhs
2) <i>Equipment</i>	Rs. 2.00 lakhs
3) <i>Pay & Allowances of staff</i>	Rs. 1.50 lakhs
4) <i>Recurring expenditure</i> on medicines, electricity, water, chemicals, etc.	Rs. 1.46 lakhs
Total	Rs. 9.46 lakhs

3. *Rinderpest Immunization:* Rinderpest is practically non-existent in this area and as such till this time no eradication programme has been carried out. However, due to the free movement of cattle and buffaloes from the neighbouring States it is felt that the establishment of immune belt along the borders be established. Therefore, it is proposed to undertake the immunization programme all along the border. The programme will be carried out through the existing Veterinary staff and vehicles. The only expenditure will be incurred on purchase of vaccines and serum and other miscellaneous equipment.

Tentative provision of Rs. 0.25 lakhs has been proposed.

4. *Establishment of Clinical and Investigation Unit:* There are no facilities at present with the Department for prompt diagnosis of diseases and many a time help has to be taken from the Health Laboratory. Now, with the advance in the development of Livestock, it is imperative to have one unit for timely diagnosis. The unit will be kept under the charge of Disease Investigation Officer with small laboratory and subordinate staff. The unit will be housed in one of the dependency of this Department and no special building programme is anticipated.

Tentative outlay proposed for five years is Rs. 1.00 lakh.

- 1) *Staff:* One Disease Investigation Officer, one Laboratory Assistant, two attendants.
- 2) *Equipments:* Microscopes, sterilisers, incubators and other laboratory equipment, stain glassware, media, etc.

Details of expenditure for five years:

1) Pay of staff and allowances	...	...	Rs. 0.30 lakhs
2) Non recurring expenditure on equipment			Rs. 0.60 lakhs
3) Recurring expenditure	Rs. 0.10 lakhs
			<hr/>
Total	Rs. 1.00 lakh

SPECIAL SCHEMES

Outlay proposed: Rs. 7.04 Lakhs

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S. No.	Name of Scheme	Brief objective	Upto date achievement in respect of con- tinued scheme	Target proposed for IV Plan	Tentative allocation in lakhs	Technical programme for New Schemes changes suggested programme in respect continued Scheme	Remarks
1	2	3	4	5	6	7	8
1.	Expansion of Feed Mixing Plant.	The existing plant will be expanded to handle larger quantity of feed to meet the increased demand.	One unit for 4 ton capacity.	Expansion of Plant to handle about 8 tons per day.	0.74	Balanced feed will be compounded for the various species of livestock and will be made available at reasonable rates at no profit no loss basis.	
2.	Modernization of slaughter houses.	This is a new Scheme necessitated because the old slaughter houses are antiquated and not provided with necessary arrangements for hygenic meat production.	3 existing slaughter houses in the most populous talukas.	All these three are proposed be modernised.	6.00	To be implemented by the construction of modern hygienically and sanitorially constructed houses.	
3.	Training & Education.	Providing stipends to candidates in various fields of Animal Husbandry and Veterinary Services.	1 B. V. Sc. completed, 7 under training, 3 I. D. D., 28 stockmen, 3 in various A. H. & V. Science branches.	4 for B. V. Ss. 15 stockmen, 1 Swine Husbandry, 6 refresher courses in various branches of Animal Husbandry & Veterinary Services.	0.30	Usually the short duration courses held in various Govt. Institutes Stockmen are locally trained.	
Total for Special Scheme					Rs. 7.04 lakhs		

VI. Special Schemes:

1. *Expansion of Feed Mixing Plan:* The existing Feed Mixing Plant will be continued and expanded to meet the requirement of balanced Livestock feeds. This step towards reducing the cost will be made by the bulk purchase of ingredients and also popularisation of cultivation of maize and jowar locally. Maize also will be produced on the Departmental Farm under the Feeds and Fodder Development Scheme.

The Scheme will be run on no profit no loss basis and on commercial terms for which P. L. A. account will be operated. No provision has been made under this Scheme as it will be operated as a Trading Scheme and necessary capital will be provided under Non-Plan Budget. However the amount required for Pay and Allowances of staff and various equipment is included under Plan.

Tentative provision proposed is Rs. 0.74 lakhs and details are as follows:

1) Pay of staff	... ..	Rs. 0.40 lakhs
2) Purchase of equipment like mixer, grinder, spares, etc.	... ..	Rs. 0.20 lakhs
3) Recurring expenditure on labour wages, electricity, etc.	... ..	Rs. 0.14 lakhs
Total	... ..	<u>Rs. 0.74 lakhs</u>

2. *Modernisation of Slaughter Houses/Meat Rendering Complex:* The modernisation of the Slaughter Houses was to be taken up during the III Plan for which provision was made but was held in abeyance as the Project of Meat Rendering Complex was expected to materialise and which includes a Central Modern Slaughter House. The Project is still not finalised and in view of this a provision is made in the Plan for modernising three slaughter houses situated in the three largest consuming towns.

The outlay proposed is Rs. 6.00 lakhs.

3. *Training and Education:* With the progress of various development Schemes, it is necessary to make provision for trained staff in different fields of Animal Husbandry in view of this, some new candidates have to be trained and some of those already trained may have to undergo refresher or short term specialised courses.

Such courses are held from time to time in various Government Institutions and it is proposed to depute 4 for B. V. Sc., 15 Stockmen, one for Swine Husbandry and 6 for refresher courses during the Plan period.

The provision made under this Scheme is mainly for payment of stipends.

Tentative provision proposed is Rs. 0.30 lakhs for five years.

5 — Dairying & Milk Supply

Dairy Development

POSITION BEFORE THE IMPLEMENTATION OF THE THIRD PLAN

Dairy development programme were introduced only after liberation towards the middle of the Third Plan and during ex-Portuguese regime the requirements of milk and milk products like butter, cheese, condensed milk, sterilised milk, milk powder, were solely met through imports.

The cattle population of this Territory compares favourable with the neighbouring Districts but they are non-descript type, learn emanciated with low milking and draught capabilities due to non implementation of any cattle development schemes before liberation.

After liberation imports of milk and milk products were restricted and keeping in view the rapidly increasing demand for milk and milk products from urban population the Dairy Development programme was introduced in 1963-64 supported by the Cattle Development Schemes.

The following Schemes in Dairy Development were implemented during Third Plan and subsequent years 1967-68 and 1968-1969.

1. Organisation of Dairy Cooperative Societies in potentially milk producing areas.
2. Financial Assistance to Dairy Societies in the form of loans, managerial subsidy, subsidy for purchase of milk collection and handling equipment and share capital contribution.
3. Establishment of Pilot Pasteurisation Plant linking with rural milk collection from Societies.
4. Rural Dairy Extension.
5. Training Programme of Dairy personnel.
6. Establishment of Central Dairy Plant at Ponda.

IMPACT OF THE THIRD PLAN

Due to organisation of Dairy Cooperatives in rural areas, supported by Cattle Development Schemes there is substantial increase in milk production. In all 22 Primary Milk Producer's Cooperative Societies were organised in areas which are potential for such development. It is worth mentioning that the collection milk from Societies went up to 3500 litres during flush season after reaining sufficient quantity of milk in villages for consumption.

They were provided necessary financial assistance in the form of loan, subsidy for purchase of milk collection and handling equipment, managerial subsidy, share capital contribution and technical assistance and marketing facilities to foster their growth and close coordination is ensured in the Animal Husbandry programme.

The amount of loan disbursed to the Society was regulated on the share capital raised and working of the Society and upto now an amount of Rs. 70,000/- was disbursed to the 27 Societies on easy terms. The loan is recovered through the milk bills payable to the Societies.

Also the Societies were provided with subsidy to the tune of Rs. 2,000/- for each Society for purchase of milk collection and handling equipment and an amount of Rs. 34,000/- was disbursed to 17 Societies.

Due to limited financial resources of Societies, managerial subsidy at the rate of Rs. 1,800/- spread over three years was granted for managerial expenses and the total amount disbursed so far is Rs. 44,100/- to 25 Societies.

In order to strengthen the financial position of Societies, Societies were provided matching Government contribution towards share capital and the total amount disbursed so far is Rs. 79,440/- for 24 Societies.

The Societies are supplied with balanced cattle feed at reasonable price manufactured at Government Feed Mixing Plant.

As a result of various measures undertaken to foster the growth of cooperative Societies for milk production, the financial resources of individual producers have shown certain improvement due to ancillary occupation of milk production besides other benefits of maintaining milch cattle towards agricultural improvement.

The milk produced by the Society is marketed through the Government Milk Supply Scheme. The Milk is collected through Government transport from milk collection centres of Societies and after processing at the Pilot Pasteurisation Plant it is distributed to consumers in urban areas. The Milk Supply Scheme handles per day about 3,500 litres during flush season and 1,600 litres during lean season. To supplement committed supply toned milk is distributed during lean season.

With the increase in procurement quantity of milk it is felt necessary to establish the Central Dairy having 10,000 litres handling capacity per day to cater to the needs of all major consuming towns of the Territory.

The site for location of plant is already acquired at centrally located place and the plans and estimates of Dairy building are being finalised. Also specification of the equipment is being finalised.

Rural Dairy Extension Service forms a Key for Dairy development and this Scheme was introduced in 1966-67. The individual members of Societies were assisted through this programme.

The extension programme is supported by technical staff to render technical advice on clean milk production, quality control, management of cattle, marketing facilities, technical advice in conservation and popularisation of forage crops. The Animal Husbandry Schemes are also linked with this programme.

To facilitate the collection of milk for long distance a chilling centre has been established having 1000 litres capacity.

The financial assistance towards managerial subsidy and for purchase of equipment was made available to the Societies in the initial years.

In order to implement the Schemes efficiently three candidates were trained in Dairy technology and husbandry.

APPROACH TO THE FOURTH PLAN

The salient features of the Fourth Plan would be as under:

- a) To develop dairying as an organised rural industry on cooperative lines.
- b) Completing the Central Dairy Project taken up during the III Plan but spilling over to the IV Plan.
- c) Consolidation and expansion of existing Plant to ensure larger coverage.
- d) Consolidation and expansion of Rural Dairy Extension programme to give wider scope for milk production.
- e) Establishment of one Rural Dairy Centre.
- f) Training of Dairy personnel.
- g) Survey and Statistics.

SUMMARY STATEMENT OF ALLOCATIONS

Schemes	Provision in lakhs
1. Panaji Milk Scheme	1.50
2. Ponda Milk Scheme	35.00
3. Rural Dairy Centre	4.50
4. Rural Dairy Extension	5.00
5. Loan for purchase of Milch animals	20.00
6. Training of Dairy personnel	0.50
7. Assistance to Cooperative Societies	7.00
8. Dairy Development Staff	1.00
9. Survey and Statistics	0.50
	75.00

Details of the Plan Schemes

I. Panaji Milk Schemes: The present capacity of 2000 litres of Panaji Milk Supply Scheme will be increased to 3000 litres capacity to meet the increased demand of milk from consumers and cope up with the additional procurement of milk Producers' Cooperative Society.

To achieve the additional features the Pilot Pasteurisation Plant will be provided with milk bulking tanks, semi automatic bottle washing machine, increase in cold storage, equipment for toned milk preparation and other miscellaneous equipment like cans, milk vans, etc. The Scheme is expected to run on no profit no loss basis but certain amount of loss is unavoidable as the Scheme is in its initial stages of establishment. Efforts are being made to reduce the extent of loss by introducing very economic measures.

In order to meet committed demand of milk, toned milk was introduced during the lean season and also to make available cheap milk to low income group of population. The present daily consumption of toned milk is about 500 litres. Due to restricted supply of skim milk powder the supply of toned milk will be discouraged gradually when the procurement of milk sufficiently develops.

The maintenance expenditure under this is provided in Non Plan. However, a provision of Rs. 1.50 lakhs is made to cover the expenditure on additional equipment.

Tentative outlay proposed for five years is Rs. 1.50 lakhs and details are as follows:

1. <i>Equipment:</i> Additional equipment like bulking tanks toned milk equipment, cans.	Rs. 1.50 lakhs
Total 	Rs. 1.50 lakhs

The expenditure towards the payment of milk collected from the Societies will be met through P.L.A. account and necessary provision is being made under Non Plan.

II. Ponda Milk Schemes — Central Dairy: With the implementation of various Dairy and Cattle Development Schemes, it is expected that the production of milk in rural areas will be increased to a considerable extent and in order to provide remunerative market to milk producers and to cover a larger area it was proposed to set up a Central Dairy at Ponda having 10000 litres capacity as against the present handling capacity of Pilot Pasteurisation Plant which is only 2000 litres.

The site is already purchased and plans and estimates of Dairy building is being finalised. Also the specification of type of the machinery are being studied so that suitable machinery is under selection. Part of the capital expenditure will be incurred before the commencement of the Fourth Plan but the project will be completed and commissioned during the beginning of 4th Plan.

The Ponda Dairy when commissioned will be able to cater to the supply of milk in all major towns of Goa.

Tentative outlay proposed is Rs. 35.00 lakhs and details are as follows:

- Staff:* Additional staff like milk procurement and distribution officer, Dairy Supervisor, quality control Officer, etc.
2. *Equipment:* Consists of Pasteuriser, milk storage tanks, refrigeration equipment, cans, laboratory equipment.
 3. *Building:* Completion of Dairy Building and residential quarters, overhead tank, garage, workshop, store, etc.
 4. *Vehicles:* 4 milk collection and distribution vehicles.

Details of expenditure for five years.

1) Pay & Allowances of staff	... ..	Rs. 5.50 lakhs
2) Non-recurring expenditure on Dairy machinery, equipment, milk vans	... ..	Rs. 15.00 lakhs
3) Buildings	... ..	Rs. 8.00 lakhs
4) Recurring expenditure on maintenance of vehicles and machinery, chemicals, detergents, laboratory glassware, labour wages,, electricity and water charges	... ..	Rs. 6.50 lakhs
Total	... ..	Rs. 35.00 lakhs

III. Rural Dairy Extension: In order to develop Dairying as an organised rural industry on cooperative lines with accent on community development, it is imperative to provide all the facilities like, financial and technical assistance and extension which supports to encourage the farmers and milk producers. This programme is undertaken through the Rural Dairy Extension supported by specialised staff with necessary finance and the milk produced is channelised through organised dairy plants.

The Scheme of Rural Dairy Extension was introduced during 1964-65 with the appointment of specialised staff in milk potential areas. This programme was supported with necessary finance and Societies were provided loans, assistance for purchase of milk collection and handling equipment and managerial subsidy. This programme also provides technical advice on clean milk production, management of milch cattle, quality control and marketing facilities. Also a chilling centre was established.

During the fourth plan, the programme will be consolidated and extended to new area with the appointment of additional specialised staff, establishment of chilling centre, provision to provide financial assistance in the form of loan, subsidy etc. Also the campaign for cultivation and conservation of forage crops will be intensified. The Animal Husbandry programme is Cattle Development will be closely linked up with the Rural Dairy Extension Programme.

Tentative outlay proposed for five years is Rs. 5.00 lakhs and details are as follows:

1. *Staff:* Additional staff like Rural Dairy Extension Supervisors, field workers, mechanic, attendants, will be recruited.
- Equipment:* Consists of milk coolers and other ancilliary equipment, two Jeeps and dairy utensils.

Details of expenditure for five year.

1. Pay and allowances of staff	Rs. 2.50 lakhs
2. Non recurring expenditure on milk cooler, Jeeps, dairy utensils	Rs. 2.00 lakhs
3. Recurring expenditure on maintainence of vehicles, electricity, etc.	Rs. 0.50 lakhs
Total	Rs. 5.00 lakhs

Necessary provision is made separately under Animal Husbandry Schemes and other Dairy Development Schemes to support the Rural Dairy Extension Programme.

IV. Rural Dairy Centres: This is a new Scheme and it aims in organisation of Dairy Centres in rural areas of milk. The starting of Rural Dairy Centres would also afford the necessary incentive to the farm milk producers in association with Animal Husbandry Programme. It is proposed to set up one such centre having all the facilities for milk production, collection and handling.

Tentative outlay proposed for five years is Rs. 4.50 lakhs and details are as follows:

1. *Staff for Centres:* One Dairy Extension Officer, one Veterinary Assistant and two attendants.
2. *Equipment:* Head Recorders, Bulking tanks, milk cans, measures, fat testing machine, lactometers, jeep and one cooler of 1000 litres.

Details of expenditure.

1) Pay and allowances of staff	Rs. 1.00 lakh
2) Equipment	Rs. 2.50 lakhs
3) Recurring expenditure on maintainence of vehicles, machinery electricity and water	Rs. 1.00 lakh
Total	Rs. 4.50 lakhs

V. Loans for Purchase of Milch Animals: The dairy industry is to be organised as a rural industry through Cooperatives and hence it is proposed to provide loans to only Dairy Cooperatives on easy terms. The amount of loan to be given to each Society will be decided on the share capital raised by the Society and working. The loan Scheme will be co-ordinated with the Rural Dairy Extension Programme. The usual terms and condition will govern the grant of loan. The loan instalments will be recovered through the milk bills. About 50 Societies will be assisted by way of loan during the Plan period.

Total outlay proposed for five years is Rs. 20.00 lakhs.

VI. Training of Dairy personnel: In order to carry out the programme successfully to achieve desired results, it is necessary that the programme is supported by the specialised trained personnel in various fields. It is,

therefore, proposed to train one candidate in Dairy Engineering, one candidate in Plant Management, two candidates in Dairy Husbandry and one candidate in Dairy Technology. Also Department personnel will be sent for refresher courses from time to time. The expenditure is mainly on stipends.

Tentative outlay proposed for five years is Rs. 0.50 lakhs.

VII. Assistance to Dairy Cooperative Societies: The farmers are to be assisted in different ways to induce them to take up dairying as a subsidiary occupation to agriculture. The following type of assistance will be provided mainly through Dairy Cooperatives.

1. Subsidy for milk collection and handling equipment @ Rs. 2000/- each Society.
2. Managerial Subsidy @ Rs. 1800/-.
3. Subsidy for popularisation of silo pits and hay @ Rs. 250/- per silo pit.
4. Subsidy for chaff cutters @ Rs. 50/- per chaff cutter.
5. Subsidy for pump sets @ 25% of the cost of set.
6. Share Capital Contribution.
7. Subsidy for development of pasture land at the rate of Rs. 30/- per acre.

Tentative outlay proposed for five years is Rs. 7.00 lakhs.

VIII. Dairy Development Staff: In order to intensify the dairy programme, it is necessary to recruit specialised trained staff in Dairy Extension, Dairy Engineering Plant Supervising, Field Supervising, etc. and the expenditure on pay and allowances is provided under the Scheme.

Total outlay proposed is Rs. 1.00 lakh.

IX. Survey and Statistics: This is a new Scheme and in the past no survey was conducted. It is therefore proposed to conduct survey as regards to various aspects of Dairy Industry and milk production. A statistical section will be organised to carry out this work. The survey on statistics will facilitate to formulate the development plans in Dairy Industry on a sound footing.

Tentative outlay proposed for five year is Rs. 0.50 lakhs, the details of which are as under:

1. *Staff:* One Statistician, four enumerators, one clerk, one peon.
2. *Equipment:* Furniture, calculating machines.

Details of expenditure:

1) Pay and allowances of staff	...	...	Rs. 0.25 lakhs
2) Non recurring expenditure on equipment			Rs. 0.15 lakhs
3) Recurring expenditure	...	...	Rs. 0.10 lakhs
Total	...	...	Rs. 0.50 lakhs

6 — Forests

During the III Five Year Plan, the Forest department undertook the following schemes for implementation:

SURVEY AND DEMARCATION

Since the inception of the Department in October 1963, a forest boundary of 820 kms. was cleared by clearance of three metre wide strip along this line and 6560 cairns were erected. During 1966-67, a boundary line of 1570 kms. was cleared and erected 7926 cairns. In 1967-68 all the previously demarcated forest boundaries were maintained and necessary rectification was carried out wherever it was considered necessary.

WILD LIFE

It was proposed to constitute two game sanctuaries during the III Five Year Plan period. Owing to the reason, that the Wild Life Act was not being enforced in this territory, no action was taken. Subsequently in the year 1966-67, the Wild Life Act was enforced and in 1967-68 two game sanctuaries were constituted in this Union territory.

WORKING PLANS

The scheme was introduced in 1965, as it was quite necessary to write the Working Plan of the entire Goa Forests. Two Working Plan Divisions were created for this purpose. During 1966-67, enumeration of growing stock of Forest area was taken up and nearly an area of 500 hectares was covered up. As the contour maps from the Survey of India were not received, this work could not be speeded up as outlined. During 1967-68, the Survey of India was requested to supply enlarged toposheets to the scale of 1:15000, so as to be convenient for field work.

FOREST PROTECTION

The Scheme was introduced during the last year of the III Plan, when Mobile Squad staff was organised, to keep proper check on transit of forest produce, and on general protection of forest wealth. During the years 1966-67 and 1967-68, the scheme was continued and many checknakas were established at strategic places to keep proper check on the transit of forest product and to prevent illicit movement of forest produce.

FOREST PUBLICITY

During the III Plan, the scheme was introduced only to educate the ignorant villagers and to inculcate in them tree-consciousness and a feeling for conservation of wild life. This was done through exhibition of documentary films on wild life during the Wild Life Week. Apart from this both Wild Life and Vanamahotsava weeks were observed. During 1966-67 and 1967-68 essay competition on Wild Life, tree-planting, etc. was conducted with a view to make the younger generation conscious about these national assets. For this purpose, a projector and documentary films on Forestry and Wild Life were purchased during the III Plan period.

PLANTATIONS

In the ex-Portuguese regime there was no scientific management of forests and no plantations of any species existed. The department was organised in 1963. The plantation programme was relied on for replacement of inferior existing tree-growth by economic tree-species. Initially, an area of 960 hectares was planted up in 1964-65, and in 1965-66 an area of about 1600 hectares was planted up. Teak and eucalyptus were given priorities, besides cashew, rubber and sawar also was planted. As the planting programme has to be continued in the next Plan, to meet the requirement of planting stock, ten wet nurseries were established in various places of Forest areas. The nurseries were provided with water-pumps and all other accessories. During 1966-67 an area of 1766.71 hectares was planted and in 1967-68 an area of 1768.08 hectares was covered with teak, eucalyptus, cashew, rubber, etc.

COMMUNICATIONS

At the end of the III Five Year Plan, a road distance of 95 kms. was taken charge of by this Department and maintained thereon. As the use of the Forest roads was increased, action was initiated to convert these roads into all-weather roads. In the last two years of the III plan, maintenance of the nature of pre-monsoon, post-monsoon works, etc. was carried out on these roads. In 1966-67 actual work of soling, construction of cross-drainage, etc. was undertaken on two major roads covering a distance of 10 kms. In addition to this, a bridge was also constructed on one of these roads. In 1967-68 an additional road-length of 8 kms. was taken up for soling work.

BUILDINGS

For efficient supervision of forestry works and implementation of various schemes undertaken by this department, it was quite necessary to provide adequate residential facilities to the staff of this department. Actual building construction work for this purpose was undertaken during 1964-65 and in 1965-66 construction of 21 buildings including three Forest rest houses were completed. In addition to this, about 21 more buildings were under construction during 1965-66. In the year 1966-67, construction of about 11 buildings including one forest rest house was completed and in addition to this about 16 more buildings were under

construction, during the year. During 1967-68 construction of ten more quarters were completed; and few more quarters and one Divisional Office were under construction.

All these schemes mentioned above are being continued during the IV Five Year Plan period. In addition to the above schemes, two new schemes viz. (i) Introduction of Extensive Cashew Plantations; and (ii) Farm Forestry; are proposed to be taken up during the IV Plan period.

During the IV Plan period it is expected to complete the preparation of Working Plan work of this territory, complete in all respects.

The plantation scheme envisages to cover an area of about 3500 hectares under teak; 3500 hectares under eucalyptus; and interplanting of bamboo in eucalyptus plantation of 3500 hectares. Rubber in an area of 50 hectares is also proposed to be raised during the entire IV Plan period.

The new Scheme of Introduction of Extensive Cashew Plantation is proposed to cover an area of 10,000 hectares approximately during the IV Plan period.

Another new scheme on Farm Forestry is also proposed for implementation in areas belonging to private parties. An area of 400 hectares is proposed for raising fuel wood plantations on village wastes, canal banks, etc. distributed in 4 C. D. blocks of the Union Territory.

The execution of the new scheme on 'Introduction of Extensive Cashew Plantations will be carried out in two Divisions in charge of two Divisional Forest Officers, assisted by 6 Range Forest Officers, 2 Forest Surveyors, 18 Round Foresters, and 27 Forest Guards. In addition 2 Accountants, 2 U. D. Cs., 8 L. D. Cs., 2 Drivers and 5 peons are also required for effective implementation of the scheme.

Owing to the fact that all the territorial staff working in two Divisions and 7 different Ranges would be entirely executing all the other schemes continued from the III Plan and since the services of these staff would not be adequate to implement the scheme of Cashew Plantations, the above referred staff is quite necessary during the IV Plan period.

DRAFT OUTLINE OF THE IV FIVE YEAR PLAN AND REVIEW OF THE III FIVE YEAR PLAN

Organized and systematic management of forests of Goa territory started only during the Third Five Year Plan period. In spite of great potentialities, the forest never had the benefit of scientific management during the last 450 years of erstwhile regime. Forestry in other States of the country is more than one hundred years old, and recently, most of the States have celebrated centenaries commemorating hundred years of organised forestry with great strides taken, and achievements made during the various plan periods. Unfortunately, in the past, there has been practically no development in this territory in the field of forestry, the importance of which has now been fully realised. The Goa Forest Department is now making efforts to cover up the backlog in the forest development by a crash programme.

ORGANIZATION OF THE DEPARTMENT

The Forest Department in this territory started functioning from October 1963 onwards, after its organization by the deputationist officers from the neighbouring States. After the establishment of Department, newly created staff on plan schemes along with some minor schemes such as Working Plans, Publicity, Protection, were originally grouped under the scheme «Organization» during the Third Plan period. After the third plan period, all the plan staff and expenditure thereon was transferred to Non-plan. The minor schemes such as Working Plan, Publicity, Protection were treated as regular plan schemes. The expenditure on the scheme «Organization» during the Third plan period was Rs. 5,64,739/-. The details of the other schemes are given under respective Plan scheme:

SURVEY AND DEMARCATION

During the erstwhile rule, the State forests were not covered up with complete demarcation, but only a portion of the Government forests was demarcated and even this was not finalised. Because, the demarcation was a major work, more emphasis was laid on this ever since the re-organised Forest Department was established. With a view to safeguard the forests from encroachments, provisional demarcation was taken up by clearing a strip of three metres wide separating the private holding from the Government forests and boundary cairns were erected as per the specifications adopted in the neighbouring States. A boundary line of 820 kms. was demarcated during the III plan period by erecting 6560 cairns at an expenditure of Rs. 1,10,698/-. During 1966-67, a boundary line of 1570 kms. was cleared and 7926 cairns were erected at an expenditure of Rs. 40,844/. The forest boundaries demarcated in the past years were maintained during 1967-68. In addition to this, necessary rectification was carried out of boundary cairns along the forest boundaries. The survey instruments were also purchased and the amount spent during 1967-68 was Rs. 41,065/-. Anticipated expenditure for the year 1968-69 is Rs. 0.45 lakhs.

WILD LIFE

The Goa, Daman and Diu Wild Animals and Wild Birds Protection Act 1965 has been passed and is enforced with effect from 1st June 1966. The game status in the forests of this territory is very poor, mainly because of the past uncontrolled poaching by public under the garb of crop protection. During the year 1967-68 two game sanctuaries were constituted in the territory, where complete protection is provided to the wild life. It is proposed to provide drinking water facilities by digging water holes, construction of small reservoirs, etc. to wild animals. With a view to create complete sense of security in their natural habitat, shooting of wild life is completely prohibited in the game sanctuaries. Even the licence holders are prohibited from shooting within the limits of the sanctuary. In addition to these measures, strict watch and patrols are arranged to prevent poaching in the sanctuaries. During 1967-68 an amount of Rs. 6871/- was spent under the scheme. It is expected to incur an expenditure of Rs. 0.05 lakhs during 1968-69.

WORKING PLAN

The scheme for collecting data for Working plan was introduced during the last year of the III plan period. This territory had no independent Forest Department prior to liberation. The preparation of first Working plan of the territory is taken up in two Working Plan divisions in charge of the two Divisional Forest Officers. Non-availability of topographical maps of the forest area a great handicap in the working plan work. During 1966-67 and 1967-68 few contour maps (uncorrected proofs) prepared to the scale of 1:25,000 have been received from the Survey of India. Since these maps are not convenient for the working plan work, enlarged maps to the scale of 1:15,000 are requisitioned from the Survey of India. For the year 1966-67, Rs. 14,303/- was spent. During 1967-68 few enlarged prints were received by the Department. The Department has also proposed to the Government to take up forest survey work of this territory on priority basis, as the preparation of forest maps is a major work and in the meantime, stock mapping of entire growing stock has to be carried out as and when the forest maps are received. During 1965-66 and 1966-67, growing stock in an area of 500.27 hectares was enumerated. Since the Working Plan is to be written for the first time, full details and complete data are required to be collected. It is expected that the preparation of Working plan will be completed by the end of the IV plan period. During 1967-68 an amount of Rs. 51,768/- was spent under the scheme. Anticipated expenditure for 1968-69 is Rs. 0.35 lakhs.

FOREST PROTECTION

The scheme was introduced in 1965-66 during the III plan aiming to regulate the forest produce in transit and to prevent illicit cutting and removal of forest produce unauthorisedly. A Mobile Squad unit has been set up with one Range Forest Officer, a Forester, a Forest Guard and an Armed Constable. The Mobile Squad party arranges surprise patrols to regulate the movement of the forest produce in transit. Apart from this, several check posts have been established at different strategic points. A strict vigil by checknaka staff has greatly reduced the incidence of illicit transit and removal of forest produce from the Government forests. The scheme is proposed to be continued during the IV plan. An expenditure of Rs. 28,000/- was incurred during the III plan period and Rs. 2122/- during 1967-68. It is expected to incur an amount of Rs. 5000/- during 1968-69.

FOREST PUBLICITY

The importance of forests is realised only when the villagers of the neighbouring areas are convinced of the beneficial effects of the forests. Most of the population residing in and around the forests are illiterate and hardly can realise the importance of forest protection and its development. During the III plan period, a projector and few documentary films on the conservancy of forests and the preservation of wild life were purchased with a view to educate the ignorant villagers. The documentary film shows were conducted frequently so as to inculcate the importance of forests amongst the ignorant village masses. Apart

from this, annually the Vanamahotsava week and Wild Life weeks are observed and on the occasions, wide publicity is given to create interest in tree-planting and in conservation of wild life. Importance of forests is conveyed to villagers, school children, institutions, etc. by distributing seedlings and pamphlets, etc free of cost. During the Vanamahotsava and during Wild Life weeks, essay competitions are also organised with a view to create interest in tree planting and wild life preservation. An expenditure of Rs. 15,000/- was incurred during the III Five Year Plan and during 1967-68 few documentary films have been purchased. An expenditure of Rs. 10,473/- was incurred in implementing the scheme during 1967-68. Anticipated expenditure for 1968-69 is Rs. 0.10 lakhs.

PLANTATIONS

The scheme forms the core of the forest development in this Union territory. During the pre-liberation period, very little attention was given for improvement of forests, as a result, vast stretches of barren areas are seen all over the territory, and even the soil conservation aspect was neglected. After the establishment of the department, the plantation works were taken up on priority basis, emphasis being laid on fast growing and economically important species such as encalyptus, teak, cashew, rubber, etc. An area of 960 hectares was planted during 1964-65. The planting target has been increased to 1600 hectares annually in the subsequent years. The details of area planted during the III plan period and in subsequent years are as under:

Year	Area	Amount
1964-65	960.00 hectares	Rs. 3,56,635.00
1965-66	1600.00 hectares	Rs. 4,72,030.00
1966-67	1766.71 hectares	Rs. 6,44,842.00
1967-68	*1768.08 hectares	Rs. 8,64,890.00

* Inclusive of 211 hectares of bamboo interplanted with encalyptus.

The plantation programme is five years old now, and the tempo of raising plantations over an area of about 1600 hectares has been continued during 1968-69 also. The department has to meet adequately requirement of planting material. As such, ten wet nurseries have been established including two rubber nurseries from 1964 to 1968. All these nurseries are equipped with 5 H. P. Kirlosker pumping sets and pipelines. Apart from the wet nurseries, temporary dry nurseries are also established to raise the stock of teak seedlings. In 1964-65 rubber plantation over an area of 40 hectares was raised on experimental basis. The tract of this territory falls outside the rubber region. Even so, attempts are being made to cultivate rubber plantations on scientific lines and the result seen in 1967-68 are quite encouraging. During 1967-68, an area of 6 hectares was planted by rubber. Bamboo cultivation was also taken on hand during the III plan period and in 1966-67 and 1967-68. Improved variety of bamboos such as *Dendrocalamus longispathus* of Bihar variety is proposed to be cultivated as a mixture in the encalyptus plantations, with a view to serve as a good substitute raw material for future rayon pulp industries. Apart from this, it is also proposed to grow medicinal plants such as menthol, *Raulwolfia serpentina*, lemon grass, etc. in the various forest nurseries. It is expected to incur an expenditure of Rs. 10.00 lakhs during 1968-69.

COMMUNICATIONS

Since there was no organised forestry during the erstwhile rule, the importance and development of forest roads was not adequately recognised. At present, about 95 kms. of road is in charge of this department. As the need for communications in the interior forest areas has increased greatly, the Department has attempted to make good use of these roads for public communication as also for departmental purpose. After these roads were handed over to this department, for the first two years they were maintained as fair weather roads and only pre-monsoon and post-monsoon works were carried out with an expenditure of Rs. 32,561/- during the III plan period. The increased use of these roads has necessitated conversion of these roads into all weather roads. Accordingly, action was taken in 1966-67 and 1967-68 to carry out cross drainage works along with re-surfacing. In 1966-67 a distance of 10 kms. was taken up for soling work, including construction of a bridge, and the expenditure incurred on this account was Rs. 1,41,473/-. In 1967-68 an additional length of 8 kms. was taken up for soling work at an expenditure of Rs. 2,01,684/- approximately.

BUILDINGS

The necessity of buildings, perhaps, was not felt during the pre-liberation time as there was hardly any forest developmental activity. Owing to this, efficient supervision of forests was not attended to, as a result, the illicit cutting of forest produce was very rampant. There were no rest houses for touring officers to camp and enforce effective supervision of the forest works. After liberation of the territory, the developmental works started on sound footing, and for the effective supervision of forest works, necessity was felt for providing residential facilities to the subordinate staff of this department in the interior forest areas. Initially, great difficulty was experienced due to non-availability of Government-owned areas as building sites, and the owners of the private holdings posed a problem by demanding exorbitant prices. The building programme was geared up from 1964-65 onwards. During III plan period, three Forest rest houses were constructed in addition to number of residential quarters for subordinates at an expenditure of Rs. 10,43,614/- and nearly one-third of the subordinates were accommodated in these quarters. In 1966-67 one more forest rest house was constructed in addition to the construction of 10 more quarters. During 1967-68 construction of ten more quarters were completed in addition to few more quarters including construction of Divisional Forest Office, and the expenditure incurred during 1967-68 was Rs. 7,32,183/-. It is expected to incur an expenditure of Rs. 7.50 lakhs during the year 1968-69.

INTRODUCTION OF EXTENSIVE CASHEW PLANTATIONS

The Scheme of cashew planting was introduced during 1967-68 as an integral part of the plantation scheme. Owing to favourable climatic and soil conditions suited for healthy growth of cashew, more emphasis is laid on cashew cultivation. The importance of cashew as foreign exchange earner is recognised in carrying out this programme. It was proposed to acquire large stretches of barren areas in charge of the Comu-

nidades which are devoid of tree vegetation. Due to difficulty in getting adequate area for planting, the implementation of the original scheme prepared to cover an area of 2400 hectares annually by cashew plantations could not be done as per the advice of the Union Ministry of Food and Agriculture. However, administrative and financial sanction was accorded by the Government of India for implementing the cashew scheme over an area of 600 acres annually. Since there was no separate organization for executing the scheme, it was treated as an integral part of the plantation scheme, and the expenditure has been included in the plantation scheme only.

In the IV Plan, a cashew planting scheme designated as 'Extensive Cashew Planting Scheme' is proposed to be implemented. The main features of the Scheme are summarised below:

Area where the Scheme is to be Executed: The Comunidades and some private individuals in Goa have vast barren hilly areas, which are proposed to be developed by carrying out suitable soil conservation and afforestation measures by establishing cashew plantation. Acquisition of the Comunidades barren hilly areas or taking them on long term lease basis for the purposes of development, poses several unsurmountable difficulties. As such, it is recommended that the Goa Government may confine itself to assuming powers to enter upon these lands and develop them. This can be done by extending the provisions of the Bombay Land Improvement Schemes Act, 1942, under which the Soil Conservation department in Maharashtra is entering upon private lands and developing cashew plantations in that State. Provisions of this Act after its extension to this territory, will be limited to only barren hilly areas where food crops cannot be grown, belonging to the Comunidades and other private individuals, without prejudice to any other legislation that may be under contemplation for the reorganisation of the Comunidades, which might need considerable time. This Act is in operation in Ratnagiri District of Maharashtra State, and barren hilly areas are taken up for development under soil conservation and afforestation (Cashew planting) measures under Clauses (vii), (viii-a) of Section 4 of the Land Improvement Act.

The cost of the scheme less subsidy of 50% will be recoverable from the land owners in ten equal instalments with interest @ 4½% per annum. The recovery will begin from the fifth year of planting.

The anticipated expenditure to be incurred on the scheme is as under:

Financial Implications	Physical Targets
1969-70 — Rs. 11,76,000	4000/ 5000 acres
1970-71 — Rs. 11,34,000	4000/ 5000 acres
1971-72 — Rs. 12,08,000	4000/ 5000 acres
1972-73 — Rs. 12,08,000	4000/ 5000 acres
1973-74 — Rs. 12,08,000	4000/ 5000 acres
Rs. 59,34,000	20000/25000 acres

After the Scheme is executed with the expenditure of Rs. 59.34 lakhs, the yield of revenue will commence with 5.76 lakhs in 1974 which will progressively increase upto 1983 to a limit of Rs. 384 lakhs and this revenue will be kept up during the next thirty-year period.

The estimated expenditure per acre will be Rs. 120/150 in the first year; Rs. 24.00 per acre in the second year; and Rs. 12.00 per acre in the third year i. e. Rs. 186/- per acre and 50% of this amount will be treated as subsidy and the balance 50% is recoverable from Comunidades or private individuals in ten easy instalments after the fifth year of planting.

As the financial prospects will tremendously boost the economy of this territory, Government's sanction to the implementation of the Scheme is sought with effect from 1969-70 onwards.

FARM FORESTRY

This scheme is proposed to be implemented during the IV Five Year Plan. There are large stretches of barren areas owned by private individuals and the Comunidades and the owners of these lands have never attempted to re-stock such areas. The plantations under the scheme are proposed to be raised on village waste lands, canal banks and on private holdings near villages. During the IV Five Year Plan, the scheme will be executed in four Community Development Blocks covering an area of 20 hectares in each block, and the anticipated expenditure on this account is Rs. 80,0000/- during the plan period. The species to be planted will be of fast growing type at a cost not exceeding Rs. 200/- per acre.

APPENDIX

Schemewise breakup of physical target of each scheme during the IV Plan Period

Sr. No.	Name of Scheme	Total outlay for the plan (in lakhs)	Physical targets proposed
1	2	3	4
1.	Survey & Demarcation.	2.50	The forests of this territory were not surveyed and demarcated before. The work of provisional demarcation by clearing a 3 metre wide strip all along the boundary and putting up the boundary cairns will be continued. In addition to this it is proposed to take up forest survey work during the plan period.
2.	Wild Life.	0.50	Two game sanctuaries have already been constituted during 1967-68. Provision of adequate drinking water facilities and providing salt-licks are proposed. In addition, construction of watch towers is proposed.
3.	Working Plans	2.50	The work of collection of data for preparation of the working plan for the territory of Goa has been already taken up. It is proposed to prepare forest maps and do stock mapping during the plan period. The working plan work is expected to be completed by the end of the plan period.
4.	Forest Protection.	0.50	The mobile squad established during the III Five Year Plan is being continued. It is proposed to provide weapons to the Range Officers of this department for effective protection of forests of their jurisdiction.

1	2	3	4
5.	Publicity.	0.50	The scheme was introduced during the III Five Year Plan and is being continued. It is proposed to show films on forestry and wild life with a view to create interest among the students and in the rural population in the preservation of this national asset.
6.	Plantations.	52.50	<p>Economic plantations of following species are proposed to be taken up:</p> <p>Teak — 700 hectares per year i. e. 3500 hectares for the plan period.</p> <p>Eucalyptus — 700 hectares per year i. e. 3500 hectares for the plan period.</p> <p>Rubber — 10 hectares per year i. e. 50 hectares for the plan period.</p> <p>Bamboo inter-planting in eucalyptus plantations — 700 hectares per year i. e. 3500 hectares for the plan period.</p> <p>Already established ten wet nurseries are proposed to be continued and some additional area is proposed to be added to the same to meet the ever increasing demand for seedlings to plant up in the targetted areas.</p>
7.	Communications.	6.86	The existing road length of 95 kms. is proposed to be converted into all weather roads by carrying out soling, metalling and cross-drainage works.
8.	Buildings	4.00	During the III Plan Period and in 1966-67, 1967-68 number of residential quarters were constructed and are now brought into use. Nearly $\frac{2}{3}$ of the forest subordinates are provided with quarters in the interior forest areas where they have to stay for effective supervision and protection of forests. It is also proposed to construct office buildings in all the Range Quarters. The scheme will be continued during the plan period.
9.	Introduction of extensive cashew plantations.	59.34	The cashew planting scheme was introduced during 1967-68 when 600 acres were planted up with cashew. In 1968-69 this was carried forward and 1000 acres have been planted up with cashew. During the IV plan it is proposed to take up extensive cashew plantations in the barren areas belonging to comunidades and private owners. An area of 4000-5000 acres is proposed to be taken up every year so that by the end of IVth Five Year Plan an area of 20000-25000 acres would be planted up with cashew on more systematic lines.
10.	Farm Forestry.	0.80	It is proposed to introduce the scheme during the Fourth Plan. The scheme proposed to plant up village wastes, canal banks, individual holdings near village by fast growing and economically important fuel wood species with a view to enable them to meet their own requirement in respect of fuelwood and small timber for their agricultural implements etc. The scheme is proposed to be executed in four C. D. Blocks, in an area of 20 hectares annually in each C. D. Block.
		130.00	

7 — Fisheries

INTRODUCTION

In the present days of rapid growth of population requiring increased food supplies and improvement in nutritional value of our protein deficient diet, importance of fisheries, as a source of nutritious food needs no emphasis. Development of fisheries however, did not receive proper attention in the former Portuguese regime. A separate Department of Fisheries has been established only after liberation of this Territory for undertaking all round development of the fishing industry.

FISHERY RESOURCES

The Territory of Goa, Daman and Diu is known to be rich in fishery resources. Goa has a sea coast of 100 kms., 250 kms., long inland waterways and a number of small tanks. The coast is full of creeks and estuaries which provide a good shelter for fishing crafts. The coastal waters are rich in fishery resources especially of the huge shoals of mackerels and sardines which regularly visit the coastal waters during fishing season and yield abundant catches.

Daman and Diu have a coast line of 12 kms. and 21 kms. respectively. The problems of fisheries in these two territories is akin to those in the neighbouring state of Gujarat. The waters of Daman and Diu are known to be rich, the former in Dara and Bombay Duck and the latter in the well known pomfrets.

Fish finds a very important place in the diet of the population of the Territory, about 90% of which relish fish.

ACHIEVEMENTS OF THE THIRD PLAN

After the liberation of this Territory only, a separate Department of Fisheries has been established on 2-1-1963. The first and second five year plans and first two years of the third plan could not be implemented in the Territory as it was under Colonial regime during that period.

A survey of fishing activities and conditions of fishermen was conducted and various schemes were recommended for implementation in the remaining period of the third five year plan.

During the third five year plan emphasis was laid on the following:—

- 1) Mechanisation of fishing crafts for increasing fish production.
- 2) Bringing suitable inland waters under fish culture.
- 3) To improve the socio-economic condition of the fishermen by giving them financial assistance.
- 4) Bringing the fishing into the cooperative fold and thereby pooling their resources and strengthening them.

In order to encourage the fishermen to undertake mechanised fishing scheme for allotment of marine diesel engines and boats on loan-cum-subsidy basis has been implemented. During the third plan 68 engines were purchased for fitting on local fishing crafts or boats specially built for mechanisation. Out of these 48 engines have been fitted on boats till the end of third plan period. Since the local country crafts in Goa are not suitable for mechanisation i. e. for installation of inboard diesel engines, 17 boats of improved design have been constructed and orders for construction of ten more boats were placed. The mechanisation have thus cost Rs. 30.69 lakhs during the third plan.

During the years 1966-67 and 1967-68, 37 engines, 12 boats have been allotted at the cost of Rs. 14.54 lakhs and it has been proposed to allot 20 engines and 4 boats during the year 1968-69.

An amount of Rs. 4.45 lakhs has been spent during the third plan period for supply of fishery requisites and grant of assistance for general development of fisheries. Under this scheme nylon, cotton and hemp twine and other accessories and high speed diesel oil have been subsidised in the fishing.

During the year 1966-67 and 1967-68, the expenditure scheme has been Rs. 3.36 lakhs and an amount of Rs. 1.20 lakhs has been proposed for the year 1968-69.

A training centre for fisheryouths was opened during the third plan period. In all 88 fisheryouths have received training during the third plan period and 16 candidates have received training during the year 1966-67. Training facilities have since been discontinued.

Candidates were also deputed to the Institute of Fisheries Education, Bombay, Marine Products processing centre, Mangalore and the Central Institute of Fisheries Operatives, Cochin for training. In all six candidates have completed training in above Institutes.

The expenditure during the third plan period has been Rs. 2.09 lakhs and Rs. 0.518 lakhs have been spent during the year 1966-67 and 1967-68.

Development of Cooperative fisheries has received attention. Ten fishery cooperative societies have been organised during the third plan period and to the tune of Rs. 34,000/- has been incurred under this scheme.

An Ice factory of 10 tons capacity and a quick freezing unit have been installed during the Third Plan period in order to provide facilities

for freezing marine products. The Cold Storage at Panjim and Marmagoa have also been renovated and made suitable for storage of fish thus making 150 tons of frozen storage space available to the industry. An amount of Rs. 7.82 lakhs has been spent on this scheme during the third plan period and Rs. 4.72 lakhs during the years 1966-67 and 1967-68. The provision for 1968-69 is Rs. 4.468 lakhs.

Research and Statistical cells have been created during the third plan period for collection of data about fish life and the fishing industry.

OUTLAY FOR THE FOURTH PLAN

During the third plan period emphasis was laid on production of fish. It is felt that the same basis should be adopted while formulating the fourth plan so that fish will be available to the public in order to reduce deficiency of protein in the diet of the public to the extent possible.

The schemes proposed are on the same lines of the third plan aiming at consolidation of the progress achieved during 1963-1964 to 1968-69.

The major scheme in the improvement of marine fisheries will be mechanisation of fishing crafts. The scheme has helped the fishermen to exploit fishing grounds which are normally not visited by sailing vessels. The number of mechanised boats operating in sea by end of 1968-69 will be about 114 and it is proposed to mechanise 100 boats during the Fourth Plan period.

However, this programme will enable the exploitation of fishery resources in a limited belt only. The extension of the range of operations for further area, specially to greater depth necessitates use of large vessels for fishing.

Purse-seine fishing operations have been successfully conducted by the Department with the help of two very old purse-seine boats. These operations have fairly demonstrated that purse-seining is a most effective method of catching huge shoals of mackerels and sardines which regularly visit the coastal waters of Goa during September to January-every year. Such vessels being costly cannot be acquired by the fishermen. A beginning therefore will be made on Government level by acquisition of two trawlers of 55 ft. length and three multipurpose boats for purse-seining etc. This will also enable the Department to undertake the exploratory programme which could not be taken up systematically, so far for want of suitable boats for the purpose.

Production of fish depends much on use of improved and efficient type of fishing gear. One of the difficulties experienced by the fishermen is the paucity of credit at reasonable rate of interest. It is therefore necessary that financial assistance is made available to fishermen at competitive rates.

With the proposed acquisition of two trawlers and three multipurpose boats facilities for their maintenance and repairs will have to be provided, for which a scheme is provided.

The financial and physical targets in respect of important schemes are given below: —

Name of the scheme	Targets	
	Financial	Physical
1) Mechanisation of fishing crafts	Rs. 41.00 lakhs	70 engines 20 boats
2) Powered fishing	Rs. 54.40 lakhs	
3) Assistance to fishermen	Rs. 8.00 lakhs	2 trawlers 4 purseine
4) Construction of slipway and service station ...	Rs. 4.50 lakhs	
5) Production of fish from inland and brackish waters and freezing and cold storage facilities to processors and producers	Rs. 6.99 lakhs	1 unit

The Fourth plan outlay of the fishing sector is placed at Rs. 119.31 lakhs out of which Rs. 99.90 lakhs have been earmarked for production of marine fish. This represents about 83.7% of the total outlay. It would thus be clear that emphasis has been laid on production schemes.

As a result of the implementation of the schemes fish landing by the end of Fourth Plan are estimated to increase by 6000 tons per year.

The Fourth Five Year Plan has been drawn up taking into consideration additional factors such as: —

- a) Capacity of the region to absorb development programme.
- b) Normal in financial limitations.
- c) Availability of sufficient and suitable equipment.
- d) Performance during the third five year plan and the two years 1966-67 and 1967-68.

NAME OF THE SCHEME: MECHANISATION OF FISHING CRAFTS

Total Plan Outlay — Rs. 41.00 lakhs.

Physical Target

- a) Revenue — Rs. 19.12 — 70 engines.
- b) Loan — Rs. 21.88 — 20 boats.

This is a continuing scheme the object of which is to assist fishermen in fitting engines to their craft with a view to expanding their field operation, increasing their catch and thereby their income.

The scheme envisages grant of subsidy and loan for purchase of marine diesel engines. Fishermen have now realised the advantage of mechanisation but the main difficulty has been that the boats at Daman and Diu are old and need replacement and that boats in Goa are not sui-

table for mechanisation. It is therefore proposed to encourage fishermen and or their cooperative societies to undertake construction of new boats for mechanisation by granting them financial aid at the rate of 25% of the value of the hull as subsidy and remaining 75% as loan, Marine diesel engines for fitting on boats will be given on 50% subsidy and 50% loan.

Loans and subsidy for construction of boats will be granted in instalments against presentation of the contract signed with the boat builders and on execution of an agreement to the effect that the boats with engine when ready will be mortgaged to Government. The loan amount is repayable in seven years, in quarterly instalments. However no instalment will be due during the off season i. e. June, July and August each year. Insurance equal to loan amount is compulsory.

Details of expenditure

	Loan	Subsidy	Total
70 engines at average rate of Rs. 45,000/- each	15.75	15.75	31.50
20 boats at average rate of Rs. 45,000/- each	6.75	2.25	9.00
	22.50	18.00	40.50
Establishment charges			0.50
			41.00

Phasing of expenditure

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	2.54	3.26	3.91	4.09	5.32	19.12
Loan	2.92	2.66	4.72	5.06	6.52	21.88
	5.46	5.92	8.63	9.15	11.84	41.00

Phasing of physical targets

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Engines	10	10	15	15	20	70
Boats	2	3	4	5	6	20

Details of staff:

Additional posts.

1) Diesel mechanic 1 post

NAME OF THE SCHEME: POWERED FISHING

Total Plan outlay — Rs. 54.40 lakhs

Revenue — 14.40 lakhs

Capital — 40.00 lakhs

The extent of fisheries resources of Goa has not been assessed so far. Operations conducted within limited range and on an exploratory basis on trawling have demonstrated the existence of rich fishing grounds and thus there are possibilities of increasing fish production by exploitation of known resources as well as by extending range of operation for other areas. At the same time it will be necessary to conduct detailed survey with suitable boats fitted with modern equipments which could cover the areas in deeper waters.

The coast of Goa is regularly visited by large shoals of mackerel sardines between September to January every year. Experience has demonstrated that purse-seine net is a most effective gear for catching the large shoals of mackerels and sardines. Two purse seine boats are at present operated successfully in Goa, but the boats become very old and need replacement.

Government of India have indicated that arrangements are being made to procure fishing trawlers of about 55 ft. in length and that two of them are allotted to Goa. Each trawler is likely to cost about Rs. 9.00 lakhs and amount of Rs. 6.00 lakhs approx. is likely to be spent during 1968-69. Likewise four multi-purpose boats will have to be procured in order to replace the purse-seine boats at present in operation.

Details of expenditure:

a) Pay of establishment	Rs. 5.26.000-00
b) Allowances	Rs. 3.00.000-00
	<hr/>
	Rs. 8.26.000.00

Operational cost:

Diesel oil, lubricants grease cotton waste, etc. ...	Rs. 3.13.000-00
Repairs and idleing charges	Rs. 46.000-00
Cost of nets, floats ropes etc.	Rs. 1.05.000-00
Cost of ice	Rs. 1.50.000-00
	<hr/>
	Rs. 14.40.000-00

Capital:

a) Partial cost of 2 trawlers of 55 ft. length ...	Rs. 12.00.000-00
b) Cost of 4 multipurpose boats of 40 to 50 ft. in length	Rs. 28.00.000-00
	Rs. 40.00.000-00
	<hr/>
	Rs. 54.40.000.00

Details of staff:

Floating staff:

1. Skipper	5 posts
2. Bossuns (300-350)	5 »

3. Engine Driver class I (250-350)	...	...	...	...	5	»
4. Asst. Engine Driver (150-250)	...	...	...	...	5	»
5. Deckhands (100-130)	...	...	...	...	5	»
6. Cooks (75-95)	...	...	...	...	2	»
7. Asst. Cooks (70-85)	...	...	...	...	2	»

Shore staff:

1. Superintendent of Fisheries	...	...	...	...	1	posts
2. Asst. Supdt. of Fisheries	...	...	...	...	4	»
3. Skipper	...	...	...	...	1	»
4. Engine Driver	...	...	...	...	1	»
5. Salesman (110-180)	...	...	...	...	1	»
6. Senior clerk (130-300)	...	...	...	...	1	»
7. Junior clerk (130-300)	...	...	...	...	1	»
8. Junior clerk (110-180)	...	...	...	...	2	»
9. Storekeeper (130-300)	...	...	...	...	1	»
10. Peons (70-85)	...	...	...	...	2	»
11. Shore attendants	...	...	...	...	6	»

Phasing of expenditure

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	1.66	2.29	2.89	3.22	4.34	14.40
Capital	12.00	4.50	6.50	7.00	7.00	40.00
	13.66	6.79	12.39	10.22	11.34	54.40

NAME OF THE SCHEME: ASSISTANCE TO FISHERMEN

Plan outlay — Rs. 8.00 lakhs

- a) Revenue — Rs. 3.50 lakhs
 b) Loan — » 4.50 lakhs

This is a continued scheme, the object of which is to encourage the fishermen to equip themselves with essential fishing accessories, like nylon, hemp twine, fish hooks, diesel oil etc. In view of the high cost it is proposed to give subsidy to the fishermen on the purchase of fishery requisites at the rate indicated below:

Nylon twine	...	33 1/3%	Fishing Hooks	...	33 1/3%
Hemp twine	...	33 1/3%	Diesel Oil — Rs. 500		
Cotton twine	...	33 1/3%	per year per boat		
Winches	...	33 1/3%	upto 36' and 25%		
Polythen fibre	...	33 1/3%	of total expenditure		
			on diesel oil		
			for large boat.		

Under the scheme it is also proposed to advance lease to fishermen individually or through their cooperative societies for repairs and cons-

truction of boats, purchase of nets and fishery accessories. Loans will be granted to the extent of 50% of the value of assets offered as security such as house, land, engines, floating charges of all assets of the borrowers and mortgage of machinery, plants, fishing boats, trucks and other equipment to be purchased with loan amount and subject to other conditions mentioned in the pattern of assistance, approved by Government of India and adopted by this Administration.

Details of expenditure:

Loan — Rs. 4.50 lakhs
 Subsidy — Rs. 3.50 lakhs
 Rs. 8.00 lakhs

Phasing of expenditure

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Loan	0.70	0.80	1.00	1.00	1.00	4.50
Subsidy	0.60	0.60	0.70	0.80	0.80	3.50
Total	1.30	1.40	1.70	1.80	1.80	8.00

NAME OF THE SCHEME: PRODUCTION OF FISH FROM INLAND & BRACKISH WATERS & FREEZING AND COLD STORAGE FACILITIES TO PROCESSORS AND PRODUCERS

Revenue — Rs. 58.300/-
 Capital — Rs. 6.41.000/-
 Total — Rs. 6.99.300/-

There are vast stretches of land inundated with brackish water lying hollow in Goa. They can be used for inland fish culture. It is therefore proposed to establish a brackish water demonstration fish farm on experimental basis. The site for the fish farm has been selected and is being acquisitioned. The provision for erection of bunds, removal of vegetation and levelling of the land is made in the scheme.

Since the farm will be run purely on an experimental basis and for demonstration purposes no return can be expected from the said farm at least during first four years.

As there will be all round increase in the fish and prawn production from fresh and brackish waters also during the IV Five Year Plan it is proposed to extend the freezing and cold storage facilities in the interior areas for the benefit of the processors and producers. A provision is therefore proposed for one plate freezer and cold storage equipment etc.

Details of expenditure:

Pay of establishment	Rs. 17.300-00
Allowances and honoraria	Rs. 9.000-00
	26.300-00

Contingencies:

Equipment, tools wire netting etc.	Rs.	15.000-00
Casual labour	Rs.	5.000-00
Minor repairs to bunds	Rs.	10.000-00
Miscellaneous	Rs.	2.000-00
	Rs.	<u>32.000-00</u>

Capital:

Cost of land	Rs.	65.000-00
Construction of bunds, clearance, of vegetation and levelling etc.	Rs.	86.000-00
Construction laboratory and office quarter ...	Rs.	40.000-00
Plate freezer	Rs.	1.30.000-00
Equipment of cold storage etc.	Rs.	3.20.000-00
	Rs.	<u>6.41.000-00</u>

Phasing of expenditure

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	-	13.625	14.745	14.865	14.985	58.300
Capital	3.31	1.40	50.000	50.000	70.000	641.000
	<u>3.31</u>	<u>1.53.625</u>	<u>64.745</u>	<u>64.865</u>	<u>84.985</u>	<u>6.99.300</u>

Details of staff:

1) Watchman (Rs. 70-85)	1 post
Research Assistant (Rs. 250-10-290-15-530)	1 post

NAME OF THE SCHEME: CONSTRUCTION OF SLIPWAY AND SERVICE STATION

Outlay for 1969-74 — 4.50 lakhs.

Revenue — 1.75

Capital — 2.75

The department is at present operating six mechanised boats. there being no servicing facilities available, the boats are to be sent to either Captain of Ports or Private Workshops for servicing and annual repairs. These Workshop always being busy, the repairs are delayed considerably, thereby causing prolonged lapse in the regular fishing operations. The cost of the repairs in these Workshops is also high. Further the boats are to be anchored in the water during rainy season as there is no safe place to take them on hard. This bring down the normal life of the boats.

It is therefore proposed to construct a slipway, with servicing facilities attached, nearby the base of operation of the boats. This is all the more necessary in view of the allotment of two trawlers to this Territory which are likely to be delivered by the end of the year 1968-69.

Details of expenditure: —

a) Pay of establishment	...	...	...	Rs. 74,600-00
b) Allowances & Honoraria	...	...	...	Rs. 37,500-00
				Rs. 1,12,100-00

Contingencies:

1) Power and water charges etc.	...	...	...	Rs. 10,000-00
2) Lubricants, oils, cotton waste etc.	...	...	...	Rs. 8,000-00
3) Replacement and repairs	...	...	...	Rs. 13,000-00
4) Furniture	...	...	...	Rs. 3,000-00
5) Other items	...	...	...	Rs. 8,000-00
6) Casual labour	...	...	...	Rs. 15,000-00
7) Miscellaneous	...	...	...	Rs. 5,900-00
				Rs. 62,900-00

Capital:

Cost of construction of slipway	...	...	...	Rs. 1,50,000-00
Cost of machinery such as winch, trollies, Electric Jack etc.	...	...	...	Rs. 75,000-00
Cost of land	...	...	...	Rs. 50,000-00
				Rs. 2,75,000-00
Total	...	...	...	Rs. 4,50,000-00

Phasing of expenditure

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	-	0.37	0.43	0.47	0.48	1.75
Capital	2.75	-	-	-	-	2.75
Total	2.75	0.73	0.43	0.47	0.48	4.50

Details of staff: —

1) Foreman	Rs. 350-650	...	...	...	...	1 post
2) Diesel Mechanic	...	...	...	...	...	1 post
3) Electrician	Rs. 175-280	...	...	...	...	1 post
4) Mechanic	Rs. 150-240	...	...	...	...	1 post
5) Carpenter	Rs. 125-155	...	...	...	...	1 post
6) Welder	Rs. 110-155	...	...	...	...	1 post
7) Turner-cum-machinist	Rs. 110-180	...	...	...	...	1 post
8) Blacksmith	Rs. 110-131	...	...	...	...	1 post
9) Watchman	Rs. 70-85	...	...	...	...	2 posts

NAME OF THE SCHEME: ASSISTANCE TO FISHERIES COOPERATIVE

Plant outlay — Rs. 2.30 lakhs

Revenue — Rs. 0.15

Capital — Rs. 0.15

Loan — Rs. 2.00

Rs. 2.30

Cooperative movement is new for this Territory. At present there are 10 fishery Cooperatives. However they have not taken stride enough to undertake large responsibilities such as Cooperative marketing of fish and fish products. It is therefore necessary to nurture the Cooperatives with Government assistance in the form of managerial subsidy, share capital contribution and loans for working capital.

Details of expenditure:

Managerial subsidy to 10 societies at the rate of Rs. 600/- during 1969-70 and Rs. 600/- during 1970-71 and 1971-72 Rs. 15,000-00

Capital:

Additional share capital contribution to the maximum of Rs. 10,000/- per society on matching basis Rs. 15,000-00
Loans towards working capital Rs. 2,00,000-00
Total Rs. 2,30,000-00

	1969-70	1970-71	1971-72	1972-73	1973-74	Total
Revenue	6.000.00	6.000.00	3.000	-	-	0.15
Capital	12.000.05	-	3.000	1.00	1.00	2.15
Total	18.000.00	6.000.00	6.000	1.00	1.00	2.30

NAME OF THE SCHEME: LANDING & BATHING FACILITIES

Plan outlay — Rs. 2.00 lakhs.

Capital — Rs. 2.00 lakhs.

Due to mechanisation of fishing boats berthing facilities at Daman, Diu and other major ports will have to be provided in order to facilitate rapid landing of highly perishable commodity like fish. As such construction of jetties at these places are proposed.

Phasing of Expenditure:

Construction of jetties at Daman, Diu and other major ports	Rs. 2.00 lakhs
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Details of Expenditure:

1969-70	Rs. 0.50 lakhs.
1970-71	Rs. 0.85 lakhs.
1971-72	Rs. 0.65 lakhs.
	<u>Rs. 2.00 lakhs.</u>

NAME OF THE SCHEME: TRAINING

Plan outlay — Rs. 12,000

Revenue — 12,000

The object of the scheme is to train the candidates in various branches of fishery science. As the developmental activities of the department are increasing the need of trained personnel will be felt in near future for efficient implementation of the fishery development schemes. It is therefore proposed to depute two candidates for training in specialised field in fisheries during the IV Plan period and the provision therefore is made in the scheme.

Scholarship to 2 deputees — 12,000-00

Details of expenditure:

1970-71 —	2,000
1971-72 —	4,000
1972-73 —	2,000
1973-74 —	4,000
Total	<u>12,000</u>

8 — Warehousing & Marketing

Marketing

INTRODUCTION

The Marketing Wing under the Dept. of Cooperation started in September, 1964. The following are the activities taken up since the inception and the staff expenditure is being met from the Non-plan. These activities will be continued under Non-plan.

1. Market Survey and Market Investigation.
2. Development of Grading.
3. Coordinated Market News and Intelligence.

The only scheme which is under Plan is, Development of Agricultural Marketing (Regulated markets). Now, the Agricultural Produce Markets Act is applied to this Union Territory and it is to be implemented.

ACHIEVEMENTS

1. Development of Agricultural Marketing (Regulated Markets): The Maharashtra Agricultural Produce Market (Regulation) Act 1963 has been extended to this Union Territory from June 1968. The provisions made during 1966-67 and 1967-68 could not be utilised for want of the Act. An amount of Rs. 1.50 lakhs is provided during 1968-69 out of which Rs. 0.75 lakhs is expected to be utilised.

2. Market Survey and Investigation: Survey reports on Betelnut, Pineapple and Vegetable are published and a report on Meat Marketing is under printing.

3. Development of Grading: The Foodgrains Analytical Laboratory is set up in this Office. 13 Agmark Grading Centres for eggs and 2 for betelnut have been established as against target fixed for 3. 1,250 food-grain samples were analysed in the laboratory so far. The preliminaries for establishment of an oils and Fats analytical laboratory are being completed and the laboratory will start functioning shortly.

4. Coordinated Market News and Intelligence: 7 Market Intelligence Cells are established at 7 centres. Daily prices of different agricultural and essential commodities are collected from these centres and disseminated through All India Radio, Panaji. In addition weekly, and monthly Market News Bulletins are also published.

Objectives: — The main objective during the Fourth Five Year Plan is establishment of Regulated Markets and sub-yards with a view to achieve maximum return to the producer and establish a sound marketing channel. The other activities such as market Survey, Investigation, Grading and Standardization, Market News and Intelligence for which no separate plan expenditure is proposed as no amount is required under Plan excepting on administration which will be met from Non-Plan will be continued.

DESCRIPTIVE NOTE ON THE PLAN SCHEMES CONTINUING AND NEWS

1. Organisation of Marketing Wing (Additional Staff): For expansion of the present activities and implementation of the Agricultural Produce Market (Regulation) Act and establishment of Market Extension Cells, additional staff will be required for which an amount of Rs. 0.35 lakhs are proposed.

2. Development of Agricultural Marketing (Regulated Markets): For establishment of Market Yards and sub-yards and their administration, loans and subsidies are required to be granted to the Market Committee as in the initial stage, they will not be having any revenue. So an amount of Rs. 6.00 lakhs is proposed to be granted as loan and subsidy during the Fourth Five Year Plan.

3. Market Extension: It is proposed to open an Market Extension Cell as per the guidelines of the Working Group Report on the Agricultural Marketing Schemes as formulated by the Directorate of Marketing and Inspection Ministry of Food and Agriculture Nagpur. No separate amount is required under this scheme excepting administrative expenditure which is shown at 1 above.

Cooperation and Community Development

1 — Cooperation

INTRODUCTION

The cooperative movement in this tract is of recent origin and innovation. Although the people are new and nascent to the methods of cooperative working gradually are showing considerable interest in developing the cooperative channel. This responsive cooperation has indeed helped to diversify the activities of cooperation to various fields.

The economy of the area though primarily is dependent on agriculture it has received a slight slant on account of the mining industry. All the same the local people have a second look on this matter and they are now gradually reverting to their traditional occupation mainly agriculture on account of its need, as the area is deficit in food production and also on account of the remunerative prices that they are having for their produce which position was not prevalent before liberation.

The plan schemes under Cooperation have been so drawn so as to aid agriculture and allied activities on a priority basis as the cooperative movement is primarily meant for the economically weak people though considerable headway has been made even in other spheres.

ACHIEVEMENTS DURING THE THIRD PLAN

The attainment and the accomplishment during the Third Five Year Plan can broadly be enumerated as below:

1) All the 245 villages have been brought under the cooperative fold through service cooperative societies. The average membership of service cooperatives can be put at more than 336 and coverage of the rural population can be taken at more than 60%.

2) The financing of agriculture was started for the first time through an institutional agency in the year 1963-64. A two tiered working viz. a service cooperative at the village level and the State Cooperative Bank at the apex level has been worked out for financing agriculture. The financing done in this respect is of the order of Rs. 30.00 lakhs by the end of the year 1966-67.

Though the Bank has newly started it has been able to build up adequate resources by way of deposits of the order of Rs. 35.00 lakhs. Thus

it has tried to make its impact felt on the other banking institutions in the area.

3) Along with credit operations by the service cooperatives they have undertaken distribution of controlled essential commodities in a large measure right from the beginning. In urban and industrial areas, primary consumer societies are operating the field of distribution of consumers goods. Thus the overall distribution system has been brought under the cooperative fold both in rural and urban areas and their business operations have reached a figure of nearly Rs. 2.80 crores every year.

4) A good beginning has been made in pooling of horticultural crop viz. arecanut through the marketing society formed for the purpose and it has made a business of Rs. 5.00 lakhs covering about 6% to 7% of the overall arecanut business. The grading of the agricultural produce along with dissemination of market news has been introduced for the benefit of the market functionaries.

5) Cooperative societies are to be managed by the people themselves who join them. They are autonomous bodies which are to function within the accepted Rules and Regulations. The role of the Department is normally expected to aid, assist and advise them from time to time for better and efficient management of the societies. The leadership in the cooperative societies to manage their own affairs is being gradually build up with a liaison of the Department. The system of continuous and concurrent audit has prevented the societies from keeping their accounts books in arrears to a certain extent. This has further helped in placing the annual audit notes before the general bodies for consideration what was helped the members of the societies to know the precise working of their business.

The working of a cooperative society is a continuous process and without a constant vigil the prospects of running the cooperative on acceptable principles and practices will not be fully achieved unless the persons working in or for the cooperative movement are not endowed with required devotion and knowledgeability. The structure of this type is being built up through percolation of the needed knowhow, through the departmental machinery. The department itself cannot fulfill the allotted function effectively and efficiently unless it develops also to a certain extent, the required structure in this field. This has also been achieved and the departmental personnel are proving efficient to the job assigned to them.

OBJECTIVES

The broad objective during the Fourth Five Year Plan is to consolidate what has been achieved with a view to make it a beacon light for furthering the cause of cooperative movement.

1. **Finance:** If all the service cooperative societies are geared to finance the agriculture sector, it is expected they will cover a business of about 20 lakhs of rupees.

2. **Economic viability:** The village units will be made to stand on their own without depending on outside aid so that they can act as self-support-

ing units either purely on their agricultural business and or with the consumer business.

3. Distribution: The consumer programme will be suitably strengthened and established so that it would make an impact in the overall trade channel at least by covering 20% of population and 20% of retail business, with the assistance of the Goa Central Consumers Store which acts as a bulk agency on behalf of its constituent member societies. Consumer units will also be made to work on their own.

4. Marketing: Production will be suitably linked up with marketing and it may be possible to cover 25% of the agricultural business, especially in the surplus produce like arecanut, coconut and cashewnut.

DESCRIPTIVE NOTE ON THE SCHEMES — CONTINUING AND NEW

1. Organisation of Cooperative Department (Additional Staff).

In view of the increase in the work of the Cooperative Department additional departmental staff would be necessary during the Fourth Five Year Plan for which a provision of Rs. 1.40 lakhs is proposed.

2. Cooperative training, education, propaganda & publicity.

In the absence of the State Cooperative Union, the function of training, propaganda and publicity are being performed by the department and an ad-hoc committee has been approved for regulating this work at the Block level consisting of —

1. Extension Officer (Village Panchayat cum Cooperation).
2. Extension Officer (Agriculture).
3. School teacher of the village.
4. Gram Sevak.
5. Two or Three representatives from the village.

Upto the end of the year 1967-68 training has been imparted to 14172 members at the headquarter of the societies in different blocks. It is proposed to continue this programme in the Fourth Five Year Plan.

The training programme is worked out more or less on the lines indicated by the National Cooperative Union of India subject to suitable modifications to suit the local conditions. Persons who attended the training classes are given attendance allowance at the rate of Rs. 1.50 per head and training classes are held for a period of 3 days.

The training classes hitherto are conducted briefing the aspect of theory and practice of cooperation in a broad way, like principle of cooperation, management of cooperative societies and resources of societies. It has been proposed to make the training programme more intensive and extensive. A few selected knowledgeable persons will be given full implications of the working of a cooperative and through them the training programme will be percolated to the remaining cooperative clientele. Besides, having in view the responsibilities of the secretaries, train-

ing classes are also proposed to be conducted, covering the operational side of the societies. This work is partly fulfilled through the audit staff, during their quarterly visits to the societies, since the system of continuous and concurrent audit has been introduced here in all types of societies.

The other measures like propoganda and publicity have been also effectively introduced. The occasion of the Cooperative Week has been suitably availed of to make the cooperative theory and practice more and more to the doors of the villagers and other public through the Block machinery and conducting series of talks, lectures, discussions and radio talks, etc. This aspect is being got fulfilled more from the non-officials as they have to be fully acquainted with the substance of Cooperative for creating a cooperative leadership.

The department has also equiped itself with 28 suitable films on Cooperation and allied activities for being exhibited at different centres. The exhibition of films programme is also suitably integrated with the publicity programme of Government.

Under this scheme the total expenditure made is of the order of Rs. 1.06 lakhs upto the year 1967-68. In the fourth plan, it is expected to spend about one lakh in this scheme.

3. Management subsidy and other grant-in-aid.

a) *Service cooperatives*: — It is proposed to assist viable service societies with managerial subsidy to the extent of Rs. 1800/- spread over a period of 3 to 5 years for which a provision of Rs. 0.90 lakhs has been asked for plan period.

b) *Consumers cooperatives*: — Management subsidy on the approved pattern at the rate of Rs. 2000/- per primary society spread over a period of 3 to 5 years will be given to the newly organised societies during the plan. A sum of Rs. 0.40 lakhs has been asked for.

c) *Marketing societies*: — As on the lines of other societies, marketing societies will also be considered for subsidising the managerial cost on the basis of the approved pattern. During the plan peirod a sum of Rs. 0.50 lakhs may be required for the purpose.

d) *Farming societies*: — These cooperatives will be given managerial cost on the basis of the approved pattern of Rs. 1200/- spread over for a period of 3 to 5 years. 15 new farming societies are likely to come up during the Fourth Plan for which adequate subsidy would be required and a provision of Rs. 0.18 lakhs has been made.

e) *Construction of rural godown subsidy*: — So far 38 rural godowns having a capacity of 100 tons have been granted to the service cooperation societies. Out of which 14 are ready for storage purposes. Out of the remaining 24 godowns 10 will be granted subsidy during 1968-69 and for the remaining 14 godowns and 10 new godowns which will come up during Fourth Five Year Plan are to be assisted. A provision of Rs. 0.60 lakhs for subsidy is proposed.

f) *Outright grants to primary agricultural societies and central cooperative banks*: — This scheme will also be continued in the Fourth Plan. The contribution will be at the rate of 12% at the primary level and 4% at the central bank level. The contribution during the particular year will be

on the basis of additional loans issued to a weaker sections during the last year over those advanced in previous year. For this a provision of Rs. 1.25 lakhs have been made.

g) *Contribution to the price fluctuation fund created by marketing societies*: — It is envisaged to make contribution to special price fluctuation fund to be constituted by selected marketing societies for undertaking outright purchases of agricultural produce. The Government contribution will be at the rate of 2% of the value of outright purchases made in the preceding year. The price fluctuation will depend upon the outright purchases made in the context of immediate necessity and not as a general policy. Marketing society itself will have to earmark portion of its profits to such a fund. The creation of the fund is to act as an insurance against the possible losses and drawals from this fund will only be justified if the society sustains losses on account of outright purchases made in special circumstances. For this purpose a provision of Rs. 0.15 lakhs has been made in the Fourth Plan.

h) *Agricultural Credit Stabilisation Fund*: — In the business of agriculture there are occasions for natural calamities such as draught, floods, hail frost pests and locusts by which recoveries of loan of cooperative is not certain. The credit institution will have to write off their dues as bad debts. The Rural Credit Survey Committee has recommended that arrangements may be made to establish Agricultural Credit Stabilisation Fund for this purpose. The central bank and apex bank which carries profit have to contribute 15% of their net profit to such fund. The State Govt. invest the share capital contribution in the cooperatives from which if it receives dividend more than 3% may be transferred to such fund by Government. In addition of this contribution, the committee has suggested that the State Govt. may give a lump sum contribution which is fixed at 5% of the loan outstanding with the banks in a particular year. This fund will be made available only to Apex Bank i. e. the Goa State Cooperative Bank. For this purpose a provision of Rs. 2.00 lakhs has been made in the Fourth Plan.

4. Contribution to share capital of the societies.

a) Service cooperative societies.

All the three districts of Goa, Daman and Diu have been covered with a service cooperative societies authorising to come up one service cooperative society in the jurisdiction of each Panchayat keeping in view its prospects of development on economic lines. Accordingly no programme for formation of new service society is necessary. However due to reorganisation of Gram Panchayats some service cooperatives may come up.

The working of each service cooperative society, though newly formed, is put under screening and scanning with a view to make it a self-supporting proposition in course of time. To determine the economic viability of the service cooperative the general criteria laid down for the purpose has been adhered to.

The financing of agriculture by way of short-term and medium term loans has been undertaken since the year 1963-64. Though good progress has not been made in the context of agricultural finance, gradually the incidence of finance is on the increase.

All the service cooperative societies have been assisted with the Government share capital contribution in order to strengthen their capital base for

enabling them to undertake financing programme on a large scale. 176 service cooperative societies out of the total number of 178 have been granted share capital contribution to the extent of Rs. 6.84 lakhs upto the end of the year 1967-68.

In addition to the primary functions of agricultural finance, the service cooperatives have also undertaken the distribution work of essential commodities in the rural areas. Almost all the pockets have been covered with this system, barring a few spots where the societies could not function well in this behalf. The average business of each society in the consumer programme is of the order of more than a lakh of rupees per year. Since it is intended to make the consumer programme fully diversified in respect of all non-controlled essential commodities, it will be tried to increase the business potential to a great extent, though for the present, the work is confined to distribution of essential controlled commodities in most cases.

With a view therefore, for enabling the societies for not only to undertake agricultural finance and other attendant services and also to undertake distribution work on proper lines, it may be necessary to strengthen these units financially by providing share capital contribution to the viable societies. For this purpose a provision of Rs. 2.50 lakhs has been made in the Fourth Plan. The average membership of the service societies has been 336 and it is expected to reach 500 per society by the end of the fourth plan.

b) Consumers Cooperative societies including wholesale stores.

All the urban areas have been covered with primary consumers societies. Consumers societies for industrial labour and other establishments have also been formed. It is proposed to cover all the fixed income group people under the consumer programme in the establishments like Govt. Semi-Govt., municipalities, etc. The schools and colleges are also proposed to be covered. There are 51 consumers societies at present which figure may increase to 71.

The average consumer business per society has been more than 3.00 lakhs and it is expected to increase this when all the societies, switch over the activities even to other non-controlled essential supplies under the auspices of the wholesale consumers store i. e. the Goa Central Consumers Store.

With a view, therefore to enable the consumer units to carry on their business on effective and efficient lines, they have been assisted with Govt. share capital contribution to the extent of Rs. 1.39 lakhs upto the end of the year 1967-68. The partly assisted units upto the year 1968-69 and the societies which will come up during the fourth plan are to be assisted for which a provision of Rs. 1.22 lakhs is asked for.

The Central Store caters to the needs of the consumer both in rural and urban areas through its affiliated primary units. In substance it is federal organisation and not a unitary type as formed elsewhere, as this areas was not endowed with urban population townships having a population of 50,000 or more. In order to enable this store to stand, it has been assisted to the extent of Rs. 2.92 lakhs as working capital and assistance for purchase of equipment and transport fleet was also given. Similarly, it was granted Govt. share capital contribution to the tune of Rs. 1.00 lakh upto the year 1967-68 and it will be assisted further by like

amount during the fourth plan period for which a provision of Rs. 0.50 lakhs is made.

During the Fourth Five Year Plan a well knit and integrated consumer programme would be laid and as a result of this, it may be possible to cover 20% of the urban population and 20% of the retail business. In addition to this consumer programme in the rural areas. Coverage will also be increased, strengthened and established, considerably.

c) Marketing cooperative societies.

Formation of marketing societies have been of recent origin and the atmosphere for marketing the produce through the cooperative structure has yet to gain momentum. There is no scope for forming multipurpose marketing societies as the main crop of this area is only paddy and it is also not sufficient enough to feed the people. It has also to depend upon food aid from outside for at least 3 to 4 months in a year. Marketing societies for single commodities like arecanut coconut and cashewnut have been formed as this area is surplus in those items. Vegetable and fruit sale societies have also been formed with a view to create a congenial climate for growing vegetable and also to supply them at reasonable rates. The marketing societies are also being assisted in granding of the produce and extending benefit of market news. The marketing societies now number 6 (1 arecanut, 1 coconut, 1 cashewnut and 3 vegetables). 8 more marketing societies for coconuts and vegetables and other items are proposed.

The working of the marketing societies will be systematised and streamlined during the fourth five year plan.

In order that the marketing societies discharge their functions effectively and efficiently they have been suitably assisted both with share capital contribution. Such assistance is of the order of Rs. 0.72 lakhs upto the year 1967-68. Including new units they are proposed to be assisted for which a provision of Rs. 0.75 lakhs has been made.

b) Farming cooperative societies.

Four farming cooperative societies have been formed of which one was formed exclusively for rehabilitating the political sufferers. The society of political sufferers could not possibly work well as the initial interest shown by them soon dwindled away. The other societies are more or less formed for the economically weak people and it is likely to take shape. The farming societies have been assisted by share capital of Rs. 0.04 lakhs upto the year 1967-68 and two more societies will be assisted during the year 1968-69.

The situation for farming societies is not very ripe as bulk of the land vests in village community otherwise known as Comunidade. Besides to work out a farming scheme is much more difficult as it is difficult to have permanent and absolute loyalty of the beneficiaries to work out the scheme successfully. Taking these factors into consideration it is proposed to organise 15 more farming societies for which a provision of Rs. 0.30 lakhs is proposed.

e) Apex Bank (Goa State Cooperative Bank).

The Goa State Cooperative Bank has been granted Govt. share capital contribution of Rs. 7.00 lakhs. A further sum of Rs. 3.00 lakhs is proposed

during the Fourth Plan, with a view to enable the bank to undertake substantial agricultural financing and also to aid other types of societies.

The financing programme has been of the order of Rs. 20.00 lakhs by the close of the year 1966-67 of which agricultural finance is of Rs. 11.11 lakhs. Agriculture financing programme to the extent of Rs. 20.00 lakhs may be possible by the end of the Fourth Plan.

The Bank has nine branches including sub-offices, which are catering to the needs of all societies and the banking facilities have been made available upto the societies as far as possible.

f) Cooperatives sugar factory.

The land as well as climate conditions of this territory are suitable for the growth of sugarcane. Besides, this sugarcane production is on the increase, as more agriculturists are taking up the sugarcane cultivation since liberation. A Bagayatdar (landlord owners) Cooperative Society has been recently registered and one of its objective amongst other is to encourage sugarcane cultivation in systematic manner so that ultimately it will be possible to have a command area of 6000 to 7000 acres of land under sugarcane cultivation in the next few years and thus from a sugar factory on cooperative basis. In the circumstances a provision of Rs. 19.00 lakhs has been made for Govt. share capital contribution to the proposed cooperative sugar factory in Goa.

5. Loans to cooperative societies.

a) Loans to service cooperative societies for construction or rural godowns.

During the Fourth Plan it is proposed to have 10 rural godowns for which a provision of Rs. 0.75 lakhs is proposed. The storage facility will be of the order of 5000 tons including the capacity fulfilled upto now. The provision of this storage facility will go a long way in storing agricultural produce on behalf of the members of the cooperative societies and thus helping to pool the agricultural produce on systematic lines.

b) Farming cooperative societies.

The new farming societies which will be organised will be assisted with medium term and long-term loans subject to a maximum of Rs. 4000/- per society as per the approved pattern. As the newly organised societies will not be able to function effectively in infant stage. A sum of Rs. 0.60 lakhs is required for the purpose.

c) Land Development Bank.

This Administration has recently decided to allow the Goa State Cooperative Bank to open a section of the Land Development Bank for which it has already advanced a loan of Rs. 3.00 lakhs and a provision of Rs. 1.00 lakh has been made during the year 1968-69. It is proposed to assist further to the extent of Rs. 6.00 lakhs in the Fourth Plan.

The Land Development scheme is being taken up from this year. The benefit of this scheme will be extended only to those persons who have clear title of the land, since such loans will be given against mortgage of land. The working of the section will be suitably regulated in consultation with the Reserve Bank of India.

2 — Community Development

The Community Development Programme was extended to this territory in the year 1962. There are 12 Community Development Blocks with 11 units.

The Community Development Programme has considerably advanced by now and the Development Blocks are in the sixth year of their operation. Under Stage I, a Community Development Block is entitled to a provision of Rs. 12 lakhs for five years.

The funds admissible to a block under Stage I come to Rs. 2.40 lakhs per annum inclusive of loan provision of Rs. 0.60 lakhs per annum. The expenditure expected from all the 12 Blocks of 11 units is to the tune of Rs. 26.40 lakhs per annum on the above basis. The figures of expenditure for the Blocks during the last 6 years are as under (in lakhs):—

Year	Non-Loan	Loan	Total
1962-63	2.73	—	2.73
1963-64	17.05	—	17.05
1964-65	26.97	9.69	36.66
1965-66	19.89	3.80	23.69
1966-67	18.38	6.95	25.33
1967-68	17.30	4.95	22.25

The expenditure during 1962-63 was very low because only 4½ blocks were started in that year in the month of November 1962.

The remaining 7½ Blocks were started in April '63; hence the expenditure was less during the year 1963-64 also. During 1964-65 all the 12 Blocks were functioning in full swing and they exceeded the ceiling limit of Rs. 26.40 lakhs by Rs. 10.26 lakhs, thus covering the shortfalls of the previous 2 years to a considerable extent.

The Community Development programme is mainly aimed to increase in food production and to make the territory selfsufficient within the shortest possible time by following the improved methods of intensive cultivation. Recently taichung variety has been introduced in this territory, which is a high-yielding variety, and the entire responsibility in this behalf has been shouldered by the Block Development Officers. Last year an area measuring 3000 acres was brought under Taichung and this has caught up the imagination of the Cultivators and is likely to play a very important role in solving the food problem in the near future.

Under the Animal Husbandry Programme, Organisation of poultry and dairy Societies, free supply of veterinary medicines and introduction

of improved breed of Sindhi Bulls, etc; is being introduced in this territory successfully.

Under Health & Rural Sanitation programme construction of new wells and repairs to old ones is a major activity engaging the attention of Block Development Officers, and it is expected that by the end of IV Five Year Plan all the villages will be provided with drinking water facilities.

So far (during the III plan) 307 wells have been constructed. Propaganda is also made in the villages about the various health programmes including Family Planning, introduced by this Administration, so that maximum advantage thereof may be taken by the people.

Under Education and Social Education Programmes the following activities are being undertaken through the Block Development Officers.

1. Construction of School Buildings (So far 242 School Buildings have been constructed).

2. Organisation of Yuvak and Mahila Mandals (so far 173 youth-clubs and 46 Mahila Mandals have been started).

3. Organisation of Village Libraries (So far 130 rural libraries have been started).

4. Organisation of village camps.

5. Organisation of Tours of villagers to places of interest.

Under Communication, construction of new roads, repairs to old ones have been undertaken. About 37 Culverts have also been constructed.

Similarly, tailoring, pottery, coir-weaving, Carpentry, bamboo work Centres have been started under Rural Arts, Crafts, & Industries Programme.

It may be stated here for information that this year an amount of Rs. 1,02,000/- has been provided for the Applied Nutrition Programme (Centrally sponsored scheme) being implemented in two blocks viz Ponda and Canacona. So far, the Block Development Officers have selected Villages to implement the programme and also seeds have been distributed to schools and Community Gardens.

With effect from 1-4-1968 all the 12 Blocks have been reverted to stage IInd phase. The budget provision that would be available to these 12 Blocks is Rs. 60.00 lakhs for 5 years (i. e. Rs. 1.00 lakh per Block for one year) as under: —

A-1 Project/Block Headquarters	...	...	...	Rs. 10,20 lakhs
A-2 Animal Husbandry & Agriculture	...	...	...	Rs. 5,00 lakhs
A-3 Health & Rural Sanitation	...	...	...	Rs. 4,00 lakhs
A-4 Education	...	...	...	Rs. 2,00 lakhs
A-5 Social Education	...	...	...	Rs. 5,50 lakhs
A-6 Communication	...	...	...	Rs. 3,00 lakhs

A-7 Rural Arts, Crafts and Industries	...	...	Rs. 4,50 lakhs
A-8 Housing	...	...	Rs. 13,80 lakhs
B1 Local Development Works	...	...	Rs. 2.00 lakhs
Q Loans and Advances	...	...	Rs. 10,00 lakhs
			<u>Rs. 60,00 lakhs</u>

But this provision will not be sufficient for a period of 5 years, because as per the schematic pattern the provision available towards the expenditure on staff and purchase of vehicle is Rs. 85,000/- per block for 5 years i. e. Rs. 10.20 lakhs for 12 Blocks for 5 years. As against this provision of Rs. 10.20 lakhs the actual requirement is estimated at Rs. 50.20 lakhs as detailed below:—

S. No.	Staff	Number	Rate per month (Per head)	Amount for 5 years
1.	Block Development Officers	12	Rs. 500	Rs. 3.60 lakhs
2.	Extension Officers	48	Rs. 400	Rs. 11.52 lakhs
3.	Mukhya Sevikas	12	Rs. 400	Rs. 2.88 lakhs
4.	Gram Sevaks	110	Rs. 250	Rs. 16.50 lakhs
5.	Head Clerks	12	Rs. 400	Rs. 2.88 lakhs
6.	Clerks including cashiers	36	Rs. 200	Rs. 4.32 lakhs
7.	Peons	48	Rs. 150	Rs. 4.32 lakhs
8.	Drivers	12	Rs. 200	Rs. 1.44 lakhs
			Total	<u>Rs. 47.46 lakhs</u>
9.	Purchase of Jeeps and other misc. items	12	—	Rs. 2.74 lakhs
			Grand Total	<u>Rs. 50.20 lakhs</u>

This increase is due to the fact that the scales of pay and allowances estimated some years back, while formulating the schematic pattern do not hold good now. The prices of Jeeps and other miscellaneous items have also now gone up. Taking into consideration these factors the amount actually required against item A-1 Proejct/Block Headquarters would come to Rs. 50.20 lakhs.

Therefore the total provision required for 12 Blocks during the Fourth Five Year Plan comes to Rs. 100,00 lakhs.

3 — Panchayats

INTRODUCTION

Foundations of Panchayati Raj and, in fact, of first democratic institution were laid in this Union Territory by the constitution of Village Panchayats in 1962.

The territory was liberated in December, 1961, from the foreign domination. Till then, the people in Goa, Daman and Diu had not enjoyed any democratic rights in true sense. No democratic institutions existed in this Territory.

Soon after the liberation, therefore, there was an insistent popular demand for the establishment of a democratic regime through which common people could express their wishes, their pressing needs and aspirations. The Government of India decided, therefore, to hold elections to village panchayats before the first anniversary of the liberation and thus make the people of Goa, Daman and Diu feel the revitalising impact of democracy. The elections were held in October, 1962, in which out of the total number of 1,95,000 voters from rural areas 1,21,000 i.e., more than half of the total electorate exercised their franchise.

The Village Panchayats started functioning as effective bodies only from January, 1963.

With the constitution of village panchayats, the "Juntas Locais" (village local boards) of Portuguese regime stood abolished and their assets and liabilities transferred to the respective village panchayat.

The total number of villages in Goa, Daman and Diu is 265. These villages were originally grouped into 159 village panchayats. However, later on in view of various administrative and developmental difficulties experienced by the Panchayats, the same were regrouped into 167 panchayats.

ACHIEVEMENTS OF THE THIRD FIVE YEAR PLAN

During the Third Five Year Plan period the village panchayats collected approximately Rs. 2,84,000 by way of taxes and Rs. 5,75,000 worth popular contribution for implementing various developmental schemes in conjunction with the N. E. S. Blocks mainly, construction of School buildings, Panchayat Ghars, roads and drinking water wells establishment of village libraries, Mahila Mandals and Youth Clubs.

Besides, the village panchayats received Government assistance to the tune of Rs. 1.61 lakhs in 1963-64, Rs. 6.00 lakhs in 1964-65 and Rs. 2.70 lakhs in 1965-66 for taking up various development schemes.

The village panchayats, with the assistance of the N. E. S. Blocks and other Government agencies completed the following schemes —

School rooms	380
Roads total length	620 kms.
Drinking water wells	326
Culverts	190
Panchayat Ghars	57
Reclamation of land	1700 acres
Tanks constructed	29
Construction of and repairs to bhandaras	46
Adult Education classes	116
Rural reading rooms and infor- mation centres	19
Cooperative Societies established	300
Training camps	8 camps of three to five days duration were held. Sarpanchas and Deputy Sarpanchas of 96 village panchayats participated in the camps.

Advalpale village panchayat has laid out a channel for protected water supply to a population of 3,000 at a cost of Rs. 10,000 entirely by Shrandan.

PROPOSALS AND OBJECTIVES IN THE FOURTH FIVE YEAR PLAN

Following are the schemes proposed for the Fourth Five Year Plan —

(a) *Training of elected members of Panchayati Raj Bodies* — The scheme for peripatetic training of the members of village panchayats and chiefly of Sarpanchs and Deputy Sarpanchs in the principles of Panchayati Raj as well as rules and regulations under which they function had already been under implementation during the Third Plan period. Three to five day training camps were held under this scheme in rural areas of each Community Development Block. Exhibitions of village crafts and agricultural products were also held along with the camps. The scheme has proved to be a great success and it is proposed to continue the same in the Fourth Five Year Plan. Besides, general elections to village panchayats took place in February, 1968 and as such new members have now taken charge of these bodies. They will require intensive training in Panchayati Raj in order to enable them to function in an effective way.

An amount of Rs. 0.75 lakhs has been provided under this scheme for the Plan period.

(b) *Training of Panchayat Secretaries* — Almost all the existing Panchayat Secretaries are ill-equipped to carry out duties in the Panchayats, though they work under the constant guidance of the Block Development Officers and Extension Officers. It is, therefore, proposed to give them training in various subjects such as accounts, preparation of annual plans, budget estimates, cooperation, principles of Panchayati Raj, etc. The estimated expenditure on the scheme during the Fourth Five Year Plan period is Rs. 2.25 lakhs.

(c) *Loans to Panchayati Raj Bodies* — A scheme for granting loans to village panchayats to enable them to raise remunerative assets has been approved by the Government. It comes into force during the Fourth Five Year Plan and a provision of Rs. 9.50 lakhs is proposed for the Plan period.

(d) *Incentive grants to village panchayats* — Small Savings in the rural areas will be mobilised through village panchayats. In order to encourage the Panchayats to implement the scheme most effectively, it is proposed to sanction them grants. The estimated cost of the scheme is Rs. 0.55 lakhs.

Irrigation and Power

1 — Irrigation

Brief Note: — The Central Water and Power Commission has investigated a number of projects for the past three to four years. Among the projects so far investigated, the Salauli-project in Sanguem Taluka is in an advanced stage and can be taken up for its execution in the Fourth Five Year Plan. This project when fully impletented is likely to irrigate 36,000 acres of land in the Central and Southern portion of Goa.

A sum of Rs. 4.50 crores is therefore proposed for the execution of this project.

Apart from this, the Government of Maharashtra at the request of this Administration has investigated the feasibility of utilising the waters of Tilarí River for irrigation in Goa. The project has been investigated and it is understood that the same is under scrutiny by the C. W. & P. C. Delhi. It is hoped that the green signal will be given for the execution of this project to irrigate about 50,000 acres of Land in the Northern part of Goa.

A sum of Rs. 10 lakhs is provided for the purpose as a token project.

It may be mentioned here that both these two projects are boon to this Territory in as much as it will give ample water for irrigation, besides satisfying the domestic and Industrial demands.

Since this Administration has no adequate staff on Irrigation we may have to recruit staff and establish at least a few divisions to implement these projects.

A sum of Rs. 10 lakhs is provided for the purpose as a taken.

2 — Power

INTRODUCTION

Planning for power development in the Union Territory of Goa, Daman and Diu presents some special problems in view of the fact that the territory comprises of 3 different areas separated from one another. Of the 3 areas, Goa is the biggest one, while the other two are very small ones.

Goa is bounded on the north by Maharashtra, on the east and south by Mysore and on the west by Arabian sea. It has an area of 3610 sq. Km. and a population of 5,89,997 according to 1961 census. It has 11 towns and 239 villages. The eleven towns are: (1) Panaji, (2) Margao, (3) Mapusa, (4) Vasco-da-Gama, (5) Ponda, (6) Bicholim, (7) Pernem, (8) Quepem, (9) Sanguem, (10) Chauri (Canacona) and (11) Valpoi. Panaji, the capital of the territory has a population of 35,468.

Daman is on the eastern side of the Gulf of Cambay. It has an area of 57 sq. Km. and a population of 22,390 according to 1961 census. In the area besides a small town called Daman having a population of 9,197 there are two villages.

Diu is a small island off the south coast of Saurashtra (Gujarat) at the entrance of the Gulf of Cambay with a small village viz. Ghoghla on the main land. It has an area of 38.5 sq. Km. and a population of 14,280 according to 1961 census. The area contains a small town called Diu having a population of 4138 and 4 villages.

Prior to liberation in December 1961 there were 8 small electricity supply undertakings with diesel generation in the territory—6 in Goa at Panaji, Vasco da Gama, Ponda, Margao, Mapusa and Sanvordem and one each in Daman and Diu. The undertakings at Panaji, Vasco da Gama and Diu were owned and run by municipalities and the remaining 5 were under private licensees.

In the interest of power development, the Govt. of Goa, Daman and Diu created the Electricity Department in Jan. 1963 which initially started functioning without any electric supply undertaking under its control.

Soon after the creation of the Electricity Department decision was taken to develop the territory by purchasing power in bulk from the neighbouring States of Mysore and Maharashtra in case of Goa and from the State of Gujarat in case of Daman and Diu. Accordingly, 2 schemes were framed viz. (1) Power Development in Goa and (2) Power Development in Daman and Diu. The implementation of these schemes which started during the 3rd Plan itself is in progress and will have to be continued during the Fourth Plan period as well.

Power demand in Goa is steadily increasing. From a meagre 2.2 MW in 1965-66, it has increased to 11 MW in 1967-68. During the next 3 to

4 years power demand in Goa is expected to increase at a very fast rate. This is on account of the fact that apart from a Fertiliser Plant which is being established 3 more Pelletisation Plants each with a capacity of 1.5 million tons are proposed to be established in Goa by 1971-72. Further modernisation of Marmagca Port is also proposed. As can be foreseen at this stage power demand in Goa is expected to rise from 15 MW in 1968-69 to 112 MW in 1973-74.

Goa may have to depend primarily on bulk supply from the neighbouring States of Maharashtra and Mysore. As per present arrangements uptill 1970-71 and to a greater part of 1971-72 the power availability from the neighbouring States is likely to be limited to 32MW (30.4 MW from Mysore and 1.6 MW from Maharashtra). After the commissioning of the 9th and 10th units of the Sharavathy Project by the end of 1971-72 additional supply to the extent of 20 MW will be available from Mysore increasing the total availability of power from these two sources to 52 MW by that time.

The surplus or deficit in availability of power supply in Goa commencing from 1968-69 to 1973-74 is expected to be as indicated below:

Year	Maximum Power Demand MW	Power availability MW	Surplus (+) or Deficit (-) MW
1968-69	15	32	+17
1969-70	20	32	+12
1970-71	50	32	-18
1971-72	99	52	-47*
1972-73	106	52	-54
1973-74	112	52	-60

*Actual deficit for greater part of the year is expected to be 87 MW (99-32)

From the above table it may be seen that there is likely to be a deficit to the extent of 18 MW in 1970-71 which is expected to rise further to 60 MW in 1973-74. Mysore may finally agree to increase the quantum of power supply to Goa from 30.4 MW to 50.4 MW by 1970-71 without linking up the question of commissioning of the 9th and 10th units of Sharavathy Project and in that case there will be no difficulty in meeting the Power Demand of Goa upto 1970-71.

For meeting the power demand in Goa beyond 1970-71 it will be necessary to arrange additional power supply to the tune of 60 MW from the neighbouring states of Mysore or Maharashtra. Since Mysore now do not appear to be interested in supplying power in excess of 50.4 MW negotiations are therefore afoot in the matter with the Maharashtra State Electricity Board.

The proposal for obtaining power supply to the tune of 60 MW from Maharashtra would involve laying of about 30 Km of 110/132 KV double circuit transmission line within Goa and establishment of a separate 70.5 MVA 132/110 KV Receiving Station in Goa. But in that case it may not be necessary to lay another 32 Km of 110 KV double circuit line from Mysore-Goa border to Ponda and it may be possible to limit the capacity of the Ponda sub-station to 90 MVA instead of 130.5 MVA now proposed.

The additional cost involved in implementing the proposal of obtaining supply from Maharashtra may amount to Rs. 75 lakhs. It will therefore be advantageous if the entire power demand of Goa is met from Mysore.

In case of non-availability of the additional supply from either of the States, establishment of an oil based thermal station initially with 2×55 MW sets in Goa itself may be necessary. Preliminary study indicates that the cost of this station along with its associated step-up sub-station may be of the order of Rs. 18 crores. Further the cost of power generation may be considerably higher than the cost of bulk supply from the neighbouring states. In view of this, the establishment of a separate thermal station in Goa may be gone into only as a last resort for additional source of power.

The Fourth Plan proposals herein outlined have been framed on the assumption that the additional supply to the tune of 60 MW would be available from Mysore. A token provision of Rs. 1.00 lakh has however been made in the proposals for the establishment of a thermal station so that necessary funds for the purpose could be demanded at a later date if the establishment of such a station becomes absolutely necessary. Alternatively, the Centre may initiate such a power generation scheme on a bigger scale in Goa to meet the deficit of power supply in the entire region.

SCHEME FOR POWER DEVELOPMENT IN GOA

The Scheme for Power Development in Goa estimated to cost Rs. 947 lakhs takes care of power development in Goa upto 1975-76. The scheme is essentially a transmission, sub-transmission, distribution and rural electrification scheme availing bulk supplies from the neighbouring states of Mysore and Maharashtra. Provision has been made in the scheme for acquisition of two municipal and four private electric supply undertakings, laying of 4 circuits of 110 KV line from Mysore-Goa border to Ponda-2 with 0.125 sq. in. and the other with 0.2 sq. in. Cu. eq. ACSR conductor, setting up of a 130.5 MVA, 110/33/11 KV Receiving Station at Ponda, installation of 33/11 KV Sub-stations one each at Pernem (1MVA), Bicholim (11 MVA), Panaji (7 MVA), Margao (6 MVA), Pale (6 MVA), Mormugao (6 MVA), Sanvordem (6.5 MVA) and Chouri-Canacona (0.5 MVA), laying of 360 Kms. of 33 KV and 1358 Kms. of 11 KV and 1321 Kms. of L. T. distribution lines and electrification of all towns and villages in Goa.

In regard to progress made in the implementation of the scheme it may be stated that out of six electric supply undertakings in Goa except the one at Vasco all others were taken over by the Govt. from June 1963 to 1964. For availing 2 MVA supply from Maharashtra erection of 65 Kms. of 33 KV line in Goa, installation of 1 MVA, 33/11 KV sub-stations one each at Pernem, Bicholim, Panaji and Ponda were completed and supply commenced from December 1963. For availing 500 KVA supply from Mysore construction of 52 Kms. of 33 KV single circuit line and 1 MVA sub-station at Margao were completed and supply commenced with effect from 4th July 1965. For availing 10.5 MVA supply from Mysore at 110 KV 32 Kms. of 110 KV double circuit line and a temporary 10.5 MVA sub-station at Ponda were completed and supply commenced with effect from 10-11-1966.

With the availability of bulk supplies it has been possible to close down the diesel power stations at Panaji, Mapusa and Ponda. A double circuit 33 KV line is under construction from Ponda to Margao and the same is expected to be completed during 1968-69. With its completion, diesel station at Margao is to close down. One single circuit 33 KV line from Ponda to Sanvordem is under construction. With its completion in 1969-70 the diesel station at Sanvordem will also close down.

By the end of 1968-69 out of 11 towns and 239 villages in Goa 10 towns and 88 villages are expected to be electrified.

During the 4th Plan the remaining one town of Valpoi and all the remaining 151 villages are expected to be electrified. The municipal undertaking at Vasco will be acquired and with its acquisition the power supply in the entire territory will come under the Electricity Department.

The works in the Fourth Plan in Goa would include augmentation of the present supply systems in towns and rural areas and extension of electric supply facilities in new localities. These works can be grouped under two broad heads viz (1) Transmission & distribution and (2) Rural Electrification. The works under transmission & distribution include town distribution as well.

The important works proposed under transmission & distribution during the 4th Plan period are as follows:—

1. Construction of a double circuit 110 KV line on towers with 0.2 sq. in. Cu. Eq. ACSR conductor from Goa-Mysore border to Ponda (32 KM).
2. Setting up of a 130.5 MVA, 110/33/11 KV sub-station at Ponda.
3. Construction of 33 KV double circuit lines on towers with 0.2 sq. in. Cu. Eq. ACSR conductor from Ponda to Margao (35 Km) and from Ponda to Fertiliser Plant of M/s Birla Gwalor at Marcaim (10 Km.).
4. Construction of two single circuit lines with 0.125 sq. in. Cu. Eq. ACSR conductor from Ponda to Sanvordem (35 Km) and from Ponda to Pale (11 Km).
5. Construction of 33 KV single circuit line with 0.125 sq. in. Cu. Eq. ACSR conductor from Sanvordem to Margao (18 Km).
6. Construction of 33 KV single circuit line with 0.03 sq. in. Cu. Eq. ACSR conductor from Bicholim to Mapuca (20 Km) and from Mapuca to Panaji (10 Km).
7. Construction of single circuit 33 KV lines of a length of about 30 Km. with 0.03 sq. in Cu. Eq. ACSR conductor and for a length of about 20 Km. with 0.125 sq. in. Cu. Eq. ACSR conductor for supply to various 33 KV HT consumers.
8. Setting up of new 33/11 KV sub-stations at Pale (6.30 MVA), Mormugao (6.30 MVA), Sanvordem (6.30 MVA), Chourri-Canacona (1 MVA) and Mapuca (2 MVA).
9. Increasing the capacity of existing 33/11 KV sub-station at Bicholim from 3.15 MVA to 11.45 MVA, Panaji from 5.15 MVA to 6.30 MVA and Margao from 3.15 MVA to 6.30 MVA.

10. Construction of about 75 Km. of 11 KV lines for towns distribution.
11. Provision of about 6150 KVA aggregate 11/0.4 KV transformer capacity for town distribution.
12. Construction of about 150 Kms. of L. T. lines for town distribution.
13. Construction of about 200 Kms. of telephone lines.
14. Providing of service connections to about 9000 domestic and commercial consumers and 1200 industrial consumers.

The proposals for the construction of a 33 KV line from Bicholim to Mapuça, Mapuça to Panaji and Sanvordem to Margao and setting up of 2 MVA sub-station at Mapuça as detailed above were not envisaged in the scheme report for power development in Goa.

At present Mapuça is fed from Bicholim 33/11 KV sub-station with a 11 KV line having 0.03 sq. in. Cu. Eq. ACSR conductor. The length of the line is 20 Km and the present load demand on this line is 600 KW which is steadily increasing resulting in poor regulation. In order to stabilise voltage conditions at Mapuça, it will be necessary to lay the 33 KV line and have the 33/11 KV sub-station at Mapuça. Incidentally this arrangement will facilitate in extending the line to Panaji so as to form a ring main with Bicholim, Mapuça and Panaji ensuring greater reliability of power supply to the capital town of Panaji as well as in Bicholim and Mapuça.

Similarly, the tie line between Sanvordem and Margao will form a ring main with Ponda, Margao and Sanvordem ensuring greater reliability of power supply in areas served from Sanvordem and Margao.

With the completion of the 130.5 MVA sub-station at Ponda, the 33/11 KV sub-station at Ponda is likely to be closed down and the equipment of this sub-station could be utilised for establishing the Mapuça sub-station.

The works proposed under Rural Electrification under the scheme are to extend further electricity supply facilities in 88 villages in Goa that would get electrified by 68-69 and to electrify remaining 151 villages. It would involve construction of 675 Km of 11 KV lines, installation of aggregate transformer capacity of 12650 KVA, laying of 500 Km LT lines and providing service connections to 21,000 domestic and commercial consumers and 400 industrial and agricultural consumers.

SCHEME FOR POWER DEVELOPMENT IN DAMAN AND DIU

The Scheme for Power Development in Daman and Diu which is primarily a Rural Electrification scheme envisaging an outlay of Rs. 57.25 lakhs is to cover electrification programme in Daman and Diu upto 1975-76 by purchasing power in bulk at 11 KV from the Gujarat Electricity Board from their Vapi sub-station in case of Daman and from Una sub-station in case of Diu. The scheme includes acquisition of 2 electric supply undertakings at Daman and Diu, erection of 87 Kms. of 11 KV lines, 230.5 Kms. of L. T. lines and providing service connections to 3555 Nos. domestic and 895 Nos. industrial and agricultural consumers. The implementation of the scheme was started in the 3rd Plan itself and is still continuing.

The private electricity supply undertaking of Daman was acquired in September 1964 and the Municipal undertaking in Diu in Oct. 1964. Bulk supply in Daman commenced in May 1965 and in Diu by Dec. 1965. By 1968-69 all the towns and the villages in Daman and Diu would have the facilities of electric supply.

During the 4th Plan period, the work would mainly consist of extending supply to more remote areas and meeting additional demand of already electrified areas. The programme of electrification includes laying of 10 Kms. of 11 KV lines, 140 Kms of L.T. lines and providing of service connections to 2000 Nos. domestic and 600 Nos. Industrial and agricultural consumers.

INVESTIGATION

Except Dudhsagar Project there is no hydro resources or other power resources in the territory requiring large scale investigation. Dudhsagar Project is primarily an irrigation project having a power potential of about 10,000 KW. It is now under investigation by C. W. & P. C. At present, expenditure on investigation is being met from Irrigation Sector. No funds under investigation are therefore required.

ADVANCE ACTION FOR THE FIFTH PLAN

Towards the end of 4th Plan it may be necessary to arrange further additional power supply in Goa for meeting its increased power demand in the beginning of the 5th Plan period. For this purpose, it may be either necessary to install additional generating sets at the thermal station if established or to obtain increased bulk supply from the neighbouring states. A clear picture as to which would be the source from where additional supply is likely to come will emerge only by the middle of the 4th Plan period. At this stage it is difficult to forecast the requirement of funds on this account.

REQUIREMENT OF FUNDS DURING FOURTH PLAN PERIOD

The requirement of funds for the 2 continuing schemes are shown in detail in Appendix. In the same Appendix in respect of the thermal scheme a token provision has been made. The funds required for the Fourth Plan proposal are summarised below under 3 broad heads viz (1) generation, (2) transmission and distribution and (3) rural electrification.

Name of Scheme	Generation Rs. lakhs	Trans & dist Rs. lakhs	Rural Elec. Rs. lakhs	Total Rs. lakhs.
<i>(a) Continuing schemes:</i>				
1. Power Development in Goa ...	-	344	218	562
2. Power Development in Diu ...	-	-	33	33
<i>(b) New scheme:</i>				
Proposed scheme for thermal power generation, in Goa	1*	-	-	1*
Total	1	344	251	596

* Token provision. The cost of the scheme is about Rs. 18 crores. It would need to be implemented if negotiations for additional supply from neighbouring states fail.

DETAILED ESTIMATES ON REQUIREMENT OF FUNDS

Description	Rs. in Lakhs	Remarks
I. Power Development in Goa:		
A. Transmission and distribution:		
1. Erection of 32 Kms of 110 KV Double Circuit line with 0.2 Sq.in. su. eq. ACSR Conductor from Mysore-Goa Border to Ponda Sub-Station	33.60	
2. Setting up of 4×30 + 1×10.5 MVA 110/33/11 KV Sub-Station at Ponda... ..	45.00	The sanctioned cost of 3×30 MVA Sub-Station at Ponda is Rs. 87.47 lakhs of which an expenditure of Rs. 54.47 lakhs is expected to be incurred by end of 1968-69 mostly towards the cost of equipments. Balance expenditure of Rs. 33 lakhs is expected in the Fourth Plan. In addition there is to be an expenditure of Rs. 12 lakhs for one more 30 MVA transformer with its associated equipment and for installing the 10.5 MVA transformer now temporarily installed at the temporary sub-stations.
3. Construction of 35 Kms. 33KV Double Circuit Sub-Transmission line with 0.20 Sq. in. cu. eq. ACSR Conductor from Ponda to Mormugao	17.50	
4. Construction of 10 Kms. of 33 KV Double Circuit Sub-Transmission line with 0.20 Sq. in. cu. eq. ACSR Conductor from Ponda to Marcaim	5.00	
5. Construction of 2 Nos. 33 KV Single Circuit Sub-Transmission line with 0.125 Sq. in. cu. eq. ACSR Conductor each of 35 Kms. in length, from Ponda to Sanvordem	22.40	
6. Construction of 2 Nos. 33 KV Single Circuit Sub-Transmission line with 0.125 Sq. in. cu. eq. ACSR Conductor each of 11 Kms. in length, from Ponda to Pale	7.04	
7. Construction of 18 Kms. of 33 KV Single Circuit Sub-Transmission line with 0.125 Sq. in. cu. eq. ACSR Conductor from Sanvordem to Margao	5.76	
8. Construction of 20 Kms. of 33 KV Single Circuit Sub-Transmission line with 0.03 Sq. in. cu. eq. ACSR Conductor from Bicholim to Mapuça	3.20	This is not provided in the Scheme Report.

Description	Rs. in Lakhs	Remarks
9. Construction of 10 Kms. of 33 KV single Circuit Sub-Transmission line with 0.03 Sq. in. cu. eq. ACSR Conductor from Mapuca to Panaji	1.60	
10. Construction of 30 Kms. of 33 KV Single Circuit SubTransmission line with 0.03 Sq. in. cu. eq. ACSR Conductor for supply to various H. T. Consumers	4.80	
11. Construction of 20 Kms. of 33 KV Single Circuit sub-transmission line with 0.125 Sq. in. cu. eq. ACSR Conductor for supply to various H. T. Consumers	6.40	
12. Provision for Special Steel Structures to Cross Rivers and Water logged areas	4.00	
13. Construction of Telephone line below 33 KV line from Ponda to Pale (11 Km.)	0.176	
14. Construction of Telephone line below 33 KV line from Ponda to Sanvordem (35 Km.)	0.56	
15. — do — from Ponda to Marcaim (10 Km.)	0.16	
16. — do — from Ponda to Marmugao (35 Km.)	0.56	
17. — do — from Bicholim to Mapuca (20 Km.)	0.32	
18. — do — from Mapuca to Panaji (10 Km.)	0.16	
19. Construction of Telephone line below 11 KV line from Ponda to Banastarim (14 Kms.)	0.224	
20. Construction of Telephone line below 11 KV line from Banastarim to Panaji (16 Kms.)	0.256	
21. — do — from Pale Sub-Station to Onda (20 Kms.)	0.32	
22. — do — from Onda to Bicholim Sub-Station (15 Km.)	0.24	
23. Construction of Telephone line below 11 KV line from Bicholim to Pernem via Kolavad (30 Kms.)	0.48	
24. 25 Line Telephone Exchange at Ponda Sub-Station and 10 line exchange at Bicholim Sub-Station	0.25	
25. Increasing the capacity of existing 33/11 KV Sub-Station at Bicholim from 3.15 MVA to 11.45 MVA	5.40	
26. Increasing the capacity of existing 33/11 KV Sub-Station at Panaji from 5.15 MVA to 6.30 MVA	3.00	
27. Increasing the capacity of existing 33/11 KV Sub-Station at Margao from 3.15 MVA to 6.30 MVA	3.00	
28. Setting up of a new 33/KV Sub-Station at Pale of a capacity of 6.30 MVA	4.80	
29. Setting up of a new 33/11 KV Sub-Station at Marmugao of a capacity of 6.30 MVA	4.80	
30. Setting up of a new 33/11 KV Sub-Station at Sanvordem of a capacity of 6.30 MVA	4.80	

Description	Rs. in Lakhs	Remarks
31. Setting up of a new 33/11 KV Sub-Station at Canacona of a capacity of 1 MVA ...	1.20	
32. Setting up of a new 33/11 KV Sub-Station at Mapuca of a capacity of 2 MVA ...	0.80	This sub-station is not envisaged in the scheme for power development of Goa. Most of the equipments released from the Ponda 33/11 KV Sub-Station will be used for this station.
33. Construction of 10 Kms. of 11 KV Single Circuit line with 0.02 Sq. in. cu. eq. ACSR Conductor for extension works in urban areas	0.77	
34. Construction of 10 Kms. of 11 KV Single Circuit line with 0.03 Sq. in. cu. eq. ACSR Conductor for extension works in urban areas	0.86	
35. Construction of 20 Kms. of 11 KV Single circuit line with 0.06 Sq. in. cu. eq. ACSR Conductor for extension works in urban areas ...	2.00	
36. Construction of 35 Kms. of 11 KV Single Circuit line with 0.08 Sq. in. cu. eq. ACSR Conductor for extension works in urban areas	3.85	
37. Installation of 200 KVA 11/0.4 KV Distribution Sub-Stations ... 8 Nos. ...	1.44	
38. Installation of 150 KVA 11/0.4 KV Distribution Sub-Stations ... 12 Nos. ...	1.80	
39. Installation of 100 KVA 11/0.4 KV Distribution Sub-Stations 20 Nos. ...	2.40	
40. Installation of 75 KVA 11/0.4 KV Distribution Sub-Stations 10 Nos. ...	1.10	
41. Miscellaneous works such as G.O.A.B's., L.A.'s distribution Boxes, G.I. Pipe Fittings etc. ...	0.50	
42. Construction of 50 Kms. 3 Phase 5 wire L. T. Distribution lines with 0.03 Sq. in. cu. eq. 'AA' Conductor for phases and 0.02 Sq. in. cu. eq. 'AA' Conductor for neutral and street light phase in urban areas ...	7.00	
43. Construction of 50 Kms. 3 Phase 5 Wire L. T. Distribution lines with 0.04 Sq. in. cu. eq. 'AA' Conductor for 3 Phases and 0.02 Sq. in. cu. eq. 'AA' Distribution Boxes, G. I. Pipe Fittings phase in urban areas ...	7.50	
44. Construction of 50 Kms. 1 Phase 3 wire L. T. Distribution lines with 0.02 Sq. in. cu. eq. 'AA' Conductor in urban areas ...	5.50	
45. Giving of 9000 Nos. Domestic and Commercial single phase service connections ...	13.50	
46. Giving of 120 Nos. Medium Industrial Service Connections ...	1.08	
47. Providing 55 Nos. 33/11 KV Metering Equipment for large and heavy industries ...	5.50	
48. Providing 1000 Nos. Public Lighting ...	0.91	

Description	Rs. in Lakhs	Remarks
49. Payment of compensation to licensees ...	7.00	
50. Acquisition of land at Pale, Sanvordem, Vasco and Canacona for construction of Sub-Station, Staff Quarters and Office Buildings	5.00	Scheme Report provision for this is Rs. 17.00 lakhs. Upto end of 1968-69 an expenditure of Rs. 18.26 lakhs is expected to be incurred. Due to high cost of land etc., the scheme report provision will be exceeded.
51. a) Construction of buildings for Chief Electrical Engineer's Office at Panaji, Executive Engineer's Office at Panaji, Ponda and Margao and Sub-Divisional Offices at Panaji, Ponda, Margao, Bicholim, Mapuca, Marmugao, Sanvordem and Daman	15.00	
b) Construction of 'A' type quarters for Chief Electrical Engineer at Panaji 1 No. 'B' type 4 No.s, 'C' type quarters 7 Nos. 'D' type quarters 16 Nos., 'E' type quarters 30 Nos. 'F' type quarters and 50 Nos. for staff in Goa, Daman and Diu	18.00	
52. Improvement in distribution system of various power houses	5.00	
53. Conversion of 3.3 KV lines to 11 KV Operation at Margao Sanvordem and Marmugao	5.00	
54. Establishment	36.00	
55. Tools and Plants	9.00	
Sub-Total	343.516	
or Say	344.00	

B. Rural Electrification:

1. Construction of 140 Kms. 11 KV Single Circuit line with 0.02 Sq. in. cu. eq. ACSR Conductor	10.78
2. Construction of 290 Kms. 11 KV Single Circuit line with 0.03 Sq. in. cu. eq. ACSR Conductor	24.94
3. Construction of 180 Kms. 11 KV Single Circuit line with 0.06 Sq. in. cu. eq. ACSR Conductor	18.00
4. Construction of 65 Kms. 11 KV Single Circuit line with 0.08 Sq. in. cu. eq. ACSR Conductor	7.15
5. Provision for special structures to cross rivers and water logged areas	1.00
6. Installation of 100 KVA, 33/0.4 KV Distribution Sub-Station ... 8 Nos.	1.76
7. Installation of 200 KVA, 11/0.4 KV Distribution Sub-Station ... 2 Nos.	0.36

Description	Rs. in Lakhs	Remarks
8. Installation of 150 KVA, 11/0.4 KV Distribution Sub-Station ... 8 Nos. ...	1.20	
9. Installation of 100 KVA, 11/0.4 KV Distribution Sub-Station ... 40 Nos. ...	4.80	
10. Installation of 75 KVA, 11/0.4 KV Distribution Sub-Station ... 30 Nos. ...	3.30	
11. Installation of 50 KVA, 11/0.4 KV Distribution Sub-Station ... 40 Nos. ...	3.60	
12. Installation of 25 KVA, 11/0.4 KV Distribution Sub-Station ... 50 Nos. ...	5.50	
13. Installation of 15 KVA, 11/0.4 KV Distribution Sub-Station ... 50 Nos. ...	3.00	
14. Miscellaneous works such as G. O. A. B's., L. A.'s., Distribution Boxes, G. I. Pipe Fittings etc. ...	1.25	
15. Construction of 200 Kms. of 3 Phase 5 wire L. T. Distribution lines with 0.03 Sq. in. cu. eq. 'AA' Conductor for 3 phases and 0.02 Sq. in. cu. eq. 'AA' Conductor for neutral and street lighting phase ...	28.00	
16. Construction of 100 Kms. of 3 Phase 5 wire L. T. Distribution lines with 0.04 Sq. in. cu. eq. 'AA' Conductor for 3 phases and 0.02 Sq. in. cu. eq. 'AA' Conductor for neutral and Street lighting phase ...	15.00	
17. Construction of 200 Kms. of 1 phase 3 wire L. T. Distribution lines with 0.02 Sq. in. cu. eq. 'AA' Conductor ...	22.00	
18. Providing 21,000 Nos. Domestic and Commercial Single Phase Service Connections ...	31.50	
19. Providing 400 Nos. Small and Medium Industrial and lift irrigation pump service connection ...	3.60	
20. Providing 3600 Nos. Public Lighting ...	3.276	
21. Establishment ...	24.00	
22. Tools and Plants ...	6.00	
Sub-Total ...	218.016	
or Say ...	218.00	
GRAND TOTAL ...	562.00	

II. Power Development in Daman and Diu:

Rural Electrification:

1. Construction of 10 Kms. of 11 KV Single Circuit line with 0.03 Sq. in. cu. eq. ACSR Conductor for extension of existing H. T. line 0.86
2. Construction of 25 Kms. of 3 phase L. T. 5 wire line with 0.03 Sq. in. cu. eq. 'AA' Conductor for 3 phases and and 0.02 Sq. in. cu. eq. 'AA' conductors for street light phase and neutral ... 3.50

Description	Rs. in Lakhs	Remarks
3. Construction of 100 Kms. of 3 Phase L. T. 4 wire line with 0.03 Sq. in. cu. eq. 'AA' Conductor for 3 phases and 0.02 Sq. in. cu. eq. 'AA' Conductor for neutral	14.00	
4. Construction of 15 Kms. of 1 Phase L. T. 3 wire lines with 0.02 Sq. in. cu. eq. 'AA' Conductor	1.65	
5. Construction of 2 Nos. 11 KV Switching Stations	0.86	
6. Construction of 2 Nos. River Crossing Towers	0.60	
7. Installation on 11 KV/416 Volts, 100 KVA Transformer Sub-Stations ... 5 Nos. ...	0.75	
8. Installation of 11 KV/416 Volts, 50 KVA Transformer Sub-Stations ... 10 Nos. ...	0.90	
9. Installation of 11 KV/416 Volts, 25 KVA Transformer Sub-Stations ... 10 Nos. ...	0.70	
10. 2000 Nos. 1 Phase Service Connections for Domestic and Commercial lighting	3.00	
11. 600 Nos. 3 Phase service connection for Industries and Irrigation pump sets	5.40	
12. Public Lightings, 500 Nos.	0.45	
Sub-Total	<u>32.67</u>	
or Say	<u>33.00</u>	
III. Proposed Scheme for Thermal Power Generation	1.00	Token provision. The cost of the scheme is about Rs. 18.00 crores. It need to be implemented if negotiations for neighbouring states fail.
GRAND TOTAL	<u><u>596.00</u></u>	

Industry and Mining

BEGINNING OF THIRD FIVE YEAR PLAN

The developmental activities of Third Five Year Plan have commenced in the country in 1961, when the Union Territory of Goa, Daman and Diu was liberated from the yoke of the Portuguese Regime. Thus at the beginning of Third Five Plan progress in respect of developmental activities was practically nil.

During the period of Third Five Year Plan, the Government was determined to develop this Territory with all possible measures and numerous developmental activities were taken up for implementation. At the beginning of the Third Five year Plan the Territory has nothing to its credit so far industrial development is concerned, except few cashew factories, country liquor, etc. It was a tremendous task before the Government change the industrial map of Goa. For this many schemes have been taken up for development, such as extension of activities of Maharashtra State Financial Corporation, establishment of Goa, Daman and Diu Industrial Development Corporation, scheme for foundry, metric system of weights and measures, development of handloom industries, training-cum-production centre, power subsidy managerial subsidy to Industrial Cooperative Societies, interest subsidy for grant of loans, financial assistance to backward classes etc. These schemes were taken in hand to create confidence among enterprising potential entrepreneurs, who were reluctant to come forward to venture into industrial enterprise because of discouraging policy of the erstwhile Portuguese Regime. Awaiting encouragement from the Govt., entrepreneurs of the Territory have responded properly and people have taken maximum advantage of the facilities given to them in setting up units. The Major achievements are summarised in the following paragraphs:

During the period 672 industrialist have been given financial assistance to the tune of Rs. 1,608,890/- to start industries in different trades, such a carpentry, soaps, bakery, workshop, automobile workshops, candle manufacture etc. The co-operative movement has taken good shape and as many as 22 Industrial co-operative societies were established and assisted by way of share capital contribution. The Territory is lacking in skilled workers and it was rather difficult task for the industries to import all skill labour from the neighbouring states. With a view to provide trained personnel, thirty training centres were started in different trades during the period of Third Five Year Plan. To meet the ma-

nagerial expenses incurred by the Industrial Co-operative Societies, the Government had decided to grant managerial subsidy at the rate of Rs. 1200/-, 900/- and 600/- during first, second and third year respectively. The benefits of this scheme was secured by seven industrial Co-operative societies.

The development of Industrial Estates was a accepted solution for rapid industrialisation and maximum advantage are available to co-operative industrial estates. During the above period an assistance in the form of matching share capital contribution was given to three co-operative industrial estates to be established, at Margao, Murgaon and Ponda, with a view to create nucleus of industrialisation. As this Territory is full of coconuts and no concentrated efforts were made during earstwhile regime to develop this home industry in proper manner, the Government has decided first to train artisans in modern techniques of manufacture of coir products. With this intention in view three coir-production centres were started during the period.

The hereditary artisans who were engaged in the manufacture of decorative handicrafts articles were totally neglected and not paid due attention they deserved. The handicrafts of Goa, particularly wood carving, engraving, lacquerwares, pottery, etc., were very famous. As almost all these artisans are uneducated and do not know the modern methods of marketing, they were unable to sell their products. A handicrafts emporium is therefore, established at Panaji. The handicrafts articles from the artisans are purchased and kept in the emporium for sale.

It was observed that in the context of present economic condition the small scale industrialists cannot afford to purchase heavy machinery and they cannot be expected to put all machines for limited production. It was therefore, decided to establish a Common Service Facility Centre comprising of different trades such as General Engineering Workshop Electroplating unit, etc. The preliminary survey as made and a piece of land was purchased at Atlinho, Panaji to establish this Centre.

PROGRESS DURING 1966-67 AND 1967-68

Major developmental activities undertaken during this period is the establishment of Goa, Daman and Diu Industrial Development Corporation. The Corporation was established with view to establish Industrial Estates and areas at different places in the Territory. A remarkable achievement was made during this period in developing one industrial estate at Corlim and 25 sheds have been constructed and allotted to interested entrepreneurs to start industries.

The schemes which were undertaken for development, such as training centres, loans, assistance to co-operative societies, development of handicrafts and handloom industries etc., were continued.

With a view to give benefits to small scale industries in procurement of new materials and machinery on hire purchase basis, the activities of the Maharashtra Small Scale Industrial Development Corporation were extended to this Territory and the procurement of raw materials such as imported, canalised, scarce, indigenous, etc. Moreover the corporation has undertaken the scheme of giving machinery on hire-purchase basis. The office has been established at Murgaon.

ABSTRACT OF ALLOCATIONS-SCHEMewise

Sr. No.	Name of the Scheme	Proposed outlay (Rs. in lakhs)
Large and Medium Industry		
1.	Cost of Preparation of feasibility Report	5,00
2.	Power Subsidy to Large Scale Industry	750,00
Total		755,00
Mineral Development		
	Construction of building for Directorate of Industries and Mines	6,00
Village and Small Industries		
1.	Development of Industrial Estates, Areas and Capital Contribution to Goa, Daman and Diu Industrial Dev. Corp.	35,00
2.	Assistance to M.S.F.C.	10,00
3.	Establishment of Industrial Research and Chemical Laboratories and Quality Marking Scheme	8,60
4.	Strengthening of the staff of the Directorate of Industries	1,00
5.	Incentives to Small Scale Industries	28,70
6.	Common Service Facility Centre	5,00
7.	Financial assistance to small scale and cottage industries under the State Aid to Industries Rules	10,00
8.	Export Promotion	1,00
9.	Loan and Share Capital to Industries Cooperative Societies	2,00
70.	Development of Handicraft	3,50
11.	Handloom Coop. Societies & Establishment of Dye House	0,25
12.	Financial assistance to backward classes and scheduled caste	0,50
13.	Establishment of M. S. S. I. D. C.	1,00
14.	Mobile Workshop	1,50
15.	Study Tour of Small Industrialists and Training to Artisans	0,12
16.	Training of Officers	0,06
17.	Rural Industries Project	10,00
18.	Techno Economic Survey	0,20
19.	Khadi and Village Industries Road	0,25
Total		118,68

1 — Large & Medium Industries

NAME OF THE SCHEME: COST OF PREPARATION OF FEASIBILITY REPORTS—

Total Financial Requirements: — Rs. 3 lakhs.

Description and Scope: Feasibility studies form an important aspect specially in relation to large and medium scale projects. These feasibility studies give an idea as to the prospects and the cost involved in preparing such reports is quite heavy. A large number of industrial consultants including Govt. of India organisations like N. I. D. C. and C. S. I. R. exist in the country. Project reports have also to be prepared and supplied to prospective entrepreneurs. The Govt. under this scheme, will meet 75% of the cost of preparation of feasibility reports, got prepared by the private parties (in respect of industrials potentialities in the State) and the Govt. may also undertake on its own feasibility reports in respects of certain industries (for example like line deposits in Diu) by employing services of such expert consultants.

Phasing:

1969-70	1 lakh
1970-71	1 lakh
1971-72	1 lakh
1972-73	1 lakh
1973-74	1 lakh

NAME OF THE SCHEME: POWER SUBSIDY TO LARGE AND MEDIUM SCALE INDUSTRIES —

Total financial requirements: — 750 lakhs.

Description and Scope: The large and medium scale units in Goa received their power requirements at a price higher per unit than such units in Mysore, from which State, Goa is purchasing power requirements. It is therefore natural that cost of production in Goa should be higher and consequently the products should be less competitive. Govt. will therefore subsidise the rate per units to the extent of the difference in rates.

Phasing:

1969-70	40 lakhs
1970-71	45 lakhs
1971-72	225 lakhs
1972-73	225 lakhs
1973-74	215 lakhs

2 — Mineral Development

NAME OF THE SCHEME: CONSTRUCTION OF BUILDING FOR THE DIRECTORATE OF INDUSTRIES AND MINES —

Plan Provision — Rs. 6,00,000/-.

At present the Directorate of Industries and Mines is occupying a very old private building. The Mines Wing of this Directorate is occupying a part of Government building. It is very likely that the Mines Wing may be shifted to occupy a part of the aforesaid private building. In that case the annual rent of this private building will be Rs. 29,620/-. It is why we have suggested for the construction of a new Government building to accommodate this Directorate, with the following Wings:—

Name of the Wing	Floor space requirements
1. Industries Wing consisting of:	
a) Industries Section	300 m ²
b) Weights and Measures Section	100 m ²
c) Industrial Testing and Research Laboratory, accommodating Food and Mineral Technology sections	400 m ²
2. Mines Wing and Museum of Geology	400 m ²
3. Rural Industries Projects	100 m ²
Total	1,300 m ²

4. Reception room.

5. Garage and parking space.

6. Future expansion.

For this we can make a provision for another Rs. 1,00,000/-

Progress of Work: —

Nature of work	Period	Expected Expenditure
1 — a) Selection of site b) Purchase of plot c) Calling tenders and start of construction	From 1st April 1969 to 31st August 1969	Rs. 40,000/-

Nature of work	Period	Expected Expenditure
2 — Construction work completed upto roofing	1st September 1969 to 31st March 1970	Rs. 2,50,000/-
3 — Plastering doors and windows fitting etc. and electric and sanitary fittings colouring	1st April, 1970 to 31st December 1970	Rs. 2,50,000/-
4 — Equipping and furnishing	1st January 1971 to 31st March 1971	Rs. 60,000/-
Total requirements for the building, etc. ...		Rs. 6,00,000/-

3 — Village & Small Industries

NAME OF THE SCHEME: DEVELOPMENT OF INDUSTRIAL ESTATES AND INDUSTRIAL AREAS THROUGH THE GOA, DAMAN AND DIU INDUSTRIAL DEVELOPMENT CORPORATION —

Financial requirements: — 35 lakhs.

Description and Scope: The Small scale and village industries play a significant role in the national economy of the country. They open avenues for large scale employment and at the same time act as a check on the concentration of wealth in fewer hands. Govt. owes a responsibility to create suitable climate conducive to growth of these industries, which need to be assisted in matter of procurement of land, construction of factory sheds and office, procurement of raw materials, provision of facilities of water, electricity, roads, etc. One industrial estate at Corlim has already been set up by the Industrial Development Corporation and another is under construction at S. Jose de Areal. Both these Estates are in the southern part of Goa. One Industrial Estate should be set up in the Northern part of Goa. Secondly in these Industrial Estates, some plots could be kept for the use of those entrepreneurs, who wish to erect the sheds as per their own designs and requirements.

Phasing:

1969-70	29 lakhs.	
1970-71	1.50 lakhs.	
1971-72	1.50 lakhs.	35 lakhs.
1972-73	1.58 lakhs.	
1973-74	1.50 lakhs.	

NAME OF THE SCHEME: ASSISTANCE OF THE MAHRASHTRA STATE FINANCIAL CORPORATION —

Plan outlay: — Rs. 10 lakhs.

Physical targets: — 30 Industrialists to be benefited.

The Branch Office of the Maharashtra State Financial Corporation has been set up with the object of providing a financing agency for assisting new industries or assisting expansion of existing industries throughout the Union Territory of Goa, Daman and Diu. In order to

enable the Corporation to meet the growing demands for Industrial Finance, it is proposed to provide for an additional investment of Rs. 10 lakhs to the Maharashtra State Financial Corporation during the Fourth Plan. At present the Government is providing funds in the form of loan to Small Scale Industries upto Rs. 10,000 for fixed assets and more for working capital. To satisfy the higher requirement of the industrialists, the activities of the above Corporation are extended to this territory from 1964. The Corporation has been successful in assisting Small Scale Industries to considerable amount and they have granted loans amounting to Rs. 2 to 3 lakhs in each case.

NAME OF THE SCHEME: QUALITY CONTROL TESTING LABORATORY —

Financial requirements: — Rs. 8.60.000.

Description and Scope: Besides the Indian Standard Institution, and Ag. mark scheme of the Ministry of Agriculture, some State Govts. have their own quality marking schemes. In Goa, food processing industries have registered considerable increase since liberation. Four to five canning units are established, a number of bakery units and confectionery units, distilleries and breweries cashew processing units are operating in the territory. The items of production involves safety and health of the public.

It is felt that to serve the above needs of the public and also needs of the industry, a industrial testing laboratory should be set up to have a quality control and also to provide facilities for these units and this laboratory should have two wings, to have their products checked.

- 1) Food Technology Section 2) Minerals Testing Section.

In the food technology section, where samples of locally processed articles/foodstuffs will be tested, investigations will also be conducted to process local subsidiary food products like banana, pineapple. At times for conducting biological tests, the samples of canned articles are sent to places outside the territory for being certified in regard to their quality.

In the mineral testing section, the samples of the ores and also pellet which are exported will be checked so as to have a check on the malpractices and also to see that royalties are correctly accounted on the graded ore. The samples therefore need to be collected from various mines and also at the point of loading and then these samples are to be analysed in the Laboratory.

1969-70	—
1970-71	—
1971-72	5 lakhs.
1972-73	1.8 lakhs.
1973-74	1.8 lakhs.

Food Technology Section inclusive of (Biochemistry section)

a) Non Recurring:

1) Purchase of machinery and equipments	250,000	
2) Books and Journals	10,000	
3) Furniture	5,000	265,000
		<hr/>

b) Recurring:

1) Research officer 350-900 (Carbohydrate) ... 1	13,500	
2) Research Officer 350-900 (Proteins and fats ... 1	13,500	
3) Laboratory assistants 210-425 4	32,500	
4) Peons 75-85 2	5,500	64,000
		<hr/>
5) Allowances T. A.	8,000	
6) Dearness Allowance, H. R. etc.	38,000	46,000
		<hr/>

Contingencies:

1) Purchase of chemicals	10,000	
2) Purchase of raw materials and consumable stores ...	10,000	20,000
		<hr/>

Grand Total: 3,95,900

Minerals testing section

a) Non recurring:

1) Purchase of machinery and Equipments	250,000	
2) Books and Journals	10,000	
3) Furniture	5,000	265,000
		<hr/>

b) Recurring:

1) Research officer 350-900 (Bauxite and other minerals) 1	13,500	
2) Research officer 350-900 (Ocimal sands) ... 1	13,500	
3) Laboratory assistants 210-425 4	32,400	
4) Peons 75-85 2	5,500	64,900
		<hr/>
5) Allowances T. A.	10,000	
6) D. A., H. R. A. etc.	38,000	48,000
		<hr/>

Contingencies:

1) Purchase of chemicals	10,000	
2) Purchase of raw materials and consumable stores ...	10,000	20,000
		<hr/>

Grand Total: 3,97,900

Administrative staff for food technological Section and Minerals testing Section.

Non-recurring:

1) Furniture	4,000	4,000
		<hr/>

Recurring:

1) Store keeper 210-380 1	8,100	
2) Accountant 210-380 1	8,100	
3) U. D. C. 130-300 1	4,800	
4) L. D. C. 110-180 1	4,100	
5) Peons 75-85 2	5,500	34,600
		<hr/>
D. A. and H. R. A.	22,600	
Allowances T. A.	2,000	24,600
		<hr/>

Contingencies:

1) Misc. Expenditure	3,000	3,000
		<hr/>

Grand Total: 66,200

NAME OF THE SCHEME: **STRENGTHENING THE STAFF OF THE DIRECTORATE OF INDUSTRIES —**

Plan outlay: — Rs. 1 lakh.

Physical target: Objective of the scheme is to strengthen the administrative and executive wing of the Directorate of Industries to cope with the increasing work arising from various development schemes. According to Fourth Five Year Plan about 20 schemes will be implemented at the total cost of Rs. 1.64.230.000/- during the Fourth Five Year Plan. The progress of the plan schemes depend upon the efficiency of the persons to handle them.

During this period to incur facilities for bringing planned prospects to actual fruition and to ensure promptness and efficiency in disposal of all government business related to industrialisation, establishment of a Central Agency, which would function as a dynamic cell in the general administrative set up, can be thought of. This cell will consist of following branches:

1. Industrial and related surveys.
2. Publication of relevant data and statistical information.
3. Technical assistance to the interested parties.
4. Strengthening of raw material section.
5. Establishment of statistical section.
6. Establishment of Central Store Purchase Organisation.
7. Staff for the implementation of plan schemes.

The scheme would cover the expenditure such as stipend and other allowances for the staff members for carrying out survey, publication covering industrial activities by way of monthly bulletins, subscription of periodical and other publications of different agencies including Central Government, participation and exhibition inside and outside the territory.

During the Fourth Five Year Plan, Directorate of Industries will be fully equipped with the required machinery of manpower to implement plan schemes successfully.

NAME OF THE SCHEME: **INCENTIVES TO SMALL SCALE INDUSTRIES —**

Plan Outlay: — Rs. 28.70 lakhs.

Physical target: — Under this scheme following type of incentives will be given to Industrialists for the development of Industries in different field.

1. Power subsidy;
2. Sale Tax Refund;
3. Subsidy towards interest on loan;

4. Tools and equipment subsidy;
5. Managerial subsidy;
6. Assistance to bonafide crafts;
7. Subsidy on rent charged on the sheds on the industrial estate.

1 — Power subsidy: One of the major problem faced by SSI units in this territory is the high rate of electric power as compared to their counterparts in other states. In order to mitigate this problem, it is proposed to give subsidy on power consumption to SSI units as per the pattern approved by Govt. of India. The rate of subsidy will be the difference between the actual rate and 9 paise per KWH subject to the maximum of 9 paise per KWH. Thus, it is expected that about 250 units (SSI) will be benefited by this scheme during 1969-70 and about 500 units by the end of the Plan period. Yearwise break up is Rs. 2.5 lakhs in 1969-70; Rs. 2.75 in 1970-71; and Rs. 3/- lakhs in 1971-72; Rs. 3.25 lakhs in 1972-73 and Rs. 3.50 in 1973-74.

2 — Sale Tax Refund: In order to bring down the cost of production of the priority industries so as to improve their competitive power and also boost exports, it is proposed to give cash refund on the sale tax paid by the unit for the purchase of raw materials. This will also encourage establishment of new units. Originally about 40 units will be benefited by the scheme but this number is expected to go up to 100 units by the end of the Plan period. Since correct estimates are difficult to anticipate, a nominal amount of Rs. 2.00 lakhs is proposed, which will be more or less adequate. The refund of sales tax will be subject to the maximum of 8% of the equity capital.

4 — Tools and equipment subsidy: In order to equip the Industrial Cooperative, it is proposed to grant subsidy to the extent of 50% towards purchase of machinery and equipment subject to a maximum of Rs. 25000/-. The balance 50% will be granted as loan. In case of Coop. Societies of backward class artisans, it is proposed to give loan free of interest.

5 — Managerial subsidy: There are about 21 existing Coop. Societies already in operation. The societies are required to be given managerial subsidy at the rate of 75%, 60% and 40% during the 1st, 2nd and 3rd year respectively to meet the management expenses of the Society to the extent as per pattern of assistance.

6 — Assistance to bonafide crafts: Craftsmen trained in a particular industry at the peripathetic schools of the Department of Industries, Community Development Blocks or in any other technical institution recognised by the Govt. may be considered as bonafide craftsmen for this purpose.

An amount equivalent to 25% subject to a maximum of Rs. 250/- of the amount sanctioned for tools and equipment may be treated as subsidy in deserving cases.

7 — Subsidy on rent charged on the sheds on the Industrial Estate: It is proposed to subsidise the economic rent charged on the Industrial Estate established in the Industrial Estate at the rate of 50% during the

1st and 2nd year, 40% during the 3rd year and 25% during the 4th and 5th year. It is found that the economic rent charge on the shed is sometimes very high taking into consideration the financial limitation of small scale industrialists. At present, an Industrial Estate at Corlim is already established and one more Estate at Margao is being established by the Goa, Daman and Diu Industrial Development Corporation. In the Industrial Estate at Corlim, 30 sheds have been constructed and about the same number are under construction in the Margao Industrial Estate. The total financial implication taking into consideration the above pattern of assistance will be Rs. 4.00 lakhs.

3 — Subsidy towards interest on loan: It is proposed to grant subsidy on the rate of interest charged by the MSFC. The pattern of subsidy will be difference between the rate of interest charged by the MSFC and the rate of interest charged by the Govt. The subsidy will be paid to the MSFC which will charge the rate of interest to the loanees at the rate at which the Govt. gives loans to the industrialists.

NAME OF THE SCHEME: COMMON SERVICE FACILITY CENTRE, ALTINHO —

Plan outlay: — Rs. 5.00 lakhs.

Physical target: — This is a continuous scheme. During the period of 4th Five Year Plan considerable expansion in the present activities will be done. The General Engineering Workshop and Electroplating Unit which are at present being established will need considerable expansion during this period depending upon the response from Small Scale Industrialists. In this Centre the parties will be given machinery on hire at a reasonable rate by the Government and facilities will be provided to train students in the trades such as milling, shaping, turning electroplating etc. The sophisticated machinery are installed here to benefit S.S.I. Units. It is expected that during the plan period about 100 parties will be benefited.

NAME OF THE SCHEME: FINANCIAL ASSISTANCE TO SMALL SCALE AND COTTAGE INDUSTRIES UNDER THE STATE AID TO INDUSTRIES RULES.

Plan outlay: — Rs. 10.00 lakhs.

Physical target: — 750 parties will be assisted.

The object of the scheme is to assist Small Scale entrepreneurs by the provision of Industrial Finance, as absence of credit on easy terms is a serious problem for prospective small entrepreneurs in Goa, Daman and Diu. It is proposed to continue the scheme of liberalized credit as approved by the All India Small Scale Industries Board. Under the State Aid to Industries Rules, loans are granted to individuals artisans in Small Scale and Cottage Industries upto Rs. 75,000/- and in exceptional cases upto Rs. 1.00 lakh. It is proposed that loans exceeding Rs. 10,000/- upto Rs. 10.00 lakhs should be granted by the Maharashtra State Financial Corporation from its own funds, subject to Govt. guarantee as regards repayment of principal with interest.

NAME OF THE SCHEME: EXPORT PROMOTION —

Financial requirements: — 1.00 lakh.

Description and Scope: — The scheme envisages the granting of incentives to small scale industrial units, engaged in export of its products. Subsidy amounting to 50% of the import and for customs duties will be paid to such units for promotion of export market.

Phasing:

1969-70	0.00
1970-71	0.25
1971-72	0.25
1972-73	0.25
1973-74	0.25

NAME OF THE SCHEME: LOAN TO INDUSTRIAL COOPERATIVE SOCIETIES (SHARE CAPITAL CONTRIBUTION TO INDUSTRIAL COOPERATIVE SOCIETY) AND INDUSTRIAL COOPERATIVE INCLUDING LABOUR COOPERATIVE —

Plan outlay: — 2.00 lakhs.

Physical target: — Assistance will be given to 24 cooperative societies by way of loan and share capital.

The object of the scheme is to help artisans, craftsmen, persons engaged in traditional and cottage industries and handicrafts etc. to organise themselves on cooperative basis and to assist their cooperatives.

The scheme provides for financial assistance to Industrial Cooperatives including Handicrafts Cooperatives and prospective members of the Cooperative for the following purpose: —

- a) Government participation in the share capital of Industrial Cooperatives so as to strengthen their capital base.
- b) For making funds available to the Cooperative Bank for providing loan fixed assets to Industrial Cooperatives. It is proposed to organise Agriculture Processing Cooperative Societies, such as rice milling, oil extraction, canning, coir, cashew processing, bakeries and other types such as printing press, automobile and service workshop, labour contract including forest labour etc. Financial assistance to Industrial Cooperatives will be channelised through Cooperative Banks so as to strengthen the Cooperatives activities.

NAME OF THE SCHEME: DEVELOPMENT OF HANDICRAFTS —

Financial Requirements: — 3.50 lakhs.

Description and Scope: — Goa, Daman and Diu is known for its production of lacquerware, brass ware articles, pottery, bamboo products, tor-

toise shells and ivory articles and to ascertain extent wood carving articles etc. It is necessary to provide phillip to the sale of such articles through the Handicrafts Emporium, opened by the Directorate. In this Emporium, articles of Handicrafts, produced in other States will also be displayed. At Vasco another emporium is proposed to be established.

1969-70	0.6 lakhs.
1970-71	0.75 lakhs.
1971-72	0.75 lakhs.
1972-73	0.75 lakhs.
1973-74	0.75 lakhs.

NAME OF THE SCHEME: HANDLOOM COOPERATIVES AND ESTABLISHMENT OF DYE HOUSE —

Financial requirements: — 0.25 lakhs.

Description and Scope: — The object of this scheme is to improve economic conditions of handloom weavers by encouraging them to better their prospects through financial assistance. There are about 200 looms in Goa. Under the scheme, the handloom Cooperatives will be helped to set up dye house and also assistance by way of rebate on the sales of handloom cloth will be provided to make it more competitive in the market. The Govt. will provide also matching share capital contribution to the Society.

1969-70	Rs. 9,000
1970-71	Rs. 4,000
1971-72	Rs. 4,000
1972-73	Rs. 4,000
1973-74	Rs. 4,000

NAME OF THE SCHEME: FINANCIAL ASSISTANCE TO BACKWARD CLASSES OR SCHEDULED CASTES —

Plan outlay: — Rs. 0.50 lakhs.

Physical target: — The classification of backward classes or scheduled tribes is recently notified. It is very essential to give a boost to this class to increase their social standard in the Society. The scheme is therefore proposed to give some incentives in the form of loan-cum-subsidy in deserving cases to the artisans who are engaged in the manufacture of cottage industry products, such as bamboo articles, earthenwares, leather goods etc. The loans will be granted to the extent of Rs. 1000/- on personal bond on the recommendation of the B. D. O. and out of this 25% will be considered as subsidy. It is estimated that about 50 artisans will be assisted during the plan period.

NAME OF THE SCHEME: **ESTABLISHMENT OF A SMALL SCALE INDUSTRIAL DEVELOPMENT CORPORATION —**

Plan outlay: — Rs. 1.00 lakh.

Physical target: — Distribution of raw materials as per quota received from Govt. of India from time to time in accordance with Trade Control Policy and policy of allotment of scarce raw materials.

The object of this scheme is to establish a Small Scale Industrial Corporation to cater the needs of the small scale industries by assisting them in the following manner: —

- i) Marketing the quality marked products and products of standing specification produced by Small Scale Industries of this territory, and to make propaganda, hold exhibitions etc. to promote their sales,
- ii) quality marketing of the goods,
- iii) opening and running depots of raw materials of correct specifications for supply to Small Scale Industries and working as approved stockist of certain items of raw materials,
- iv) supply machines and machine tools of Indian origin, on hire purchase system to Small Scale Industries.

In order to promote the development of Small Scale Industries in backward areas, the Central Government recommends State participation in equity capital of small industrial concerns. The proposed Corporation would undertake such selective investment.

Above activities will be undertaken by the Goa, Daman and Diu Industrial Development Corporation in future. At present, the Maharashtra Small Scale Industrial Development Corporation has extended their activities to this territory and they are at present distributing only scarce raw materials on payment by parties. On opening of raw material depot by the Government, the raw materials required by different parties will be purchased on their behalf and stored in this depot. The material will be released to the parties on making payment. This will facilitate the functioning of existing units and encouraging new ones. The depot will be opened in the vicinity of the Industrial Estate.

NAME OF THE SCHEME: **MOBILE WORKSHOP —**

Financial requirements: — Rs. 1.5 lakhs.

Description and Scope: — On field, the need is often experienced to run a mobile vans which will go to villages to repair pumps, tractors, oil engines, etc. This to a certain extent will also help to increase agricultural production. These vans equipped with modern machines and tools will conduct also demonstrations, wherever feasible.

1969-70	—
1970-71	0.90 lakhs
1971-72	0.20 lakhs
1972-73	0.20 lakhs
1973-74	0.20 lakhs

NAME OF THE SCHEME: STUDY TOUR OF SMALL INDUSTRIALISTS —

Plan outlay: — Rs. 0.12 lakhs.

Physical target: — It is proposed to arrange study tours of prospective industrialists to the States where industrialisation is developed sufficiently. Unless the industrialists know the procedure, administrative set up and effective working of units in the developed States, the entrepreneurs in this Territory will not be able to start industries on planned manner. Every year a batch of 20 industrialists will be taken to other States on Industrial tours and the expenditure of the tours will be borne by the Government. This scheme has been recommended by the Development Commissioner, Small Scale Industries, Government of India.

NAME OF THE SCHEME: TRAINING OF STAFF OF DIRECTORATE —

Plan outlay: — Rs. 0.06 lakhs.

Physical target: — It is proposed to train the officers of this Directorate in advance training provided by the C. S. I. O. and Small Scale Industrial Training Institute at Hyderabad and similar Institutions in the Country. It is found almost all the entrepreneurs in backward areas do not know the modern technique and procedure for establishment of Small Scale Industries. They could be very well assisted by the trained staff by the Directorate of Industries in smooth implementation of their scheme. The training facilities have already been provided to the staff of the Central Small Industries Organisation under the various development plans. It is also envisaged to sent the officers of this Directorate to attend seminar, symposium and training courses organised by the Government of India under the various United Development Plans. Without the trained officers it is not possible to implement the plan scheme effectively. It is proposed to train four officers during the plan period.

NAME OF THE SCHEME: RURAL INDUSTRIES PROJECT —

Financial requirements: — Rs. 10.00 lakhs.

Description and Scope: — Goa has been included under Rural Industries Project Programme. Rural Industries Project in Goa has confined itself to training programme, production centres, common facility centres and financial assistance to small scale and cottage industries. During the Fourth Five Year Plan the Project will be continued. The efforts will be to consolidate the gain already made. An amount of Rs. 7.5 lakhs is expected to be spent on all types of schemes during the Fourth Plan period and Rs. 10.00 lakhs towards financial assistance etc. During the period from 1-4-65 to 31-3-68, the expenditure on the Project was approximately Rs. 15.9 lakhs and there was additional expenditure on loans amounting to Rs. 6.13 lakhs.

NAME OF THE SCHEME: TECHNO-ECONOMIC SURVEY OF GOA, DAMAN AND DIU —

Financial Requirements: — Rs. 0.20 lakhs.

Description: — It is a follow up action of the initial survey conducted earlier in 1962-63. This survey was undertaken by the National Council of Applied Economic Research for which above amount is to be paid during 1969-70.

NAME OF THE SCHEME: KHADI AND VILLAGE INDUSTRIES BOARD —

Financial requirement: — Rs. 0.25 lakhs.

Description: — To promote the following Khadi and Village Industries: —

1. Processing of cereals and pulses.
2. Village leather.
3. Village oil.
4. Cottage match.
5. Gur and Khandsari.
6. Palm gur.
7. Non edible oil and soap.
8. Handmade paper.
9. Bee keeping.
10. Village potteries.
11. Fibre.
12. Carpentry and blacksmithy.
13. Lime manufacturing.

Out of these, initially Bee keeping, village leather and lime manufacturing will be implemented through Khadi and Village Industries Board which is being constituted. As regards other schemes, the possibilities of starting cannot be envisaged at this stage as there may not be good response from village artisans for the development of the scheme.

Phasing: —

1969-70	0.05
1970-71	0.05
1971-72	0.05
1972-73	0.05
1973-74	0.05

Transport and Communications

1 — Roads

The Union Territory of Goa, Daman and Diu came into picture as regards the Five Year Development Plans only after the Liberation in December 1961. Since 1962 till today lot of work is done to improve the conditions of not only P. W. D. network of roads but also of ex-Municipal roads transferred to P.W.D. Besides some new roads have also been constructed.

Major part of road development done so far is the improvement of the roads by blacktopping their surfaces. The general standard of the roads prior to Liberation especially in respect of formation width were found below the uniform standard adopted in the rest of India. As widening of the roads involves land acquisition which is time consuming procedure, it was decided that during first stage of development roads be improved by blacktopping their surface and widening could be resorted to in the 2nd stage as per traffic conditions.

Total road network under P.W.D. prior to Liberation was of 647 Kms. At present due to transfer of many municipal roads the total length is increased to 1288 Kms. Still more 700 Kms. of municipal roads are yet to be transferred and which will be done in a phased programme. Besides there are about more than 1200 Kms. of village roads which also need improvement. These roads which are under various Gram Panchayats will also be improved by P. W. D. after taking them over in a phased programme.

Major achievements since Liberation are as follows:

- i) Reconstruction of 13 bridges destroyed by retreating ex-Portuguese army.
- ii) Improvement of roads by blacktopping their surface in a length of 315 Kms. approximately.
- iii) Improvement inclusive of widening of the existing asphalt carpet in a length of 49 Kms. approximately.

Out of the following 24 new bridges, mentioned below, 11 bridges have been completed and the remaining 13 bridges are under progress and will be completed by March 1969:

I) Reconstruction of Sanguem bridge. II) Morlem bridge. III) Keri bridge. IV) Poroskoda bridge. V) Uguem bridge. VI) Tanem bridge. VII) Veluz bridge. VIII) Submersible bridge at Poriem. IX) Baga bridge.

X) Torda bridge. XI) Ragado bridge. XII) Bamanguda bridge. XIII) Cumbarjua bridge. XIV) Ghodeval bridge. XV) Reconstruction of Ponda bridge. XVI) Submersible bridge at Paroda. XVII) Shelvona bridge. XVIII) Taripanto bridge. XIX) Reconstruction of Maxem bridge XX) Maina bridge. XXI) Mandovi bridge. XXII) Saleri bridge XXIII) Damanganga bridge. XXIV) Thud bridge.

Mandovi bridge is a major high level bridge having a span of 675 metres lying on the West Coast Road across Mandovi river and connects Panaji with Betim. This bridge together with approach road is expected to be completed by December 1969.

New roads totalling 65 Kms. have been constructed so far. In the Fourth Five Year Plan it is proposed to complete, in the first instance the spill over schemes which will be continued next year.

New schemes proposed to be taken up are described below briefly: —

I — Proposed link of National Highway to connect Goa to Nearest National Highway: — It is proposed to Ministry of Transport, Delhi to declare Panaji Anmod road as National Highway. This road is 70 Kms. long and connects Panaji, capital of this Union Territory, to Belgaum. The road is entirely blacktopped to a width of 5 metres except for the Ghat section of 10 Kms. where the blacktopped width varies from 3 to 4 metres. The general formation width is 6.0 metres and it is proposed to widen the same to the formation of 12.0 metres as per I. R. C. recommendation to National Highways. Existing laterite arch minor bridge will be replaced by R. C. C. slab structures. 2 by-pass roads on Ribandar — S. Pedro and Ponda — Curti sections are also proposed in order to divert traffic from congested areas.

II — Proposed link in the form of National Highway from Marmagoa Harbour to proposed National Highway Panaji Anmod: The length of this road is 37 Kms. and its conditions is very bad both in regard to surface and width and is inadequate for the present heavy traffic circulation and future development of the Port. The missing link between Borim Bridge and Loutulim has already been started. The existing formation width varies from 5 to 6 metres and widening of this road to 12 metres is very essential to meet present and future traffic demands. It is proposed to widen the road from Loutulim to Chicalim and to construct a new diversion road from Chicalim to Marmagoa Harbour across Chicalim plateau in a length of 11 to 12 Kms. as the existing portion of road in this section is difficult and expensive to widen due to many sharp curves existing and presence of built up areas for considerable length. This proposed National Highway meets the Panjim-Anmod road at Ponda.

III — West Coast Road: The length of this road passing through Goa Territory is 140 Kms. and entire alignment with exception of 15 Kms. in the North from Patradevi to Pernem and 5 Kms. in the South from Canacona to Ordofoondo is blacktopped. The work of blacktopping of 5 Kms. in the South is in progress and will be completed by March 1969. Major schemes proposed on this road are construction of 2 major high level bridges over river Zuari and Colvale. Advanced action in the form of collection of bore data of river bed, survey of approach roads etc. have been already started.

Besides these 2 bridges, it is proposed to widen the road from the existing 6 metres to 10 metres as per standards recommended by I. R. C. for the West Coast Roads. Major portion of this road have formation width of 5 to 6 metres.

IV — State Highways subjected to Mining Traffic: As mining forms an important part of economic assets of Goa and are earner of foreign exchange by export, every facility is required to be given to increase its production. Since Liberation about 230 Kms. of P. W. D. roads situated in mining areas have been improved by providing blacktopped surface. In the Fourth Plan it is proposed to blacktop remaining roads which are not improved so far. Besides there are number of private mining roads which require improvement. It is proposed to improve some of them provided mine owners transfer these roads to P. W. D. and are ready to bear 50% of the expenses.

V — Other State Roads and Inter-State Roads: Following 2 inter-State roads are proposed to be undertaken during current Fourth Five Year Plan:

- 1) Sankhli-Keri-Chorlem Ghat to Kankubi-Belgaum ... 18 Kms.
- 2) Sanguem-Zuna-Dighi 20 Kms.

The first road partly exists up to Keri for a length of 9 Kms. and there remain still 9 Kms. to be constructed from Kerim onwards up to Chorlem Ghat. This route will serve the northern part of Goa for its connection to Belgaum via Kankubi and will reduce distance to Belgaum by 20 miles. The second route will connect Sanguem Taluka to Industrial areas of Mysore State.

Besides it is also proposed to construct another short road hardly 3 Kms. in length to connect Poriem on Sankhli-Keri road to Aint on Maharashtra side. Existing state Highways will also be widened to formation width of 10 metres wherever traffic conditions demands.

VI — Roads of Touristic Importance: Development of Tourism to cater to the needs of the foreigners and the people of this land has been stressed by the Government. Following roads are, therefore, proposed to be developed to promote tourism: —

- 1) Quepem-Chandranath road.
- 2) Borim Sidhnath hill road.
- 3) Curchorem-Marutigad road.
- 4) Margao-Colva road.
- 5) Arvalem road.
- 6) Vagueri hill road.
- 7) Sarzora lake road.
- 8) Saligao Canlangute road.
- 9) Canlangute Aguada road.

VII — District Roads: Ex-municipal roads which are transferred to P. W. D. are classified as Major District Roads and Ordinary District Roads respectively. About 600 Kms of these Municipal roads were transferred to P. W. D. during 1965 and there still remain to be transferred another 700 Kms of the roads. Most of these roads are narrow and have macadam pavement. During first stage these will be improved by providing a blacktopped surface and in some cases they will be widened as per traffic conditions.

VIII — Other Bridges: Besides 2 important bridges mentioned earlier under West Coast Road it is also proposed to undertake the construction

of following bridges which lie partly in State Highways and partly on District Roads: 1) Sristal bridge. 2) Orlim bridge. 3) Assolda bridge. 4) Carmona bridge 5) Sigao bridge. 6) Dabal bridge. 7) Tonca bridge. 8) Sancordem bridge. 9) Madei bridge. 10) Tormes bridge. 11) Guleli bridge.

IX — Rural Roads: It is also proposed to improve communication means to villages by providing all wheather roads to them. At present these village roads are under various Gram Panchayats and are mostly in neglected state due to paucity of funds with said Panchayats to improve them. There are about 1200 Kms of such village roads. Most of them are in the form of cart trucks. Considerable emphasis will be laid on rural roads in the Fourth Five Year Plan. At least 20 to 25 per cent of the total allocation for roads will be earmarked for these roads as recommended by the Transport Development Council at its recent meeting in Mysore.

DETAILS OF THE OUTLAY PROPOSED FOR ROADS

Classification of Roads	Outlay Proposed
1) State Roads & Ex-Municipal Roads in Mining areas	Rs. 80.00 lakhs
2) Other state and Inter state roads	Rs. 50.00 lakhs
3) District Roads	Rs. 100.00 lakhs
4) Roads of Touristic Importance	Rs. 18.88 lakhs
5) Rural Roads	Rs. 78.82 lakhs
6) Bridges	Rs. 45.00 lakhs
7) Proposed National Highways	Rs. 27.00 lakhs
Total	Rs. 400.00 lakhs

Besides this a separate provision of Rs. 227.14 lakhs is proposed for the Centrally Sponsored schemes i. e. for west coast road and Zuari and Colvale bridges.

2 — Ports and Harbours

INTRODUCTION

As regards the development of inland waterways it is needless to stress the necessity of improving the existing lights and aids for safer navigation. Stress is laid to provide modern vessels for use as ferries and launches. Also survey of inland waterways is being carried out in order to undertake dredging wherever required and to facilitate the flow of barge traffic without delays and thereby increase the export of ores.

The construction of new ferries and launches for new service routes and replacement of old vessels as well as the expansion of Marine Workshop at Betim are being executed. Already new jetties and ramps have been constructed and the execution of others is in progress at various ferry crossing points.

The development of Panaji as Minor Port is being carried out throughout the plan period. Already the first phase of extension of Panjim Jetty is completed and the execution of the second phase has started. In connection with the development of Panaji Port the work of dredging of Aguada Bar is periodically done during the fair season so that the passenger ships may cross the bar at any tide.

Ports of Talpona and Chapora will be developed to provide facilities for fishing and sailing vessels.

The development of Daman and Diu include the modernisation of lights, construction of jetties and ramps. For the transport of agricultural and industrial products from Diu and hinterland mechanised barges are being provided.

ACHIEVEMENTS IN THE THIRD FIVE YEAR PLAN AND NEXT TWO YEARS

As regards the navigational aids and improvement of existing lights seven shallow light buoys to be placed at the mouth of Mandovi River have been acquired. The Lighthouse Tower at Diu was completed.

The first phase of extension of Panaji jetty has been completed. The work of dredging of Aguada Bar has been satisfactory.

Excavation of materials and dredging has been carried out in the Cumbarjua Canal and at the same time survey of the canal has been undertaken.

The protection wall at Caranzalem has been extended.

Five jetties in the Mandovi River have been completed. They are at Orondo, Ecoxim, Pomburpa, Ambarim and Calvim. Also approach roads to the jetties at Orondo, Ambarim and Calvim were constructed. Repairs were carried out to the jetties at Colvale and Macasana.

Engine and materials were purchased for the construction of two new ferry-boats and one launch.

PLANS IN THE FOURTH FIVE YEAR PLAN (1969-74)

As regards the Minor Ports and inland waterways the Fourth Five Year Plan has to be implemented with due regard to the transport requirements of the economy so that a co-ordinated development is ensured taking also into account the future growth of the traffic.

The main aim is the conservation of rivers, harbours and canals in order to develop the export of ores and other commodities. With this in view creation of a Hydrographic Survey Organisation and a Dredging Organisation for this Union Territory have been proposed.

Physical targets so far achieved have also been taken into consideration special emphasis being laid down in running commercially viable new services, acquisition of crafts, modernisation of lights and navigational aids and maintenance of navigable channels.

The total outlay proposed is Rs. 310.70 lakhs out of which Rs. 247.00 lakhs for Minor Ports and Rs. 63.70 lakhs for inland waterways.

INLAND WATER TRANSPORT SCHEMES

1. Modernisation of lights and navigational aids: The object of the scheme is to provide facilities for navigation in the minor ports and inland waterways. An outlay of Rs. 4.00 lakhs is proposed under this scheme for obtaining optical equipment for the lightbuoys in Mandovi River and the replacement of option of the Aguada Lighthouse together with the improvement of lighthouses at Daman and Diu. Necessary arrangements in providing equipment have been initiated by the Directorate General of Lighthouses and Lightships, New Delhi.

2. Jetty at Panaji: The second phase of construction of a jetty at Panaji will commence in the year 1968-69 and will continue in 1969-70. The Jetty will be utilised for loading and unloading of goods from sailing and country-crafts. A site for this construction near the Mandovi Bridge has already been selected. This Jetty will have an extension of 96 metres frontage. Therefore, an outlay of Rs. 4.50 lakhs has been proposed.

3. Development of Diu and Daman Ports:

Diu: The port will work as a lighterage port and the cargo will have to be supplied or brought ashore by lighters which will be towed by the tugs. It will therefore be necessary to provide tugs and barges. Considering the general dispatch required for salt steamers at the rate of 1000 tons per diem, it will be necessary to purchase at least 15 barges con-

sidering the sickness percentage. In order to tow these barges it will be necessary to purchase two tugs of 350 HP. Dredging also will have to be carried out at the mouth of the bar, partly in rock, in order to increase the working hours of the barges and the tugs. Besides, detailed survey and investigation will have to be done for dredging as well as extending the existing jetty. The existing jetty is not adequate and will have to be widened and extended to deep waters for facility of working at all hours. Heavy crane will have to be acquired also.

Daman: This territory nearly surrounded by water is the origin of today's seafarers. A number of sailing vessels are manned and operated by the local population. The inland waters though do not provide natural navigational facilities can be developed with little expenditure.

Fishing industry is also developing very fast and in view of the above, it is felt that development as envisaged in the following may be implemented during the fourth plan period.

4. Construction of terminals, sheds, etc.: For the development of Minor Ports it will be necessary that terminals, sheds, godowns should be constructed at each Port. Therefore, an outlay of Rs. 4.00 lakhs is proposed for these works.

5. Making Cumbarjua Canal navigable at all tides: The Cumbarjua Canal which is in length of about 10 miles has recently been surveyed from the Mandovi River to the Zuari River end. So far only maintenance work to remove certain difficulties encountered by barges in manoeuvring has been taken up. This is a vital link between River Mandovi and River Zuari and the only link of communication and navigation during the monsoon season. It is, therefore, necessary that the whole of the Cumbarjua Canal will need to be deepened and widened. There are very narrow and shallow portions in this canal. At the shallow portions depths of not more than 5 ft. are available at low tides and due to the narrow portions in rivers (including bends) two barges are unable to safely cross each other. Therefore, it will be necessary to deepen this canal to a depth of at least 12 ft. so that barges drawing 10 ft. load are able to pass without having to wait for favourable tides. Also the width of navigable channels will have to be increased to at least 200 ft. so that two barges could safely pass through. Minimum widths at same places being less than 100 ft. This is a very important phase of development and it is necessary that the Central Government may require to study this in detail. At present arrangements are being made to obtain boring to be undertaken so as to be able to determine the type of bottom that is available at certain places in the canal. It will be necessary to blast certain portions of the canal and also to widen and strengthen the banks at certain places. A detailed study of this is being undertaken and a report in this connection will be submitted. A detailed estimate cannot be prepared unless all facts are made available but in any case it is felt that at least Rs. 50.00 lakhs would be required for this purpose and therefore, the provision has been made for this amount during the Fourth Five Year Plan.

6. Survey of Inland Waterways: Prior to liberation hydrographic survey of inland waterways of Goa, had not been carried out and there-

fore at the time of liberation this Department was entirely unaware of the depth of water at various parts of the inland waterways. There was no machinery in this Department to undertake such detailed work after liberation. Under these circumstances, the assistance was availed of the Hydrographic Survey Wing of the Ministry of Transport who have done so far the survey of the Cumbarjua Canal and are at present surveying the Mandovi River. During the Fourth Five Year Plan period it will be possible for this Department to have its own survey Unit. In this connection, a survey launch is being constructed at the cost of Rs. 3.25 lakhs. In the meanwhile by the time the launch, personnel and equipment are obtained it will be necessary to utilise the services of the Hydrographic Survey Unit of the Ministry of Transport and for this purpose a sum of Rs. 5.00 lakhs has been provided in the Fourth Five Year Plan.

7. Acquisition of a Dredging Unit: A sum of Rs. 150.00 lakhs has been provided for the Fourth Five Year Plan period. At present this Department has one old Cutter Suction Dredger on spuds with pipelines. It is necessary that this should be augmented to another dredger of the same type costing about Rs. 25.00 lakhs so that the dredging of the inland waterways be expedited as there are portions on the upper reaches where loading is carried out where the depth of water is shallow. It is necessary to dredge the approaches to the Port of Panaji off Aguada Bar so that steamers calling at the Port could navigate over the bar at all stages of the tide. Though it is necessary to provide a self-propelled cutter suction dredge of shallow draft and hopper capacity for this purpose.

8. Construction of a wall at Caranzalem: The problem of erosion at sea-shore at Caranzalem is under constant observation. Every year fortification of the earlier protective works and extension of the wall to cover additional length of the bay are taken up. So far the length of the break-water wall constructed is 347 metres. To safeguard against the erosion in the further reaches the protective wall is being extended every year. It is proposed to construct one more row of wall behind the front wall facing the sea directly. A sum of Rs. 2.50 is earmarked for this work.

9. Mechanised barges for Diu: Action has been initiated for the purchase of two mechanised barges for Diu. The barges will be utilised for the transport of industrial products and other cargo from Diu and hinterland to the ships. With the expected increase in cargo traffic, it is felt that two more barges will be required. A sum of Rs. 17.00 lakhs is proposed.

10. Expansion of Marine Workshop at Betim: This Department has at present 24 inland vessels in the form of ferries and launches. These are used for the transport of passengers across the rivers and also along them. It is necessary to maintain these vessels in a good condition so that the breakdown are reduced to a minimum. At the Marine Workshop there is one slipway at present which is not sufficient to cater for building and maintenance of these vessels. Therefore, during the current year the 2nd slipway is being constructed. By constructing this slipway it will be possible to construct, repair and maintain all the crafts of the Navigation Department and also to a large extent fisheries and Tourism

Department. For the expansion of the Marine Workshop it will be necessary to obtain equipment like hauling winches, welding machines, etc., and therefore, for this purpose a sum of Rs. 14.00 lakhs has been provided during the Fourth Five Year Plan.

11. Construction of new jetties and ramps: There is a lot of demand from the public for the construction of these jetties and ramps at various parts of the rivers. A detailed study of this has been done and the places where these jetties and ramps are required has already been sited. For this purpose a sum of Rs. 10.00 lakhs has been provided during the Fourth Five Year Plan.

12. Slipways at Daman and Diu: An outlay of Rs. 2.00 lakhs is provided for the construction of slipways at Daman and Diu. Slipways are required to provide repair facilities to the cargo and fishing launches, as well as other vessels using the port.

13. Passenger sheds and other amenities: A sum of Rs. 3.70 lakhs has been provided for this purpose. After the construction of new jetty at Panaji it will be necessary to have passenger sheds and other facilities such as toilets, rest rooms, etc., and therefore a provision as mentioned above has been made.

14. Acquisition of new ferries and launches: The ferries and launches of the Navigation Department are more than 12 years old and therefore the utility has been reduced to a large extent. Under these circumstances it is necessary to provide during Fourth Five Year Plan new launches and ferries. The launch will be approximately cost about 8.00 lakhs and ferry about 1.5 lakhs. It is proposed to construct during the Fourth Five Year Plan three launches and four ferries. For this purpose the above amount has been proposed. For this purpose a provision of Rs. 30.00 lakhs has been provided.

3 — Tourism

INTRODUCTION

In the field of tourism, Goa completed almost six years of planned development. These include three years of the Third Five Year Plan added to the three-year period after the close of the Third plan.

Plans though taken up during this short period still form a continuity series, both in terms of investments and benefits. They present a picture of continuity and evolution in basic economic and social pattern in the field of tourism in this territory. Inevitably, there are important adaptations from one phase to another, reflecting both changing conditions and problems as well as the results of fresh experience and evaluation.

A retrospective probe into the implemental activity during this period will reveal that the foundation stone for building up tourism here, has been solidly laid.

Goa came in for planned development of tourism for the first time in 1962-63. Not much headway could, however, be made in this particular year as the budget allotment was received as late as February 1964.

Nevertheless, such schemes on which action could be initiated were taken up for implementation. These schemes included the purchase of luxury coaches for conducted sightseeing tours, speed boats for cruises on rivers and also dinghies for boating. Extensive plots of land were purchased at the main beaches and improvement of roads leading to temples and other places of tourist interest was also taken up.

The main drawback of this territory being acute shortage of accommodation and lack of other amenities, the accent of schemes was laid on the provision of accommodation and other tourist facilities. During the Third Plan period construction of two imposing establishments at Panaji and Calangute were completed.

Schemes for the beautification of tourist spots and provision of amenities have been undertaken. Similarly, cloak have been built and thrown open to the public at the beaches of Colva, Calangute and Gaspar Dias. Plenty of beach material has been distributed and grants-in-aid given for the provision of amenities at the beaches of Colva, Calangute and Gaspar Dias. Improvements were also undertaken at Cansarpale springs.

All the roads leading to important temples in Ponda have been asphalted.

With a view to popularising Goa as a Tourist Centre colour picture post cards on different subjects of Goa and a city folder on Panaji have

been added to the tourist literature on Goa. Foreign travel agents and writers have visited Goa and a number of prestige advertisements released for wide publicity.

The total expenditure on the schemes in the Third Plan was Rs. 26.44 lakhs.

With the close of the Third Plan Period on March 31, 1966 Goa completed three years of planning and development which created suitable conditions and atmosphere for the leap forward in the direction of touristic progress of the territory. On the firm foundation of those three years, a bold plan comprising of the following 11 schemes with a total outlay of Rs. 80.00 lakhs was framed for the Fourth Plan and submitted in 1966 to the Planning Commission for approval.

Schemes	Outlay (Rs. in lakhs)
1. Development of Dona Paula	6.00
2. Development of Gaspar Dias	12.00
3. Development of Panaji	12.00
4. Development of Ribandar-Old Goa-Divar Zone	3.00
5. Development of Vagheri Hill	2.00
6. Development of Caisua	1.50
7. Development of Calangute	20.00
8. Development of Colva and Benaulim Zone ...	15.00
9. Development of Daman	3.00
10. Development of Diu	3.00
11. Transport	2.50
Total	80.00

The above draft plan was prepared taking into consideration that all the schemes would be implemented by the State as it was the case during the Third Five Year Plan.

Following the decision of the Planning Commission to have schemes under Part I (Central) and Part III (State) for this Territory, the following re-distribution was proposed by the Department of Tourism, Government of India:

Central Schemes (Part I)

	(Rs. in lakhs)
1. Panaji	12.00
2. Dona Paula	13.00
3. Gaspar Dias	18.00
4. Calangute	16.00
5. Colva	15.00
6. Vasco da Gama	6.00
Total	80.00

State Schemes (Part III)

1. Development of Ribandar-Old Goa-Divar Zone	3.00
2. Development of Vagheri Hill	2.00
3. Development of Caisua	1.50
4. Development of Daman	3.00
5. Development of Diu	3.00
6. Transport	2.50
7. Strengthening of the Organisation	3.00
Total	18.00

The present proposals (State Schemes) for the draft Fourth Five Year Plan have been slightly modified so as to suit the changing conditions of the plan implementation during the buffer period of three years following the Third Five Year Plan.

Under Capital four schemes have been incorporated, whereas under Revenue three separate heads have been included bringing the total number of schemes to seven.

The modified proposals under State Schemes (Part III) for the draft Fourth Five Year Plan are presented as under:

SCHEMES

Capital:

(Rs. in lakhs)

1. Development of Hills, Hillocks, Dales and Valleys	2.00
2. Development of beaches, lakes, waterfalls, springs and provision for low income group bungalow/rest houses/holiday camps/sarais in places of tourist and religious interest	8.00
3. Development of Daman	0.80
4. Development of Diu	0.80

Revenue:

5. Transport	3.00
6. Strengthening of the organisation	0.60
7. Beautification of places of tourist interest	3.80
Total	19.00

The above proposals include a handsome provision for low Income Group so as to democratise tourism to some extent. For this purpose a 100-bedded bungalow will be put at Panaji. Small cottages, rest houses, sarais and holiday homes have been planned in many spots of tourist

interest. Likewise, substantial allocation has been included under the head "TRANSPORT" since it has been found from our past experience that the conducted tours, if properly planned, can yield large dividends not only by way of material income but also by raising the present standard. The cruises on the river and lakes have become so popular that some provision has also been made for this purpose.

Goa, which has been blessed with imposing hills and hillocks as well as by graceful dales and valleys are going to be improved so as to be attractions not only to the local tourists but also for foreigners who always find a pleasant sport in hiking and mountain climbing.

The allocation for Daman and Diu has been brought down to a realistic figure since basic amenities and facilities only are to be provided taking into consideration the present tourist traffic.

It has been considered necessary to open a head viz "STRENGTHENING OF THE ORGANISATION" for opening three bureaux at Bombay, Delhi and Ahmedabad. Full justification has been adduced in the write up.

Tourist planning in particular has its pragmatic aspects related largely to financial, administrative and technical possibilities of implementation. This entails an evolution of data as precise as possible, on the basis of which effective attempts could be made to meet the requirements for the proposed schemes. On the other hand, the programme have to be operated within the prescribed rules and its success will depend upon the active participating of various departments mainly of the P. W. D., Land Survey, Town and Country Planning, Captain of Ports and the Municipalities concerned. It is hoped that with the close cooperation of these departments the Fourth Five Year Plan for tourism will be a success.

PHYSICAL AND FINANCIAL ACHIEVEMENT

Goa came in for planned development in 1962 i. e. only after Liberation and could not, therefore, avail of the facilities of the First and Second Five Year Plans.

Since the development of tourism offers immense scope for increasing foreign exchange earnings of the country, steps were initiated soon after Liberation to provide basic facilities and services at important tourist centres.

It was during the last three years of the Third Five Year Plan that an allocation of Rs. 26.75 lakhs was available for tourist development schemes. The annual plan for 1963-64 was Rs. 1 lakh, for 1964-65 Rs. 12 lakhs and for 1965-66 Rs. 13.75 lakhs, the total provision in the Third Plan being Rs. 26.75 lakhs against which an actual expenditure of Rs. 26.44 lakhs was incurred. This expenditure was incurred for providing the following facilities: —

i) Tourist Hostel, Panaji with 41 modern and comfortable rooms, a conference hall, attached restaurant and shops of touristic utility (Rs. 11.79 lakhs).

ii) A two-storeyed tourist bungalow with 20 rooms, a dance hall and a restaurant, on the Calangute beach (Rs. 3.58 lakhs).

iii) Acquisition of plots of land at Calangute and Colva for further extension and construction of tourist cottages respectively (Rs. 1.80 lakhs).

iv) Purchase of two luxury coaches for operating conducted sight-seeing tours (Rs. 1.37 lakhs).

v) Acquisition of two speed boats and 4 dinghies for cruises and water skying in inland waters (Rs. 0.82 lakhs).

vi) Purchase of beach material like umbrellas, furniture etc. at Calangute, Gaspar Dias and Colva beaches (Rs. 0.24 lakhs).

vii) Construction of changing rooms at Colva, Calangute and Gaspar Dias (Rs. 0.92 lakhs).

viii) Grant-in-aid were given to various Municipalities/Local bodies for the beautification of beaches for providing benches, band stands, painting the structures, children's park material, electrification and for the construction of roads of tourist importance (Rs. 3.99 lakhs).

ix) On the publication side, a guide map, a folder on Goa and a folder on the city of Panaji were also produced (Rs. 0.51 lakhs).

x) Miscellaneous — Establishment and minor developments (Rs. 1.42 lakhs).

During the years 1966-67 and 1967-68, the following benefits were derived from the tourist plan: —

i) Development of Panaji — The Tourist Hostel at Panaji was put into commission. Two speed boats were acquired for water cruises on the Mandovi river and the works of electrification of Panaji causeway and beautification of Panaji town were taken in hand (Rs. 2.25 lakhs).

ii) Development of Gaspar Dias — Electrification of Children's park was completed and the beach was also electrified and beautified (Rs. 0.47 lakhs).

iii) Development of Dona Paula — The work of repairs of railings and erection of benches was completed (Rs. 0.06 lakhs).

iv) Development of Calangute — The Tourist Resort at Calangute was duly furnished and put into commission. The renovation work of the existing building was started and the beach was electrified and beautified; the cloak rooms on the beach were also got repaired (Rs. 2.69 lakhs).

v) Development of Colva — The work of construction of two cottages at Colva was completed; the beach was as usual electrified and opened to tourists (Rs. 1.15 lakhs).

vi) Development of Ribandar-Old Goa Zone — The work of electrification at Old Goa square was completed (Rs. 0.16 lakhs).

vii) Minor Development — Minor developmental works such as electrification of municipal garden, children's park and Mahatma Gandhi Square at Mapusa town were undertaken (Rs. 0.30 lakhs).

viii) Grants-in-aid — A grant-in-aid to the tune of Rs. 24,000/- was given to Ponda Municipality for the work of improvement of Farmaguddi-Nagueshi road (Rs. 0.24 lakhs).

During the current year 1968-69, the physical targets will most probably be achieved. The allocation of Rs. 4,745 lakhs will be fully utilised in the following schemes:—

1) **Development of Mapusa Hillock (Rs. 61,100):** The slope of the hillock has been planned to be a rock garden with multiple staircases on both the sides. This scheme is to be continued during the Fourth Five Year Plan since more amenities are to be provided such as band stand, belvederes and a swimming pool.

2) **Development of Sidnath and Marutigad (Rs. 20,000):** Minor developments are proposed on these hills such as provision of benches, log cabins and railings.

3) **Development of Arvalem (Rs. 26,000):** This important picnic spot is being developed so as to add facilities for the benefit of picnickers and tourists.

4) **Development of Mayem Lake (Rs. 58,000):** Mayem is being converted into a lake resort with an attractive rest house-cum-picnic shack. The periphery of the lake has also been beautified with colourful bougainvillea which will add charm and variety to the spot.

5) **Transport (Rs. 1,00,000):** The existing fleet of buses for conducted tours is being strengthened with one omnibus and one luxury coach so as to meet the every increasing demand of visiting tourists.

6) **Beautification of variuos tourist spots by plantations of bougainvillea of different colours on large scale (Rs. 7,000):** Many tourist spots including Daman have been beautified with ornamental plants so as to enhance the attraction of those places.

NAME OF THE SCHEME: DEVELOPMENT OF MILLS, HILLOCKS, DALES AND VALLEYS —

Plan Outlay — Rs. 2.00 lakhs

Physical target: Construction of forest lodges/log cabins/picnic shacks and minor developments at hills, hillocks, dales and valleys.

Goa abounds with hills and hillocks which are ideally situated and if properly developed could be ideal centres of tourist attraction. Most of the hills have their springs in the summit. From the top of these hills one gets a fine view of the whole surrounding.

Some of valleys and dales offers also a gorgeous sight.

During the plan period it is proposed to develop such places which little by little will gain great popularity and foster mountain climbing and hiking.

NAME OF THE SCHEME: DEVELOPMENT OF BEACHES, LAKES, RIVULETS, WATERFALLS, SPRINGS, BAYS AND OTHER PLACES OF TOURIST AND RELIGIOUS INTEREST —

Plan outlay: — Rs. 8.00 lakhs

Physical target: — 1. Construction of a tourist bungalow — Class II (100 beds) at Panaji.

2. Construction of Rest Houses, holiday homes and sarais at places of tourist interest.

3. General development and beautification of various tourist spots.

Goa is lavishly gifted by Mother Nature with scenic beauty. Golden beaches and open bays with fine sand and blue waters are a real obsession to the visiting tourists. Gleaming rivers and rivulets wind their way across the land tiny and idyllic lakes and lagoons add variety and picturesqueness to the landscape. The waterfalls and springs by their enhancing loveliness, idyllic environment and permanently cool and pleasant waters provide charm and freshness to those who like to have a dip.

It is proposed to develop the above places so that they are turned into spots of great tourist interest.

The accommodation which is a non-existing facility in these places will be greatly eased by the construction of low income group bungalow, rest-houses, sarais, holiday homes, specially at Panaji where people of modest means are completely left stranded.

NAME OF THE SCHEME: DEVELOPMENT OF DAMAN —

Plan outlay: — Rs. 0.80 lakhs

Physical target: — 1. Rest House at Devka beach and Children's Park.

2. Beach amenities.

Daman is one of the districts of the Union Territory of Goa, Daman and Diu. Situated on the West Coast in the Gulf of Cambay, near the Gujarat State, Daman is separate from Dadra and Nagar Haveli, the former Portuguese enclaves, by a distance of 27 kms. Daman is accessible by sea, rail and road and there are also proposals to reopen the airport closed after liberation.

With its two historical forts, a good beach and excellent climate, it can be converted into a nice seaside resort. It is already attracting large traffic from Bombay. Though Daman forms part of this Union Territory, no schemes have yet been introduced there from the tourist angle. Planned development of tourism was restricted to Goa alone in the Third Plan period. It had, however, been assured by Government in the Legislative Assembly that development of tourism in Daman would be taken up in the Fourth Year Plan. Accordingly, it is proposed to construct a rest house at Devka beach and a Children's Park in the public garden.

NAME OF THE SCHEME: DEVELOPMENT OF DIU —

Plan outlay: — Rs. 0.80 lakhs

Physical target: — Construction of a tourist bungalow at Nagoa beach.

Diu is one of the districts of the Union Territory of Goa, Daman and Diu. It is an island situated on the western coast of India, which is already connected directly by sea to Bombay and by road to Ahmedabad. The Western Zonal Tourist Advisory Committee has also recommended the re-opening of the Airport closed since Liberation. Besides the excellent climatic and geographical conditions, Diu is important from the historical point of view. It has many historical monuments, the most important being the Fort. Moreover, Diu lies within a short distance from Somnath temple as well as the famous Gir forest.

It has not been possible due to other priorities to give any benefit of planned development to Diu under tourism during the Third Plan Period. It has already been assured by Government in the Legislative Assembly that development of tourism would be introduced in Diu in the Fourth Five Year Plan. To publicise and consequently attract tourist to this place it is proposed to construct a Tourist Bungalow at Nagoa beach.

NAME OF THE SCHEME: TRANSPORT —

Plan Outlay: — Rs. 3.00 lakhs

Physical target: — 1. Purchase of one coach.

2. Purchase of one omnibus and two air conditioned coaches.

3. Purchase of boats/launches.

One of the recommendations of the Tourist Development Council is the introduction of conducted sightseeing tours on inter-State and intra-State basis. The Department already has two buses, 40 and 20 seaters, which are utilised for tours within this Union Territory. With a view to promoting tourism on an inter-State basis, one omnibus and two luxury coaches would be required to organise such tours from Goa to Bombay, Ajanta and Bangalore. In the course of time these tours will also be extended to other parts of India on regular basis.

As far as river cruises are concerned, it is proposed to augment the existing fleet by purchase of more boats and cruise equipment for the Mayem Lake and Mandovi river to giving a phillip for water sports.

NAME OF THE SCHEME: STRENGTHENING OF THE ORGANISATION —

Plan outlay: — Rs. 0.60 lakhs

Physical target: — Opening of Tourist Bureaux in Delhi, Bombay and Ahmedabad.

The scheme envisages the setting up of three tourist bureaux at Delhi, Bombay and Ahmedabad. These will be a sort of windows where the historical, cultural and social background of this Union Territory will be publicised and duly projected.

NAME OF THE SCHEME: BEAUTIFICATION OF PLACES OF TOURISTIC INTEREST —

Plan outlay: — Rs. 3.80 lakhs

Places of touristic interest and important beaches in Goa, Daman and Diu will have to be beautified so as to be attractive and pleasant from tourism point of view.

Many spots of touristic interest will also carry bougainvillea and other ornamental plants for enhancing their beauty. This scheme is a new feature of the plan.

Social Services

INTRODUCTION

The Union Territory of Goa, Daman and Diu could not get the advantages of the Two First Five Year Plans, as it was liberated from Portuguese domination in December 1961, the 2nd year of the 3rd Five Year Plan i. e. the year 1962-63 was the first year of its planned progress. However, during that year the number of plan schemes were evidently very few with a total outlay of hardly Rs. 3.00 lakhs. Subsequently more plan schemes were introduced and implemented to the satisfaction of the Govt. and the progress achieved may be stated to be noteworthy.

The plan progress during the last six years can be clearly judge from the fact that total number of primary schools has increased from 476 schools in 1961-62 to 940 during the year 1968-69. In addition there are 110 primary sections attached to Non-Govt. Secondary Schools, the number of primary sections thus totalling to 1050. The enrolment, in the age group 6-11 has also increased from 43,244 in 1961-62 to 1,00,991 in 1967,68 (Stds. I-V).

The progress in the field of Secondary Education may also be regarded as noteworthy. During the year 1961-62 there were in all 91 Secondary Schools (High Schools and Middle Schools), with a total enrolment of 8267 pupils. Due to the policy of the Govt. of giving financial assistance the number of Secondary Schools has increased to 369, during the year 1967-68, with a total enrolment of 54,692 pupils (Stds. V to IX).

As regards Higher Education, it may be stated that there were no institutions for the same in this Union Territory prior to liberation except for the study of Pharmacy and Medicine. However, due to the initiative of private enterprise and necessary financial assistance from the Govt., there are at present 4 Arts and Science Colleges, 1 Secondary Teachers' Training College. One Commerce College, in private field and one Medical College,, one Pharmacy College, one Engineering College and one Arts and Science College, at Daman run by Government with a total enrolment of 3776 pupils during the year 1967-68. Also a post-graduate centre has been started at Panaji by Bombay University at the request of the Local Govt. since 1965-66. The enrolment for the Post-Graduate Courses was 225 during 1967-68 including Research Students.

There were no facilities for the Technical education during the pre-liberation times, except for certain trade courses that were being taught

in Escola Commercial and Escola Tecnical at Panaji. Mapusa, Margao and Daman. The «Escola Commercial e Industrial) Panaji has been upgraded now into Govt. Polytechnic with an intake of 120 pupils per year in Civil Mechanical and Electrical Engineering. The «Escola Tecnica» at Mapusa has been converted into Technical High School cum High School Centre and that at Daman into Technical High School Centre.

The Govt. has also started an Enginheering College with an intake capacity of 60 pupils. An Industrial Training Institute has also been started at Panaji.

ACHIEVEMENTS DURING THE THIRD FIVE YEAR PLAN AND THREE ANNUAL YEARS (1966-67 — 1968-69)

Elementary Education: Primary Education though free and compulsory even prior to liberation, was imparted through the medium of Portuguese language. There were in all 176 Government Primary Schools with 83 extension clases, catering for th need of Primary Education of this Union Territory. The enrolment in Government Schools was hardly 18,971. In addition, however, there were 300 private Primary schools in which the medium of instruction was as per the choice of the guardians. These schools had an enrolment of 24,273. Thus the total enrolment at the Primary stage was 43,244.

Immediately after liberation, Government decided in 1962-1963 to impart free and compulsory education through the mother tongue of the child or through any of te 14 languages included in the VIII schedule of the Constitution, the choice being left to the guardians. The result was that there was a sudden upsurge in Primary Education. In the year 1962-1963, there were in all 601 Government Primary Schools with 55,202 pupils.

The enrolment at the Primary Stage went on increasing year by year and at the end of the Third Five Year Plan, there were 95, 138 pupils (Stds. I—V), studying in 990 Primary schools including primary sections of Secundar5 Schools. The enrolment has further encreased and during the year 1967-68, there are 1031 primary schools including primary sections of Secondary schools, with a total enrolment of 1,00,991 pupils (Std. I-V). This number may rise up to 1,04,000 during the year 1968-69.

The number of teachers in Government Schools has also considerably increased from the preliberation times. The number of teachers prior to liberation was 548 which increased to 1968 in 1965-1966 and 2462 in 1967-1968.

The comparative position of enrolment, number of schools, number of teachers, expenditure, etc. is as follows:—

	1961-62	1965-66	1967-68	1968-69 (anticipated)
1. Total No. of Primary Schools ...	476	992	1031	1050
2. Total enrolment	43244	95138	100991	104000
3. Government Primary Schools ...	176	788	842	876
4. Enrolment in Government Pri- mary Schools	18971	65451	67720	70000
5. No. of Government Teachers ...	558	1968	2462	2500
6. Expenditure (Rs. in lakhs) ...	28.00	57.00	80.39	88.18

Good progress has also been achieved in respect of construction of suitable buildings for the Government Primary Schools. Prior to liberation there were only 128 Government Schools housed in their own buildings. Immediately after liberation, the scheme of construction of suitable premises was taken up on priority basis and 635 school buildings with 1368 school rooms have been constructed or are under construction upto the year 1968-69 at a total cost of Rs. 82.00lakhs approximately.

The private enterprise is also playing its part in the field of Primary Education. The Government is helping these schools, if they so desire, by paying them grants at the rate of Rs. 2/- per pupil per month in Stds. I to III and Rs. 2.50 per pupil per month in Std. IV. These grants are paid on the condition that no fees should be charged by the schools to the students. The expenditure incurred on the payment of grants to the Primary Schools is as follows: —

	1965-66	1967-68
1. No. of Primary Schools and Sections receiving grants	98	89
2. Amount of grant paid	2,61,556	3,28,127

It is however decided that no grants should be paid in future to the new private primary schools save in very exceptional cases, as the Government has covered practically the entire territory under its scheme of expansion of Primary Education, by opening new schools wherever necessary. However, those schools that are at present aided will continue to be so;

As the Government found that there was no accommodation available to Government Primary Teachers in rural areas, it was decided to construct suitable quarters for Government Primary Teachers. The Scheme was however, recently introduced and 43 quarters are constructed or are under construction at a total cost of Rs. 4.00 lakhs approximately during the year 1968-1969.

Due to the sudden upsurge of the primary education after the liberation, the Government had to recruit all the teachers that were available without taking into consideration whether they were trained or not. This has resulted into many untrained teachers entering into the Government services. As the quality of education cannot improve without the teachers are properly trained, the Government has remodelled old «Escola Normal» into Primary Teachers' Training College with an intake capacity of 150 teachers per year, which is expected to increase to 250 to 300 in the Fourth Plan.

Out of the total 2462 Government Primary Teachers, 809 are trained. Since a large proportion is still untrained, the Government has allowed a private Primary Teachers Training College to function at Margao and necessary grants are paid to it as per the rules. During the year 1967-68 about Rs. 8,000/- are paid to the said College as maintenance grant and during the year 1968-69 a like amount will have to be paid.

The Government has also decided to provide necessary equipment in the Government Primary Schools with a view to improve the quality of education. Library Books and Visual Aids like Science Charts, Geography Maps and Charts, etc. are given to the schools.

So far 200 schools are provided with small school Libraries at a total cost of Rs. 0.71 lakhs and 818 schools are provided with teaching aids at an approximate cost of Rs. 0.58 lakhs.

Secondary Education: Prior to liberation there was a Lyceum (a Portuguese medium Secondary School) run by the Government at Panaji. The Courses in the Lyceum were broad based and of fairly high standard. Their duration being of 7 years, after the Primary Education of five years. The standard of attainment of the last two years in this Institution was comparable to that of Intermediate Colleges, affiliated to the Bombay University. There were also some private institutions imparting Lyceum Education in this Territory through the Portuguese medium. In addition, there were the «Escola Commercial e Industrial» at Panjim, «Escola Comercial» at Margao and «Escolas Tecnicas Elementares» at Mapusa and Daman run by the Government. However, the needs of most of student population at Secondary level were satisfied by Secondary Schools run by the private enterprise. These were affiliated to the S. S. C. E. Board, Poona for inspection and examination. These schools were run with considerable hardships without any aid from Government.

After the liberation, the Lyceum was converted into Higher Secondary School and was affiliated to the Central Board of Secondary Education, New Delhi. The Lyceum Classes were progressively discontinued, the last batch having gone out in April 1965. The first batch of Higher Secondary School also came out at the same time. This Higher Secondary School is the only institution of its kind and is very useful to the Central Government employees, who are transferred to this Territory.

In the year 1961-62 there were 91 Non-Govt. Secondary Schools, through the mediums of Portuguese, Marathy English and Gujarathi with the total enrolment of 8267 pupils, of which 1,700 were through the medium of Portuguese, The number of the schools and students went on increasing after liberation due to the general uplift of the education and at present there are 181 Non-Govt. Secondary Schools with a total enrolment of 45,073 pupils during the year 1967-68.

Due to the sudden increase in the interest of the population for education of their children, the Government had to open Primary Schools in all the nooks and corners of the Territory. The number of students at the Primary stage went on increasing and consequently there was demand for upper Primary Education i. e. Middle School Education, coming from all over the Territory. As it was the responsibility of the Govt. to provide free education to the age-groups 6-14 years as per the directives of the Constitution, the Government started Middle Schools in Rural and Backward areas, where there were previously, no facilities for Middle School Education, and where no Private Enterprise would come forward to open Middle Schools. During the year 1967-68, there were in all 175 Govt. Middle Schools in Goa, Daman and Diu, with a total population of 8,169 pupils in (Std. V-VII).

As stated earlier the Govt. Lyceum was converted into Govt. Higher Secondary Schools at Panaji. Similarly «Escola Comercial» at Margao was converted into Multipurpose High School with Arts, Science and Commerce streams while «Escola Tecnica» at Mapusa has been converted into Technical High School. A High School was also started at Diu, immediately after the Liberation, in order to satisfy the needs of the public in that area as there were no Secondary Schools previously there.

The Government has not entered into the sphere of Secondary Education to a large extent during the Third Five Year Plan. However, as it was found that the rural areas were lagging behind in high school education, and because the private enterprise was reluctant to open high schools in that area due to financial difficulties, the Government decided to open some high schools in rural areas. Consequently 5 Rural High Schools were opened during the year 1966-67 and 5 more in the year 1967-68. Thus the total number of Government High Schools during the year 1967-68 was 13, excluding Government Higher Secondary School and the enrolment in Classes VIII—XI in these High Schools is 1,450 pupils.

Thus it can be clearly seen that during the year 1967-68 the total number of Secondary Schools both Government and Non-Government was 369 with a total enrolment of 54,692 pupils.

The greater defect of the Secondary Education was, however Non-Vocationalisation at both the Middle and High Schools stage. Except for the Higher Secondary Schools which offered Science, Arts Commerce and Fine Arts Streams and Government Multipurpose High School, which offered Commerce stream, there was no other school which offered any special stream, but the common academic subjects.

As it was felt that facilities were to be provided to the students for technical studies at the Secondary level, Government decided to start Technical High School Centres at the important places so that students from the local high schools who opted for the technical bias could get the instructions in technical subjects at these Centres, the instruction at the academic subjects being available in the parent institution. Consequently, Technical High School Centre were started at Panaji and Daman and the Technical High School at Mapuca was converted into Technical High School-Cum-High School Centre. One batch of 50 pupils of each class is generally being taken in each of these Centres from Std. VIII onwards, but on account of heavy demand, two such divisions in Std. VIII are opened at Panaji Centre from the year 1968-69.

With the intension to make the education Work-Oriented, the Govt. decided to introduce Work-Experience in the Govt. Middle Schools. Subsequently, Kitchen Gardening leading to Agriculture is introduced in 10 Govt. Middle Schools upto the year 1967-68 and Card-Board modelling leading to Carpentry is introduced in 7 Schools. Necessary tools and equipment for starting these Crafts are already supplied to these schools.

As the Govt. found that there was great backlog of untrained teachers in Non-Govt. Secondary Schools and that the schools were not in a position to depute teachers for training due to their financial difficulties, the Govt. has instituted 100% grant on the salaries of the teachers deputed for training during the year 1965-66. The scheme could not be continued as no approval for the pattern of assistance was available from the Government of India.

Prior to liberation the Govt. did not give any financial assistance to the Non-Govt. Secondary Schools. Consequently, the schools were rather backward as they had no financial means either to pay the teachers well, or to purchase the necessary equipment. Subsequently, in the year 1963-64. The Govt. introduced the Grant-in-aid Code for the first

time, and payment of maintenance grants to the extent of 50% of admissible expenditure was started from that year onwards. The total amount of grants paid during that year was Rs. 7.86 lakhs covering 88 schools.

As the pay scales introduced by the Govt. during the year 1963-64, were as per pattern prevalent in Maharashtra, those were much lower than the scales followed in Govt. Instructions, which were based on the Delhi pattern. As such there was demand from the Non-Govt. Schools to bring the Salary Scales on the par and the Govt. agreed to the request of Non-Govt. Schools from the year 1965-66. This upward revision of the pay scales and as such the rate of maintenance grant was subsequently revised, the rate approved being 66 2/3% on the salaries of teaching staff and 50% on the remaining admissible expenditure.

During the year 1967-68, 167 schools were paid maintenance grants by the Govt. at a total cost of Rs. 41.50 lakhs.

The Govt. also started paying building grants as per the provisions of the Grant-in-aid Code, at the rate of 25% of the estimated cost of the building as certified by the P. W. D. Subsequently, at the request of the local Government, the Govt. of India has agreed to raise the rate of building grant to 50% of the estimated cost, subject to a maximum of Rs. 1.00 lakh. 12 schools are paid these grants upto the year 1967-68, at a total cost of Rs. 5,12,491.

As the importance of Science Education was required to be stressed to the student population, there was need to see that the school laboratories are properly equipped as they were found to be lacking in suitable equipment, the Govt. decided to give the schools 100% grant on the purchase of laboratory equipment subject to a maximum of Rs. 2,000/-. This grant was a boon to the schools and 100 schools have taken advantage of the same upto the year 1967-68, at a total cost of Rs. 1,96,731.

The Government of India at the request of the local Govt. have also agreed for the payment of grants for the development of playgrounds to the schools. At present, only two schools have taken advantage of the same at a total cost of Rs. 4,000/-.

University Education: Prior to liberation there were no facilities for Higher Education in this Territory, except for the studies of Pharmacy and Medicine. Immediately after the liberation the private Enterprise came forward and established two Arts and Science Colleges during the year 1962-63. Subsequently, two more Arts and Science Colleges, one Secondary Teachers' Training College and one Commerce College came into existence in Goa. The Pharmacy and the Medical School were upgraded into Colleges. All these Colleges are affiliated to the University of Bombay.

As there were no facilities for Higher Education in or nearby Daman, the people began to clamour for the establishment of a College in the District. As such the Govt. came forward and established an Arts and Science College, during the year 1966-67. The said College has not yet become fulfilled and is teaching for 2nd year B. A./B. Sc. during the year 1968-69. The College is affiliated to the South Gujarat University and is catering to the needs of Higher Education not only of Daman but also of the adjoining Districts of Gujarat.

All the Non-Govt. Colleges are being paid maintenance grants as per

the provisions of the Grant-in-aid Code. During the year 1963-64 the rate of grant was 33 $\frac{1}{3}$ % of the admissible expenditure for all the Colleges. This rate is still in existence for Arts and Science, Commerce Colleges while in case of Secondary Teachers' Training College the rate has been increased to 66 $\frac{2}{3}$ % of the admissible expenditure.

The total maintenance grant paid to the Arts and Science; Commerce and Teachers Training College during the year 1967-68 is Rs. 6.345 lakhs and the anticipated payment during the year 1968-69 is Rs. 5.00 lakhs.

The Government is also paying grant for construction of buildings to the Colleges as per the provisions of the Grant-in-aid Code. At Present the rate of building grant is 25% One College has already taken the advantage of the said building grant at a total cost of Rs. 4.518 lakhs.

The Govt. has also approved the scheme of payment of grants for the development of Playgrounds and one College has availed of this facility at a total cost of Rs. 10,000/-.

The Govt. has already accepted the introduction of scales recommended by the University Grants Commission for the College Teachers and necessary grant are released to the Colleges to meet the payment of balance due to increase of salaries. The total cost to the Government on this account upto the year 1968-69 is expected to be Rs. 2.40 lakhs.

As the Arts & Science Colleges in Goa became fulfilled in the year 1965, there was demand from the pupils for Post Graduate Education. As such, the Goa Administration requested the University of Bombay to establish a Post Graduate Centre in Goa, which came into existence from the year 1965-1966. The Post Graduate Centre offers courses for M. A. and M. Sc. in English, Economics, History, Philosophy, Mathematics, Organic Chemistry, in organic and Physical Chemistry. Facilities have also been made available for taking French and Portuguese as Subsidiary subjects at M. A. and for carrying on the studies of M. Ed. as also for Ph.D degree in English, History and Chemistry.

The total enrolment during the year 1967-68 in the Centre was 127 for Junior and 91 for Senior Classes.

The Goa Administration is providing for 100% expenditure on the Centre by paying grants to the University of Bombay. The total grants paid upto the year 1967-68 are Rs. 8.00 lakhs. The anticipated grant to the same University during the year 1968-69 is Rs. 3.00 lakhs.

The Goa Administration has already established a Committee for recommending preliminary steps for the establishment of a University in Goa. The report is still awaited. However the Post Graduate Centre is slowly being expanded so as to be able to form the nucleus of the future University of Goa, when decision in this regard is taken by the Government.

Social Education: Social Education has got its own place in the field of education. No academic education is complete unless it is supplemented by the general knowledge gained by the pupils from the general reading of the books. Hence there comes the necessity of the establishment of good libraries in this Union Territory. With this aim in view grants were paid to 53 libraries during the year 1964-65 at a total cost of Rs. 52,350/-. However, these grants could not be continued as the pattern of assistance is not yet approved by the Govt. of India. A scheme

for the network of libraries from the Central Library at the apex to village Libraries is under the consideration of the Government.

Illiteracy is a blot on the Society which comes into the way of the popular participation in the national reconstruction. If the citizens of this Country are required to play their part fully and effectively in the new social order, it is essential to wipe off the illiteracy. As such, the scheme of eradication of illiteracy was started by the Government during the year 1964-65.

During the initial year, 226 literacy classes was started in different villages with a total enrolment of 4,600 adults. The Government Primary Teachers were entrusted with the running of the said classes with the monthly remuneration of Rs. 15/- per month for a period of 4 to 6 months.

Later on, as the result did not appear to be quite satisfactory, a survey was conducted in 24 Panchayat areas of various talukas where the classes were run in order to find out the literacy attained after the completion of the classes and the system has been changed.

From the year 1965-66, certain villages were selected for 100% literacy. During the year 1965-66 the number of villages selected were fifteen with target of 5000 adults to be made literate. During the year 1966-67 there were 7,400 adults enrolled and the system of payment of remuneration at the rate of Rs. 15/- per month per teacher, was changed and the payment was effected on the basis of adults made literate.

The scheme is being continued during the Fourth Five Year Plan with certain modifications.

The scheme of Mid-Day Meals was introduced as a pilot scheme during the year 1965-66. As the scheme brought about good response from the students by way of attendance, it was continued during the succeeding years. During the year 1966-67 about 24,000 students were benefitted under the scheme, while during the year 1967-68 the number of students benefitted is 11,733. The anticipated expenditure on this scheme during the year 1968-1969 is Rs. 1.60 lakhs, and it is expected that approximately 18,000 children will be benefitted under the scheme.

The Government has also started an Audio Visual Unit in this Union Territory, with two film sound projectors, a generator, a motor van and a film library having about 40 films. Steps are being taken to expand this library. The Audio-Visual Unit gives film performances in the remote villages as also in the cities to the school students as also to others.

Other Educational Programmes: The former Physical Education Board was co-ordinating the activities of the physical education as also conducting tournaments on all Goa basis in many games. The said Board has been recently reconstituted and expanded to represent the various interests. The Board holds every year tournaments in different games and pays grants to registered clubs subject to the availability of funds. The Physical Education Board is an aided institution and all the expenditure on its activities is borne out of the grants paid by the Govt.

The Board has a scheme of Coaching the young budding players in games like Football, Hockey, Volleyball, etc. One Coach for Football, who is trained at National Sports Institute, Patiala is already appointed and is working for the last two years.

The Board is also entrusted with the conduct of National Physical Efficiency Drive in this Union Territory. The Drive is gaining momentum year by year as can be seen from the number of participants in the Drive year by year: —

1963-1964	...	...	...	...	...	646
1964-1965	...	...	...	...	...	1,449
1965-1966	...	...	...	...	...	6,035
1966-1967	...	...	...	...	...	9,794
1967-1968	...	...	...	...	...	10,588

In this Union Territory there are other associations like Goa Football Association, the Goa Badminton Association, the Goa Hockey Association, the Goa Cricket Association, the Goa, Daman and Diu Schools Sports Association, the Goa, Daman and Diu Schools Sports Association, etc. which are conducting tournaments in their respective fields under the guidance and help from the Physical Education Board.

Coaching Camps are also arranged regularly at the various places to coach students as also other players in Football.

With an idea of given facilities to intelligent and poor students to pursue their studies, the Government have sanctioned a scheme of Economically Backward Class cum-merit Scholarships, so that poor students with merit who would otherwise, be deprived of educational facilities may continue their education. These scholarships cover all the stages of education from the Primary to the Collegiate level and the rates of scholarships also vary from course to course. During the year 1967-68 a total number of 1,250 scholarships were awarded at a total cost of Rs. 2.50 lakhs. The anticipated expenditure on this account during the year 1968-1969 is Rs. 3.00 lakhs.

The Government is also giving free education to all the students from Stds. V to VIII, by reimbursing the fees to the schools. Free education is also given to the students belonging to Scheduled Castes/Tribes children and dependants of Political Sufferers children of Defence Personnel, children of Teachers, etc.

The total expenditure recovered by the Government on giving the educational facilities by way of fresships and scholarships of Rs. 4.295 lakhs during the year 1967-68 and the anticipated expenditure for the year 1968-69 is Rs. 5.00 lakhs, excluding the reimbursement of fees for Stds. V to VIII.

Technical Education: As stated earlier there were no facilities for Technical Education in Goa, except those available in «Escolas Tecnicas». Immediately after the liberation need was felt for opening suitable Technical Institutions for imparing knowledge of technical subjects both at the Pre-Matric and Post-Matric level. As such, the old «Escola Tecnica» at Mapusa was upgraded into Technical High School affiliated to the S. S. C. E Board Poona. The said High School prepares students for the S. S. C. Examination with technical subjects and is only one of its kind in the whole of this Union Territory.

The Govt. have established Technical High School Centres at Margao, Mapusa & Daman so that, students from local high schools, in which there are no facilities for technical education at the pre- S. S. C. E. level, can go

for getting instruction in Technical subjects, the academic subjects being taught in their own schools. These Centres are found to be popular as can be seen from the enrolment in the same.

At the Post-Matric level, the Govt. has upgraded the old «Escola Comercial e Industrial» at Panjim into a Polytechnic which now caters for the three years Post-S. S. C. E. Diploma Courses in Civil, Mechanical and Electrical Engineering. The total enrolment in the Polytechnic during the year 1968-69 is 150 pupils.

The Govt. has already constructed suitable buildings for the Polytechnic and its Workshop and a building for the Hostel is under construction. Other facilities are also being provided for.

The Govt. has also started an Engineering College in Goa with a total intake of 60 pupils from the year 1967-1968. The Second Year Course for Civil, Mechanical and Electrical Engineering is started from the year 1968-69, during which the total enrolment is 89 pupils.

The Engineering College is temporarily located in the premises of the Govt. Polytechnic. Steps are however, being taken for the construction of a building for the College at Farmagudi where a plot of land measuring 108 hectares has already been acquired. The construction of the building will be taken in hand, as soon as the financial sanction for the plans and estimates submitted to the Govt. of India is obtained.

As small scale and large scale industries are coming up in this Union Territory need was felt for the introduction of Craftsmen-Training Scheme. Consequently, an Industrial Training Institute is also started from the year 1966-67 in its temporary premises at Old Polytechnic building, Panjim. The said Institute will be ultimately shifted to its own premises at Farmagudi near the Campus of College of Engineering.

The Industrial Training Institute is at present offering trade courses in Turning, Fitting, Welding, Stenography, Tailoring & Cutting, and Electrician.

The total enrolment for these trade courses during the year 1968-69 is 78 pupils (August 68).

Cultural Programmes: The Government had constituted a Natya Academy during the year 1965-66 for the promotion of dramatic art. This Academy was entrusted with the work of giving model and Scientific training to the amateur artists by holding Shibirs, Natya Mahotsava, etc. This Academy held 2 camps one in 1966-1967 and the other in the year 1967-1968, with 37 and 23 participants respectively. The Natya Academy also organised a drama festival at which prizes are given to the first three dramas.

This Natya Academy is, as per the suggestion from the Central Government being remodelled into a Kala Academy so as to cover all the activities such as Music, Drama, Dance, Literature etc. The constitution and bye-laws of the Kala Academy are however, under the consideration of the Central Government.

Government is also paying grants to the cultural organisations for specific schemes in cultural fields. During the year 1966-67, cultural organisations were thus aided at a cost of Rs. 0.76 lakhs. The anticipated expenditure during the year 1968-1969 on this account is Rs. 1.50 lakhs approximately.

GENERAL APPROACH

A BROAD OUTLINE OF THE FIVE YEAR PLAN

During the 3rd Five Year Plan and also during the three subsequent years the main emphasis was on the expansion of education, and as a result of this policy there has been a substantial expansion in this field from the Primary to Collegiate level, during these years. As per findings of the Second All India Educational Survey (1965-66) 85.7% of population is served with a Primary School/Section either in their own habitation or within a distance of half a mile. The student population covered at the end of the Third Five Year Plan was about 80.7% of the total population in the respective age group, and the same in the year 1968-69 is estimated at 88%, the approximate enrolment figure been 1,04,000 children. As far as Upper Primary stage is concerned it can be seen from the same Survey that 60.7% of total of rural population was served with a middle section within a distance of one mile from their habitation, whilst 21.4% is served with a middle section within a distance of two miles. The enrolment at this level at the end of the Third Five Year Plan was 44% and estimated enrolment at the same stage in the year 1968-69 is 52% of the total school going children in the respective age group.

As far as Secondary education is concerned 72.7% of the total rural population has been served with facilities for the same within a distance of 3 miles from their place of residence. The anticipated enrolment in the year 1968-69 (Classes VIII-XI) at this stage is 16,000 which is 36% of the population in this respective age group.

Due to quantitative expansion in the field of education due attention could not be given to the qualitative improvement. Though some steps were taken for the same it could not keep pace with the quantitative growth. If the education is to make progress in future, it is essential that due stress should be laid at this stage on qualitative improvement. However expansion wherever necessary cannot be held up, because still there are areas to be covered and a significant percentage of school going population is to be enrolled in schools. The accent in the 4th Five Year Plan should therefore be on the consolidation with controlled expansion. The following programme is therefore given top priority in the 4th Five Year Plan.

Elementary Education: As already said, though the main emphasis will be laid on the qualitative improvement there will be some controlled growth and some more schools are expected to be opened in order to cater to the needs of population in some backward areas. Provision therefore has been proposed to create some 250 teachers at Primary level and 100 teachers at upper Primary level so that the enrolment targets of 98% and 72% in the respective age groups may be achieved at the end of Fourth Five Year Plan. Steps are also proposed for the construction of suitable school buildings so that students may get proper school accommodation which is often conducive to proper school environment. At present there are a good number of schools functioning in hired premises which being of residential type are not suitable for schools. There are even now some schools conducted in adhoc places such as verandahs of houses and temples spared free of rent by the owners for the purpose. The total amount paid yearly towards rent of the buildings to run Primary schools is at present

approximately Rs. 1.25 lakhs. Against the natural need of about 2500 school rooms there are only 1332 rooms available at present. About 500 class rooms are therefore proposed to be built both at Primary and upper Primary stage at the cost of Rs. 37.50 lakhs during the Fourth Five Year Plan at the rate of Rs. 7,500/- per school room. This will reduce to a great extent the amount of rent paid at present.

For the qualitative improvement of Primary education main stress is laid on the training of primary teachers. The present intake capacity of 150 teacher trainees of the existing Teachers Training College is proposed to be increased to 250 with a view to abolishing the backlog of untrained teachers as early as possible. Steps are also taken for inservice short term courses for teachers so that they may be in touch with modern developments in the field of Education. For the purpose of the said inservice short time courses it is proposed to establish a Centre in the existing Teachers Training College at Porvorim. The following programmes are also envisaged in order to achieve improvement in the quality of education, improvement in attendance in schools and possible reduction in wastage and stagnation:—

- 1) Establishment of Science Clubs in the Teachers Training Colleges.
- 2) Improvement of school libraries.
- 3) Development of Science Education in Elementary Schools.
- 4) Introduction of work orientation in Upper Primary Schools.
- 5) Improvement of attendance in schools:

This scheme of midday meals will be expanded to cover more backward areas, as experience has shown that the scheme helps to improve the attendance in school to a great extent.

In order to implement the recommendations of the Education Commission regarding the introduction of new pattern of school classes the following programmes are also envisaged:—

- 1) Improvement of supervision by appointment of the necessary additional Inspecting staff.
- 2) Revision and upgrading of curricula.
- 3) Adoption of improved methods of teaching in Education.

As far as enrolment is concerned at Primary level though the percentage enrolment in the respective age group is satisfactory, the enrolment of girls will have to be increased as it is comparatively much lower than the enrolment of boys, 81% in the classes I-V and 44% in classes VI to VIII for boys as compared to 64% in classes I to V and 32% in classes VI to VIII for girls, at the end of the 3rd Five Year Plan. Therefore, in order to achieve substantial increase in girls enrolment special scheme for stipends to girls students is introduced in the 4th Five Year Plan.

Secondary Education: As far as Secondary Education is concerned the same policy of controlled expansion is proposed to be followed and main stress should be laid on consolidation and improvement of the standard of education. It is proposed also to adopt the new pattern of school classes 10+2. Side by side with the improvement of quality and necessary controlled expansion steps are proposed to be taken for equalisa-

tion of Educational facilities by means of creation of free studentships and lower income Group Scholarships. As per pattern followed at present, Secondary Education is mainly controlled by private registered societies which are aided by Govt. and as a policy Govt. does not take the responsibility of opening and maintaining directly Secondary schools. However, in some backward areas where private initiative could not come forward due to lack of material resources Govt. has to provide facilities for education. As such during the 3 subsequent years after the Third Five Year Plan, Ten Govt. High Schools were opened in rural areas. These high schools are to be developed with proper physical facilities, appointment of more staff, proper buildings, hostels for students, playground etc. It is also proposed to open another 5 High Schools in rural areas to meet the essential needs of rural population. Grants are also proposed to be paid to non Govt. Secondary Schools for construction of school buildings and development of playgrounds and libraries. Enrolment at the Secodary stages (age group 14-17) at the end of the Third Plan was about 25% and the same is estimated at 36% in the year 1968-69. The target for the Fourth Plan is to enrol 53% by the end of the Plan. It is therefore expected that some 25 more High Schools may come up due to private initiative which will be required to attend the target of enrolment at this stage, and it is also envisaged to pay these schools sufficient grants as per rules of Grat-in-aid Code. Grants will have also to be paid to the existing Secondary Schools for their development schemes and for the appointment of additioal tachers etc. It is also proposed to encourage the introduction of diversified streams of courses such as agriculture, fine arts etc. for which grants are to be paid as per rules of the Grant-in-aid Code. The following objective are also envisaged as far as this stage of education is concerned: —

i) Revision of upgrading of curricula :

This programme should be connected with that adopted in the new pattern of school classes as recommended by the Education Commission: "The 10 year School". It is possible to reach the standard now reach at the time of S. S. C. Examination within 10 years if the curricula are suitably revised. In this regard, as our system of education follows the Maharashtra pattern we have to adopt the same measures as Maharashtra Govt. is going to adopt and our curricula will therefore fall in line with the new curricula already prepared for Classes I to VII, by the Maharashtra Govt. and they will be introduced from the year 1969-70 in class I with some minor changes which are envisaged due to local conditions. The same policy will be followed with the upgrading the syllabi from Classes VIII to X, in such a way that the standard reached at the end of Class X should be comparable with that now reached at the S. S.C. examination. This syllabus should be introduced in Class VIII in 1970-71 and in Class X in 1972-73.

Higher Secondary Stage: The Higher Secondary stage should consist of 2 years—Classes XI and XII. The curriculum of these 2 classes will be prescribed by the Board of Secondary Education, Maharashtra State. The same Board will also hold the examination at the end of Class XII. These two classes may be located in selected Secondary schools and also in Colleges. As proposed by the Govt. of Maharashtra, the syllabus in Class XI should be introduced in 1973-74 and that in Class XII in 1974-75. For the reasons mentioned earlier we have to introduce the same changes

as proposed by Maharashtra Govt., with suitable adaptations and minor modifications required due to the local conditions and this matter will be studied and decided with the help of authorities of Maharashtra Govt. In the Fourth Five Year Plan it is envisaged to have these 2 classes in 6 selected schools in Goa and one in Diu. In Daman, these 2 classes will be located in the Daman College of Arts and Science. As the territory of Daman is comparatively small, no other school is proposed to be considered for the purpose of upgrading. As the Text Books at secondary stage will be adopted from the Maharashtra Govt. only the production of Supplementary materials is envisaged in order to complete them with the regional aspects wherever required.

ii) Improvement of Physical facilities in educational Institutions.

The Physical facilities including school buildings, laboratory equipment etc. provided in many educational institutions are at present not very satisfactory. It is therefore necessary to make provision to improve them with the help of the Community. A programme of financial assistance within the framework grant-in-aid Code rules, is envisaged for this purpose. The Inspectorate staff should be strengthened in order to supervise the implementations of changes consequent to upgrading of curricula.

iii) (a) Improvement of supervision and inspection of schools:

The number of inspecting staff is not sufficient at present. Besides, with the upgrading of curriculum there will be need of closer supervision and constant advice to the schools in order to implement the new curriculum effectively.

(b) Appointment of Subject Inspectors in Science, Maths and English.

For proper guidance in some important subjects as Maths, Science and English need is felt to have some specialised Inspecting Officers so that the standard of teaching in the subjects may be effectively raised. It is therefore proposed to create 5 posts of specialised Inspector in the said subjects.

iv) Improvement of methods of teaching and evaluation:

This programme does not involve any appreciable expenditure and it will be developed on a priority basis. The Evaluation Unit in the Directorate is proposed to be strengthened for this purpose.

(v) Programmes of qualitative improvement of teaching in Secondary Schools:

(a) Training Programme of Secondary Teachers:

At present 45% of Secondary teachers are untrained and it is necessary to make arrangement to remove this back log of untrained teachers, as early as possible in order to raise the quality of education. Scheme for special grants on deputation of teachers for training is therefore proposed in the 4th Five Year Plan. It is also proposed to open an extension centre in the existing Teachers Training College in order to develop facilities of inservice training and to take some experimental projects in a few selected schools. It is also proposed to organise Summer courses for secondary teachers in certain subjects such as Science, Maths and English to improve their knowledge in the subject. This is needed, as at present many teachers are taking subjects other than those in which

they have taken their degree. This measure, may be taken for teachers already in service, and it is proposed to introduce in future a rule in the grant-in-aid Code to the effect that a teacher in a secondary school shall be a graduate and should teach only that subject, in which he has taken a degree. This will be done after suitable notice for future recruitment.

(b) Introduction of Diversified streams and Technical subjects in the existing Govt. Multipurpose High School, Margao, Govt. High School, Diu and development of Technical High School Centres at Mapusa, Panjim and Daman.

(c) Introduction of agricultural education in Secondary Schools.

(d) Development of Science education under the Crash Programme.

Under this programme it is proposed to equip properly many secondary schools which are still lacking in laboratory equipment.

(e) Development of Audio Visual Education in Schools.

vi) Financial assistance as per grant-in-aid Code and loans for construction of school buildings, acquisition of playgrounds, construction of hostels and provision of other Physical facilities such as furniture, teaching equipment, library etc. This programme is essential, as many of the schools in this Territory do not have still their own buildings as they were not getting financial help in pre-liberation times and the grant-in-aid system has been introduced only in 1963-64.

University Education: In this field we have already got 4 Arts and Science Colleges, one Commerce College, one College of Education, one College of Engineering in Goa and one Arts and Science College in Daman. There are besides, one Medical College and one Pharmacy College. No opening of new College is therefore envisaged in the Fourth Plan, but only strengthening and consolidation of the existing Institutions. Grants will have to be paid to non Government Colleges for construction of College buildings, playgrounds, construction of hostels, development of libraries, science laboratories, as per rules of the Grant-in-aid Code.

Post-Graduate Education: At present there is a Post Graduate Centre run by Bombay University and maintained on the basis of 100% grant by Goa Government. A programme of the development of the Centre is envisaged in the Fourth Five Year Plan. Acquisition of land and a proposed programme of construction of buildings for the Centre is also envisaged. It is proposed to develop the centre into a University in due course of time.

Social Education: In the sector of Social Education the following schemes are included:—

- 1) Eradication of Illiteracy.
- 2) Publication of material for neo-literates and follow up programmes for maintenance of literacy achieved.
- 3) Establishment of Community Centres etc.
- 4) Establishment of a network of libraries and grants to libraries run by private initiative.

Other Educational Programme: It is necessary to provide opportunities to students and young people generally in channalising their leisure into useful activities. Facilities are therefore provided for phy-

sical education and games and sports with the expansion of such activities through the Sports Council proposed to be created and through the Physical Education Board and schools Sports Associations Goa, Daman and Diu. A programme of national service and sports organization (N. S. C. and N. S. O.) has been developed by the Government of India, at the University stage. A provision is therefore made for all these programmes. Besides an adhoc provision of Rs. 5.00 lakhs is proposed for Youth Welfare Programmes in general.

The following miscellaneous schemes are also proposed to be included in the Plan:

- 1) Appointment of Additional staff for the working of the Directorate.
- 2) Expansion of Zonal Office.
- 3) Establishment of a Vocational guidance Bureau.
- 4) Establishment of Examination Bureau.
- 5) Establishment of Cultural Unit.
- 6) Expansion of Statistical Unit.
- 7) Holding of Departmental Seminars for the development of education and deputation of officers of the Directorate for training.

Technical Education: In the field of Technical Education no new Institutions are proposed to be opened and stress is being laid on the consolidation, raising of quality and completion of incomplete schemes. As far as the Engineering College is concerned the College has started functioning in the year 1967-68 and it has entered in the second year of its existence during the current year (1968-69). It is functioning provisionally in the building of the Govt. Polytechnic, Panjim and it will be shifted to its own buildings at Farmagudi, Ponda, when the same are ready. Plans and estimates for the buildings are under scurtiny in the Ministry of Finance Govt. of India and necessary scheme for the construction of these buildings and purchase of additional equipment and additional staff is proposed in the 4th Five Year Plan. The College has started with an intake capacity of 60 and no increase is envisaged in the intake capacity of the College during the 4th Five Year Plan.

As regards Govt. Polytechnic, the present intake capacity of 120 will also remain as it is in the 4th Five Year Plan. It is, however, proposed to introduce some diversified courses in this Institution in order to meet the demand of man power needs as per data available and taking into consideration the development industries during the 4th Five Year Plan.

Cultural Programmes: A Kala Academic is being established and payment of grants to Cultural Organisations is envisaged.

Exchange of Cultural Troupes, etc.

Labour and Labour Welfare Programme: As for the I.T.I. some new courses are proposed to be started after ascertaining also the manpower needs at that training level.

An apprenticeship scheme is also proposed to be implemented.

Welfare of Backward Classes: Schemes for grant of freeships and scholarships to backward class students are proposed in order to achieve the equalisation of opportunities in Education.

ABSTRACT OF ALLOCATION — SCHEME-WISE

(Rupees in lakhs)

No. Sl.	Name of the Scheme	Plan Provision				Total
		Revenue		Capital		
		Recur- ring	Non- Recur- ring	Others	Loan	
1	2	3	4	5	6	7
I — Elementary Education						
1	Promotion of Pre-Primary Education	-	0.50	-	-	0.50
2	Expansion of Primary Education including Upper Primary Classes	39.00	3.80	-	-	42.80
3	Construction of School buildings for Elementary Schools	-	-	16.00	-	16.00
4	Construction of Quarters to Primary Teachers in backward areas where no accommodation is available ...	-	-	4.00	-	4.00
5	Appointment of more A. D. I's for proper supervision of Primary Schools	4.00	0.10	-	-	4.10
6	Direct Grants to Non Govt. Schools	0.75	-	-	-	0.75
7	Training of Primary Teachers ...	1.80	3.90	2.00	-	7.70
8	Development of Girls' Education ...	2.25	-	-	-	2.25
9	Improvement of Primary Education	1.00	6.25	-	-	7.25
10	Mid-day Meals	16.71	1.00	-	-	17.71
11	Establishment of Ashram Type of Schools	1.00	-	-	-	1.04.06
	Total	66.51	15.55	22.00	-	1.04.06

II — Secondary Education

1	Development and expansion of the existing Govt. Multipurpose High School, Margao and addition of Technical High School Centre ...	3.00	2.00	9.00	-	14.00
2	Development of Govt. High School, Diu, into a Multipurpose High School	2.00	1.00	3.00	-	6.00
3	Establishment of Govt. High Schools in Rural Areas	13.50	5.00	7.00	-	25.50
4	Development of Technical High School, Mapusa	1.00	1.00	6.00	-	8.00
5	Development and Expansion of Technical High School Centre, Daman	1.00	0.50	2.00	-	3.50
6	Development and Expansion of Technical High School Centre, Panaji	1.50	2.00	5.00	-	8.50

1	2	3	4	5	6	7
7	Development and Expansion of the existing Non Govt. Secondary Schools	10.00	-	-	-	10.00
8	Opening of New Non Govt. Secondary Schools	5.00	-	-	-	5.00
9	Grant for the development of Science Education under the Crash Programme	-	0.80	-	-	0.80
10	Grant for the development of Audio Visual Education	-	0.50	-	-	0.50
11	Grant for the construction of School Buildings and Playgrounds & Loan for the construction of School Buildings	-	12.00	-	5.00	17.00
12	Grant for the construction of Hostels	-	2.40	-	-	2.40
13	Development of Agricultural Education in Secondary Schools	0.50	1.50	0.50	-	2.50
14	Upgrading of Secondary High Schools into Higher Secondary Schools	3.00	1.80	-	-	4.80
15	Training of Secondary Teachers	4.00	4.00	-	-	8.00
16	Strengthening of the Inspecting Staff for the Inspection of Secondary Schools	3.50	0.50	-	-	4.00
17	Appointment of Subject Inspectors	1.80	0.20	-	-	2.00
	Total	49.80	35.20	32.50	5.00	1,22.50

III — University Education

1	Establishment of Goa University (Grant to Bombay University to run the Post Graduate Centre to be developed into a University in due Course)	15.00	-	5.00	-	20.00
2	Opening of Govt. Arts & Science College	2.00	2.00	-	-	4.00
3	Development and Expansion of the Govt. Arts and Science College, Daman	8.00	5.00	17.00	-	30.00
4	Development and expansion of Non Govt. Colleges	5.50	9.00	-	2.00	16.50
5	Establishment of Institute of Languages	1.00	-	-	-	1.00
6	Production of Literature in Indian Languages for the use as media of instruction at the University stage	0.50	-	-	-	0.50
	Total	32.00	16.00	22.00	2.00	72.00

1	2	3	4	5	6	7
IV — Social Education						
1	Development of Central Library ...	1.10	5.55	1.00	-	7.65
2	Grant to Librarian run by Private initiative ...	1.00	-	-	-	1.00
3	Promotion of Hindi and Sanskrit ...	1.00	-	-	-	1.00
4	Grant to other Associations, such as Jr. Red Cross, etc. ...	0.25	-	-	-	0.25
5	Eradication of Illiteracy ...	8.23	1.50	-	-	9.73
6	Establishment of School Cum Community Centres ...	0.30	-	-	-	0.30
	Total ...	11.88	7.05	1.00	-	19.93

V—Other Educational Programme						
1	Grant to Physical Education Board/ Sports Council of Goa, Daman & Diu ...	2.50	-	-	-	2.50
2	Grant to Goa Football Association and other Voluntary Associations and Clubs for providing Sports & Games ...	1.50	-	-	-	1.50
3	Coaching Scheme, Refresher Courses and Seminars ...	1.00	-	-	-	1.00
4	Construction of a Stadium & Pavilion ...	-	5.00	-	-	5.00
5	Rural Sports Schemes ...	0.10	-	-	-	0.10
6	Sports Talent Search Scheme ...	0.10	-	-	-	0.10
7	Sports Festival ...	-	1.00	-	-	1.00
8	National Service Corps & National Sports Organisation ...	4.00	2.00	-	-	6.00
9	Grants to Goa Branch of the Bharat Scouts & Guides Association ...	1.00	-	-	-	1.00
10	National Physical Efficiency Drive ...	0.80	0.20	-	-	1.00
11	Establishment of Inspectorate of Physical Education ...	0.90	0.10	-	-	1.00
12	Labour & Social Service Camps ...	1.00	0.50	-	-	1.50
13	Promotion of Youth Welfare ...	0.25	-	-	-	0.25
14	Establishment of Training Institute for Physical Education ...	0.95	0.55	-	-	1.50
15	Expansion of the Directorate of Education ...	7.60	0.70	4.35	-	12.65
16	Improvement of Text-Books and Curricula ...	0.40	0.10	-	-	0.50
17	Holding of Departmental Seminars for the improvement of Education ...	0.20	0.05	-	-	0.25
18	Deputation of Officers of the Directorate of Education to other States for Training ...	0.25	-	-	-	0.25
19	Award of scholarships and Stipends ...	8.25	-	-	-	8.25
	Total ...	30.80	10.20	4.35	-	45.35

1	2	3	4	5	6	7
VI — Cultural Programme						
1	Establishment of Kala Academy ...	10.55	5.00	-	-	15.55
2	Development and Expansion of Arts & Crafts Education ...	0.40	0.10	-	-	0.50
	Total ...	10.95	5.10	-	-	16.05
VII — Technical Education						
1	Development and Expansion of Engineering College ...	12.00	10.00	50.00	-	72.00
2	Development of Govt. Polytechnic, Panjim ...	5.50	8.00	11.50	-	25.00
3	Starting of a Book Bank at Govt. Engineering College and Govt. Polytechnic ...	0.20	-	-	-	0.20
	Total ...	17.70	18.00	61.50	-	97.20
VIII — Labour & Labour Welfare						
1	Expansion of Industrial Training Institute ...	4.18	4.75	19.40	-	28.33
2	Apprenticeship Training ...	4.70	-	-	-	4.70
	Total ...	8.88	4.75	19.40	-	33.03
IX — Welfare of Backward Classes						
1	Freeships and other Educational Facilities to Scheduled Castes/Tribes and other Backward Classes ...	0.50	-	-	-	0.50
2	Grant of Stipends to Backward Class Students ...	3.00	-	-	-	3.00
3	Grant for the construction and maintenance of Backward Class Hostels ...	1.70	1.30	-	-	3.00
4	Post Matric Scholarships for Scheduled Castes/Tribes and Low Income Group ...	5.50	-	-	-	5.50
	Total ...	10.70	1.30	-	-	12.00

1 — Elementary Education

NAME OF THE SCHEME: PROMOTION OF PRE-PRIMARY EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	0.50	0.50
Capital	—	—	—
Grand Total ...	—	0.50	0.50

Pre-Primary Education is still in its infancy in this Territory. Grants are proposed to be paid to private institutions catering to the needs of pre-Primary Education as per rules of the grant-in-aid Code. Grants will be paid for development of existing schools and for starting of new schools and even for construction of new school buildings if funds are available. A provision of Rs. 0.50 lakhs is proposed on this account in the 4th Five Year Plan.

NAME OF THE SCHEME: EXPANSION OF PRIMARY EDUCATION INCLUDING UPPER PRIMARY CLASSES —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	39.00	3.80	42.80
Capital	—	—	—
Grand Total ...	39.00	3.80	42.80

Primary education is essentially the responsibility of Government and as such soon after the liberation of this Territory Primary Schools were established in a good number of villages to impart education. There were in all 176 Government Primary Schools catering to the needs of Primary Education of this Territory in the year of liberation and though the education was free and compulsory it was imparted through the medium of Portuguese in the Government Primary Schools. There were also some 300 private Primary Schools maintained by people through the medium of regional languages, without any help from Government. Immediately after liberation, Government decided to impart free and Primary education through the mother tongue of the child and many new schools were opened. Besides, a number of private schools were also taken over by Government. The result of this policy was at the end of the Third

Five Year Plan there were 788 Government Primary Schools, with an overall enrolment of 65,451 students. There were besides 29,687 children enrolled in Classes I to V in non Government Schools. It can be seen that the total enrolment at the end of third Plan comes to 95,138. The same figures during the year 1967-68 for Government Schools were 67,720 and for non Government Schools were 33,271. The anticipated figures for the year 1968-69 in Government Schools are 70,000 and non-Government Schools are 34,000. The percentage of children attending classes from I to V and VI to VIII by the end of the Third Plan was approximately 83 & 44 respectively. The percentage of girls attending classes from I to V and VI to VIII was 64 and 32 respectively.

a) Expansion in the age group 6-11

Though the main emphasis in the Fourth Plan in the field of Primary education will be laid on the qualitative improvement, the necessary expansion cannot be neglected. It is proposed therefore to enrol 98% children in the age group 6 to 11 and 72% in the age group from 11 to 14 by the end of the Fourth Plan. The targets of girls enrolment are 85% in the age group 6 to 11 and 41% in the age group 11 to 14. As said earlier by the end of the Third Plan the number of school going children in the age group from Std. I to V in Government Schools was 95,138 with an annual expenditure of Rs. 57.00 lakhs. The corresponding anticipated figures at the end of the year 1968-69 are 1,04,000 children and Rs. 88.00 lakhs of expenditure. The experience in the past years has shown that the rate of increase in the number of students is approximately 5% and assuming that this rate will continue in the Fourth Plan period and that 40 students can be allotted for a teacher the net expenditure on expansion of Primary education will be to the tune of 1.20 lakhs. It is estimated that 26,000 additional children would be enrolled in the age group 6-11, during the Fourth Plan period which would raise the total number of school going children in this age group to 1.30 lakhs at the end of Fourth Plan. It is expected that about 60% of the total number of children will be absorbed in the existing Government and non-Government Primary Schools. Thus it will be necessary to provide new facilities i. e. new schools for the remaining 10,000 children during the Fourth Plan, and taking into account that nearly 2,000 additional children will be enrolled in schools every year, the appointment of 50 new teachers will be required every year of the Fourth Year Plan. The salaries of these teachers alone, would come to Rs. 18.00 lakhs and at least Rs.1.80 lakhs would be required to be spent on contingencies and other items for the additional 10,000 students.

b) Expansion in the age group 11-14

The enrolment at the end of the Third Five Year Plan in the age group 11-14 was 18,308. The same was 26,187 at the end of the year 1967-68 and the anticipated enrolment for the year 1968-69 is 29,000. It is expected that another 6,000 students will be enrolled in Std. VI to VIII during the Fourth Plan, raising the percentage for school children in this age group from 44% to 60% at the end of the Fourth Plan. Of these additional 6,000 students about 3,000 are expected to be absorbed in the existing Government Schools. Thus, it will be necessary to appoint some 25 teachers every year, during the five years of the Fourth Five Year Plan which would mean that 620 teachers would be required at the

end of Fourth Plan and their salaries alone would be Rs. 18,800 and another 2.00 lakhs would be required for normal contingencies. An amount of Rs. 20.00 lakhs is therefore proposed in the Fourth Five Year Plan. As for additional equipment for these schools an outlay of Rs. 2.00 lakhs is proposed on adhoc basis.

c) Allowance to the headmasters

It is also proposed to sanction a special allowance of Rs. 20/- per month to a senior teacher who looks after the administration of the school in addition to his own duties at least in case where the enrolment in the schools is 200 or more. There will be about 100 schools satisfying the above conditions and some others may come up during the Fourth Five Year Plan and an adhoc provision of Rs. 1.00 lakh is proposed in the Fourth Five Year Plan for this purpose.

NAME OF THE SCHEME: CONSTRUCTION OF SCHOOL BUILDINGS FOR
ELEMENTARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	—	—
Capital	—	16.00	16.00
Grand Total ...	—	16.00	16.00

At the time of liberation there were approximately 128 Govt. Primary School buildings. After liberation a relevant programme of construction of Primary school buildings was taken up in the Third Five Year Plan. About 400 school buildings comprising approximately 700 classrooms were constructed by the end of the Third Five Year Plan. Another 300 classrooms are expected to be completed by the end of the year 1968-69, thus bringing the total to 1000. Our needs however are approximately 2400 and as such a very big number of Primary schools are yet to be provided with buildings. It is, therefore, proposed to construct about 200 classrooms during the Fourth Five Year Plan at the cost of Rs. 15.00 lakhs at the rate of Rs. 7,500 per school. It is to be mentioned here that, the total amount of rent of buildings to run Primary Schools paid at present is more than Rs. 1.00 lakh and there are besides some schools conducted in adhoc places such as verandahs of houses, temples spared free of rent by the owners for the purpose.

Provision of sanitary block to some of the existing Primary schools mostly in Urban areas: There are some schools in Urban areas where there are no facilities of sanitary blocks. As such, it is proposed to provide such schools with sanitary arrangements and an adhoc provision of Rs. 1.00 lakh is made for the same. Details of construction in the most economical way so that maximum possible number of sanitary blocks may be constructed within this amount will have to be worked out.

NAME OF THE SCHEME: CONSTRUCTION OF QUARTERS TO PRIMARY TEACHERS IN BACKWARD AREAS WHERE NO ACCOMMODATION IS AVAILABLE—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	—	—
Capital	—	4.00	4.00
Grand Total ...	—	4.00	4.00

The question of providing quarters for Government Primary teachers was taken up during the years 1968-69, and a few other (another 20) are under construction. The problem for accommodation to Primary teachers in some backward rural areas is most acute and if proper attention is not paid to this situation it may hamper the progress of education as the teachers cannot be expected to give out their best if the position of their residential accommodation is unsatisfactory. It is therefore proposed to build the 40 single quarters for Primary teachers during the Fourth Five Year Plan. The plinth area of each residential quarter will about 400 sq. ft. with three rooms at an approximate cost of Rs. 10,000/-. The total cost of 40 quarters will be Rs. 4.00 lakhs. Expenditure to be incurred during each year of the Fourth Five Year Plan will be Rs. 0.80 lakh.

NAME OF THE SCHEME: APPOINTMENT OF MORE A. D. I's FOR PROPER SUPERVISION OF PRIMARY SCHOOLS—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	4.00	0.10	4.10
Capital	—	—	—
Grand Total ...	4.00	0.10	4.10

In order that the quality of Primary education may improve, it is essential to have effective supervision and inspection of Primary schools. At the end of the Fourth Five Year Plan, the total number of Primary schools in the Union Territory including the Primary sections of Secondary Schools is expected to be 1,200. At the normal rate of 40 schools per inspecting Officer, the total number of inspecting officers required for inspection of Primary schools will be 30.

At present, there is one Inspector, 4 Dy. Inspectors and about 16 A.D.-I.s for the Primary Education. Thus the total number of Inspecting Officers is 21. As such, nine more Inspecting Officers are required to be appointed, during the Fourth Plan Period.

As such, a provision of Rs. 2.00 lakhs is made for the payment of these inspecting officers.

It is also decided that these inspecting officers should have their offices at the Taluka Headquarters. There are 11 talukas in Goa, in addition to the Education Office at Daman & A. D. I's Office at Diu. Educa-

cation Office at Daman is properly staffed but no A. D. I's Office either at taluka headquarters or at Diu is provided even with a peon.

It is therefore proposed to appoint 12 clerks & 12 peons at taluka levels. As such, a provision of Rs. 2.00 lakhs is made for this purpose in the Fourth Plan.

The Office of the A. D. I. at Taluka level will naturally be located though temporarily in one of the rooms of Government Schools, at the Taluka Headquarters. However, these inspecting Officers will each require a table, a chair, 1 cupboard for himself, at least two shairs for the visitors and one stools for the peon. In order to provide these minimum requirement a provision of Rs. 0.10 lakhs is made in the Fourth Plan period.

NAME OF THE SCHEME: DIRECT GRANTS TO NON GOVERNMENT SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.75	—	0.75
Capital	—	—	—
Grand Total ...	0.75	—	0.75

Though there are Government Primary Schools, imparting free Primary education to the student population through the mother-tongue of the students as declared by their guardians, there is no doubt that the private enterprise is also contributing its best in the field of Primary education. According to the Grant-in-aid Code for Primary Schools, as amended from time to time, Non-Government Primary Schools recognised by Government are to be reimbursed the loss of fees on the basis of Rs. 2.00 per pupil per month for Students I to III and Rs. 2.50 per pupil per month for standards IV and V. This position will continue in the Fourth Plan and suitable, provision on this account needs to be made.

A token provision of Rs. 0.75 lakhs is made in the Fourth Plan, for payment of grants to new Non-Government Primary Schools which may come up during the Fourth Plan.

NAME OF THE SCHEME: TRAINING OF PRIMARY TEACHERS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.80	3.90	5.70
Capital	—	2.00	2.00
Grand Total ...	1.80	5.90	7.70

A) *Expansion of the existing Primary Teachers' Training College.*

The Government Primary Teachers' Training College which is already shifted to its new premises at Porvorim is at present training about 150 teachers, per year.

At present there are about 2400 teachers in Government Primary Schools of whom about 60% i.e. about 1450 are untrained. If the present rate of training is continued it will take about 10 years to remove the backlog, if all the new recruits taken are trained teachers.

However, it has been decided that as per the recommendations of the Education Commission, the training course should be course of two years duration after S.S.C.E. as is done in the neighbouring State of Maharashtra. If this is done it will take about 20 years to remove the backlog at present rate of training.

It is therefore proposed to increase the output of the Teacher's Training College to about 250 to 300 teachers per batch. As such additional staff of two senior instructors, four junior instructors, one L.D.C. and one peon will be required. Provision of Rs. 1.00 lakh is therefore proposed in the Fourth Plan Budget to meet this recurring expenditure.

Due to increased intake, Teachers' Training College will be requiring additional equipment like benches, tables, chairs and other educational aids to satisfy the needs of teacher trainees. A provision of Rs. 2.00 lakhs is therefore made for this purpose in the Plan Budget.

The Building of the Teachers' Training College as also the Hostel are already completed or being completed and will be ready before the end of the year 1968-69. However, Quarters for Principal, Hostel Rector and Class IV staff are required to be constructed for which a provision of Rs. 2.00 lakhs are proposed under the Fourth Plan Budget.

B) In Service Short-Term Training Courses for Primary School Teachers.

The study group on the training of Elementary Teachers in India appointed by the All India Council for Elementary Education has suggested to give in-service training of not less than two months' duration to every primary school teacher in every five year of service. It is therefore, proposed to introduce a short-term inservice training course of the duration of 8 weeks every year and admit 100 students every time. Thus, by the end of fourth plan 500 teachers will have undergone inservice training. Since the short term refresher training for the old trained teachers is an additional course, they will have to be deputed on full salary plus a stipend of Rs. 50/- p. m. per teacher to enable them to meet the necessary expenditure at this Course.

Therefore, the cost involved in the proposal during the Fourth Five Year Plan is as indicated below:

Item	Estimated cost during the plan period			
	Recurring	Non-Recurring	Capital	Total
1	2	3	4	5
1. Stipends to 500 teachers for 2 months' at Rs. 50/- per month ...	0.50	-	-	0.50
2. T. A. to 500 teachers at Rs. 20/- per teacher ...	0.10	-	-	0.10
Total ...	0.60	-	-	0.60

C) Establishment of an Extension Centre at the Existing Government Primary Teachers' Training College.

The Government of India has favoured the Establishment of an Extension Centre to the Training College, in order to extend the concept of Extension. This Centre will have to carry limited, but effective programme of inservice training for teachers of some schools in the neighbourhood of the Training College, which may later on be extended to other schools.

The inservice Training Programme to be carried out by this Centre includes Week-End Workshops, Seminars, Conferences, School Visits, Programmes connected with the Courses, Specific Experiments and Projects in the Schools, Library Service and Organisation of Subject Teachers Study Circles.

In order to carry out this programme one teacher of the Training College will have to be trained under the programme of Extension Service. He will have to be assisted by one clerk and one peon.

In order to go to the various schools, the Extension Service Centre will require a van to take its students to the various schools in order to carry out the programme.

A sum of Rs. 1.00 lakh is therefore proposed on adhoc basis, for being provided in the Fourth Five Year Plan for meeting the recurring and Non-Recurring expenditure of the Centre. Details will have to be worked out later.

D) Establishment of Science Clubs.

The importance of Science Education need not be stressed in the present scientific and technological age. The scientific impact on the minds of the pupils requires to be made at the young age when they are in the primary schools. As such, it is essential that the primary schools teacher who will stress this importance to the students should be well versed in the scientific activities. It is therefore, essential that these teachers are given proper perspective of the scientific development.

As such, it is proposed that Science Clubs should be established in the Teachers' Training Colleges in this Union Territory. As such a provision of Rs. 0.10 lakhs is proposed in the Fourth Plan Period.

E) Payment of Maintenance Grant to Non Government Primary Teachers' Training College.

In addition to the Government Teachers' Training College, Porvorim, there is one more Teachers' Training College run by private society at Margao. The said College is required to be paid grant for its development as per the rules laid down in the grant-in-aid Code at 66 $\frac{2}{3}$ % percent of the admissible expenditure.

As such a provision of Rs. 0.50 lakhs is made in the Fourth Plan Budget.

F) *Applied Nutrition Programme.*

As per the recommendations of Government of India, the programme of Applied Nutrition is being introduced in this Union Territory. A van has already been donated by the UNICEF in order to carry on the said programme. It is therefore essential to have a driver to run the said van, as also the other staff.

In order to meet the recurring as well as non-recurring expenditure on the said programme it is proposed to make a provision of Rs. 0.50 lakhs in the Fourth Plan Period.

NAME OF THE SCHEME: DEVELOPMENT OF GIRLS' EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	2.25	—	2.25
Capital	—	—	—
Grand Total	2.25	—	2.25

A) *Grants for needy Girl Students in Government Primary Schools for books, clothes, etc.*

Though Primary Education is free in all Government Primary Schools, there are few handicaps in the development of Girls' Education. Many girls cannot attend the school due to financial difficulties of parents who are hesitating to send their children to schools without proper books, clothes, etc. In order to wipe out these difficulties, it is proposed, to pay grants at the rate of Rs. 25/- per student, per year, for the purchase of full uniforms, books, slates etc. About 1000 students are to be benefited under this scheme, per year and as such a provision of Rs. 1.25 lakhs is made for this purpose in the Fourth Five Year Plan Budget.

B) *Part-time Courses for Girl Students in Rural Areas.*

It can be seen from the Statistical data that the enrolment percentage for girl students in the age group 6 to 11 and 11 to 14 is much lower than boys. In spite of all efforts there is reluctance to enrol girls especially in rural and backward areas, as normally in poor families they are to look after their younger brothers and sisters or when they are sufficiently grown up (age group 11 to 14) they are also required to help the family in the current household duties. Some parents are not able to send their children to schools due to difficulties even when they are very keen about their education. It is, therefore, proposed to have some part time Courses from Stds. I to IV, specially conducted for girls, as far as possible by lady teachers in rural areas. Government Primary Teachers will be entrusted with this work on part time basis according to a time-table convenient to the rural population. As this will be extra work for the teachers concerned they will have to be paid extra remuneration. The scheme is to be taken on experimental basis in some selected areas to begin with and then extended slowly to other areas where enrolment of girls continues to be lower. An adhoc provision of Rs. 1.00 lakh

for payment of special remuneration for the extra work to teachers engaged for this scheme is, therefore, made in the Fourth Five Year Plan. The details of the scheme will be worked out later.

NAME OF THE SCHEME: IMPROVEMENT OF PRIMARY EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1 00	6.25	7.25
Capital	—	—	—
Grand Total	1.00	6.25	7.25

A) Improvement of School Libraries.

Almost all the Government Primary Schools will have to be equipped with libraries and library equipment. About 300 Primary schools will be covered under this scheme at the end of the year 1968-69. During the Fourth Plan it is expected to cover another 300 schools under this scheme and a provision of Rs. 1.50 lakhs is proposed for this purpose on ad-hoc basis during the Fourth Five Year Plan.

B) Development of Science Education in Elementary Schools.

The Scientific outlook must be imbibed in the minds of students in every day life from the very beginning of their school carrier. This may be done through the nature study which in years to come may lead to the study of General Science. It is therefore essential to equip all the schools with charts and models of science so that the students may have the visual aid to help their education.

The scheme has already been introduced in this Union Territory and about 100 primary and middle schools are equipped with scientific models and charts.

The scheme is proposed to be continued during the Fourth Plan period and as such a provision of Rs. 1.60 lakhs is proposed at the Fourth Plan level.

C) Introduction of Work Orientation in Middle Schools.

The importance of Work-Orientation has been stressed by the Education Commission. This Work Orientation is required to be introduced in all the Middle Schools, as the vocational activity brings some light in the passive class room teaching. This scheme has been introduced in this Union Territory during the last two to three years and so far approximately 20 schools are covered under this scheme.

The Crafts that are at present being covered under the scheme of Work Orientation are Cardboard modelling leading to Carpentry and Kitchen gardening leading to Agriculture.

The Scheme is proposed to be continued during the Fourth Five Year Plan by equipping more schools to teach these crafts and intro-

ducing other suitable crafts as also by training the primary school teachers with the knowledge of these crafts.

Syllabi framed by the Government of Maharashtra will be followed in this respect.

It is therefore proposed to provide a sum of Rs. 1.25 lakhs under the scheme during the Fourth Five Year Plan.

NAME OF THE SCHEME: MID-DAY MEALS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	16.71	1.00	17.71
Capital	—	—	—
Grand Total	16.71	1.00	17.71

Objectives: The scheme intends to supply children an unexpensive meal in school and help them to have balanced diets. The scheme also aims at inculcating in children proper dieting habits and overcoming food prejudices. The school meals will help children develop socially and be friendly with all, regardless of caste, creed and differences in social and economic status, thus facilitating the emotional integration of the Nation.

Financial implications: During the year 1966-67 about 12,000 children were covered by the scheme. The daily cost of meal per child was 25 paise out of which 20 paise is Government contribution and 5 paise popular contribution. Where contribution in cash is not possible the village people may contribute in kind i. e. serving utensils etc. Preference is to be given to schools in backward areas and where children have to bear the strain of long distance. Last year, 15,000 children were benefited from the scheme for 100 days.

During the Fourth Five Year Plan, it is proposed to cover at least 60 per cent of the school going population i. e. about 26,000 children including the no. of children benefited during the year 1967-68. So far the cost of the meal per day per child contributed by the Government is 20 paise. However, it is felt that this amount is insufficient to provide adequate meals with essential nutrients to children. The children will be provided meals for 150 days in a year. At the rate of 25 paise per meal, the estimated expenditure will be as follows with the extension of the benefit of the scheme to additional 1500 children every plan year.

Year	No. of children	Cost of meals
1969-70	5,000	Rs. 1,87,500
1970-71	6,500	Rs. 2,43,750
1971-72	8,000	Rs. 3,00,000
1972-73	9,500	Rs. 3,56,250
1973-74	11,000	Rs. 4,12,500
	Total	Rs. 15,00,000

It is proposed to supplement the meals with milk powder supplied under Indo-US Agreement. The Govt. of India have approved the milk feeding programme covering 55,000 primary school children.

The additional financial implications for this programme are as under:

	Recurring	Non-Recurring
a) Rent of three stores ...	Rs. 9,000	—
b) Store keeper—three (210-380)	Rs. 12,600	—
c) Accountant—three (210-380)	Rs. 12,600	—
d) Utensils for preparation and distribution of milk	—	Rs. 1,00,000
	Rs. 34,200	

Total recurring expenditure during the Fourth Plan Period is Rs. 1,71,000 besides the non-recurring being Rs. 1.00 lakh for milk feeding scheme.

Total outlay for the Mid-day meals including the milk feeding scheme will thus be Rs. 17,71,000.

Foreign Exchange requirements: No foreign exchange is required.

Physical targets: At the end of the Fourth Five Year Plan, 12% of the school going children are to be covered by the scheme in addition to the no. of children covered during the last year. The meal is to be constituted of a loaf, a banana and a cup of milk. Besides additional 30,000 children will be given milk under milk feeding scheme.

NAME OF THE SCHEME: ESTABLISHMENT OF ASHRAM TYPE SCHOOLS—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total ...	1.00	—	1.00

The Ashram Type School is a residential school for the pupils of scheduled Castes/Tribes. It is proposed to provide lodging and boarding facilities to the students. Each school will start with 30 pupils i. e. 15 boys and 15 girls, and 20 pupils will increase every year upto the strength of 110 pupils. This scheme is proposed to be implemented during the Fourth Plan period on experimental basis and as such a token provision of Rs. 1.00 lakh is proposed to be made during the IV Plan for the establishment of such schools directly by the Department or through a voluntary organisation on grant-in-aid basis. The details of the scheme will be worked out later.

2 — Secondary Education

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF EXISTING
GOVT. MULTIPURPOSE HIGH SCHOOL, MARGAO
AND ADDITION OF TECHNICAL HIGH SCHOOL
CENTRE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	3.00	2.00	5.00
Capital	-	9.00	9.00
Grand Total ...	3.00	11.00	14.00

The Government Multipurpose High School, Margao is at present offering academic subjects and also Commerce streams but it has not reached the stage of fulfilled Multipurpose School as other streams like Technical, Fine Arts, etc. are not yet introduced. It is found from the experience that if technical bias is introduced in the said school, it will have good demands from the students. It is therefore felt that a Technical High School Centre may be opened at the said school so that not only the students from that school but also the students from other high schools of that area may take advantage of the teaching of the technical subjects.

It is therefore proposed to appoint the following staff for running the Technical High School Centre:—

1. Superintendent	1	Rs. 400-950
2. Assistant Lecturers	2	Rs. 260-500
3. Junior Lecturers	2	Rs. 210-380
4. Instructors	2	Rs. 125-155
5. Laboratory Assistant	2	Rs. 110-180
6. U. D. C.	1	Rs. 130-300
7. Class IV Servants	4	Rs. 70-85

A provision of Rs. 3.00 lakhs is made for the payment of the staff during the Fourth Plan budget.

The present premises of the Government Multipurpose High School, are not at suitable for the expansion programme, it requires therefore to build a suitable building as also Workshop on the plot of land which already acquired for the purpose. The plans and estimates of the same

are not yet ready though they are under preparation. As such the total expenditure required is not known. However, a provision of Rs. 8.00 lakhs is made for this purpose.

As the school is shifted to its new premises, necessary furniture will have to be acquired. Necessary equipment for the Technical Wing will also have to be purchased. A sum of Rs. 2.00 lakhs is therefore provided for the same in the Fourth Five Year Plan.

It is proposed to convert this school into a residential school by constructing Hostel for the students. It is also necessary to construct suitable accommodation for Principal, and Hostel Rector as also Servants' Quarters. The Scheme will have to be taken in hand in part as per the availability of funds. However, an adhoc provision of Rs. 1.00 lakh is made in the Fourth Five Year Plan.

NAME OF THE SCHEME: DEVELOPMENT OF GOVT. HIGH SCHOOL, DIU
INTO A MULTIPURPOSE HIGH SCHOOL —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	2.00	1.00	3.00
Capital	—	3.00	3.00
Grand Total ...	2.00	4.00	6.00

As there was no High School in Diu during the preliberation times, the Government started one High School immediately after the liberation, which is at present catering to the needs of the whole District. The school is however, giving academic education only from Std. VIII to XI without any option for students to choose any other bias.

It is therefore now proposed to develop the said high school into Multipurpose school by affording facilities to the students to take other schemes like Commerce, Technical, etc.

In order to introduce Technical streams the following staff will be required:—

1. Superintendent	1	Rs. 400-950
2. Assistant Lecturer	1	Rs. 260-500
3. Junior Lecturer	1	Rs. 210-380
4. Instructors	2	Rs. 125-155
5. U. D. C.	1	Rs. 130-300
6. Class IV Servants	2	Rs. 70-85

A provision of Rs. 2.00 lakhs is made for the payment of this staff during the Fourth Plan Period.

In order to introduce this scheme necessary furniture equipment, etc. will be required. A sum of Rs. 1.00 lakh is therefore provided for this purpose.

Though the school has its own building which can at present accommodate the students, the same will not be sufficient as and when other streams are introduced. There will be need for the construction of some school rooms, as also Workshops and as such a provision of Rs. 3.00 lakhs is proposed for the purpose in the Fourth Five Year Plan.

NAME OF THE SCHOOL: ESTABLISHMENT OF GOVT. HIGH SCHOOLS IN RURAL AREAS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	13.50	5.00	18.50
Capital	—	7.00	7.00
Grand Total ...	13.50	12.00	25.50

A) *Improvement of the existing Government High School.*

As the Government found that the private enterprise did not come forward for providing educational facilities for rural areas, it was decided to start 10 Rural High Schools during the years 1966-67 and 1967-68.

The construction of buildings for some of these schools has already started but action will have to be taken for construction of remaining school buildings. In addition, these schools will require more equipment and necessary provision will have to be made for the same.

A provision of Rs. 2.00 lakhs is therefore made in the Fourth Five Year Plan for the construction purpose and Rs. 1.50 lakhs for the purchase of equipment and furniture.

It is expected that during the Fourth Five Year Plan, the enrolment in these schools will go on increasing and as a result more divisions will have to be opened in each of the classes. The following staff may therefore be necessary in each of the 10 schools: —

1. Assistant Teacher	2	Rs. 170-380
2. Drawing Teacher	1	Rs. 130-300
3. Hindi Teacher	1	Rs. 170-380
4. Watchman	1	Rs. 70-85

A sum of Rs. 6.00 lakhs is proposed in the Fourth Five Year Plan to meet the salary of the staff in all these high schools.

B) *Opening of new Rural High Schools:*

There are many places in rural areas where the educational facilities at the Secondary level are not easily available. There is no private enterprise coming forward due to lack of finances and there is constant demand from the people for high school education. It is therefore proposed to start, if possible, some more 5 Rural High Schools in backward areas during the Fourth Five Year Plan.

The following staff will be required for each of these schools: —

1. Headmaster	1	Rs. 325-575
2. Assistant Master	4	Rs. 170-380
3. Drawing Teacher	1	Rs. 130-300
4. N. F. C. Instructor	1	Rs. 130-300
5. U D. C.	1	Rs. 130-300
6. Clas IV Staff	2	Rs. 70-85

A sum of Rs. 5.00 lakhs is proposed under this scheme for the payment of the staff.

The school will be requiring necessary furniture for the students as also staff members, equipment for laboratory, library books, teaching aids and other didactic material. A sum of Rs. 2.00 lakhs is therefore provided for this purpose in the Fourth Plan Budget.

Suitable buildings will have to be constructed for this purpose for which the land may be available free of charge. However, a sum of Rs. 5.00 lakhs is proposed for the construction of the said buildings during the Fourth Plan period.

C) *Provision for Mobile Scientific Van.*

The importance of Science Education need not be stressed in the present day of Technological advancement. In the rural areas, it may not be possible to have fulfilled laboratories, specially Van, extension classes might have to be opened in remote areas. It will not be possible to have separate laboratories in all such extension schools. It is also felt advisable to show the experiments on science in the middle schools.

It is therefore proposed to purchase one mobile van which is to be equipped with the scientific apparatus, in order to move from one school to another.

A sum of Rs. 1.00 lakh is proposed in the budget for the purchase of the Van and laboratory equipment.

The following staff will also be required for manning the said Van:

1. Driver	1	Rs. 110-131
2. Laboratory Assistant	1	Rs. 130-300
3. Attendant	1	Rs. 70-85

A sum of Rs. 0.30 lakhs is provided for this purpose during the Fourth Five Year Plan.

D) *Conversion of Rural High School into Residential Schools.*

There is demand of high school education from every nook and corner of the Territory, especially from the rural areas, where no private enterprise comes forward for starting Secondary Schools. It is not possible for the Government to start High schools in all the areas where there is demand. It is, therefore proposed to convert some of the Rural High Schools into residential High Schools by providing suitable hostels where the students from far off rural areas may stay to continue their studies.

In order to house 50 students in a hostel, the non-recurring cost will be as follows:—

1. Hostel building (50 students x 130 plinth area x Rs. 25/- rate of construction) ...	Rs. 1.625 lakhs
2. Furniture and Utensils	Rs. 0.100 lakhs
Total	Rs. 1.725 lakhs

About 4 hostels are proposed to be constructed in the first instance for which a provision of Rs. 7.00 lakhs will be necessary.

The following staff will be necessary for running the said Hostels:—

1. Hostel Superintendent	1	Rs. 210-450
2. Cook	1	Rs. 110-180
3. Assistant Cook	1	Rs. 70-85
4. Kitchen Servants	2	Rs. 70-85
5. Watchman	1	Rs. 70-85

A sum of Rs. 2.50 lakhs is therefore required for this purpose during the Fourth Plan period.

The students residing in the Hostel will not be in a position to meet fully the food charges. It is therefore proposed to give them food on subsidised basis. The cost per child per month is estimated at Rs. 50/-. Taking it for granted that the school will run for 10 months, a total provision of Rs. 5.00 lakhs will be required for all the four hostels in the Fourth Five Year Plan.

It will be seen from the above that the total amount required on account of conversion of existing Rural High School into Residential ones is Rs. 14.50 lakhs.

However, against this amount a token provision of Rs. 5.00 lakhs is proposed because of limited ceiling.

NAME OF THE SCHEME: DEVELOPMENT OF TECHNICAL HIGH SCHOOL, MAPUCA —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	1.00	2.00
Capital	—	6.00	6.00
Grand Total	1.00	7.00	8.00

The Technical High School at Mapusa was providing education at the S. S. C. level with technical subjects. This was the only school of its kind in the whole of Union Territory, as it was upgraded from «Escola Tecnica» from the pre-liberation times.

Later on it was found that there was good demand for technical high school centre in Panaji, it was decided to convert Technical High School into Technical High School-cum-High School Centre and students from the local schools were taken for training for the technical subjects. This centre has made good progress along with High School itself.

However, it is found, that in view of growing demand of student population for technical subjects, the staff at present working at the Technical side is not sufficient. It is therefore, essential to appoint more staff to teach Technical subjects as also to help the students in the workshop practice. A sum of Rs. 1.00 lakh is therefore earmarked for this purpose during the Fourth Five Year Plan..

The present accommodation is not suitable for both Technical High School and for the said centre. As such suitable plot of land is already acquired for the purpose Plans and estimates for the construction of suitable building are being prepared and the construction of the building will have to be started and as such a provision of Rs. 6.00 lakhs is made for this purpose.

When the Technical School is shifted to its new building, more equipment, and furniture will be required for which provision of Rs. 1.00 lakh is proposed in the Fourth Five Year Plan Budget.

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF TECHNICAL HIGH SCHOOL CENTRE, DAMAN —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	0.50	1.50
Capital	—	2.00	2.00
Grand Total ...	1.00	2.50	3.50

The Technical High School Centre, Damam was upgraded from the original «Escola Tecnica» is at present working as Technical High School Centre in Damam providing facilities for the Technical Education at the S. S. C. stage to the students from the local schools through the medium of Gujarati. The school though housed in its own building, has no sufficient accommodation and as such it is essential to construct more class rooms and workshops in order to absorb the growing number of students. It is also essential to construct suitable quarters to Superintendent and class IV staff. A provision of Rs. 2.00 lakhs is therefore made for this purpose in the Fourth Plan Budget.

With the growing demand for the technical studies, it is seen that the staff working in this centre will also not be sufficient and as such more Workshop Instructors and Assistant Lecturers as also class IV staff will be required. A provision of Rs. 1.00 lakh is therefore made for this purpose.

The equipment that is at present existing in the said Centre will not be sufficient in the years to come and as such it is essential to purchase more in order to equip the said Centre fully. A provision of Rs. 0.50 lakhs is made for this purpose in the Fourth Five Year Plan.

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF TECHNICAL
HIGH SCHOOL CENTRE, PANAJI —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.50	2.00	3.50
Capital	—	5.00	5.00
Grand Total ...	1.50	7.00	8.50

It was found that almost all the secondary schools in this Union Territory were preparing the students to the S. S. C. E. with common academic subject, which made the pupils either go to the College or seek employment as clerks. There were only a few schools which however, allowed the students to offer typewriting as one of the subjects. But there were no schools offering technical bias to the students preparing for S. S. C. E. in order to enable them to seek technical jobs after passing the same.

It was found that it was not possible for individual schools to start technical subjects in their High School classes due to heavy cost. It was therefore decided to start technical high school Centres in which instruction in technical subjects for the students of the local schools is to be given free of charge, the other subjects being taught in their parent schools.

With this idea in view Government started one technical High School at Panaji which is gaining strength and popularity year by year. From the good response received from the local schools it is felt that more divisions will have to be opened during the Fourth Plan period by appointing more staff.

The following staff is proposed for the Centre: —

1. Assistant Lecturers	2	Rs. 260-500
2. Jr. Lecturers	2	Rs. 210-380
3. Instructors	2	Rs. 125-155
4. Head Clerk	1	Rs. 210-380
5. Class IV Servants	2	Rs. 70-85

A provision of Rs. 1.50 lakhs is made for this purpose in the Fourth Plan Budget.

With the addition of more divisions, the furniture equipments, etc. will not be sufficient and more will have to be purchased. If Commerce stream is also started, typewriters will also have to be acquired.

A provision of Rs. 2.00 lakhs is made for this purpose in the Budget.

The Technical High School Centre is at present located in old Polytechnic building but the accommodation is not sufficient even for the present needs.

It is therefore proposed to construct a suitable building for the said Centre on the available space in the premises of the old Government Polytechnic building. And a provision of Rs. 5.00 lakhs is made for this purpose in the Budget.

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF THE EXISTING
NON-GOVERNMENT SECONDARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	10.00	—	10.00
Capital	—	—	—
Grand Total ...	10.00	—	10.00

By the end of the Third Five Year Plan, the expenditure on maintenance grants to Secondary Schools was of the order of Rs. 18.00 lakhs per year. Due to enhancement of salary scales of the teachers so as to bring them on par with those prevalent in Delhi Administration and also due to the increase in the rate of the maintenance grant from 50 to 66½ per cent the Government liability has considerably increased during the three years after the Third Five Year Plan and the annual liability during the year 1968-1969 is expected to be Rs. 60.00 lakhs. As per the recommendations of the Working Group, the expenditure on the maintenance grant is to be met from Non Plan funds. However, for the development of the existing schools and affording more Physical facilities, grants are required to be paid from the Plan funds.

The enrolment in the Non-Government Secondary Schools which is 45,073 during the year 1967-68 is expected to rise to about 63,000 by the end of the Fourth Five Year Plan. Thus the increase in enrolment is expected to the tune of 18,000 at the Non-Government level. It is expected that 50% of the enrolment may be absorbed in the existing schools. As such about 300 more teachers will have to be appointed, purchase of more furniture and more equipment will have to be made by the schools on which Government will have to pay necessary grants.

A provision of Rs. 10.00 lakhs is therefore made for this purpose, in the Fourth Plan Budget.

NAME OF THE SCHEME: OPENING OF NEW NON-GOVERNMENT SECOND-
ARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	5.00	—	5.00
Capital	—	—	—
Grand Total ...	5.00	—	5.00

There are at present about 180 Non-Government Secondary Schools with a total enrolment of 45,000 pupils. This enrolment is expected to increase to 63,000 by the end of the Fourth Plan period, as the enrolment at the Primary Stage (I-IV) is 86,000 and due to free education being given upto Std. VIII by the Government, most of these students are expected to continue their studies at the secondary level. Of the increase of 18,000 pupils about 9,000 are expected to be absorbed in the existing schools. However, it will not be possible to absorb the remaining 50%

as there are no high schools in the rural areas and all the students will not be in position to come to the cities for pursuing their education. It is therefore felt that about 20 more Non-Government Secondary Schools may come up during the Fourth Plan period for which necessary development grants will have to be paid in terms of the existing rules.

A provision of Rs. 5.00 lakhs is therefore made in the Fourth Plan Budget for the said purpose.

NAME OF THE SCHEME: GRANTS FOR THE DEVELOPMENT OF SCIENCE EDUCATION UNDER THE CRASH PROGRAMME —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	0.80	0.80
Capital	—	—	—
Grand Total ...	—	0.80	0.80

Progress of any Nation is dependant upon Scientific, Industrial and Technological advance. It is therefore necessary that the students in our high schools are imbued with the Scientific attitude by providing grant, necessary facilities for the advancement of their Scientific knowledge.

It is therefore essential that the Secondary Schools are properly equipped with the necessary apparatus that are required at the Secondary Stage. Many of the schools are found to be lacking in laboratory equipment as such it is proposed to continue the scheme of paying special grants on 100% basis for the purchase of laboratory equipment. About 113 high schools out of 142 are already provided with the said grants. 29 high schools existing as also 11 more middle schools may be upgraded during the Fourth Plan period. Thus the scheme will have to be extended to about 40 schools and as such a provision of Rs. 0.80 lakhs is proposed for the purpose during the Fourth Plan Period.

NAME OF THE SCHEME: GRANT FOR THE DEVELOPMENT OF AUDIO VISUAL EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	0.50	0.50
Capital	—	—	—
Grand Total ...	—	0.50	0.50

There is no doubt that the Audio Visual Education plays an important role in the field of education. The film shows can surely augment the impression of teaching upon the minds of the pupils. The Audio Visual

Education is so far completely neglected in most of our Non-Government Secondary Schools and hence special efforts are needed in order to bring out schools on par with those in the adjoining States as far as Audio Visual Education is concerned.

At present hardly some 30 schools have a film projector of their own. Though the Department has sufficiently equipped Film Library, the schools cannot take advantage of the same without their own projectors as the projectors of the Department which are only 2 in number cannot satisfy the needs of all the Primary and Secondary Schools.

It is therefore, proposed to pay grants to well developed Secondary Schools at 50% of the cost of the Projector. The cost of each projector is approximately Rs. 5,000/- and the liability on the Government per school will be approximately Rs. 2,500/-.

About 26 Schools are proposed to be covered during the Fourth Five Year Plan under the scheme and as such a provision of Rs. 0.50 lakhs is proposed for the scheme.

NAME OF THE SCHEME: **GRANT FOR THE CONSTRUCTION OF SCHOOL BUILDINGS AND PLAY GROUNDS AND LOAN FOR THE CONSTRUCTION OF SCHOOL BUILDINGS —**

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	12.00	12.00
Capital	--	5.00	5.00
Grand Total	—	17.00	17.00

(i) Grant for the construction of School buildings.

Many private schools have no suitable premises and they are functioning in residential buildings which have no adequate class rooms and libraries, etc. These buildings are mostly unsuitable for educational Institutions in view of class room area, lighting, ventilation, etc.

The cost of the school building on a moderate scale with class rooms, laboratories, etc. is estimated at Rs. 2.00 lakhs. At the rate of 50% of the estimated cost of the building, as approved by the Government of India the financial liability per school on the Government is Rs. 1.00 lakh. About 10 schools are proposed to be covered under the scheme during the Fourth Five Year Plan and, as such, the provision of Rs. 10.00 lakhs is proposed to be made for the same.

(ii) Grant for the Development of Playgrounds.

The Government of India had already approved the payment of grants for the developments of playgrounds at the rate of Rs. 5,000/- per school, subject to certain conditions. The scheme is already introduced and it is proposed to continue the same during the Fourth Five Year Plan so that the schools that are not benefited so far may get the benefit

of the scheme for the development of their playgrounds which is essential for the promotion of Physical education.

It is therefore proposed to pay grants to some 40 high schools, under the scheme during the Fourth Plan period for which a provision of Rs. 2.00 lakhs is proposed.

(iii) Loans for the construction of School buildings.

Though the Non Government Secondary Schools are entitled for building grants under the Grant-in-aid Code, many of them cannot take advantage of the same as they are not in a position to raise in one stage their share of 50% which is required for the construction of school building. There are also other schools which are not in a position to avail the facility of building grant due to one reason or the other.

There are at present 136 Non Govt. High Schools of which about 75 to 80 are housed in the buildings owned by the schools or by the Society. The other schools are housed in rented premises which are not adequate for the school needs. Even the buildings owned by the School or Societies are sometimes found to be inadequate due to rising of the school population or due to adaption of the old buildings for school purpose.

It is felt that more schools may come up if a loan scheme for the construction of school buildings is approved. The scheme is at present under consideration of the Government of India and as such no details are available. However, a provision of Rs. 5.00 lakhs is proposed for the Scheme on an ad-hoc basis in order to assist some 10 Secondary Schools during the Fourth Plan period.

NAME OF THE SCHEME: GRANT FOR THE CONSTRUCTION OF HOSTELS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	2.40	2.40
Capital	—	—	—
Grand Total	—	2.40	2.40

The Primary Education has made so much progress in this Union Territory that it has covered almost all the hamlets. However, students in some rural areas cannot get the facilities of Secondary Education, as it is not possible to have high schools in all the places. The way for these students to get the facilities of high school education is to have residential schools so that the students from the villages can come to the adjoining schools and carry on their studies by residing in hostels. It is therefore, essential to have certain residential high schools so that the students may get the benefits of Secondary Education.

However, the schools will not be in a position to build hostels unless suitable grants are paid to them by the Government the cost of each hostel is estimated at Rs. 1.60 lakhs, approximately. At the rate of 50% of the cost, the liability on the Government per hostel will be

Rs. 80,000/-. About 3 schools are expected to be benefitted under the scheme during the Fourth Plan period and as such a provision of Rs. 2.40 lakhs is proposed to be made in the Fourth Five Year Plan for this purpose.

NAME OF THE SCHEME: DEVELOPMENT OF AGRICULTURAL EDUCATION IN SECONDARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.50	1.50	2.00
Capital	—	0.50	0.50
Grand Total ...	0.50	2.00	2.50

A) Introduction of Agricultural Bias in Government Rural High Schools.

The Government has started 10 Rural High Schools in this Union Territory. These high schools are providing instruction only in the academic subjects. This type of education cannot help the students in their daily life unless they join as clerks in Government and Non Government Offices or they proceed for College education. College education is not possible for all the students due to financial difficulty. It is also difficult to most of the students coming out from Secondary Schools to find suitable employment in clerical line due to high level of unemployment prevailing in the country. As such, it is essential to give such type of education to the students that may help them in every day life in the rural areas.

It is therefore proposed to introduce Agriculture as one of the subjects in the Rural Areas during the Fourth Five Year Plan. About 10 schools one in each development block in rural areas (including one at Daman and another at Diu) are proposed to be covered under the scheme in the beginning..

The Government will have to provide an Agricultural Graduate in each school in addition to the necessary Class IV Staff. Agricultural land about 5 to 10 acres in area will also have to be acquired. Equipment for agriculture, bullocks, etc., will have to be purchased and bullocks sheds will have to be constructed at each school..

A provision of Rs. 1.50 lakhs is therefore proposed on ad hoc basis to meet the recurring and non-recurring expenditure on the scheme during the Fourth Plan period. Details will be worked out by a Committee of experts to be appointed for the purpose.

B) Payment of grant to Non-Government Secondary Schools for the introduction of Agricultural Bias.

In addition, to the Government Rural High Schools there are also many Non-Government High Schools in the rural areas. These schools also provide education in academic subjects only and it is essential that

some of these schools are also channelled into the field of agricultural education. This cannot be achieved unless the schools are given liberal grants for the same. Due to the importance of agriculture in present education when the insufficiency of food is the draw back of our economy, it is felt that the schools should be given 66²/₃% grants on the recurring and non-recurring expenditure and 50% grants for the purchase of suitable agricultural lands.

A provision of Rs. 1.00 lakh is therefore made for this purpose in the Fourth Plan on ad hoc basis.

NAME OF THE SCHEME: UPGRADING OF SECONDARY HIGH SCHOOL INTO HIGHER SECONDARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	3.00	1.80	4.80
Capital	—	—	—
Grand Total ...	3.00	1.80	4.80

As per the recommendation of the Education Commission, as accepted by the Government the high school stage will be completed at the X standard level when the students will appear for the Public High School Examination. After the High School Stage, the recommended Higher Secondary stage is of 2 years after which there will be generally College education of 3 years duration.

The Commission has also recommended that two higher secondary classes should be located in Secondary Schools, wherever possible, so that more students will be in position to take advantage of the said education. However, as pointed out by the Commission, these two years of higher secondary stage will also form a part of College Education for some years to come so that the student may be in a position to take advantage of the College staff, equipment etc.

It is therefore proposed that in all our Colleges the said Classes should also function for the time being.

In the above context, it is also proposed that about six high schools may be considered for upgrading into Higher Secondary Schools during the Fourth Plan period. The provision of floor space for accommodating Physics, Chemistry and Biology Laboratory as also Library will have to be made by the Schools and they can take the advantage of normal building grants for the construction of the same if they so desire. However, special grants on 100% basis are required to be given for the purchase of equipment which may cost Rs. 30,000/- per school.

The schools will naturally have to appoint more Assistant Masters, Librarian, Laboratory Assistant etc. and the expenditure on their salaries will have to be met by the Government under the rules of maintenance grant for the Non-Government Schools.

The exact work-out for the expenses on the staff will be done later. However, an ad-hoc provision of Rs. 2.00 lakhs has been made under the Fourth Plan Budget.

A provision of Rs. 1.00 lakh is also proposed in the Fourth Five Year Plan for meeting the expenditure of the non-recurring grants under the scheme.

NAME OF THE SCHEME: TRAINING OF SECONDARY TEACHERS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	4.00	4.00	8.00
Capital	—	—	—
Grand Total ...	4.00	4.00	8.00

A) Grant to the existing Secondary Teachers' Training College.

There is only one Secondary Teachers' Training College, conducting B. Ed. and Dip. Ed. Courses in this Union Territory. In addition, there is also one Arts and Science College conducting Dip. Ed. Course.

The Secondary Teachers' Training College is paid grants at the rate of 66% of the admissible expenditure, as approved by Government of India. Payment of grants for the Dip. Ed. Course at the same rate is also proposed.

The annual maintenance grant at the end of the year 1968-69 for the Training College is expected to be Rs. 45,000/-. This will be the committed expenditure during the Fourth Plan Period, and the expenditure above this committed expenditure for the development and expansion of the college will have to be considered as Plan expenditure which is expected to be about Rs. 1.50 lakhs during the Fourth Plan Period.

B) Special grants on deputation of Teachers for Training.

The backlog of untrained teachers in this Union Territory is sufficiently high and until this backlog is removed, the quality of education is not likely to improve to appreciable extent. It is therefore, essential that this backlog is removed as early as possible by training the untrained teachers. However, under the normal grant-in-aid rules, the schools are reluctant to depute their teachers as they have to incur the expenditure on salary of deputed teacher as well as new teacher appointed in the place of deputed teacher.

It is therefore proposed that during the period of deputation, the full salary of deputed teacher be reimbursed by the Government on the condition that this teacher enters into an agreement to serve in this Union Territory for the period of at least 3 years.

The salary of an untrained teacher is approximately Rs. 250/- per month and as such the annual salary per teacher will be Rs. 3000/-.

About 50 (fifty) teachers are proposed to be trained every year under this Scheme at a cost of Rs. 1.50 lakhs and as such the expenditure during the Fourth Plan period is expected to be Rs. 7.50 lakhs. However due to limited ceiling, an amount of Rs. 4.00 lakhs only is proposed.

C) *Grant for opening of an Extension Unit in the Existing Secondary Teachers' Training College.*

The Directorate of Field Services, New Delhi, has introduced a project namely «Extension Unit in Selected Training Colleges». The main purpose of establishing these Units is to introduce the concept of extension in training Colleges so that these Units can carry out a limited but effective programme of in-service education.

The in-service training programme which these units will carry out includes Week-end Workshops, Seminars, Conferences, School Visits, programmes connected with the courses, specific experiments and projects in selected schools library service and organisation of subject-teachers study circles.

The inservice training programme will be carried out by the staff of Training College, but they will require a clerk and a peon to look after the Office Work. More books and equipment will also be required. A Van may also be required to enable the Extension Unit to visit the teachers in the neighbouring schools in order to help in the in-service training programme.

It is proposed to pay 100% grant to the Teacher Training College for the expenditure incurred on the extension centre on the condition that the property of the assets acquired out of these grants will vest in the Government.

It is therefore, proposed that a provision of Rs. 1.00 lakh be made in the Fourth Five Year Plan for the said purpose.

D) *Organisations of Course in Certain Subjects.*

With a view to improving the quality of instruction in secondary schools it is proposed to organise courses for teachers of English, Science, Geography etc. These courses will be organised either for a short term period of about 3 weeks during vacations or on week end days, during the year. The teachers will be initiated into the deeper knowledge of the subject and also into the methods of teaching the subjects. These Courses will be run with the help of Secondary Teachers' Training College and also experienced teachers from Secondary schools and Colleges. Two courses will be organised every year and about 50 teachers will be admitted for each course. The total number of teachers that will be put through these courses during the plan period will about 500. It will be necessary to make the following arrangements for holding these courses:

1. Payment of remuneration to teaching personnel.
2. Stipends to Teachers.
3. Payment on account of Laboratory charges.
4. Contingent expenditure.
5. Remuneration to persons in charge of the course and to class III and Class IV servants.

A sum of Rs. 0.50 lakh is therefore proposed for this Scheme in the Fourth Five Year Plan on ad-hoc basis.

NAME OF THE SCHEME: STRENGTHENING OF THE INSPECTION STAFF FOR
THE INSPECTION OF SECONDARY SCHOOLS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	3.50	0.50	4.00
Capital	—	—	—
Grand Total ...	3.50	0.50	4.00

As a result of enormous expansion in the field of Secondary Education, the inspecting staff is found to be too inadequate. Similarly the Ministerial staff required for the checking of the account of the aided schools is also not sufficient to cope up with the work of the increasing number of schools. The quality of work in the educational institutions has thus suffered for want of adequate inspecting staff.

With a view to improve the quality of Secondary Education, it is proposed to strengthen adequately the inspecting staff, etc.

As per the approved pattern there should be an Inspecting Officer in class II of every 40 Secondary Schools, assisted by 3 A. D. I's. and two accounts clerks. Each Secondary School will have to be inspected and visited by this team once every year.

At present there are about 150 high schools. With the addition of 20 more high schools that may come up during the Fourth Five Year Plan, the total number of high schools will be approximately 175. Thus there will be 5 Inspecting Officers in Class II, 15 A. D. I's and 10 Accounts Clerks. At present there are 3 Inspecting Officers Class II, 6 A. D. I's. As such there is need to appoint 2 more Class II Inspecting Officers, 9 A. D. I's and 10 Accounts-Clerks during the Fourth Five Year Plan.

A provision of Rs. 400 lakhs is therefore proposed in the Fourth Five Year Plan for the appointment of the said staff.

NAME OF THE SCHEME: APPOINTMENT OF SUBJECT INSPECTORS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.80	0.20	2.00
Capital	—	—	—
Grand Total ...	1.80	0.20	2.00

It is proposed to appoint subject Inspectors for guiding teachers of Secondary Schools. The subject Inspectors will be appointed in English, Maths and Science. The beginning will be made with one subject Inspector to be appointed (Science or Maths) in the year 1969-70 and another 4 in the subsequent years of the Fourth Five Year Plan. By the end of the Fourth Five Year Plan the number of subject Inspectors will be 5. The subject Inspectors will be in the grade of Rs. 425-680 (Headmasters Graded). They will work mainly through in service training programme, teachers guidance and production of necessary literature. A provision of Rs. 2.00 lakhs is proposed for the purpose in the Fourth Five Year Plan.

3 — University Education

NAME OF THE SCHEME: ESTABLISHMENT OF GOA UNIVERSITY. (GRAND TO THE BOMBAY UNIVERSITY TO RUN THE POST GRADUATE CENTRE TO BE DEVELOPED INTO A UNIVERSITY IN DUE COURSE) —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	15.00	—	15.00
Capital	—	5.00	5.00
Grand Total	15.00	5.00	20.00

A) *Grant to the University of Bombay for the development of the Post-Graduate Centre.*

The Bombay University had at the request of the local Administration already started a Post Graduate Centre at Panjim. The Centre is at present imparting Post Graduate Education in the subjects of English, Economics, History, Philosophy, Mathematics, Organic, Chemistry, In-Organic Chemistry, Physical Chemistry, Education and French, and Portuguese as subsidiary. Students can also undergo Ph. D Course in English, History and Chemistry at the said Centre by paying 100% grant-in-aid to the University of Bombay.

The Post Graduate Centre is proposed to form the nucleus of the proposed University in Goa, as such, it is essential to add more subjects and also to purchase more equipment, library books, etc. which will ultimately form the assets of University of Goa.

The Centre was started after the end of the Third Five Year Plan. The expenditure incurred by the Post Graduate Centre will be for the development of Post Graduate Education and as such incurred for the development of Post Graduate Education and as such will be incurred under the Plan Schemes. As such a provision of Rs. 15.00 lakhs is proposed in the Fourth Five Year Plan for the said purpose.

B) *Preliminary steps for the establishment of University.*

The Govt. has already appointed a Committee to recommend steps for the establishment of a University in Goa, and its report is awaited. However, as per the present policy and as recommended by the Inspecting Team of the U. G. C., the Centre is to develop ultimately into the Goa University.

The assets acquired by the Post Graduate Centre will ultimately be reverted to the Goa University, and as such there will not be such expen-

diture on the teaching side. However, other steps are required to be taken for the acquisition of suitable land for the location of University Campus, Construction of suitable premises, etc. at the beginning of the establishment of University.

A provision of Rs. 5.00 lakhs is therefore proposed in the Fourth Five Year Plan for the said purpose being Rs. 2.00 lakhs for acquisition of suitable land and Rs. 3.00 lakhs for construction of building.

NAME OF THE SCHEME: OPENING OF A GOVT ARTS AND SCIENCE COLLEGE—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	2.00	2.00	4.00
Capital	—	—	—
Grand Total ...	2.00	2.00	4.00

As the Secondary Education is making progress year by year the enrolment at that stage is increasing tremendously. Consequently, it is felt that there may be need for opening one more College at some locality, such as Ponda, Curchorem or any other place where the student population leaving the Secondary Stage might warrant the opening of the same. The Government therefore proposes to open one such College, if the private enterprise does not come forward.

A token provision of Rs. 4.00 lakhs is therefore proposed in the Fourth Five Year Plan. The details of the scheme will be worked out later on.

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF THE GOVT. ARTS AND SCIENCE COLLEGE, DAMAN.

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	8.00	5.00	13.00
Capital	—	17.00	17.00
Grand Total ...	8.00	22.00	30.00

The Govt. has established an Arts and Science College in Daman during 1966-67 in order to cater to the needs of Higher Education in the said District. The College will be completing 3 years before the beginning of the Fourth Five Year Plan. However, no building have so far been constructed, for the said College which is at present housed in temporary premises. Necessary proceedings for the acquisition of required land for the construction of the College are already started and plans and estimates for the building are also been prepared by the Architect of Gujarat Govt. Necessary steps will have to be taken as soon as Land Acquisition proceedings are completed.

The total expenditure estimated for the acquisition of land, construction of College and Hostel buildings, Principal's and Rector's Bungalows, Servants Quarters, etc. is roughly Rs. 17.00 lakhs.

The break-up is as follows:

		<i>(Rs. in lakhs)</i>
1. Land	...	Rs. 3.00 lakhs
2. Main building	...	Rs. 6.00 lakhs
3. 2 Hostels	...	Rs. 6.00 lakhs
4. Principal's Bungalow	...	Rs. 0.50 lakhs
5. Quarters for Hostels Supt.	...	Rs. 0.75 lakhs
6. Servants Quarters	...	Rs. 0.75 lakhs
Total	...	Rs. 17.00 lakhs

The College will be teaching full Course of B. A. and B. Sc. during the Fourth Five Year Plan and the sum of Rs. 8.00 lakhs is proposed for the payment of all the staff of the said College.

Due to the additional 3rd Year of B. A. and B. Sc. during the Fourth Plan period additional Science Equipment, Libraries, Furnitures, Office equipment, etc. will have to acquired for which a provision of Rs. 5.00 lakhs is proposed under the Fourth Plan period.

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF NON-GOVT. COLLEGES —

		<i>(Rs. in lakhs)</i>		
		Recurring	Non-Recurring	Total
Revenue	...	5.50	9.00	14.50
Capital	...	—	2.00	2.00
Grand Total	...	5.50	11.00	16.50

A) *Grant to the Non-Govt. Colleges for their development and expansion.*

There are at present 4 Non-Government Arts and Science Colleges and one Commerce College in this Union Territory catering to the needs of Higher Education. These Colleges except the Commerce are working from the Third Plan period during which the Annual Expenditure incurred by the Govt. by way of grants was Rs. 4.34 lakhs. This expenditure will be committed expenditure and will be met from Non-Plan funds.

The enrolment at the Collegiate level during the year 1965-1966 was round about 2000 in Arts and Science Colleges only which has grown up to about 3,400 during the year 1967-68. The same is expected to rise to round about 7,500 by the end of Fourth Five Year Plan.

As the Colleges are on the way of the development and expansion they have to after better facilities to the student population and will also have to cater for their rising needs against the increase in enrolment. This will have to be met by giving them development grants at the rate

approved by the Govt. and as such a provision of Rs. 7.00 lakhs is proposed in the Fourth Five Year Plan in the Budget.

B) Grant for the construction of Non-Govt. College Building.

There are at present four Arts and Science Colleges, one College of Education and one Commerce College in this Union Territory. Of these, two Colleges have already constructed their own buildings. The others may come forward for the building grant in order to take up their construction programme.

Under the present rules building grant is admissible at the rate of 25% of the estimated cost of the building. However, the proposal to raise the same to 50% is pending with the Govt. of India. If the same is approved, building grant at 50% of the estimated cost will have to be paid for the Colleges. A provision of Rs. 5.00 lakhs is therefore made in the plan for this purpose.

C) Grants to Non-Govt. Colleges for the construction of Hostels.

The Scheme envisages the payment of grant to Non-Government Arts, Science, Commerce and Training Colleges for the construction of Hostels. The grant will be paid at the rate approved by the Govt.

The provision of Rs. 1.00 lakh is proposed in the Plan for this purpose.

D) Grant for the purchase of Campus, Sites and Playgrounds.

The Govt. of India have already approved the Scheme of payment of grants to Colleges for the development of playgrounds. Under the Scheme a College can be paid maximum of Rs. 10,000/- for the construction of playground, subject to certain conditions. Only one College has so far availed of the Scheme and it is hoped that other Colleges will come forward to take the advantage of the Scheme.

A provision of Rs. 0.50 lakhs is therefore proposed for this purpose for the Fourth Plan period.

E) Loan for the Construction of College/Hostel Building.

Even by the payment of building grant at the rate approved by the Govt. the Managements of the Colleges are not in a position to meet the rest of expenditure in view of their financial difficulties. It is therefore proposed to make provision for loans for College or Hospital buildings which can be repaid in instalments. It is proposed to sanction loans to the Managements of Non-Govt. Colleges at 75% of the approved cost subject to a maximum of Rs. 2.00 lakhs.

A provision of Rs. 2.00 lakhs is made for this purpose.

F) Grant for the Development of Science Education in Non-Govt. Colleges.

Science education plays an important part in the development of a country. It is therefore essential to give fillip to Science Education at the College level. Sometimes the Colleges are not in a position to equip

their laboratories with all the apparatus needed due to their financial stringency. It is therefore proposed to pay special grants to Colleges on 100% basis at the rate of Rs. 25,000/- each for the said purpose.

It is therefore proposed to make a provision of Rs. 1.00 lakh during the plan period.

NAME OF THE SCHEME: ESTABLISHMENT OF INSTITUTE OF LANGUAGES —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total ...	1.00	—	1.00

As a result of Portuguese domination extending over four centuries, Goa has acquired certain standard of Latin culture. This culture or properly speaking the cultural environment, is favourable for the research in Latin languages. Nowadays when the world is becoming narrower and narrower and cultures of different regions/countries are merging towards a common world culture, it is felt that study of different languages may contribute for better understanding between divergent cultural tendencies.

It is therefore proposed to establish an Institute of languages which will try to study culture through languages in order to bring better understanding from one region and the other.

The Bombay University may be requested to establish the said Institute along with the Post Graduate Centre by the payment of suitable grants on 100% basis. The Institute may be taken over by the University in Goa when it is established.

A token provision of Rs. 1.00 lakh is made for this purpose in the Fourth Five Year Plan.

NAME OF THE SCHEME: PRODUCTION OF LITERATURE IN INDIAN LANGUAGES FOR THE USE AS MEDIA OF INSTRUCTION AT THE UNIVERSITY STAGE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.50	—	0.50
Capital	—	—	—
Grand Total ...	0.50	—	0.50

The Education Commission has recommended that the media of instruction at the University stage should ultimately be the regional lan-

guage, though in this Union Territory the medium of instruction is at present English and may continue to be so for some years due to the peculiar nature of the Territory, it is felt that the Bombay University will ultimately revert to the regional languages as media of instruction along with English which will have its own place in University Education in this territory as also in the cosmopolitan cities like Bombay.

The Government of India is offering grants over a period of six years for production of the Text-Books and other needed literature in the modern Indian languages with a view to their development and adoption as media of instruction at the University stage.

Though our colleges may not change to the regional languages immediately, it is felt that the local college professors may also have a change of writing books on various subjects in regional languages for being approved and prescribed by the University of Bombay.

A detailed Scheme will however, have to be worked out in consultation with the Government of India, However, a provision of Rs. 0.50 lakhs is proposed on an ad-hoc basis in the Fourth Five Year Plan for this purpose.

4 — Social Education

NAME OF THE SCHEME: DEVELOPMENT OF CENTRAL LIBRARY —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.10	5.55	6.65
Capital	—	1.00	1.00
Grand Total ...	1.10	6.55	7.65

A) *The Central Library is the only Government Library that is being run in this Union Territory. The said library is located at Panaji and is catering to the needs of the growing number of readers in the capital.*

If the progress of the library with reference to the growth in the number of readers is taken into account it is found that the present premises will not be in a position to cope up with the growing demand of the public. It is therefore, essential that the present building is expanded in order to accommodate the said library. A provision of Rs. 1.00 lakh is therefore made on this account in the Fourth Plan Budget.

With the growth in the number of readers and the changing taste in the reading material, it is also essential to equip the said library with more books, more furniture, and other types of equipment. It is essential, to have Audio-Visual Aids in order to have regular film shows, seminars, group discussions etc. For this purpose, it is also essential to have one film projector, tape recorder, radiogram, which could be used by the library for broadcasting education programmes and other lectures of public interest. A sum of Rs. 2.50 lakhs is therefore provided for this purpose in the Fourth Plan Budget.

The Central Library being located in Panjim cannot cater the needs of the people in the other parts of the Territory. It is essential that the library services in view of the growing importance of reading should reach even to the people situated far in the rural areas. It is therefore, proposed that mobile libraries one each at Bardez, Salcete and Ilhas are to be established by providing each Model Library with a van, one Assistant Librarian, one Library Assistant, one driver and one hamal. The services of mobile libraries are available in the territory of Delhi and it is important that the same should also be introduced in Goa where the percentage of illiteracy is very high. A sum of Rs. 4.00 lakhs is therefore provided for this purpose in the Fourth Plan Budget.

The work of the library will go increasing and as such the staff working in the libraries will not suffice the growing demand, as such it is proposed to create some more posts of Assistant librarian, clerks,

and peons to cope up with the said work. A provision of Rs. 1.00 lakh is therefore made for the said purpose in the Fourth Plan Budget.

B) *Certificate Course in Library Science.*

During the Fourth Five Year Plan it is proposed to conduct Short Term Certificate Course in Library Science at the Central Library. Need for such a regular course is felt due to non availability of trained professional or semiprofessional hands for efficient running of library service in educational institutions, Government departments, etc. With the remarkable educational and technical development demand for library service is increased and without trained personnel in Library Science adequate library service and guidance to readers cannot be made available.

It is proposed for this purpose a recurring expenditure of Rs. 10,000 and non-recurring expenditure of Rs. 5,000/- in a total of Rs. 15,000/- during the Plan period.

NAME OF THE SCHEME: GRANT TO LIBRARIES RUN BY PRIVATE INITIATIVE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total ...	1.00	—	1.00

The development of libraries is an essential feature of Social Education. It is necessary to supply proper literature, books, magazines, etc., to neo-literates and other members of the public to keep them well informed about their role in Democracy, to understand different problems they have to face and to create among scientific and positive outlook which may enable them to understand and solve problems of present complex society. It aims also creating reading habits in general public. During the year 1964-65 with this end in view, 55 libraries were given financial assistance. It is proposed to have during the Fourth Five Year Plan one library in each Panchayat which will be guided and fed by the Taluka libraries. The Panchayats will be incharge of books distributing units will have to be assisted in addition to 13 Taluka libraries and one Central Library. Some of the libraries which, are subsidised by the Government at present are functioning in Panchayats and Taluka Centres. There are also 10 Municipal Libraries catering for town population.

It is necessary to develop these libraries by giving them adequate grant. Some of the Libraries functioning in villages will be selected as Panchayat Libraries for providing them with technical as well as financial assistance. During the Fourth Five Year Plan is is proposed to assist the Panchayat Libraries with a grant of Rs. 500/- each for year and the taluka and Municipal Libraries with a grant of Rs. 1,000/-. All these Libraries will be advised to have adequate staff and uniform rules.

A provision of Rs. 1.00 lakh is made in the 4th plan on account of this scheme.

NAME OF THE SCHEME: PROMOTION OF HINDI AND SANSKRIT —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total ...	1.00	—	1.00

Sanskrit as an ancient and classical language of India and Hindi as an national language require every encouragement for their development and propagation in this Union Territory. Sanskrit requires to be propagated to the masses so that they may come in direct contact with the ancient culture, Sanskrit Patshalas are doing good work in this field and it is therefore proposed to pay them maintenance grant under the present rules. It is also proposed to pay stipends to Sanskrit students studying in Patshalas so that more and more students may come forward for the study of this ancient language.

In Secondary Education Sanskrit can be taken as a second language from VIII Std. onwards. It is necessary to give encouragement to the students at the Secondary State to study this language by providing qualified Sanskrit Teachers in the Secondary Schools. The Schools are reluctant to appoint teachers for many languages due to their financial difficulties and it is therefore proposed that special grants, if possible, on 100% basis should be paid on salaries of Sanskrit Teachers possessing approved Sanskrit qualifications.

The Government of India is already giving some scholarships for the Sanskrit students but the number allotted to this Territory is approximately 10 to 15, which is too little to stimulate the students to study this language. It is therefore proposed to introduce some more Sanskrit Scholarships on the same basis as given by Government of India.

As regards Development of Hindi, it is found that the Central Government is paying grants to Voluntary organisations for certain schemes like Development of Libraries, Publication, Holding of Seminars, Debates etc. However, it is found that no grants are paid by Central Government on the recurring expenditure for running the libraries, Hindi classes, etc. However, it is found that no grants are paid by Central Government present in force.

An amount of Rs. 1.00 lakh is therefore proposed under the Fourth Five Year Plan for the said scheme.

NAME OF THE SCHEME: GRANTS TO OTHER ASSOCIATIONS, SUCH AS JR. RED CROSS ETC. —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.25	—	0.25
Capital	—	—	—
Grand Total ...	0.25	—	0.25

There are some Associations, such as the Jr. Red. Cross, Banasthali Vidyapith, etc., which are doing good work in the field of social welfare and their meritorious services need be acknowledged by payment of

suitable grants. There are also other associations. So a provision of Rs. 0.25 lakhs is proposed under the Fourth Year Plan for the scheme, for the payment of grants to such institutions to carry on with their useful activities.

NAME OF THE SCHEME: ERADICATION OF ILLITERACY —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	8.23	1.50	9.73
Capital	—	—	—
Grand Total ...	8.23	1.50	9.73

Considering the obvious importance of Social Education as an all comprehensive programme of community uplift through community action it is proposed to launch a territory-wide movement in order to cover at least 75% of the population, mainly economically backward section, of interior villages during the Fourth Five Year Plan. For the effective and successful achievements of the aims envisaged in Social Education, the programme will be implemented through various activities.

It is imperative to make every possible endeavour to liquidate illiteracy as expeditiously as funds, personnel and organisational ability would permit. Democracy cannot exist in a Society where vast masses of people are ignorant and incapable of exercising independent judgement. Banishing of ignorance and liquidation of illiteracy are thus significant aspect of Adult or Social Education. But due to the paucity of resources, teaching personnel etc., it is proposed to fix the target of eradication of illiteracy at 75% when it was necessary to wipe out completely this blot. All primary teachers during this period will be engaged in this task and every possibility of using voluntary resources will be explored.

The implementation of the scheme of eradication of illiteracy since 1965 was undertaken by the Education Department through Block Offices which were provided for the Social Education Programme, with one social education organiser and one education clerk. However, since last year the post of Social Education Officer has been abolished and need was felt to undertake directly the implementation of the Scheme.

During the Fourth Five Year Plan, the Drive for eradication of illiteracy is proposed to be conducted in various directions harnessing maximum possible resources, Government and non-Government.

It is proposed to conduct regular classes for illiterate adults through part-time workers and supervisors who besides running classes will also conduct the educational survey of the area selected for 100% literacy, held group discussions meetings, educational film shows and cultural programmes, all direct to attract the illiterate adults to enrol themselves to Literacy Classes and win over their sympathy towards the education.

The part-time workers are to be engaged for eight months in a year year with a fixed remuneration of Rs. 80/- per month.

The supervisor (Social Education) besides conducting the classes are to supervise and coordinate the programme entrusted to part-time

workers in a Taluka. The pay scale attributed to them is Rs. 130-5-160-8-200-EB-8-256-EB-8-280-10-300/-.

The yearwise distribution of the above personnel during the Fourth Five Year Plan and cost is as follows:—

Year	No. of part-time workers	Supervisors	No. of regular centres	No. of illiterates	Cost (In Rs.)
1	2	3	4	5	6
1969-70	100	12	224	5,600	98,560.00
1970-71	150	12	324	8,100	1,30,560.00
1971-72	200	12	424	10,600	1,62,560.00
1972-73	250	12	524	13,100	1,94,560.00
1973-74	300	12	624	15,600	2,36,560.00
				53,000	8,22,800.00

Besides the above regular classes it is proposed to encourage efforts of voluntary educational organisations and individuals by way of Grant to the extent of 100% of the admissible expenditure including expenditure on remuneration of teachers on the basis of Rs. 6/- per adult made literate, cost of material for Literacy Classes, cost of meeting, propaganda held for the purpose of Literacy Drive, stationery etc. For this purpose, it is proposed to provide during the Plan period an amount of Rs. 50,000/- i. e. Rs. 10,000/- per year.

It is also necessary to sustain the literacy by follow up activities in order to avoid relapse of neo-literates into illiteracy. For the follow-up activities an amount of Rs. 1.00 lakh is provided during the Plan period which includes expenditure on production of literature for neoliterates such as remuneration to writers, printing charges etc.

Total provision proposed during the Fourth Five Year Plan for the scheme of eradication of illiteracy is Rs. 9,72,800/-.

If the above Plan is totally approved, it is expected to wipe out the illiteracy from this Union Territory before the end of the Fifth Five Year Plan.

NAME OF THE SCHEME: ESTABLISHMENT OF SCHOOL CUM-COMMUNITY CENTRES —

(Rs. in lakhs),

	Recurring	Non-Recurring	Total
Revenue	0.30	—	0.30
Capital	—	—	—
Grand Total	0.30	—	0.30

It is proposed to start on an experimental basis during the Fourth Plan Period, about 10 such centres in order to find out whether the rural schools can become a nucleus of social and cultural activity in villages with the teacher working as friend and guide of the rural people. So far as the activities of these centres are concerned, the teachers in charge are expected to conduct the same type of activities as in ordinary social education centres, the only difference being that these activities are conducted in off hours of teachers.

As such, a provision of Rs. 0.30 lakhs is proposed to be spent at the rate of Rs. 50/- per month per centre.

5 — Other Educational Programmes

NAME OF THE SCHEME: GRANT TO PHYSICAL EDUCATION BOARD/STATE
SPORTS COUNCIL OF GOA, DAMAN AND DIU —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	2.50	—	2.50
Capital	—	—	—
Grand Total ...	2.50	—	2.50

One of the main factors exerting a strong influence in the very mode of existence of a country is the physical fitness of its inhabitants. Physical fitness may rightly be called the live wire and the barometer of the around health of a Nation, in as much as human activities lean heavily and are largely conditioned by the physical pulse of its subject. No efforts in this sphere of life, however strenuous and copious, may be deemed sufficient, as the ground to be covered in this regard is very wide and brooks no light efforts. So, during the Fourth Plan period, more strenuous efforts are proposed to be made to promote physical education activities.

The Physical Board of this Territory proceeds from pre-liberation times and it is entrusted with the promotion of all the sports activities. The Board conducts every year tournaments in Badmington, Volley-ball, Tennis, etc., and gives grants to clubs and association. It also gives grants to the newly formed Middle and High Schools Sports Association which charges with the responsibility of promoting sports and games among the school children. Apart from this, it gives financial assistance for conducting inter-college tournaments and to the registered gymkhanas and professional associations conducting on all Goa Basis tournaments which are not conducted by the Board itself.

One of the Pre-requisites for effective promotion of physical education in secondary schools is the availability of playgrounds. There are no good playgrounds. In most cases the players convert the paddy fields after the harvestin^g is over in to playgrounds and thus satisfy their craving for games. It is therefore, proposed to acquire suitable sites at the taluka places at least and develop the same into playgrounds, by levelling, fencing, etc. and wherever possible it is proposed to construct small stadia/pavillions.

It is also proposed to establish a Sports Council in this Union Territory on the pattern of such Councils existing in other States and Territories in the country. The creation of such a Council will help considerably to raise the standard of Sports and also to avail of the facilities

and financial help extended by Government of India to Sports Associations through such Councils.

A Total provision of Rs. 2.50 lakhs is made for the purpose of paying grants, to these institutions.

NAME OF THE SCHEME: GRANT TO GOA FOOTBALL ASSOCIATION AND CLUBS FOR PROVIDING SPORTS AND GAMES —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.50	—	1.50
Capital	—	—	—
Grand Total	1.50	—	1.50

Football has taken deep roots in this Territory as is evidenced by the number of clubs who participate in the league matches and the crowd these matches draw. The Goa Football Association which was set up prior to liberation is doing good work to promote Football games. A grant of Rs. 1.50 lakhs is proposed to be paid during the Fourth Five Year Plan to this Association to meet the expenditure towards development of its activity i. e. Rs. 30,000/- per year.

NAME OF THE SCHEME: COACHING SCHEME, REFRESHER COURSES AND SEMINARS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total	1.00	—	1.00

For the proper development of sports and games it is essential to appoint well trained coaches who will coach Secondary School teachers in sports and games such as Football, Volley-ball, Basket-ball, Athletics, etc. It is therefore, proposed to appoint coaches in Foot-ball Volley-ball, Basket-ball or Hockey and Athletics in the pay scale of Rs. 250-10-350-EB-15-500, and also to conduct camp of one month's duration each year of the Fourth Five Year Plan.

In order to give proper guidance to the institutions working in this field in the technique of coaching students in games and sports so that they may have knowledge of the recent trends in the field of physical Education, it is necessary to organise periodical refresher courses, seminars, conferences, etc. It is proposed to organise a seminar every year of the Fourth Five Year Plan.

The total cost of the scheme is estimated at Rs. 1.00 lakh during the plan period.

NAME OF THE SCHEME: CONSTRUCTION OF A STADIUM AND PAVILLION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	5.00	5.00
Capital	—	—	—
Grand Total ...	—	5.00	5.00

At present in this Territory there is no stadium except at Margao. This hampers considerably the sports and games activities. For expansion of the facilities for sports, physical education, etc., it is essential to have more stadia. It is, therefore, proposed to have stadia at Panjim and Mapusa.

The cost of construction a Multi Stadium is estimated at Rs. 15.00 lakhs and it is proposed to pay a grant at 50 per cent of the cost of construction to any voluntary organisation or local body that is Municipalities etc., which may come forward to construct a stadium. The cost of land is estimated at Rs. 1.00 lakh. The total amount of grant to be paid on this scheme works out to Rs. 16.00 lakhs as under:—

i) Grant for construction of stadia at 50 per cent	Rs. 15.00 lakhs
ii) Grant for purchase of land at 50 per cent	Rs. 1.00 lakh
	<u>Rs. 16.00 lakhs</u>

One stadium is proposed to be constructed first either at Mapusa or Panaji and an amount of Rs. 5.00 lakhs has therefore been proposed on an ad-hoc basis for the purpose in the Fourth Five Year Plan. The second stadium may be taken up for construction at a later stage if funds are available.

NAME OF THE SCHEME: RURAL SPORTS SCHEME —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.10	—	0.10
Capital	—	—	—
Grand Total ...	0.10	—	0.10

To promote Physical Education and in order to create liking for it in rural areas of this Territory it is proposed to implement special sports Scheme in rural areas. The Scheme will provide an opportunity to villages to have some sports equipment and other facilities on permanent basis. Thus it will serve as incentive to have some Physical Education activities in rural areas.

This is a Centrally sponsored scheme carrying 50% assistance from the Centre and the programme will be framed as per instruction from the Ministry of Education. An amount of Rs. 0.10 lakhs is proposed therefore as the Administration's share for this scheme for the Fourth Five Year Plan.

NAME OF THE SCHEME: SPORTS TALENT SEARCH SCHEME —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.10	-	0.10
Capital	—	—	—
Grand Total ...	0.10	-	0.10

This Scheme envisages to create liking for Physical Education and also to encourage the attitude for Physical Education in young generation. This scheme caught the very idea of «Catch them young and encourage properly», at proper time which is a very important factor in the field of sports and games.

The programme for this scheme will be framed as per the instructions from the Ministry of Education. The Scheme is Centrally sponsored scheme carrying 50% assistance from the Centre. An amount of Rs. 10,000/- is therefore, proposed as administration's share for this scheme for the Fourth Five Year Plan.

NAME OF THE SCHEME: SPORTS FESTIVAL —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	—	1.00	1.00
Capital	—	—	—
Grand Total ...	—	1.00	1.00

This scheme will provide an opportunity to all youths men and women from both Rural and Urban areas to participate in different games and sports activities at Village level, Taluka level Zonal level and State level and even at National level and develop discipline leadership and above all sportmanship of accepting the defeat and success in the same spirit. A number of tournaments are organised at different level for school boys and girls but the remaining youths from rural areas are completely neglected. The basic idea of this scheme is to organise various games and sports like, kabadi, Kho-kho, volley-ball, foot-ball, Athletics, Folk-dances, etc. for two age groups of below 18 years (Jr. Section) and below 25 years (Sr. Section) for both men and women. A special programme will be prepared on the lines of other states and the same programme can be organised during sports weeks in this Territory as pro-

posed by the Ministry of Education. All the expenditure at all the levels of organising games and sports, lodging and boarding etc., will have to be borne by the State. Hence an amount of Rs. 1.00 lakh is proposed for this scheme in the Fourth Five Year Plan. This includes provision for participation of the Goa Contingent in Autumn and Winter Meets of Schools Games Federation of India.

NAME OF THE SCHEME: NATIONAL SERVICE CORPS AND NATIONAL SPORTS ORGANISATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	4.00	2.00	6.00
Capital	—	—	—
Grand Total ...	4.00	2.00	6.00

These are new schemes recommended for introduction in our Educational Institutions by Ministry of Education Government of India. Till the academic year 1967-68 the NCC was compulsory in all Colleges but from the year 1968-69 it has been made voluntary and those who do not take N. C. C. will have to take compulsorily either N. F. C. or N. S. O. The National Sports Organisation will absorb only some selected talents in the field of Sports, only those who show a special aptitude for Sports and games. The remaining will have to choose either N. C. C. or N. S. C. As N. C. C. Scheme has been implemented in this Territory since Third Five Year Plan whatever expenditure is made on that scheme will now be committed and the entire Scheme of N. C. C. will pass to the non Plan sector and the two new schemes namely N. S. C. and N. S. O. will remain in the Plan sector.

The working details of these 2 scheme will be worked out later and as such, an adhoc provision of Rs. 6.00 lakhs is made for this purpose in the Fourth Five Year Plan.

NAME OF THE SCHEME: GRANTS TO GOA BRANCH OF THE BHARAT SCOUTS AND GUIDES ASSOCIATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	—	1.00
Capital	—	—	—
Grand Total ...	1.00	—	1.00

Scouting and Guiding activities in this Territory were started in 1963-64, by the Goa Branch of the Bharat Scouts and Guides Association. This activity has made good progress in this Territory.

It is proposed to pay grants to the Association for a pavillion the need for which is keenly felt now for organisation of its activities. The Association will organise its activities on a larger scale in the Fourth Plan period so as to cover the majority-if not all — of the middle and high schools in this Territory.

A provision of Rs. 1.00 lakh is proposed to be made in the Fourth Plan for this purpose.

NAME OF THE SCHEME: NATIONAL PHYSICAL EFFICIENTLY DRIVE—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.80	0.20	1.00
Capital	—	—	—
Grand Total	0.80	0.20	1.00

This is a National Scheme aiming at arousing interest and enthusiasm in the people for physical fitness which is a pre-requisite to the attainment of a sound standard of living. Its procedural features comprise physical efficiency tests linked with prescribed standards of achievements.

This Drive was started in this Territory in 1963-64, and the increasing number of participants from year to year bears ample testimony to the favourable response elicited from students.

The Year-wise number of participants is as follows: —

1963-64	646
1964-65	1449
1965-66	6035
1966-67	9794
1967-68	10588

The Drive is being conducted by an Assistant Physical Education Officer with the following Staff:

1. Steno-typist	1
2. L. D. C.	1
3. Peon	1

However, this staff is not sufficient for the ever increasing activity of the drive. It is therefore proposed to create one new post of L. D. C. and one of the peon, during the Fourth Plan period.

A provision of Rs. 1.00 lakh is therefore proposed in Fourth Plan for the same including the general expenditure for conducting the Drive and for the purchase of equipment worth Rs. 0.80 lakhs.

NAME OF THE SCHEME: ESTABLISHMENT OF INSPECTORATE OF PHYSICAL EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.90	0.10	1.00
Capital	—	—	—
Grand Total ...	0.90	0.10	1.00

The Govt. is taking every pain to see that the Physical Education in the Territory does not suffer. The importance of physical education in the all round development of the individual has been recognised throughout the country and as such, it is essential to see that the same makes progress on proper lines.

There is no Inspecting Officer in the Directorate for the inspection of Physical Education at present. So far, the work of the inspection has been carried on by the Asst. Physical Education Officer, who is entrusted with the National Physical Efficiency Drive, and by the Liaison Officer of the Central Govt. looking after the N. D. S. Scheme. With the expansion of N. P. E. Drive, the Asst. Officer will not be able to devote his energy for the said inspection and with the transfer of N. D. S. Inspectors to the local Govts., the work of the liaison officer will also not be available.

It is therefore essential to create a Wing of Inspection of Physical Education in the Inspectorate under Dy. Director of Secondary Education with one Dy. Inspector and two A. D. I.'s in the following scale so that these Officers may be in charge of inspection of the Physical Education.

- | | | |
|--|---|--------------|
| 1. Dy Inspector for Physical Education | 1 | Rs. 425-680. |
| 2. Asst. Dy. Education Inspector | 2 | Rs. 250-425. |
| 3. Peon | 1 | Rs. 70-85. |

A provision of Rs. 1.00 lakh is therefore proposed in the Fourth Five Year Plan for the said purpose.

NAME OF THE SCHEME: LABOUR AND SOCIAL SERVICE CAMPS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.00	0.50	1.50
Capital	—	—	—
Grand Total ...	1.00	0.50	1.50

This is a Centrally Sponsored Scheme carrying 100% assistance from the Centres and the objectives of the schemes are to break the resistance to manual work among the educated classes, to develop among students a

spirit of discipline and corporate action to acquaint them with conditions in economically backward areas and to give them some practical training in citizenship by running the camps on a self-help basis. The camps will be conducted as per the programme approved by the Ministry of Education. The rules of the camps are as follows:

Strength — 25 to 50 members

Duration — 10 to 21 days.

Rate of grant:

- i) Rs. 2/- per camper per day for food.
- ii) Rs. 0-50 per day per camper as incidental charges, and
- iii) T. A. as per rules. The approximate requirements of funds for 50 such camps during the Fourth Five Year Plan will be Rs. 1.50 lakhs and hence the provision for the same may be made here and the same amount will be received from the Centre as it is a Centrally Sponsored Scheme.

NAME OF THE SCHEME: PROMOTION OF YOUTH WELFARE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.25	—	0.25
Capital	—	—	—
Grand Total ...	0.25	—	0.25

This scheme provides an opportunity to youths to exhibit their hidden talents and utilise their energies in a proper way by arranging Youth welfare Seminars/Conferences, Excursion tours and camps for youth leaders. This programme is based on as per the recommendations of the Ministry of Education for the development of Physical Education Sports and Games and Youth Welfare Programmes in the State Sector. Hence provision for Rs. 0.25 lakhs is proposed in the Fourth Five Year Plan.

NAME OF THE SCHEME: ESTABLISHMENT OF TRAINING INSTITUTE FOR PHYSICAL EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.95	0.55	1.50
Capital	—	—	—
Grand Total ...	0.95	0.55	1.50

The Physical Education is one of the important aspects of the present day general education and no education is complete without giving proper

fillip to the same at the Secondary stage. The Physical Education has attained more importance at the secondary stage since the introduction of N. F. C. programme by the Govt. of India.

It is however found that there are no sufficient teachers trained in imparting physical education and due to this deficiency the schools are unable to implement the programme to their entire satisfaction. It is therefore essential to train suitable teachers for implementing the programme of physical education and to reorient others who are already trained to the N. F. C. programme.

It is therefore proposed to start a Institute of Physical Education with one Principal, 2 Instructors and other staff as shown below:

1. Principal	...	...	1	in the scale of	Rs. 325-575
2. Instructors	...	...	2	»	Rs. 250-470
3. U.D.C.	...	...	1	»	Rs. 130-300
4. L.D.C.	...	...	1	»	Rs. 110-180
5. Peons	...	...	2	»	Rs. 70-85

A sum of Rs. 0.95 lakhs is proposed to be provided for this purpose in the Fourth Five Year Plan.

The Physical Education Institute will naturally require sufficient equipment for teaching the physical education activities. A sum of Rs. 0.55 lakhs is provided for the purpose as also to meet the contingent expenditure for the Institute.

NAME OF THE SCHEME: EXPANSION OF THE DIRECTORATE OF EDUCATION —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	7.60	0.70	8.30
Capital	—	4.35	4.35
Grand Total ...	7.60	5.05	12.65

A) *Appointment of Additional Staff in the Directorate of Education.*

With a rapid expansion of education and introduction of new developmental schemes in view of the recommendations of the Education Commission and with a view to keep up pace of development with other States, urgent need is felt for further strengthening of the Directorate of Education.

The Director of Education as Head of the Department and Additional Secretary to Govt. has not only to look after the development of various fields of education but has also to exercise financial and administrative powers delegated to him. He has, besides, to coordinate all the activities not only of general education but also of Technical Education. It is the-

refore felt that he should be assisted by one Personal Assistant. As such it is proposed to create a post of P. A. to the Director of Education in the pay scale of Rs. 475-900 in the Fourth Five Year Plan.

With the increase in the strength of the Directorate and due to declaring the Zonal Officers as Drawing and Disbursing Officers for all the Govt. Primary Teachers, the Accounts Section has over burdened with the work of not only of the accounts as also of keeping proper control over the three Zonal Offices. The present staff cannot cope up with the work and with the further development during the Fourth Five Year Plan, the Accounts Section will be badly in need of more hands in order to attend to this work efficiently. It is therefore proposed to create the following posts during the Fourth Five Year Plan: —

1. Accountant — 1 in the pay scale of Rs. 210-425.
2. U.D.C. — 1 in the pay scale of Rs. 130-300.
3. L.D.C. — 2 in the pay scale of Rs. 110-180.

The work of the other Sections in the Directorate, viz, Establishment Grant-in-aid, Primary, Technical, etc, is also increasing day by day and it is therefore felt that following staff will be required for the effective running of the establishment.

It is therefore proposed to create the following posts during the Fourth Plan period.

1. U.D.C. — 5 in the pay scale of Rs. 130-300.
2. L.D.C. — 5 in the pay scale of Rs. 110-180.

A Budget provision of Rs. 3.00 lakhs is therefore proposed for the said purpose in the Fourth Plan.

B) *Expansion of Zonal Offices.*

The payment of the Government Primary Teachers was being effected by the Block Development Officers at each Taluka upto the end of the year 1967-68. The same work has now been transferred to the 3 Zonal Offices located at Mapusa, Panaji and Margac, which are looking after the payment of primary teachers working in 4, 3, and 4 talukas respectively. So similarly, the provision of Midday Meals, Eradication of Illiteracy, etc. which were being looked after by the B.D.O.'s have also now been entrusted to the Zonal Offices. Thus the work of 10 (ten) B.D.O.'s has been transferred to 3 Zonal Offices as a result of which, the workload of each Zonal Office has tremendously increased. Consequently more staff is needed in each Zone in order to cope up with the work, so as to administer the various schemes effectively. It is therefore proposed to create the following staff in each Zone during the Fourth Plan period: —

Designation of post	No. of posts	Scale
1. Head-Clerk-Cum-Account	... 1	Rs. 210 450.
2. Cashier ... ..	... 1	Rs. 130-300.
3. U.D.C. ... ..	... 1	Rs. 130-300.
4. L.D.C. ... ..	... 2	Rs. 110-180.
5. Peon ... ..	... 1	Rs. 70-85.

The sum of Rs. 2.50 lakhs is therefore provided in the Fourth Plan Budget.

With the expansion of the Zonal Offices and appointment of more staff, there will be dearth of furniture and other equipment. It is therefore, proposed to purchase more equipment and furniture for which a provision of Rs. 0.15 lakhs is made in the Fourth Five Year Plan.

All the three Zonal Offices are at present located in the rented premises, which are not sufficient for the staff in view of the increased activities that are being managed by the Zonal Offices.

It is therefore proposed to acquire suitable piece of land and to build suitable premises during the Fourth Plan period.

As such a provision of Rs. 2.35 lakhs is proposed in the Fourth Five Year Plan for the said purpose.

C) *Establishment of Vocational Guidance Bureau.*

The importance of Vocational Guidance has now been accepted by all the educationists. Unless the students are properly channelled through the courses for which they have special aptitude, the question of un-employment will not be solved. It is therefore essential to give proper guidance to the students to choose their careers. Need is therefore felt of establishing Vocational Guidance Bureau in this Territory.

The following staff is proposed to be created for the same during the Fourth Plan period.

Designation of post	No. of posts	Scale
1. Vocational Guidance Officer	1	Rs. 425-680.
2. Counsellor	1	Rs. 250-470.
3. Technical Assistant	1	210-425.
4. U.D.C.	1	Rs. 130-300.
5. L.D.C.	1	Rs. 110-180.
6. Peon	1	Rs. 70-85.

A sum of Rs. 1.00 lakh is therefore provided for the purpose in the Fourth Plan period.

D) *Expansion of Evaluation Unit and creation of a Examination Cell attached to the same.*

As per the recommendations of National Institute of Education New Delhi, a State Evaluation Unit is to be set up in this Union Territory, in order to

(i) locate the weakness in the present system of Public examinations and to find ways minimise the same.

(ii) develop better techniques and tools of examinations.

(iii) improve the system of examinations such that they may lead to improvement in evaluation and.

(iv) deal with other problems pertaining to education.

Some skeleton staff is already appointed. However, the following staff will be essential during the Fourth Five Year Plan. in order to enable the Unit to work on more scientific lines: —

Designation of post	No. of posts	Scale
1. Director of Evaluation	1	Rs. 475-900
2. Technical Assistant	1	Rs. 210-425
3. U. D. C.	1	Rs. 130-300
4. L. D. C.	1	Rs. 110-180
5. Peon	1	Rs. 70-85

A provision of Rs. 1.00 lakh is proposed in the Fourth Five Year Plan for the said purpose.

It is also proposed to attach an Examination Cell to this Unit in order to help the Officer in charge of examinations to different types of examinations conducted by the Department. At present the Department is conducting Primary Teachers Certificate Examination and Primary School Certificate Examination. More examinations like Hindi Shikshak Sanad will have also to be conducted by the Examination Unit.

The following staff is therefore proposed for the same Unit:

Designation of post	No. of posts	Scale
1. U. D. C.	1	Rs. 130-300
2. L. D. C.	1	Rs. 110-180
3. Peon	1	Rs. 70-85

A sum of Rs. 30,000 is herefore proposed in the Fourth Five Year Plan.

E) *Expansion of Statistics/Survey and Planning Unit.*

The Statistics/Survey and Planning Unit has already been established in this Directorate to collect the educational statistics which are essentially required for the future planning in Education. It has also to collect statistics form A' in order to furnish to the Ministry of Education, Government of India, and also conduct the work connected with All India Educational Survey. The success of the prospective planning depends largely on the proper statistical data. It is therefore essential to have fulfilled Cell in this Directorate in order to cope up with the ever increasing work in Statistics and Planning.

The present Statistical Section is manned by one Statistical Officer, 1 Jr. Investigator, and two Computers. There are besides two Assistants in charge of work related to Planning and Survey. However, more staff will be essential specially to work in Zones. They will have to collect data pertaining to each Taluka in the Zone and submit it duly corrected to the Statistical cell in the Directorate. The Field workers will collect the data in

each Zone and submit to the Asst. Staistical Officer. As such it is proposed to create the following posts during the Fourth Plan period: —

1. Asst. Statistical Officer in the pay scale of Rs. 210-380 (with Headquarters in 3 Zones) ...	3	Rs. 210-380
2. Field Workers... ..	5	Rs. 110-180

A sum of Rs. 0.50 lakhs is therefore proposed for the scheme under the Fourth Five Year Plan.

F) *Construction of an additional Block to the present building.*

The Directorate of Education is functioning on the first floor of «Massano de Amorim» Primary School. However, the present accomodation is not sufficient for the staff which has substantively increased due to the need of implementation of the varicus plan schemes as also due to the expansion of education in all its aspects. It is therefore proposed to construct one more wing to the said building and a provision of Rs. 2.00 lakhs is made for the purpose.

NAME OF THE SCHEME: IMPROVEMENT OF TEXT BOOKS AND CURRICULA—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.40	0.10	0.50
Capital	—	—	—
Grand Total	0.40	0.10	0.50

The Govt. has established a Text-Book Committee for the approval of School Text-Books since 1965-66. The Text-Book Committee has started functioning and has approved certain books at the primary stage.

In view of the recommendations of the Education Commission it is however essential to upgrade the syllabus as is being done in the neighbouring State of Maharashtra, since our pattern of education will be on the same lines as that of Maharashtra, the Text-Books approved and published by the Text-Book Bureau of the said State will also be useful for our schools. However, in order to bring some regional factors regarding this Union Territory in the Text-Books to be prescribed for the schools, some supplements will have to be published.

The members of Text-Books Committee and the selected Text-Book Writers will have to be paid necessary allowances for their meetings as also for writing the necessary supplements.

A provision of Rs. 0.50 lakhs is therefore made for this purpose during the Fourth Five Year Plan.

NAME OF THE SCHEME: **HOLDING OF DEPARTMENTAL SEMINARS FOR THE IMPROVEMENT OF EDUCATION —**

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.20	0.05	0.25
Capital	—	—	—
Grand Total ...	0.20	0.05	0.25

It is necessary to acquaint headmasters of the Govt. and Non-Govt. Secondary Institutions, Training Colleges and other Educational Institutions, with problems of Educational Administration, Office procedures, maintenance of proper accounts and respective registers etc. It is also necessary to acquaint the teachers of various institutions with the latest development in the field of Education, new trends in educational system etc.

Therefore, it is sometimes necessary to hold seminars for the above purpose.

In this connection, it is always found advantageous to invite some experts from other states to take part in such seminars both officials and non-officials so that the view and ideas can be exchanged for the betterment of education.

It is therefore proposed that an allocation of Rs. 0.05 lakhs be provided in the Budget of the Fourth Five Year Plan in order to meet the expenditure towards such seminars, including T. A. and D. A. of officials and non-officials, both from this Territory and from other States invited for the purpose.

NAME OF THE SCHEME: **DEPUTATION OF OFFICERS OF THE DIRECTORATE OF EDUCATION TO OTHER STATES FOR TRAINING —**

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.25	—	0.25
Capital	—	—	—
Grand Total ...	0.25	—	0.25

In order to keep upto date the Educational Administration of the Territory, it is essential that the officers are kept in touch with the recent trends in Educational Administration. Similarly the inspecting officers are also required to be kept in touch with the new development in the supervision of schools. As such, it is essential that they should be deputed to other states for attending seminars, re-orientation courses, etc., held with the above objective.

The Govt. of the neighbouring states are already requested to allow the officers of this territory to attend re-orientation courses seminars etc.,

run by them and these officers, when deputed for such courses, will have to be paid stipends as also T. A. and D. A. as admissible to them as per rules. A provision of Rs. 0.25 lakhs is therefore proposed for this purpose in the Fourth Plan Budget.

NAME OF THE SCHEME: AWARD OF SCHOLARSHIPS AND STIPENDS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	8.25	—	8.25
Capital	—	—	—
Grand Total ...	8.25	—	8.25

A) *Award of scholarship to Economically Backward Class Students.*

In order to help the E. B. C. pupils to secure education, the Govt. has instituted E. B. C. scholarships at all the stages of School education. The rates of scholarships are Rs. 50/- per year for Primary and Rs. 15/- per month at the Secondary Stage and Rs. 50/- per month at the Collegiate level.

At the end of the Third Plan there were 340 scholarships at the Primary level, 250 scholarships at the Secondary level and 100 scholarships at the College level. The expenditure on these scholarships will be committed expenditure and as such will be met from the Non-Plan expenditure.

More scholarships at the Primary and Secondary level are instituted or proposed to be instituted in order to cover more E. B. C. students, while at the College level the same scholarships will be discontinued, as Govt. of India Scholarships for E. B. C. students are being introduced from the year 1968-69.

During the Fourth Five Year Plan about 500 more scholarships at the Primary level and 400 at the Secondary level are proposed to be instituted in addition, to the scholarships already existing at the Third Five Year Plan. As such, a provision of Rs. 5.00 lakhs is made for this purpose in the Fourth Plan period.

B) *National Scholarships.*

This scheme is meant to help academically intelligent pupils, handicapped by poverty to pursue higher studies. It was started during the year 1962-63 and about 31 students are at present getting the benefits of the same at the cost of Rs. 25,000/- during the year 1967-68.

The scheme is to be continued during the Fourth Plan period on the same basis as in the previous years and as such a provision of Rs. 1.25 lakhs is made for this purpose, in the Plan budget.

C) *National Loan Scholarships.*

The Government of India have instituted a scheme of National Loan Scholarships so that the intelligent but financial backward students may

take advantage of the same in order to derive the benefits of educational facilities. The scholarship is being awarded as per the rules and regulations of the Government of India.

During 1967-68, 60 students were benefitted under the scheme at a total cost of Rs. 55,000/- of which Rs. 25,000/- being committed expenditure was incurred from Non-Plan budget.

The scheme is proposed to be continued during the Fourth Plan period so as to cover more students, and as such, a provision of Rs. 1.75 lakhs is made for this purpose in the Fourth Plan Budget.

D) Merit Scholarships to the Children of Primary/Secondary School Teachers.

The Government of India has introduced the scheme of giving Merit Scholarships to the children of Primary and Secondary School Teachers serving in this Union Territory in order to assist their children to pursue their Post-Matric Studies. The scheme was first introduced in the Territory in the year 1963-64 and has been continued ever since. 8 students were being benefitted under the scheme during the year 1967-68.

The scheme is being continued during the Fourth Plan period on the same basis as laid down by Government of India and as such a provision of Rs. 0.10 lakhs is made for its expansion during the Plan period, in order to extend the benefit to more students.

E) Merit scholarships in residential schools.

The Government of India is having a scheme of giving merit scholarships in residential schools. There are no residential schools in this Territory approved by Government of India for this purpose and as such students willing to go for such schools will have to go outside this Territory.

It is therefore proposed to institute some scholarships in the residential schools on the same lines as approved by Government of India. The details will be worked out in due course of time.

However, a token provision of Rs. 0.05 lakhs is made for this purpose, in the Fourth Five Year Plan.

F) Merit Scholarships in Central and Sainik Schools.

There are no Central or Sainik Schools in this Union Territory. However, children from this Union Territory are interested in seeking admission to these schools, as it is found that during the last 2 or 3 years the students are appearing for the preliminary entrance examination in Sainik Schools conducted in this Territory. However, though some of the students are really bright they cannot afford to seek admission in the schools due to high cost of living in those schools.

It is therefore proposed to institute 2 or 3 scholarships during the Fourth Five Year Plan on the same lines as instituted by the Government of Maharashtra.

The details of the award of scholarships will be worked out later. However, a token provision of Rs. 0.10 lakhs is made for this purpose in the Fourth Five Year Plan.

6 — Technical Education

NAME OF THE SCHEME: DEVELOPMENT AND EXPANSION OF ENGINEERING COLLEGE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	12.00	10.00	22.00
Capital		50.00	50.00
Grand Total ...	12.00	60.00	72.00

The Government of India has already approved the establishment of Engineering College in Goa with a reduced intake of 60 pupils. The College has started functioning from June 1967 and has added the II Year of Engineering, from June 1968. Subsequent years of the Engineering Courses will have to be added during the Fourth Plan period. This will necessitate the appointment of additional staff, besides the staff already serving and as such a provision of Rs. 12.00 lakhs is made for the payment of the salaries during the Fourth Plan period.

The College has already acquired furniture and equipment worth more than Rs. 9.00 lakhs. However, when the College is shifted to its own premises more furniture will be required. Additional equipment will also have to be purchased as more years of Engineering Course are added and this additional equipment will be worth about Rs. 17.00 lakhs. However, a provision of Rs. 10.00 lakhs only is made for this purpose during the 4th Plan because of limited ceiling of the Total amount available for Educational Plan.

Though the College already started functioning, it is at present housed in the Government Polytechnic, Panaji. The Plans and Estimates for its permanent location at Farmagudi are already prepared and are awaiting the approval of Expenditure Finance Committee of Government of India—Ministry of Education. The cost of the College building including hostel, quarters for Principal and Rector, Workshops and laboratories is roughly calculated at Rs. 57.00 lakhs taking into account the reduced intake from 120 to 60 against the previous estimate of about Rs. 68.00 lakhs for an intake capacity of 120 students. However, a provision of Rs. 50.00 lakhs only is proposed during the 4th Five Year Plan for the same reason as mentioned above. Thus, the total Plan outlay proposed for the Engineering College during the Fourth Plan period is Rs. 72.00 lakhs as against approximate amount of Rs. 86.00 lakhs of estimated cost of the entire project in the Fourth Five Year Plan.

Expenditure so far incurred on the project has not been included in this estimate. The deployment of the same is as follows:

Recurring	Rs. 4.94 lakhs
Equipment	Rs. 9.00 lakhs
Other non-recurring (furniture contingencies etc.)	Rs. 2.05 lakhs
Total:	Rs. 15.99 lakhs

NAME OF THE SCHEME: DEVELOPMENT OF GOVT. POLYTECHNIC, PANJIM—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	5.50	8.00	13.50
Capital	—	11.50	11.50
Grand Total	5.50	19.50	25.00

The Govt. Polytechnic which is established after the liberation by upgrading former «Escola Comercial e Industrial de Goa» is at present offering Diploma Courses in Civil, Mechanical and Electrical Engineering, with an annual intake of 120 pupils.

It is however found that these 3 stereotyped Courses are not offering enough facilities for the present generation. In view of grave unemployment among the engineers as also among the graduates it is essential to divert large number of S. S. C. E. passed students to other courses in Engineering.

It is therefore proposed to start some of the following courses under the Civil, Mechanical and Electrical Engineering, in order to divert the enrolled students to other branches of Engineering and Technology.

1. Structural Engineering.
2. Public Health Engineering.
3. Refrigerating and Air Conditioning.
4. Mining Machinery.
5. Radio Engineering.
6. Industrial Electronics.

The duration of each of the course will be for 3 years after S. S. C. E. The Course will have common studies upto first two years under the respective major branches and there will be diversification only in the third year.

For each of the Course, the staff required will be two lecturers, one demonstrator, one Laboratory Mechanic and two Hama's. The expenditure per course during the Fourth Five Year Plan for the payment of the staff will be approximately Rs. 5.00 lakhs and Rs. 0.50 lakhs will be required for contingencies.

A provision of Rs. 5.50 lakhs is therefore proposed under the scheme for the recurring expenditure.

As the diversified branches are added more equipment will be required, as per the branch to be started as detailed below: —

1. Structural Engineering	Rs. 0.50 lakhs.
2. Public Health Engineering	Rs. 1.00 lakh
3. Refrigeration & Air Conditioning ...	Rs. 1.50 lakhs.
4. Mining Machinery	Rs. 2.00 lakhs.
5. Radio Engineering	Rs. 0.60 lakhs.
6. Industrial Electronics	Rs. 0.65 lakhs.

As only some of these branches will be started during the Fourth Plan period, a provision of Rs. 5.00 lakhs is proposed in the Fourth Plan Budget.

The Polytechnic building is already constructed and Hostel is also under construction. However, other construction like Principal's Quarters, Rector's Quarters, the Servants Quarters, Staff Quarters, etc. are required to be constructed, during the Fourth Plan period. Land for construction of suitable playground is also required to be acquired. A provision of Rs. 11.50 lakhs is therefore proposed for this purpose.

As such a provision of Rs. 25.00 lakhs is proposed for the purpose in the Fourth Plan Budget for the Development of the Govt. Polytechnic, Panaji.

NAME OF THE SCHEME: STARTING OF A BOOK BANK AT GOVT. ENGINEERING COLLEGE AND GOVT. POLYTECHNIC —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.20	—	0.20
Capital	—	—	—
Grand Total	0.20	—	0.20

It is a well-known fact that text books prescribed in Polytechnics and Engineering Colleges are costly with the result that quite a good number of students cannot afford to purchase them. It is proposed to purchase text books for 20 per cent of students and loan them to students at a nominal fee of Rs. 10/- per annum. A set of books for an Engineering College and a Polytechnic is estimated to Rs. 150/- and Rs. 100/- respectively. The total enrolment of the College and the Polytechnic will be of the order 180 and 540 in the Fourth Plan period.

The total cost involved in the purchase of 36 sets for Engineering College and 108 sets for the Polytechnic will be Rs. 16,200/-. In addition 10 almirahs will be required to keep these books the cost of each almirah is expected to be Rs. 350/-.

Thus the total cost of the Scheme will be about Rs. 0.20 lakhs and as such a provision of Rs. 0.20 lakhs is proposed in the Fourth Five Year Plan.

7 — Cultural Programme

NAME OF THE SCHEME: ESTABLISHMENT OF KALA ACADEMY —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	10.55	5.00	15 55
Capital	—	—	—
Grand Total	10.55	5.00	15.55

Objectives: — It is a well known fact that in Goa there is a lot of creative talent in the field of music and it has produced some of the best musicians both vocal and instrumental. There is also a long tradition about the Dramatic Art to the extent that Goa may be considered as the birth place of Marathi Dramas, about 1,200 to 1,500 plays are staged in Goa on different occasions in a year. Taking all this into consideration, the Administration of this Territory proposed to reorganise the existing Music Academy (School of music established during the Portuguese regime to train students mainly in Western Music) and establish a Natya Academy for promotion and developmet of Dramatic Art. However a composite scheme of Kala Academy (covering both the activities and other fine arts also was framed on suggestion of Government of India, and submitted for approval. The Government of India have agreed in principle to the establishment of such a Kala Acadmy to cover all the cultural activities, such as music, dance, drama, literature, fine arts etc.

The Kala Academy aims at promoting and developing Art in its different aspects. Its objectives is to encourage the local talent, trained the artists on modern scientific lines, provide with facilities of education in music, dance, drama, fine arts etc. and assist institutions to undertake different cultural activities.

Financial implication: It is proposed to construct an adequate building wherein all the activities may be accomodated with a theatre and centres for training in Music, Dance, Drama, Literature and Fine Arts. A Non-recurring expenditure of Rs. 5.00 lakhs is proposed for this purpose.

For other activities the recurring and non-recurring expenditure is proposed as under: —

	<i>(Rs. in lakhs)</i>
1. Staff and Contingencies	2.75
2. Scholarships	0.80
3. Financial help to indigent artistes	0.50
4. Purchase of furniture, musical instruments, stage material etc.	1.00

5. Grants to Organisations devoted to Music, Dance, Drama, Literature & Fine Arts ...	2.50
6. Music, Dance and Drama Festival ...	2.00
7. Literary Seminar, debates, Centres for study of languages and Literature ...	1.00
Total	10.55

As such a provision of Rs. 15.55 lakhs is proposed during Fourth Plan period, the details of which are shown below:

<i>(Rs. in lakhs)</i>	
1) Recurring expenditure towards Grant ...	10.55
2) Non-recurring expenditure towards Grants for constructions etc.	5.00
Total	15.55

Physical targets:— It is proposed to start an Indian Music and Dance Wing. It is expected to admit during the plan period 150 students for music and dance, 25 scholarships will be awarded. 25 indigent artistes will be given financial assistance. In addition to school of Music (present Music Academy) and Natya Academy run directly by the Kala Academy, 10 to 12 institutions will be given grant and 3 study centres of Languages and Literature will be established besides holding Literary Conferences and Seminars.

NAME OF THE SCHEME: **DEVELOPMENT AND EXPANSION OF ARTS AND CRAFTS EDUCATION —**

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.40	0.10	0.50
Capital	—	—	—
Grand Total	0.40	0.10	0.50

Arts and Crafts is one of the important subjects at the Secondary Stage, which is required to be taught in the schools, in order to foster the creative talent in the young pupils, who may ultimately blossom into budding artists. Goa is a land of talent in this field, but due to lack of facilities in the development of this creative art it is lagging behind.

This difficulty has arisen because of lack of qualified teachers, to teach the arts and crafts. It is therefore, proposed to establish a school of Arts and Crafts with one department of drawing and painting and one department of teacher-training so that these departments may be able to coach the pupils not only in drawing and paintings but also ultimately to train them for such teacher courses as D. T. C.

The details of the scheme will have to be worked out. However, a token provision of Rs. 0.50 lakhs is made for this purpose in the Fourth Plan Budget on ad hoc basis.

8 — Labour and Labour Welfare

NAME OF THE SCHEME: EXPANSION OF INDUSTRIAL TRAINING INSTITUTE —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	4.18	4.75	8.93
Capital	—	19.40	19.40
Grand Total ...	4.18	24.15	28.33

Upto the year 1965-66 there was no Industrial Training Institute in Goa, which could train Craftsmen in different trades. A beginning has now been made by establishing one Industrial Training Institute, which is at present housed temporarily in the old Government/building at Panaji. Polytechnic.

With the advancement of industrialisation in this Union Territory in the wake of establishment Textile Factories, Pelletisation Plants, Fertilizer Factory, Industrial Estates at Corlim and Margao and acute shortage of skilled Craftsmen will be felt in the near future. It is therefore proposed to expand the activities of the Industrial Training Institute.

The trades mentioned below with strength for batch and total capacity are already started: —

Sr. No.	Course	Strength per batch	Capacity with admissions every nine months		Total
			First shift	Second shift	
1.	Fitter	16	16	16	32
2.	Turner	12	12	12	24
3.	Welder	12	12	12	24
4.	Stenography	16	16	16	32
5.	Tailoring & Cutting	16	16	16	32
6.	Electrician	16	16	16	32
	Total	88	88	88	176

It is proposed to start the following trades during the Fourth Five Year Plan, if there is sufficient demand for the same:—

Sr. No	Course	Strength per batch	Capacity with admissions every nine months		Total
			First shift	Second shift	
1.	Carpentary/Wireman	16	16	16	32
2.	Her composition & proof reading/Refrigeration and air conditioning	16	16	16	32
3.	Motor Mechanic	16	16	16	32
4.	Machinist	12	12	12	24
5.	Mechanic (Instrument)	16	16	16	32
	Total	76	76	76	152

The engineering courses are of 18 months duration while the non-engineering trades (Stenography, Compositor and Tailoring and Cutting) are of 12 months duration.

Thus there will be total intake of 160 students for one shift and 320 students in all when above stated courses are started at the Industrial Training Institute during the Fourth Five Year Plan.

The approximate Non-Recurring and Recurring expenditure during the Fourth Five Year Plan will be as follows:—

A — Non-Recurring Expenditure:

	(Rs. in lakhs)
a) Main building	10.52
b) Hostel	5.00
c) Staff Quarters	2.30
d) Cycle stand (200 cycles)	0.08
e) Development of land, approach roads, fencing etc.	1.50
Total	19.40

B — Equipment	Rs. 4.50
Furniture	Rs. 0.25
Total	4.75

C — Recurring @ Rs. 900/- per student when the institution is fulfilled	2.88
Total	27.03

A total provision of Rs. 28.33 lakhs is proposed to be made during the Fourth Five Plan for this purpose.

Apprenticeship Training Scheme:

NAME OF THE SCHEME: APPRENTICESHIP TRAINING UNDER THE APPRENTICESHIP ACT, 1961 —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	4.70	—	4.70
Capital	—	—	—
Grand Total	4.70	—	4.70

With the advent of liberation of this Territory, there has been rapid growth of the industrial activity in this Territory. Many industries such as small, medium and large scale industries have sprung up and there has been a greater need of skilled manpower and trained personnel to man the industries to raise to production in quality and quantity.

With a view to meet this shortage of trained manpower and also to regulate training of craftsmen on an organised basis and on systematic and modern lines, it is imperative and of vital importance to implement State Apprenticeship Act, 1961 in this Territory without any delay.

The Planning Commission have set up a figure of 100 Apprentices to be reached by the end of Fourth Five Year Plan in this Territory. The target for the provision of 100 Apprentices is devetailed and according to the present estimate, it is felt that to take 50 Apprentices every six months. At this rate during the Fourth Five Year Plan period the total number of 450 Apprentices will be turned out by the end of the Plan period.

Assuming that on the average, the training period of an Apprentice is of 3 years duration and also taking into consideration that the Government has to share an average of Rs 40/- per month per Apprentice on the cost of basic and related training, it is proposed that the total amount of Rs. 4.70 lakhs be provided in the Fourth Five Year Plan on the Apprenticeship Scheme, 1961.

9 — Welfare of Backward Classes

NAME OF THE SCHEME: FREESHIPS AND OTHER EDUCATIONAL FACILITIES TO SCHEDULED CASTES/TRIBES AND OTHER BACKWARD CLASSES —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	0.50	—	0.50
Capital	—	—	—
Grand Total ...	0.50	—	0.50

In this Union Territory education is free upto Std. VIII without any restriction. Education from Stds. IX to XI at the School stage is not free and as such there is need to offer facilities of free education to the scheduled Castes/Tribes as notified by Govt. of India and other socially and educationally backward classes during the Fourth Plan period.

During the year 1967-68 there were 159 students from scheduled Castes/Tribes and 420 with backward class status studying in the local High Schools in Stds. IX-XI at a cost of Rs. 21,738 and Rs. 63,000/- respectively. The number is likely to increase in the years to come as it is found that there are large number of Scheduled Castes/Tribes in lower classes.

A provision of Rs. 0.50 lakhs is therefore proposed in the Fourth Five Year Plan Budget.

NAME OF THE SCHEME: GRANT OF STIPENDS TO BACKWARD CLASS STUDENTS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	3.00	—	3.00
Capital	—	—	—
Grand Total ...	3.00	—	3.00

The Scheduled Castes/Tribes as notified by the Govt. of India, will receive free education upto Std. VIII under the normal scheme and upto Std. XI under the special scheme of providing free education to the Scheduled Castes/Tribes and other backward classes. However, it is also essential that the same students are given financial assistance for the

purchase of clothes, books etc., as they are not financially capable of meeting these expenses by themselves. It is therefore proposed that stipends may be paid to them at Rs. 50/- at the Primary Stage, at Rs. 60/- at the Middle School Stage and at Rs. 100/- at the High School Stage, per year. These rates of stipends may however, be changed with the approval of Govt. so as to cover the maximum number of applicants for the said stipends.

A sum of Rs. 3,00 lakhs is proposed during the Fourth Five Year Plan for the purpose.

NAME OF THE SCHEME: GRANTS FOR CONSTRUCTION AND MAINTENANCE OF BACKWARD CLASS HOSTELS —

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	1.70	1.30	3.00
Capital	—	—	—
Grand Total ...	1.70	1.30	3.00

At present there is not a single Hostel for the backward class students in this Union Territory. The lack of such a facility reflects to a great extent on the education of backward classes as they are scattered in this Territory and unable to get High School education in their own locality. It is therefore proposed to pay grants to registered Societies/Voluntary Organisations for the construction of one such hostel during the Fourth Plan period. The approximate cost of such a hostel including furniture is estimated at Rs. 1,725 lakhs. It is proposed to pay grant at the rate of 75% of the same which will amount to Rs. 1.30 lakhs.

In addition to the Non-Recurring expenditure, there will be recurring expenditure by way of appointment of staff, stipends to the students and expenditure on food. The staff required for one such hostel will be as follows:—

Designation of post	No. of posts	Scale
Supt.	1	Rs. 210-450.
Cook	1	Rs. 110-180.
Servant	2	Rs. 70-85.
Sweeper	1	Rs. 70-85.
Watchman	2	Rs. 70-85.

The approximate recurring expenditure for one Hostel is as follows:—

	(Rs. in lakhs)
2. Expenditure on food at Rs. 40/- per month for 10 months	0.20
3. Stipends of Rs. 20 p. m. for 10 months ...	0.10
4. Contingency	0.03
Total	0.45

Grant at 75%	0.33
Cost for 5 years	1.65
Total cost of the Hostel, during the Fourth Plan	3.00

A sum of Rs. 3.00 lakhs is therefore proposed under the scheme during the Fourth Plan period.

NAME OF THE SCHEME: POST MATRIC SCHOLARSHIPS FOR SCHEDULED CASTES/TRIBES AND LOW INCOME GROUP—

(Rs. in lakhs)

	Recurring	Non-Recurring	Total
Revenue	5.50	—	5.50
Capital	—	—	—
Grand Total	5.50	—	5.50

a) Post Matric Scholarships for Schedule Castes/Tribes and Low Income Group.

The Govt. of India have introduced the scheme of giving Post-Matric Scholarships for Scheduled Casts/Tribes so that they may able to pursue their higher education in Colleges and Technical Institutions. Under the said scheme, the pupils from Scheduled Casts/Tribes are to be given freeships and a fixed amount of stipends as laid down by the Govt. of India, subject to the fulfilment of conditions laid down under the scheme. This scheme is being introduced in this Union Territory for the first time during the year 1968-69 and is proposed to be continued during the Fourth Five Year Plan.

An amount of Rs. 0.50 lakhs is proposed under the scheme for the said purpose for the Plan period.

b) Post Matric Scholarships for the low income group.

The Govt. of India have also introduced a Scheme of giving Post Matric Scholarships to the pupils from low income group alongwith the scholarships for scheduled castes/tribes. For the said scheme, the parents income is divided into two groups, (1) those having an income of less than Rs. 1,500/- per year and (2) those who are having an income between Rs. 1500/- to Rs. 2,000/-. Students falling under group (1) are to be given freeships, as also stipends, as laid down by the Govt. of India on the basis of the income of the parents, the lowest income group being given preference over the others.

The details of the scheme as also the rates of the stipends are those laid down by the Govt. of India. The scheme is introduced for the first time during the year 1968-69 and will be continued during the Fourth Plan period.

A sum of Rs. 5.00 lakhs is proposed for being included for the Fourth Plan for the said purpose.

II — Health and Family Planning

INTRODUCTION

1. **Medical and other Education:** We have at present one school for basic nursing training with 20 annual admissions, and 2 A. N. M. schools with also with 20 admissions in each. Our requirement of A. N. M. is likely to be satisfied within 2 years. But an acute shortage of nurses is a problem and to overcome this, one additional nursing school is proposed to be opened during the IV Five Year Plan. To maintain 2 basic schools and 2 A. N. M. schools, an amount of Rs. 15 lakhs has been proposed. It is proposed also to start a training programme with at least 10 admissions in each for X-Ray technicians and laboratory technicians. To run these centres an amount of Rs. 5 lakhs for the entire plan period is proposed. A provision for sending the staff for specialised training has also been included in this amount.

2. Hospitals and Dispensaries:

a) *Mental Hospital:* The expenditure for this purpose was estimated at Rs. 158 lakhs out of which a sum of Rs. 68 lakhs was meant for capital expenditure. But due to tight financial position, we were forced to reduce this amount to Rs. 67 lakhs. We have a Mental Hospital with 350 beds located at Altinho, Panaji. The building is old and it is very unsuitable for the mental patients because the place is a barren land where temperature is very high. Since long it had been decided by the Government to shift the present hospital to a suitable place. An amount of Rs. 30 lakhs will be, therefore, necessary for the construction of a suitable building to accommodate all these patients who are likely to increase to 400 in number. But for the reasons given above the provision has been reduced to Rs. 5 lakhs only, as token provision.

b) *T. B. Hospitals:* We have 3 T. B. Hospitals with a bed strength of 251, one located at Margao, one at Panaji and one at Mapusa. During the Third Five Year Plan, all these three hospitals have been provided with necessary equipment, apparatus, X-Ray equipment, etc. Two wards were also built. However, there are no staff quarters for the hospital staff with the exception of the few quarters at the Margao Sanatorium. A provision of Rs. 6 lakhs has been asked for in order to construct the quarters for doctors, nurses and other staff working in these hospitals.

c) *Leprosu Hospital:* The Leprosy Hospital with 150 beds is situated at Macazana, Salcete. The buildings are very old, but during the Third Five Year Plan, necessary additional construction work was done and the buildings are now in proper condition. But as there are no residential quarters for the staff, a provision of Rs. 3 lakhs for the construction of staff quarters for Doctors, Nurses and Class IV staff has been proposed.

d) *Other Hospitals*:— Under this sub-head, the general hospital at Marwar (Daman), Vasco-da-Gama and Curchorem has been included. Total bed-strength of these hospitals is about 150. For the construction of staff quarters, a sum of Rs. 6 lakhs has been proposed, since in these three places, there are no single residential quarters for the staff. The scheme of construction of the staff quarters has been taken up during the current year; and to complete the same, at least an amount of Rs. 6 lakhs will be necessary during the Fourth Five Year Plan period.

e) *Maternity and Family Hospitals*:— There are two such hospitals, one at Margao and the other at Sanquelim. Total bed-strength attached to these hospitals is 36 beds. However, there are no staff quarters, especially at Sanquelim where it is very difficult to find a suitable house for the accommodation of the staff. Hence, an amount of Rs. 2 lakhs has been provided for the construction of the staff quarters for two doctors, 6 nurses and other Class IV staff. In these hospitals, the shortage of staff is also felt. For additional staff, therefore, and for the necessary equipments, an additional amount of Rs. 2 lakhs has been proposed for.

f) *Poly-Clinics*:— The provision for 2 Poly-Clinics (one attached to Curchorem hospital and the other to Bicholim or Vasco hospital) has been made. A sum of Rs. 3 lakhs has been proposed for this purpose.

g) *I. D. Hospital*:— A new building for I. D. hospital will be completed by the end of this year. This hospital will have 32 beds. To equip and to provide this hospital with necessary staff, an amount of Rs. 5 lakhs has been proposed for the whole Plan period. Towards the construction of staff quarters, additional provision of Rs. 1 lakh has been included.

h) *Pediatric Wards*:— According to the Resolution no. 35 passed by the Central Council of Health in its Fourteenth meeting at New Delhi last year, priority has to be given for the organization of the pediatric units at the District and Sub-divisional Hospitals. Upto now, the services for children have been completely neglected in the hospitals and no adequate bed facility, had been provided. To organize these services properly, therefore, additional children wards with 50 beds attached to main hospitals of this territory has been proposed and for the proper running of these wards, for the purchases of equipments, etc. a sum of Rs. 10 lakhs and a further sum of Rs. 5 lakhs for the construction of the wards, has a been provided for during the entire IV Five Year Plan period.

i) *Dental Clinics*: At present only the main towns of Goa have been provided with dental clinics and the expenditure is met under Non-Plan Budget provision. The areas of Daman and Diu and also Bicholim, Ponda and Curchorem, which are progressive towns of Goa, do not have such facilities. To provide, if possible, all these places with one dental clinic each, an amount of Rs. 3 lakhs has been proposed for the whole Plan period. This provision will be utilised for the purchase of equipment etc. and for the running of the clinics.

j) *Ophthalmic Clinic*: One clinic will be started by the end of this year. The expenditure will be under the Non-Plan Budget during the Fourth Five Year Plan. The provision of Rs. 1 lakh has been proposed for the establishment of one additional clinic with a view to have the survey at Daman and Diu, where suspected cases of Trachoma have been reported.

k) *Cancer Treatment Centre and X-Ray Institute*: We do not have a special building for our X-Ray Institute. There is also no facility for treatment of cancer cases available in Goa, and the patients have therefore, to go to Bombay or Bangalore. Since the poor patients cannot afford to go to such distant places, the need for the establishment of a Cancer Treatment Centre is much felt. Hence to accommodate the existing X-Ray equipment and also to accommodate the new Cancer Treatment Centre, a provision of Rs. 2 lakhs has been made for the construction of a suitable building at Panaji. A revenue expenditure of Rs. 9 lakhs has been provided for the purchase of a cobalt therapy unit for cancer treatment at estimated cost of about 8 lakhs, with an additional staff to operate this machinery.

1) *Emergency Ambulance Services and Blood Transfusion Services*: There are no permanent Emergency Ambulance Services. To establish the same and also to start Blood Transfusion Services and Resuscitation Centres attached to the main hospitals, a sum of Rs. 4 lakhs has been provided for.

3. Primary Health Centres and Urban Health Centres: Government has issued orders converting the existing health centres, Cottage Hospitals, Sub-Health Centres, etc. into 15 Primary Health Centres (with 60 sub-Centres) and 4 Urban Health Centres. The buildings for Primary Health Centres will be completed by the end of this year. Hence 60 buildings for the sub-Centres and staff quarters and adequate buildings for the Urban Health Centres at Mapusa and Margao will be necessary. With these facts in view, an amount of Rs. 15 lakhs as revenue expenditure will be required for the basic health services during the Fourth Plan period.

4. Control of Communicable Diseases:

a) *National Malaria Eradication Programme*: Our half unit is likely to enter into maintenance phase from the next year. However, a provision of Rs. 4 lakhs has been proposed during 1969-70. During the remaining four years, one vigilance unit, attached to the Directorate of Health Services will have to be maintained, for which an amount of Rs. 3 lakhs has been proposed. Thus a total provision of Rs. 7 lakhs will be required during the Fourth Five Year Plan.

b) *T. B. Control Programme*: An amount of Rs. 15 lakhs has been proposed. About Rs. 8 lakhs for the purchase of T. B. drugs and Rs. 7 lakhs for the staff and other contingent expenditure.

c) *Small-pox Eradition Programme*: To carry on this programme, according to the instructions of D. G. H. S., who have advised to upgrade the organization from a quarter unit to a half unit, a token sum of Rs. 4 lakhs is proposed for the entire period of 5 years.

d) *National Filariasis Control Programme*: To run one head-quarter unit and 5 A-type units, an amount of Rs. 14 lakhs has been proposed.

e) *Leprosy Control Programme*: To maintain the present set-up of this control programme, with one Leprosy Control Unit and 22 S. E. T. Centres, according to the instructions of Government of India, a sum of Rs. 10 lakhs has been proposed.

f) *V. D. Control Programme*: At present we have a unit at Panaji. It is proposed to staff 2 V. D. Clinics, one at Vasco-da-Gama and the other at Bicholim, during the Fourth Five Year Plan. For this purpose, an amount of Rs. 4.5 lakhs as a revenue expenditure towards the staff and other contingencies, has been proposed.

g) *Cholera Rabies and Others*: — Rabies is a public health problem of this territory. It is proposed to start a control unit under the Health Services. A provision of Rs. 2 lakhs has been proposed for this purpose. Cholera is not endemic in this territory. But since in many States the outbreak occurs frequently, it is necessary to become vigilant so that its outbreak in this territory is avoided. Under the head, the other ancillary expenditure on the control of other epidemics, such as typhoid, water borne diseases, the cholera vaccination programmes, etc., will be covered.

5. **Family Planning**: — An amount of Rs. 2 lakhs has been proposed for the construction of a building to accommodate the Family Planning Bureau and some sub-centres. The expenditure of Rs. 58 lakhs on the revenue side is proposed to maintain the organisation and to give incentives according to the instructions of the Govt. of India. Grants-in-aid to the voluntary organisations undertaking Family Planning Work are also proposed to be given. Hence the total amount of Rs. 60 lakhs has been proposed.

6. **Indigeneous system of medicines**: — Nil.

7. **Other Schemes**: —

a) For the maintenance and strengthening of all the programmes attached to the Directorate of Health Services, such as Nutrition Cell, Health Education Bureau, Health Intelligence Bureau, Prevention of Food Adulteration Cell, Environmental Sanitation Cell, Epidemiological Cell, Nursing Wing and other programmes, a sum of Rs. 14.50 lakhs as recurring expenditure has been provided for.

b) *Maternal and Child Welfare Programme*: — This programme is being integrated in the Basic Health Services. To maintain one Supervisory Wing attached to the Directorate of Health Services, a provision of Rs. 5 lakhs has been provided for during the IV plan period. The scheme of free supply of milk to pre-School children will also be supervised by this Wing. Expenditure on flying Squads has also been provided for.

c) *Laboratory Facilities*: — Under this head a provision of Rs. 10 lakhs has been asked for. This includes besides vaccines, provision for upgrading the existing Public Health Laboratory so as to facilitate the analysis of drugs and for the expansion of the Vaccine Institute to undertake the manufacture of Pharmaceutical Products, etc.

d) *School Health Programme*: — At present we have four school Health Clinics, the expenditure on which will be borne under Non-Plan Budget. However, it is proposed to open 5 more clinics during the Plan period at Curchorem, Ponda, Bicholim, Daman and Diu. An amount of Rs. 5 lakhs has been proposed for this programme.

e) *Health Insurance*: — To start the scheme in this Territory, a total amount of Rs. 2 lakhs has been proposed.

III — Medical College

INTRODUCTION

The Goa Medical School which was functioning at the time of liberation, was upgraded to the Medical College, from June, 1963. The College was affiliated to the University of Bombay. The admission fixed for the course was 60 per year.

The affiliation was granted on ad-hoc basis subject for fulfilment of certain pre-requisites which were absolutely necessary to run a Medical College. There was no proper housing nor sufficient equipment. The Trained personal also was not available. The plan scheme at the beginning envisaged the three fold function to tackle, to a certain extent, these problems.

The equipments which were required to start the college, have been acquired and the trained staff appointed, during the years of 1963 onwards.

In order to accommodate temporarily some college Departments, some renovation of and addition to the existing old buildings have been taken up. Some new constructions, such as Pharmacology Block, Anatomy Block, O.P.D., etc. were undertaken and completed in Annual Plan Schemes.

Nevertheless it was verified that the existing premises at Panaji Hospital Compound (about 7½ acres in area) were not adequate to house a full fledged Medical College and Hospital with all the necessary facilities. In the vicinity of the existing location of the College, there was no room available for any expansion. New site had, therefore, to be selected to shift the Medical College. The Government has selected a site at Bambolim and the proposal for a plan scheme for Medical College complex was submitted to the Planning Commission, who have agreed in principle, to go on with the scheme. The E.F.C. Memo was then prepared and sent to the Government of India for the clearance of the Project, as a whole, by the Expenditure Finance Committee. On 6-2-1966 the Planning Commission had discussion with the authorities of the Government of Goa, Daman and Diu and it has been proposed to utilise to a maximum extent the existing resources. On these lines, the existing hospitals would continue to serve as Teaching Hospitals, and only the College Complex would be shifted at Bambolim. The Project estimate was revised and it has been cut down from 3.50 crores to 2.50 crores. Again on 4-6-1968, a meeting was held in the Chamber of the Additional Secretary, Ministry of Home Affairs and it has been pointed out that certain improvement to the Teaching Hospitals as well as the residential accommodation at Bambolim be restricted to a certain percentage. Accordingly the estimate was revised to 2.04 crores approximately and the amended Expenditure Finance Committee Memo has already been

submitted to the Government for onward transmission to the Government of India.

So far as the Goa Medical College is concerned the Bambolim Project is Major and the important project to be included in the IV Five Year Plan.

Although the Project is not cleared as a whole, initial steps have been taken to start the Project. The Major portion of the land at Bambolim (77.5 hect.) for locating the college has been acquired during the year 1965-1966 at a cost of Rs. 5.92 lakhs, with the permission of Ministry of Finance, in order to start the construction of the most essential buildings. A sanction for an expenditure of Rs. 20 lakhs, for taking up the "IMMEDIATE ASPECT" of the Project, was accorded by the Government of India. Under this sanction, construction work of the College Building (Phase), Students Hostel, Dining Hall, Type IV quarters and development of site have been taken up by the Central Public Works Department. The work is in progress and it is expected to be completed by the end of March, 1969.

IMPROVEMENT OF TEACHING HOSPITALS

This scheme forms a part of the Bambolim Project. As per suggestion of Planning Commission, the area available at Panaji Hospital premises will be utilised to the maximum extent for putting up additional buildings required for an upto date and modern hospital. The existing area is sufficient to accommodate the hospital only along with the minimum facilities, which are incidental to the clinical teaching of the medical students.

In order to reach to the minimum bed strength fixed by the Indian Medical Council, 500 beds for admissions of 60 students, additional 100 beds are required. In addition to this, the existing 48 beds, which are located in temporary sheds would have to be accommodated in the permanent wards. Hence the construction of new five wards has been proposed. Consequent upon the additional number of beds, more operation theatres with ancillary rooms are required. The Unit of 2 operation theatres with ancillary rooms was proposed in the Project.

In order to keep up to grade, the college as well as the Teaching Hospital, the present teaching requirement and the future Post-graduate study, the acquisition of equipment becomes absolutely necessary. Hence an estimate of Rs. 22.62 lakhs was proposed in the project.

Besides the non-recurring expenditure on construction work and equipment, during the Fourth Five Year Plan, provision for Revenue expenditure has been requested.

OTHER SCHEMES RELATING TO GOA MEDICAL COLLEGE

The first batch of final M. B., B. S. students have passed. At present there are 30 internees undergoing the training. The Post-graduate courses have to be started in the various departments. Certain facilities, therefore, have to be provided, both to the colleges as well as to the Hospitals.

Central sterilization, Central Laundry, Deep X-Ray therapy, etc. for which there is no provision, at present, have been included in the 4th Five Year Plan.

The Blood Bank attached to the Hospital requires proper equipments and for this purpose, a provision of Rs. 0.80 lakhs is requested.

Since all amenities exist in the institution, it is advantageous to start the Basic Nursing School, to meet the shortage of Nurses. The building construction was included in the plan scheme of 1968-1969. For other facilities in connection with the same school, a provision of Rs. 1/-lakh should be provided.

The College has all the laboratory facilities, para-medical personnel like laboratory technicians, X-Ray Technicians Radio-graphers and Dark-Room Assistants can also be trained. For this a provision of Rs. 2 lakhs is requested.

As the Medical College Complex will be located at Bambolim and the teaching Hospital, 4 miles away from the college, in order to transport the college students and Teaching staff to and fro Bambolim, some vehicles are necessary. Two more buses have been provided for and will be acquired during 1969-1971 to cope with this requirement.

1. Details of the Expenditure of Bambolim Project.

Sr. No	Items	Abstract cost
I. Construction of Buildings:		
1.	College and Auxiliary buildings	Rs. 55,38,310
2.	Residential accommodation	Rs. 78,56,050
3.	Development of site	Rs. 30,00,000
4.	Nurses quarters	Rs. 5,95,000
5.	R. M. O's accommodation	Rs. 2,15,600
	Total: Medical College Complex	Rs. 1,72,04,960
II. Improvement to teaching hospitals		
	Total of I	Rs. 1,81,53,760
III. Equipment for improvement to College and Hospitals		
	Total: Revised Estimate as submitted in Expenditure Finance Committee	Rs. 2,04,14,760
	(Add). Revenue Expenditure on Project	Rs. 3,56,701
		Rs 2,07,71,461
	(Deduct): Amount already sanctioned for taking up the Immediate Aspect of the Project	Rs. 20,00,000
	Balance required	Rs. 1,87,71,461

2. Development and Expansion of Medical College and attached teaching Hospitals.

Estimated cost — Rs. 33,80,000

DETAILS OF THE SCHEMES

Sr. No.	Items	Abstract cost
1.	Central sterilization	Rs. 2,00,000
2.	Central laundry	Rs. 3,00,000
3.	X-Ray Therapy and X-Ray equipment	Rs. 3,50,000
4.	Occupational therapy and Physiotherapy equipment	Rs. 1,00,000
5.	Rural Training Centres for Internees	Rs. 5,00,000
6.	Central Gas Plant	Rs. 1,00,000
7.	Central Oxygen and Section	Rs. 2,00,000
8.	Equipment of Pharmacy	Rs. 75,000
9.	Establishment of Post-graduate depart, Para-clinical and Speciality departments	Rs. 3,00,000
10.	Improvement of Library and Purchase of back journals	Rs. 1,00,000
11.	Basic Nursing School	Rs. 1,00,000
12.	Purchase of a Bus	Rs. 1,75,000
13.	Equipment for Blood Bank	Rs. 80,000
14.	Furniture for College Hospitals, Hostel and Linel	Rs. 6,00,000
15.	Training of Labour Technicians etc.	Rs. 2,00,000
	Total	Rs. 33,80,000

PLAN SCHEMES RELATING TO IMPROVEMENT & EXPANSION OF MEDICAL COLLEGE & HOSPITAL, POST-GRADUATE MEDICAL EDUCATION

Medical Care

Sr. No.	Particulars of Schemes	4th Five Year Plan						
		Total outlay in lakhs	Break up (in lakhs)					
			1969-70	1970-71	1971-72	1972-73	1973-74	
1	2	3	4	5	6	7	8	
1.	Central Sterilization	2.00	-	-	2.00	-	-	-
2.	Central laundry	3.00	-	-	3.00	-	-	-
3.	X-Ray therapy and X'ray equipment	3.50	-	1.00	2.50	-	-	-
4.	Occupational therapy and Physiothepehy	1.00	1.00	-	-	-	-	-
5.	Rural training centre for Internees	5.00	2.5	2.5	-	-	-	-
6.	Central Gas Plant	1.00	-	-	-	-	-	1.00
7.	Central Oxygen and Suction	2.00	-	-	-	2.00	-	-

1	2	3	4	5	6	7	8
8.	Equipment of Pharmacy ...	0.75	-	-	0.75	-	-
9.	Establishment of Post-graduate department in clinical para clinical and speciality Department ...	3.00	-	-	-	1.00	2.00
10.	Improvement of Library and Purchase of books, journals.						
11.	Basic Nursing School ...	1.00	-	-	1.00	-	-
12.	Training of labour technicians and other para-medical personnel ...	1.00 2.00	-	1.00	-	-	- 2.00
13.	Vehicle (Bus+Ambulances)...	1.75	0.75	1.00	-	-	-
14.	Blood Bank and equipment ...	0.80	0.30	0.50	-	-	-
15.	Furniture and linen for hospitals (5 wards) — College and Hospitals ...	6.00	1.00	1.00	2.00	2.00	-
	Total ...	33.80	5.55	7.00	11.25	5.00	5.00

PHYSICAL PHASING OF THE BAMBOLIM PROJECT

1968-69

(Rs. in lakhs)

a) College building (1st phase) ...	6.5
b) Residence ...	4.5
c) Students' Hostel ...	4.5
d) Development of site ...	6.0
	<u>21.5</u>

1969-70

a) College building (2nd phase) ...	15.0
b) Ancillary building ...	2.30
c) Contingencies ...	0.520
d) Residences and hostels ...	27.2635
e) Development of site ...	6.0000
f) Nurses quarters ...	2.0000
g) R.M.O's accommodation ...	1.156
h) Improvement of teaching hospital ...	4.744
i) Equipment ...	5.65

(2.5 lakhs in foreign exchange)

64.6335

1970-71

a) College building (3rd phase)	20.0	
b) Ancillary buildings	2.43	
c) Contingencies	0.87	
d) Residences and hostel	36.697	
e) Development of site	16.0	
f) Nurses quarters	2.0	
g) R.M.O's accommodation	1.0	
h) Improvement of teaching hospital ...	4.744	
i) Equipment	4.24	(1.875 lakhs in foreign exchange)
	<u>87.981</u>	

1971-72

a) Completion of College building ...	5.18	
b) Completion ancillary building...	2.36	
c) Contingencies	0.2231	
d) Completion of residences	5.6	
e) Completion of development of site ...	2.0	
f) Completion of nurses quarters ...	1.95	
g) Equipment	4.24	(1.875 lakhs in foreign exchange)
	<u>21.5531</u>	

1972-73

a) Equipment	4.24	(1.875 lakhs in foreign exchange)
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1973-74

a) Equipment	4.24	— Do —
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IV — Pharmacy College

The Goa College of Pharmacy was established in June 1963, when it was affiliated to the University of Bombay. The College is presently concentrating on the fulfilment of the requirements for the teaching of the degree course in (B. Pharm.) of the University of Bombay and Diploma Course in Pharmacy (Dip. Pharm.) of the Pharmacy Council of India, New Delhi.

The University of Bombay has recently granted recognition to the Goa College of Pharmacy as a post-graduate research institution for the teaching of the degree of M. Pharm.

The prospects of pharmaceutical education in India are bright. The gigantic progress of the Indian Pharmaceutical Industry has increased considerably the prospectus of the pharmaceutical profession. Further, the starting of new Colleges of Pharmacy has opened new avenues for pharmacists who would like to dedicate themselves to the educational field. Recent trends are now to recognise more and more, the existence of pharmacy as a separate profession.

It is a recognised fact that the Pharmaceutical Industry in this country is one of the largest activities in the public as well as private sector. It is also recognised that the country's medicinal drugs has constituted the potential factor in foreign exchange earning. Consequently great efforts are being made everywhere to study the untapped vast resources of the country in medicinal plants. The West Coast of the country abounds in plants whose medicinal value has not been investigated. It, therefore becomes imperative to establish nucleus, where research is being done to investigate the problems.

The country has few Pharmacy Colleges and still fewer post-graduate institutions in Pharmacy. The Goa College of Pharmacy is the only affiliated College of the University of Bombay and hence the need for postgraduate research. With the coming up of factories for Pharmaceuticals and Chemicals both in the public and private sector, the need of persons having post-graduate research and experience has greatly increased in the past years. With this end in view, post-graduate research in Pharmacy is being included in the Fourth Five Year Plan.

Taking into account the statistics of the number of reasearch qualified pharmacists in the country, it is seen that their number falls much below the requirements of the fast expanding pharmaceutical industry. The result is that large number of our students have to go abroad for post-graduate studies. With the establishment of post-graduate studies in the Goa College of Pharmacy, it is expected to train graduates in Pharmacy, while at the same time investigating the natural resources.

The number of research students which would be trained in the College depends on the number of research guiding professors recognised by the University. Each research guiding professor is authorised to register 10 students under him. Up to now the University has granted recognition to some guiding professors and it is expected in due course of time that more will be recognised.

BUILDING

Half of the Old Government Polytechnic building has already been occupied by the Pharmacy College. The total transfer of the Goa College of Pharmacy to the Government Polytechnic building has to be completed by June 1969. Facilities for research have also to be set up in order to fulfil the requirements of the University. It is proposed to make the necessary alterations and to set up the different class rooms and laboratories for the College. The approximate amount to be incurred on constructions and alterations is Rs. 8 lakhs.

PAY OF OFFICERS AND ESTABLISHMENT

In addition to the teaching staff that is required for fulfilling the conditions for teaching of the M. Pharm. degree courses, it is proposed to have research officers, laboratory assistants and non-skilled personnel. For this purpose an amount of Rs. 4 lakhs is required.

EQUIPMENTS

For the purpose of elucidation, the equipment can be divided into three categories: —

1. Pharmaceutical equipment and machines required to illustrate the principles of manufacture of classical forms of medication like tablets, capsules, injectables, syrups, etc.

It is recognised that the equipment required should be of a small scale because the students cannot work on machine of large capacity meant for industrial processing. Here again the drawback is that manufacturers of Pharmaceutical equipment in India do not concentrate on small capacity equipment, and as such same equipment would have to be imported.

2. **Analytical equipment:** It is recognised that the modern Analytical chemistry requires the help of specialised equipment like spectrophotometers, Polarographs, Refractometers, Photoelectric equipment, etc. Some such specialised equipments is manufactured in India, but some could have to be imported from abroad.
3. The third type of equipment required is the equipment for research purposes. It is proposed to have two research units. One in vegetable and one in Biochemistry. The importance of Vegetable Drugs in medicine is increasing day by day and the West Coast of India is very rich in medicinal plants which can be investigated. Besides, essential oil plants are also very abundant in our forests. To start a research unit of vegetable Drugs, besides Analytical equipment, work-shop facilities are needed so that research workers can build models of equipment suited for their research programme. The expenditure that will be incurred on equipments will be as follows: —

Indian equipment	Rs. 3 lakhs
Foreign	Rs. 2 lakhs

In addition, chemicals will be required to teach the M. Pharm. Course For this purpose an amount of Rs. 1 lakh is essential.

LIBRARY

The College Library possesses at present few books and journals. The efficiency of College and the research units depend on the availability of latest technical data. It is therefore, proposed to have a well equipped library and the expenditure for the same will be Rs. 2. lakhs.

FURNITURE AND FITTINGS

The furniture required by the College will increase as new departments start functioning. So also the fittings. The estimated expenditure for furniture and fittings will be Rs. 1 lakh.

STATIONERY

As per University Rules the Degree Course of B.Pharm. is to be taught in such a way that the progress of the students is regulated by large number of periodical tests. The results of such periodical tests have to be filled and the averages sent to the University at the end of the year. The requirements of stationery would therefore be higher than in the case of an institution where periodic tests are not compulsory. The expected expenditure will be Rs. 0.25 lakhs.

SCHOLARSHIPS FOR STAFF AND STUDENTS FOR TRAINING IN INDIA

To keep pace with the rapid and colossal strides which the pharmaceutical science is making in other parts of the country and the world, it is desirable to have a quota of fellowships allotted to the teaching cadre of these institutions. Since this is a developing and expanding institution, it is necessary that at least a quota of four such fellowships is reserved. Of those, one may be required for those who have already been abroad once, and the rest for the fresh branches. The exact branch of specialisation will be decided as and when necessary. In addition it is proposed that Government should depute a Junior Category of the teaching and technical staff in the various branches of departments in other parts of the country for specialisation. The estimated expenditure will be round about Rs. 1 lakh.

MISCELLANEOUS

Miscellaneous expenditure includes payment of electricity, water, advertisements, telephones, postage etc. The expected expenditure towards miscellaneous will be Rs. 2.75 lakhs.

To summarise, it is of urgent need that a new institution of Technical Education be well fitted. It should however not be forgotten that the maintenance of the equipment and laboratories of the Institution also play a very important role for the continuance of efficiency in teaching.

V — Water Supply

ACHIEVEMENTS

The supply of filtered and treated water to the General Public and disposal of sewage by the treatment processes is an important aspect to be considered in the development of the Rural and Urban areas. This enables in preventing the communicable diseases, which are water borne diseases. In Goa we have been able to supply treated water to the major towns namely Panaji, Margao, Vasco da Gama, Ponda and lately to Mapusa. The extension of Porvorim is under execution and many other towns like Sanguem, Pernem, Bicholim are also supplied with piped water, wherein prior to liberation water supply in Goa consisted only to supply water to Panaji, Margao and Vasco and the capacity was approximately 1.8 m. g. d. It has been found that after Liberation the connection of water has been increased and this is due to the rise of the population as well as water requirement in the Industrial areas. Taking into consideration the above it was proposed to construct 25 m. g. d. additional treatment plant at Opa which was completed by the end of September, 1967. Further, at present the laying of C. I. gravity mains from Opa to Curti to Panaji is in progress and the scheme for providing and laying of C. I. gravity mains from Curti to Ambora to Margao and from Ambora to Vasco de Gama has been technically approved by the Government of India at an estimated cost of Rs. 128.00 lakhs and has been submitted for the expenditure sanction to the Government. The water supply scheme for Mapusa, Bicholim, Tivim and Assonora has been completed and the distribution system to the Mapusa town is in progress. The Assonora treatment plant has a capacity of 2.5 m. g. d. and it is expected to supply water upto Porvorim. The estimated cost to the Mapusa water supply scheme is Rs. 7,59,000/-.

The Sewerage scheme to the Panaji town has been completed and hence connection to the different areas is under execution. The Public Works Department will undertake the preparation of the Sewerage Scheme to the Vasco town, which it is intended to be completed during the Fourth Five Year Plan. Some of the schemes executed during the Third Five Year Plan are as follows:

Name of the schemes	Expenditure incurred in lakhs
1) Water supply scheme to Mercedes, St. Cruz and Bambolim	Rs. 2.00
2) Water supply scheme to Valpoi	Rs. 0.95
3) Water supply scheme to Sanquelim	Rs. 0.98
4) Water supply scheme to Ribandar and Chimbel	Rs. 1.14
5) Water supply scheme to Mardol	Rs. 0.49

6) Water supply scheme to Chicalim	...	Rs. 0.55
7) Water supply scheme to Pernem	...	Rs. 1.00
8) Water supply scheme to Curchorem	...	Rs. 1.96
9) Water supply to Queula	...	Rs. 1.75
Total	...	<u>Rs. 10.82</u>

Various other extensions were also given for which the total expenditure incurred was Rs. 5.69 lakhs.

During the Annual Plans, 1966-67 and 1967-68, we have undertaken the spill over schemes, namely the additional Treatment Plant at Opa, Waterworks scheme to Mapusa, Bicholim, Tivim and Assonora. The Sewerage treatment Plant for Panaji town is completed and hence the scheme for giving connections to the Sewerage system to the Panaji town is in progress.

WATER SUPPLY AND DRAINAGE SCHEMES

I. Water Supply — Spill Over Schemes.

1) *Waterworks Scheme to Mapusa, Bicholim, Tivim and Assonora.*

This scheme was started in 1963 to benefit Bardez and Bicholim Taluka and has been completed. However, the spill over will be required for the final adjustment and the payment will have to be made during the Fourth Five Year Plan, for which a provision of Rs. 2.00 lakhs is proposed to be utilised during the First Year of the Fourth Five Year Plan.

2) *Additional Capacity to the Water Treatment Plant at Opa and Allied Works.*

The scheme for providing additional capacity of 2.5 m.g.d. of treated water was completed by the end of September 1967. Although the scheme is completed and commissioned, some payments are still to be effected, for which purpose a sum of Rs. 1.40 lakhs will be required during the Fourth Five Plan.

3) a) *Construction and laying of C.I. gravity mains from Opa to Curti to Panaji.*

b) *Providing and laying of C.I. gravity mains from Curti to Ambora to Margao and from Ambora to Vasco da Gama.*

On commissioning of the Additional Treatment Plant, the capacity of the present waterworks at Opa is now 4.26 m.g.d., whereas the capacity of the distribution mains is 1.76 m.g.d. It is therefore, proposed to install an additional 6 m.g.d. Plant for which the clearance has been obtained from the Directorate of Health Service, New Delhi. The construction and laying of C.I. gravity mains from Opa to Curti to Panaji is in progress and the works are at present held up only due to non supply of certain specials for which orders have been placed with the D.G. S. & D. It is expected that, this scheme will be completed during this year, provided the specials are received in time. Already a major laying of the pipeline has been done. It is possible that a small portion of this work may be

spilled over to the first year of the Fourth Five Year Plan. Hence a token provision of Rs. 8.00 lakhs is made in the Fourth Five Year Plan.

Regarding the duplicating mains from Curti to Ambora to Margao and Vasco, the Scheme has been sanctioned technically and the expenditure sanction is being issued. It is intended to take up the scheme right from this year as the provision of Rs. 3.00 lakhs is made in the current year Budget. Additional funds of Rs. 35.00 lakhs will be spent, if made available in the Supplementary Grants for 1968-69, and with this pace, the scheme is expected to be completed by the end of the year 1971-72. This will cover the immediate demands of the various consuming centres namely Military, Naval, Port, Railway, Industry and the General Public. Hence an outlay of Rs. 90.00 lakhs is proposed for this major water supply scheme in the Fourth Five Year Plan.

4) *Construction of an overflow weir at Candepar River (Opa).*

The scheme is expected to be completed this year. However, a token provision of Rs. 0.20 lakhs is proposed for the year 1969-70 for the payment of Final bills and completion of the minor works.

5) *New minor water supply schemes and extension of existing net works.*

Consequent upon the Treatment Plant at Opa of 2.5 m.g.d. capacity having been executed and with the execution of the duplicating mains from Curti to Panaji, it is expected to increase the Supply of water to the Panaji town. It is, therefore, proposed to distribute this increase-in-supply of water to all the zones effectively. It is also expected to complete the scheme of water supply to Durbhat and other areas in Ponda by March 1969. Under this, a provision is also made for the extra extensions which are required as a result of the growth of the cities like Margao, Vasco etc. This item is, therefore included in the Fourth Five Year Plan and an outlay of Rs. 14.15 lakhs has been proposed.

6) *Investigation and survey of new schemes.*

With the proposed construction of the 6 m.g.d. plant it is expected that the source of water supply which is being presently tapped at Opa will be exhausted and as such we will have to go in for new sources like Madei river, Sanguem river etc. to meet the growing needs of the Industry, Military, Naval, Port and Railway. Hence a provision of Rs. 0.05 lakhs is made for this purpose in the year 1968-69 and this work will be continued during the Fourth Five Year Plan for which a sum of Rs. 0.85 lakhs has been proposed.

7) *Extension of distribution system to Medical Camps at Bambolim and Engineering College at Farmagudi, Ponda and other extensions.*

The construction of Medical camps is in progress and is under the Central Public Works Department. Besides the Military instalment at Bambolim requires additional water supply.

With the commissioning of the Assonora water supply scheme, the extension of distribution system from this supply to Porvorim would be

a top priority scheme, because on completion of the Mandovi Bridge, the Porvorim area will be almost a suburb of Panaji. Pipes for this scheme work about Rs. 6.00 lakhs have already been procured and this work will be taken up very soon and it is expected to spill over during the Fourth Five Year Plan.

Regarding the Engineering College, it is expected to obtain the Government sanction for the same, and as such, the extension of the main distribution line from Curti to Panaji will be executed for developing the areas, as it is proposed to construct I. T. I. also in the same area. A provision of Rs. 18.40 lakhs has been made in the Fourth Five Year Plan as the scheme is expected to continue till the year 1971-72.

8) *Rural water supply scheme.*

Rural population is pressing for piped water supply, and as such, these schemes are proposed to be taken up. An amount of Rs. 3.50 lakhs are expected to be spent during the year 1968-69. It is also proposed to take up new Rural Water Supply Schemes in the Fourth Five Year Plan. More emphasis needs to be given to this scheme in order to give benefit to the rural populace. An outlay of Rs. 30.00 lakhs is provided for this scheme, to take up an ambitious programme in the Fourth Five Year Plan. In the first instance new water supply schemes for Tuem, Tonca, Marcel, St. Estevam and Siridao will be taken up.

9) *Water connection to Industrial Areas.*

With the increased demand of water to Industrial areas and also for creating the incentive for such establishments, Government has proposed to provide facility of water connection for developing light as well as heavy industries. Since there is bright prospectus for development of industrial centres at Corlim and other places, this scheme needs to be taken up on priority basis for speedy development of the areas. A provision of Rs. 1.00 lakhs has been proposed for giving water connection during the current year. New schemes for supplying water to the prospective industries areas will have to be taken up during the Fourth Five Year Plan, and as such, the provision of Rs. 10-90 lakhs is included in the present proposal. The scheme has got its importance from revenue side, as water receipts to the extent of Rs. 48 to 50 lakhs are expected during the Plan period from these areas, on full commissioning of this scheme. The estimated cost of this entire scheme is Rs. 50.00 lakhs. In case more funds are made available, this scheme will be implemented to a large extent to cover up wider field.

10) *Water supply scheme at Daman and Diu including Deoka, Varacunda, Dabel and Bhipmore.*

At present there is no adequate water supply for Daman and Diu areas. The existing water supply is restricted to only public purposes. The scheme for the above districts have been proposed to the Government and on obtaining the clearance immediate action will be taken up. An amount of Rs. 1.25 lakhs will be spent in the year 1968-69 and these schemes will be spilled over to Fourth Five Year Plan, and as such, a provision of Rs. 10.00 lakhs is included.

11. *Damming of Madei River and Water Supply Scheme.*

The entire water supply of North Goa is based on the flow of this River. The future requirements of North Goa is 10 m. g. d., which is not available from the present tapping source during the dry season. Hence it is proposed to take up the scheme during the Fourth Five Year Plan. A token provision of Rs. 0.10 lakhs is proposed.

12. *Extension of Water Supply from Altinho to Dona Paula.*

The present pipe line being of smaller diameter and due to the construction of Government Quarters and Primary Buildings, the demand of water has been increased, and as such, an estimate of about Rs. 9 lakhs has been prepared and it is expected to take up this scheme during the year 1968-69 against the Budget proposal of Rs. 4 lakhs. It will be continued, and it is expected to be completed during the first year of the Fourth Five Year Plan. Under this scheme, a provision of Rs. 4.00 lakhs has been asked for during the Fourth Five Year Plan.

13) *Construction of Wells in Rural Areas and Ancillary Scheme.*

The benefits of the piped water supply are now extended to villages en route the conveying mains. However, economics of water supply do not permit us to extend the mains to the majority of the villages which are lying far away from the mains. In order to meet the pressing demands of the population of such villages, investigation is being carried out for the construction of sinking wells in some of the parts of the rural Goa. This programme of providing adequate water supply to rural areas was rather neglected in the III Five Year Plan. This scheme will be implemented briskly on priority basis. A provision of Rs. 20.00 lakhs is proposed for undertaking a programme of constructing 400 wells of adequate depth in the Fourth Five Year Plan period in Goa, Daman and Diu area. This will ease the tension of shortage of water supply during dry season.

14) *Extension of Water works by m.g.d. Water Treatment Plant including other ancillary works, such as Rising mains and Storage Reservation at Curti.*

This forms a part of the total water supply scheme of 10.6 m. g. d. and this has been approved in principle by the Directorate of Health Services, New Delhi. The detailed scheme is presently being prepared and on obtaining the clearance, it will be taken up and completed during the Fourth Five Year Plan. The approximate requirements for this scheme is Rs. 65.00 lakhs. However a token provision of Rs. 10.00 lakhs is proposed. This scheme will be accelerated provided the adequate funds are given.

15) *New Water Supply distribution network for Panaji.*

With the completion of the scheme of laying additional C. I. Gravity mains from Opa to Panaji and Opa to Margao and Vasco, the remodeling of existing network at Panaji is a dire necessity due to its limited carrying capacity. The scheme is estimated to cost Rs. 30.00 lakhs. Actual implementation of this scheme will be done as and when need arises, subject to the availability of funds.

II. DRAINAGE

A. Spill Over Schemes: —

Sewage Treatment Plant and Sewerage Scheme for Panaji Town.

The scheme which was taken up in 1964 is almost nearing completion.

The treatment plant is completed in all respects and it is expected to be commissioned shortly. However, the balance spill over will be required for final adjustments and payments for which a provision of Rs. 11.50 lakhs is included in this proposal.

B. New Schemes: —

1) *House connections to Sewers in Panaji Town.*

The scheme for providing house connection to Sewers in Panaji Town has already been taken up and is expected to be completed during the year 1968-69. However, a token provision of Rs. 2.50 lakhs is made during the Fourth Five Year Plan for final adjustments.

2) *Extension of Sewerage scheme for Panaji Town.*

After providing drainage system to Panaji, there is need to extend the same to its surrounding areas. Hence, it is proposed to take up the scheme during the Fourth Five Year Plan. An outlay of Rs. 10.000 lakhs is, therefore, proposed.

3) *Sewage Treatment and Sewerage schemes for Vasco da Gama Town including House Connection to Sewers.*

It was earlier contemplated to undertake the sewerage schemes for Margao city first and then for Vasco city. Besides the Director of Health Services has proposed a new scheme for underground drainage at Mapusa under National Filaria Control Programme. This scheme is proposed now proposed by the Public Works Department as a new item for the Budget Estimate 1969-70. The Sewerage scheme for Vasco city which is developing rapidly will or undertaken on priority basis. This scheme is estimated to cost about Rs. 63.00 lakhs for which the provision will have to be made.

4) *Storm water drainage scheme to Nani-Daman.*

At present there is no drainage scheme in existence in Daman. A storm water drainage scheme is extremely felt necessary for Nani-Daman especially during monsoon to facilitate a rapid flow of rain water and to meet the emergencies like storms etc. The scheme is being carried out during the Fourth Five Year Plan. A provision of 1.00 lakhs would be enough for implementation of this scheme.

During the course of the Fourth Five Yer Plan, priority will be given to complete the existing water supply schemes such as water supply to Panaji, Dona Paula, Mapusa, Assonora, Tivim and Bicholim so as to ensure adequate and continuous supply to these areas in the first instance. New schemes to provide duplicating mains to Margao and Vasco will be taken up and completed by the end of the year 1971-72. However, total outlay of Rs. 225.00 lakhs proposed for the existing as well as for the new schemes would be too inadequate.

VI — Housing Schemes

The acute shortage of housing accommodation in Panaji, Margao and Vasco da Gama, has been keenly felt after the liberation of this Union Territory as a result of large in flow of the persons from outside Goa and due to increased pull of the cities over the rural population. In view of these circumstances, in the Draft Housing Plan for Goa, Daman and Diu for the period from 1963 to 1966, it was suggested that the Government should take steps to improve the situation by launching the housing schemes like slum clearance, low income group, middle income group, subsidised industrial housing schemes, etc.

In the past, the Junta do Comercio Externo had been undertaking such schemes. The funds for this purpose were available from the reserves built up by the Junta during the pre-liberation days out of the profits from the state trading activities carried out exclusively by this organisation.

Housing schemes so far completed by the Junta are as under: —

1. Construction of 68 tenements under middle income group housing scheme at Ponte de Linhares, whereof the Third Phase for the construction of additional 40 tenements is in progress.

2. Construction of 101 tenements under low income group housing scheme at Batulem-Panaji costing approximately Rs. 15.00 lakhs.

3. Construction of 24 tenements under middle income group housing scheme at Mapusa estimated at Rs. 4.6 lakhs.

4. The building having seven storeys at Panaji is since completed and occupied from 1-8-66.

The existing Housing Wing of the Junta is an ad-hoc arrangement. It is proposed to transform this Housing Wing of the Junta into a statutory Housing Board. Necessary enactment for this purpose is now in Bill stage. The Housing Board is likely to come into existence soon. It will undertake all the housing activities in this Territory. The Board would implement on an extensive scale, the following schemes: —

INTEGRATED SUBSIDISED INDUSTRIAL HOUSING SCHEME

This refers to loans-cum-subsidy to be given to Industrial and Mining Firms for building residential quarters for their workers near their Industrial Mining Sites. Financial assistance for this scheme will be routed through the Housing Board during the IV Five Year Plan. An outlay of Rs. 5.00 lakhs is proposed for this construction activity according to the approved scheme.

LOW INCOME GROUP HOUSING SCHEME

This scheme is meant for providing accommodation to persons with an annual income not exceeding Rs. 6,000/-. It envisages construction of suitable tenements of about Rs. 10,000/- each for economically weaker section of the population. An outlay of Rs. 10.00 lakhs is proposed for the construction of 100 tenements, under this scheme.

MIDDLE INCOME GROUP HOUSING SCHEME

This scheme will cater to the needs of persons with annual income between Rs. 6,000/- and Rs. 10,000/-. Each tenement will not cost more than Rs. 15,000/-. A sum of Rs. 10.00 lakhs would be required for this purpose for being given as loan to the Housing Board.

LAND ACQUISITION AND DEVELOPMENT

This scheme envisages acquisition of land from private individuals, comunidades, temple trusts etc. The barren, fallow or lowlying lands are developed by filling, reclamation, levelling, etc. The developed land can be utilised by the Housing Board for its own schemes or given on sale to local bodies, cooperative societies for their Housing schemes. By making available to prospective house-builders a sufficient number of developed building plots at reasonable costs, the land prices will be stabilised and increase in rents will be controlled. Total outlay on this scheme would be of Rs. 10.00 lakhs. Total area that will be acquired and developed during the Fourth Five Year Plan period is estimated at 50,000 m² at Rs. 20/- per m².

Besides the above schemes, village housing schemes are also proposed to be implemented during the Fourth Five Year Plan for which token provision of Rs. 10.00 lakhs each has been provided.

In order to enable the Board to undertake these activities, the total outlays of Rs. 45.00 lakhs, proposed under each scheme mentioned above, will be given to it as financial assistance by way of loans.

Besides this, a provision of Rs. 5.00 lakhs will have to be made for payment of managerial subsidy to the Board for meeting its managerial cost and other expenses in the initial stage, at the rate of Rs. 1.00 lakh per annum.

VII — Urban Development

The Department has undertaken the work of preparation of the Interim Zoning Plan for urban centre and an Interim Regional Plan. Interim Zoning Plans for the Urban Centre have been completed during the III Plan period upto 1968. These Interim Plans are to be made master plans during the next Plan period. It was very difficult for the Department to prepare the plans, as the necessary data and various aspects thereto were not available, and the maps available were not complete and upto date.

During the Fourth Five Year Plan, the Department proposes to undertake the Master Plans for all the urban centres and few selected suburban areas. In order to prepare the Master Plans and Regional Plan, the Department requires basic Survey maps. These maps are to be prepared by the Land Survey Department of the Goa Government or by the Survey of India. As this is urgent as well as essential item the work, it has to be carried out as quickly as possible.

VIII — Welfare of Backward Classes

The Notification specifying the Backward Classes was issued in January, 1968, and as such, the schemes under "Welfare of Backward Classes" are to be implemented from the year 1968-69.

An outlay of Rs. 18.00 lakhs is proposed for the Fourth Five Year Plan for the "Welfare of Backward Classes".

Economic Uplift: — Under this subhead an outlay of Rs. 9.00 lakhs has been proposed. The main purpose is to improve the economic conditions of the backward classes by giving them assistance on loan-cum-subsidy basis for taking to suitable cottage industries, professions, vocations or for improving their existing methods of work, etc.

Health Housing and Other Schemes: — Under this subhead, an outlay of Rs. 9.00 lakhs is proposed. The purpose of these schemes is to improve the living conditions of the backward classes.

Administration: — It is also proposed to set up a Department for the execution of Welfare schemes.

The following staff is suggested:

Director	1 post	Rs. 700-1250
Head Clerk	1 post	Rs. 210-380
Assistant	1 post	Rs. 210-425
U. D. C.	1 post	Rs. 130-300
L. D. Cs.	2 posts	Rs. 110-180
Peons	2 posts	Rs. 70-85
Driver	1 post	Rs. 110-139

An amount of Rs. 3.00 lakhs has been proposed for this scheme as detailed below:

Pay and allowances of staff	1.75 lakhs
Furniture for office including vehicle	0.50 lakhs
Other charges	0.75 lakhs
Total	3.00 lakhs

IX — Social Welfare

Plan Outlay — Rs. 11.00 lakhs

The Social Welfare programme in Goa, Daman and Diu is carried out mainly through the agency of Project Implementing Committees of the State Social Welfare Advisory Board.

The State Social Welfare Advisory Board has been implementing schemes for the welfare of women and children in consonance with the programme of the Central Social Welfare Board.

The Government has been aiding this Board to carry out its welfare schemes in accordance with the pattern of assistance approved by the Government of India.

X — Labour & Labour Welfare

The following plan schemes have been sanctioned to be implemented during the financial year 1968-69:

S. No.	Name of the Scheme	Total expenditure
1.	Setting up of Labour Welfare Centres ...	Rs. 15,000
2.	Manpower and Employment Scheme ...	Rs. 33,000

The above schemes are to be implemented before 31st March 1969 and the expenditure for continuation of these schemes, therefore, will from part of the Non Plan expenditure.

2. The following schemes may be taken up for implementation in the Fourth Five Year Plan: —

I — Opening of a Labour Welfare Centre: Besides the opening of the one Welfare Centre already sanctioned and which is to be completed during 1968-69, it is proposed that another welfare centre may be started at Margao during the Fourth Five Year Plan. It is necessary that the centre should be housed in a Government building. The building will also provide accommodation for the sub-centre of Employment Exchange. At present a rent of Rs. 150/- per month is being paid for the accommodation for the sub-centre of Employment Exchange at Margao. The cost of the building is estimated at Rs. one lakh and the P.W.D. may be entrusted with the construction work.

The expenditure involved for opening of the Welfare Centre will be as undr for the year 1969-70: —

Cost of the construction Rs. 1,00,000

Expenditure on staff:

S. No.	Designation	No. of posts	Scale of pay	Total Pay & Allowances
1.	Supervisor	1	130-300	2,832
2.	Gemes Teacher	1	110-180	2,592
3.	Sewing Mistress	1	110-180	2,592
4.	Watchman	1	70-85	1,710
5.	Peon	1	70-85	1,710
6.	L.D.C. (in the office of L.C.)	1	110-180	2,592
Total				14,028

Miscellaneous expenditure Rs. 8,000

Total expenditure on the above scheme for 1969-70 **Rs. 1,22,028 or Rs. 1,22,000**

Expenditure during the Fourth Plan Period on the opening of a welfare centre will be as under:

1969-70	1970-71	1971-72	1972-73	1973-74	Total for the IV Plan Period
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1,22,000	25,000	27,000	29,000	31,000	2,34,000

II — Strengthening of Labour Administration: — Various Labour Laws for extending welfare facilities to the workmen are made applicable in this Union Territory, but required strength of staff is not appointed to implement these Acts effectively. Follow up action shall be taken on the decisions of the Standing Labour Committee, Labour Minister's Conference, Indian Labour Conference, Conference of the Chief Inspector of Factories and under the Motor Transport Workers Act. Detailed reports on the implementation of various conventions adopted by the I. L. O. and accepted by the Central Government have to be submitted from time to time. The existing laws on labour and the rules thereunder are to be revised from time to time. Further it is necessary to constitute the following consultative committees which shall include the representatives of employers and workmen as desired by the Government of India.

1. *State Labour Advisory Committee:* — The Committee shall consist of the representatives of employers, workmen and Government officials of which the Honorable Labour Minister shall be the Chairman. The Committee will be consulted in the formulation of labour policy, enactment and amendment of laws and regulations.

2. *State Implementation and Evaluation Committee:* — A Committee consists of employers, workmen and Government officials of which the Labour Minister shall be the Chairman. The Committee will watch the implementation of the Code of Discipline in Industry, Industrial Truce Resolution, etc. The complaints regarding the breach of Code of Discipline received from the employers and the Unions are to be investigated by an officer of Labour Department and a report thereof shall be placed before the Committee for such action as it may decide. This procedure will serve as a check both on the employers and the unions preventing them from indulging in unilateral action of stoppage of work, unfair labour practice, etc.

3. *State Employment Advisory Committee:* — A State Advisory Committee on Employment Exchange shall also be constituted on line with the practice followed in the rest of the country. The Committee will consist of the representatives of employers, Trade Unions, Social and Welfare Organisations, members of the Legislative Assembly, and Officers of the Department. The Secretary, Industries & Labour shall be the Chairman of the said Committee. The advice of the Committee may be sought to render the services of the Employment Exchange Organisation more efficient and popular.

With a view to carry out the activities as detailed above which are very necessary for smooth and effective functioning of the Labour Department and for proper implementation of the Labour Policy as accep-

ted by the Government, it is necessary that the following posts shall be created:

S. No.	Designation	No. of Posts	Scales of Pay
1.	Labour Inspector	1	350-575
2.	Superintendent	1	350-575
3.	U. D. C.	2	130-300
4.	L. D. C.	3	110-180
5.	Driver	1	110-180
6.	Peon	1	70-85

It is further necessary that the officers of the Department who are required to tour extensively for inspection of the establishments located in the interior parts for enforcement of the various labour laws and to attend the cases of stoppages of work, accidents, etc., shall be provided with Government transport to enable them to discharge their statutory functions more effectively. It is therefore, necessary that one Station wagon shall be provided for the Department.

The expenditure on the above scheme for the year 1969-70 will be as under:

Expenditure on staff —

S. No.	Designation	No. of posts	Scales of pay	Total Pay & Allowances
1.	Labour Inspector	1	350-575	6,145
2.	Superintendent	1	350-575	5,760
3.	U. D. C.	2	130-300	5,665
4.	L. D. C.	3	110-180	7,775
5.	Driver	1	110-180	2,590
6.	Peon	1	70-85	1,710
				29,645 or 30,000

Miscellaneous expenditure —

Station wagon	30,000
Other items	10,000
40,000	
Total expenditure during the year 1969-70	70,000

Expenditure during the Fourth Plan Period on the Strengthening of Labour Administration will be as under:

1969-70	1970-71	1971-72	1972-73	1973-74	Total for the IV Plan Period
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
70,000	45,000	48,000	50,000	52,000	2,65,000

III — Visual Publicity Scheme through Mobile Cinema Van: Intensive publicity should be given to the benefits of Welfare provisions of the Labour Legislation with particular reference to the industrial safety, effective use of the welfare facilities provided under the various Acts, adult education, etc. It is therefore, necessary that a mobile audio-visual unit should be acquired to facilitate display of informative short films to the workmen employed in various industrial establishments. This will help and guide the workers regarding the proper use of safety equipments, safe and right type of handling various machinery, quality control, proper use of welfare facilities, the importance of cooperative movement among wage earners, etc.

It is necessary to provide the following items for the above scheme:

Mobile Cinema Van 1
Special films.

The expenditure on the above scheme for the year 1969-70 will be as under:

Expenditure on staff —

S. No.	Designation	No. of posts	Scale of pay	Total Pay & Allowances
1.	Projectionist	1	210-450	4,355
2.	L. D. C.	1	110-180	2,590
3.	Driver	1	110-180	2,590
				9,535 or
				Rs. 10,000

Miscellaneous expenditure: —

Mobile Cinema Van	40,000
Special films	5,000
<u>Rs. 45,000</u>	

Total expenditure during the year 1969-70 ... Rs. 55,000

Expenditure during the Fourth Plan Period on the Visual Publicity Scheme through Mobiles Van will be as under:

1969-70	1970-71	1971-72	1972-73	1973-74	Total for the IV Plan Period
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
55,000	15,000	17,000	19,000	21,000	1,27,000

Total expenditure on the three schemes for the IV Plan Period:

I — Opening of a Labour Welfare Centre ...	Rs. 2,34,000
II — Strengthening of Labour Administration ...	Rs. 2,65,000
III — Visual Publicity Scheme through Mobile Cinema Van	Rs. 1,27,000
Total	<u>Rs. 6,26,000</u>

XI — Public Cooperation

LOK KARYA KSHETRAS

Plan outlay: — Rs. 1.50 lakhs

The grant is for the running of the Lok Karya Kshetras through Bharat Sevak Samaj.

This outlay has been proposed on the basis of the amounts utilised by the Bharat Sevak Samaj in the previous years.

PLANNING FORUMS

Plan outlay: — Rs. 0.35 lakhs

Planning Forums are being conducted in the Colleges, with a view to arouse the interest of students in the various plan schemes as well as to associate them with the Planning in general. Grants to Colleges for Planning Forums are being given on the pattern approved by the Government of India. An amount of Rs. 0.35 lakhs has been earmarked for this purpose.

ASSOCIATION FOR MORAL AND SOCIAL HYGIENE

Plan outlay: — Rs. 0.37 lakhs

The Association for Moral and Social Hygiene in India has its branch in Goa, and this Association is getting an annual grants of Rs. 7.500/- from the Government for carrying out activities aimed at the suppression of immoral traffic. The grant is proposed to be continued during the IV Plan. An amount of Rs. 37.500/- has been earmarked for this item.

STRENGTHENING OF VOLUNTARY ORGANISATIONS

Plan outlay: — Rs. 7.50 lakhs

It is proposed to give grants to organisations engaged in welfare activities and in promoting Public Cooperation. The grants are proposed to be given for strengthening these organisations, as they are just coming up in this newly liberated territory. An amount of Rs. 7.50 lakhs has been proposed for the IV Five Year Plan.

RESEARCH TRAINING PILOT PROJECT

Plan outlay: — Rs. 0.36 lakhs

Under this head, it is contemplated to implement following schemes connected with emergency, which will require active community support:

- a) Training camps for voluntary workers in civil defence measures.
- b) Schemes for welfare of jawans families.
- c) Relief & Rehabilitations.
- d) Special programme for mobilising community savings.
- e) Maximum utilisation of the existing irrigation potential and idle lands.
- f) Avoidance of conspicuous consumption and wastage of food.
- g) National consumer's service.

An amount of Rs. 0.36 lakhs is proposed for this purpose.

Miscellaneous

I — Statistics

The activities of the General Statistics Department in the plan sector in the beginning of the Third Five Year Plan were nil.

In 1964, this Department launched a very important scheme viz. Fixing of Consumer Cost of Living Index.

A survey was conducted and the same was confined to the middle class employees families in Panaji Town.

During the year 1966-67 besides continuing the scheme included in the Third plan, this Department has started new schemes viz. **Housing Statistics, Strengthening of State Statistical Organisation; Improvement of State Income Estimates; Survey of Villages and Small Scale Industries.**

Some preliminary work in connection with these schemes was undertaken.

The schemes started in the Third Five Year Plan and in 1966-67, were continued during the year 1967-68.

Sufficient progress was achieved regarding the implementation of these schemes.

In accordance with the directives laid down by the Central Statistical Organisation, besides the continuing schemes enumerated above, eight new schemes were included in the Budget of the year 1968-69. viz. Survey of Distributive Trade, Training Programmes, Machine Tabulation Unit, Strengthening/Creation of Unit for Resources for Planning, Preparation of Municipal Statistical Yearbooks and District Statistical Handbooks, Survey of Goods Traffic by Road, Irrigation and Power Statistics and Vital Statistics.

As regards to the scheme Irrigation and Power Statistics and Survey of Goods Traffic by Road, the approval from the Central Statistical Organisation has not been received so far.

This Department intends to implement all other schemes to the extent possible.

During the year 1969-70 only six schemes will be taken in the plan side viz. Training Programme, Machine Tabulation Unit, Strengthening/Creation of Unit for Statistics of Resources for Planning, Preparation of Municipal Statistical Yearbooks and District Statistical Handbook, Survey of Goods Traffic by Road, Setting up of a Statistical Cell in S. S. B. for collection and coordination of data on Irrigation (including minor irrigation) Flood Control and Power Statistics.

All the remaining schemes will be considered as committed expenditure.

II — Information and Publicity

INTRODUCTION

The Plan Developments in Information and Publicity in Goa were started in 1962 and completed almost after six years of Plan Development. This includes three years of the Third Five Year Plan and three year period after the close of the Third Plan.

As the Department of Information and Tourism is considered as surveyor of Information regarding Plan activities of the territory, and to a certain extent, as Public Relations Bureau, the following schemes were undertaken during the Third Five Year Plan in continuity series: —

- 1) Production of Publicity Material.
- 2) Field Publicity.
- 3) Songs, Dramas and Dance Festivals.
- 4) Tours to Journalists.
- 5) Advertisements.
- 6) Dark Room.
- 7) Community Listening Scheme.

Most of the above schemes, though initiated during the Third Five Year Plan, could not make much headway due to lack of proper transport and communication facilities and easy access to remote villages.

1) Production of Publicity Material: As the purpose of the scheme is to popularise the Development activities of the Union Territory, the scheme envisages production of monthly magazine, reference annual, booklets/folders on agriculture, fisheries, education, animal husbandry, tourism, etc. Though the scheme was initiated in the Third Five Year Plan, it could not make much headway as the budget allotment was received as late as February 1964. However this scheme has been continued in the Fourth Five Year Plan in order to give to the people comprehensive information about post-liberation progress in Goa, Daman and Diu.

2) Field Publicity: Setting up of a mobile unit, organising exhibitions, production/purchase of documentaries, educative/informative/instructive films, etc. has been envisaged under this scheme. Through this scheme it is intended to publicise Plan Programme and other activities of the Government in rural areas, in order to educate the masses to enlist their help and cooperation in achieving the Plan targets. This scheme, initiated during the Third Five Year Plan, has been continued in the Fourth Year Plan. The scheme keeps the people informed of what has been done by the Government to better their socio economic conditions.

3) Songs, Drama, Music and Dance festivals: This scheme has been initiated after the Third Five Year Plan. It aims at assisting poets, authors and artists for writing scripts, etc., to promote and foster cultural activities and to revive traditional folklore of Goa, Daman and Diu.

Under this scheme cultural programme like Rangoli, exhibitions, dance festivals, concerts, essay writings, etc. are organised and prizes awarded to the distinguished.

4) Tours of Journalists: Under this scheme, journalists are taken to industrial concerns, development blocks, etc. to give them first-hand information regarding development activities undertaken after liberation. The scheme initiated during the Third Five Year Plan, has been continued in for the Fourth Five Year Plan period as this is considered as one of the most important schemes in giving due publicity to the development activities of the territory. The scheme enables the journalists to make comparative study of the Plan progress and socio-economic conditions in the territory with that of other States, which may be given desired publicity in a fitting manner in the columns of their journals.

5) Advertisements: The important object of this scheme lies in the important role that it plays in bringing home to the people about the achievements of the Plan. During the Fourth Five Year Plan, pictorial/statistical/display advertisements will be issued in the leading dailies, special numbers, souvenirs etc.. Special supplements giving wide publicity to Plan activities will be brought out. With the increase in tempo of development, propaganda through this medium will be intensified.

6) Setting up of Dark Room: Main object is to curtail the expenditure involved in developing, enlarging, etc. The films in commercial photo studios. Setting up of this unit will lead to saving of precious time and money. Further our own processing is essential in the interest of photo coverages, official functions and development activities.

It will be possible to undertake extensive coverage of ancient relics spread all over the territory.

The scheme envisages purchase of camera and other equipment and maintenance of staff for the purpose.

7) Community Listening Scheme: Though its purpose was to provide all the 163 Village Panchavats with the radio sets during the Third Five Year Plan, the object could not be fulfilled due to lack of proper transport facilities in remote Villages and also due to non-availability of required number of radio sets from D. G. S. & D. However, during the Third Five Year Plan, only 105 villages were supplied with the radio sets.

Difficulty of transport was overcome by purchasing a jeep in 1965 and the remaining villages were supplied with the radio sets. A working unit at the centre was set up to carry out regular inspection and maintenance of new as well as old sets. In the Planning Commission's report it was proposed that other 80 minor villages in Goa should also be supplied with the radio sets. With this in view, necessary provision has been proposed in the Fourth Five Year Plan to purchase new sets and necessary accessories, etc.

PHYSICAL AND FINANCIAL ACHIEVEMENTS

Main activity of this Department is to disseminate information to the public regarding Government policies and its execution at various levels. In view of this, the Department undertook following schemes in order to give wide publicity to Government plan activities, to educate the masses and to enlist their cooperation in achieving the Plan targets.

During the last two years of the Third Five Year Plan, a sum of Rs. 3,31,000 was spent on plan activities under the following schemes: —

1. Community Listening Scheme: — This is centrally sponsored scheme initiated with a object to publicise the activities of the Government in rural areas.

During the Third Five Year Plan, the total requirement of the sets could not be procured from D. G. S. & D, Calcutta hence all the villages could not be supplied with the radio sets. A vehicle was purchased for carrying out regular inspection and repairs of the sets. During the Third Five Year Plan an expenditure of Rs. 72,000 was incurred. The main item of expenditure were purchase of sets, jeep, accessories to the sets, etc. During 1966-67 and 1967-68 remaining villages were supplied with radio sets and a complete unit was set up for regular inspection and maintenance of sets, and the total expenditure of Rs. 74,400/-, was incurred.

2. Tours to journalists: — This scheme envisages conducted tours of editors of newspapers, journalists, press representatives etc., to various developmental projects, industrial centres in order to enable them to give due publicity in a fitting manner in the columns of their journals after making comparative study of the progress made in those fields.

During the Third Five Year Plan, four such tours were conducted to Goa, Daman and Diu and neighbouring places of Maharashtra like Bombay. Journalists were apprised of the progress made specially in Agriculture, Fisheries, etc. A party of about four journalists was also invited from Delhi and was taken around Goa in order to enable them to give publicity in their journals about the developments in Goa, Daman and Diu after liberation.

Expenditure incurred during Third Five Year Plan was about Rs. 17,000. During 1966-67 and 1967-68 no such tours could be organised due to economy.

3. Production of publicity material: — As the purpose of the scheme is to popularise the plan developmental activities in the Union a number of publications in the form of monthly magazine, reference annual, booklets/folders on animal husbandry, agriculture, fisheries etc., were brought out and widely distributed among people at a total cost of Rs. 2,10,000. During 1966-67 and 1967-68 publications on horticulture, education, tourism, etc. were brought out at a total cost of Rs. 2,92,900/-.

5. Field Publicity: — The scheme was initiated during the Third Five Year Plan. Under this scheme, educative/instructive/informative/Tourist films are screened in remote villages of Goa, Daman and Diu. Under this scheme, cultural exhibitions are also being organised and

documentary films produced and special films purchased. Total expenditure during the Third Five Year Plan was Rs. 11,000 mainly on purchase of special educative/instructive films. During 1966-67 and 1967-68 expenditure of Rs. 49,500 was incurred mainly on purchase of special feature films, production of documentary film entitled "Vignettes of Goa" and organisation of two cultural exhibitions, one in Bombay and other in Panaji.

6. Advertisements: — As advertisement plays an important role in informing the people about objects and achievements of plans, a number of pictorial/statistical advertisements were issued during the Third Five Year Plan in important journals and magazines at a total cost of Rs. 60,000/- and the desired publicity was achieved.

7. Dark room: — The scheme was introduced during the Third Five Year Plan in order to undertake extensive photo coverages of official photo-coverages. During the Third Five Year Plan the expenditure was Rs. 7,000 and the main expenditure was on purchase of one camera for the unit. During 1966-67 and 1967-68 total expenditure involved was Rs. 6,900.

8. Songs, dramas, music and dance festival: — The scheme was initiated in 1966-67. It was introduced to promote cultural activities and to revive traditional Goan folklore. During 1966-67 and 1967-68 a large number of weekly/special cultural programmes were organised at a total cost of Rs. 12,800.

ABSTRACT OF ALLOCATION — SCHEMewise

Name of the scheme	Proposed Outlay (Rs. in lakhs)
1) Production of publicity material	9.00
2) Field Publicity	2.25
3) Songs, Dramas & dance festival	1.00
4) Tours of journalists	0.75
5) Advertisements	2.50
6) Setting up of a Dark room	0.50
7) Community Listening Scheme	1.00
Total	17.00

Details of the Plan Schemes

PRODUCTION OF PUBLICITY MATERIAL

Plan outlay: — Rs. 9.00 lakhs

The Department will bring out during the Fourth Plan period various publications in the form of booklets, brochures, folders, inserts, charts, etc. to disseminate to the general public information regarding Plan activities of the Government.

The scheme also envisages production of tourist publicity literature in the interest of tourists in general.

FIELD PUBLICITY

Plan outlay: — Rs. 2.25 lakhs

Setting up of a mobile unit, organisation of exhibitions, production/purchase of documentaries, educative/information films, etc.

It is the intention, through this scheme, to publicise Plan programmes and other activities of the Government in rural areas in order to educate the masses so as to enlist their help, cooperation and participation in achieving Plan targets.

During Fourth Five Year Plan the scheme proposes to organise exhibitions of various achievements so that the people will be informed as to what has been done for the betterment of their economic and social development. The scheme also provides for the participation in exhibitions held in important cities of India so as to project the image of Goa, Daman and Diu in the rest of the country.

Under this scheme, it is also proposed to produce documentaries, purchase of films from Government of India as well as from approval private producers.

SONGS, DRAMAS, MUSIC AND DANCE FESTIVALS

Plan outlay: — Rs. 1.00 lakh

The scheme aims to assist poets, authors and artists for writing scripts, etc. to foster cultural activities and revive traditional folklore of Goa, Daman and Diu and to award prizes to best artists.

Under this scheme, cultural programmes will be organised in the Union Territory of Goa, Daman and Diu. Concerts, dance festivals, etc. will also be held.

TOURS OF JOURNALISTS

Plan outlay: — Rs. 0.75 lakhs

Under this scheme, journalists will be taken on tour to project areas and industrial concerns, development blocks, etc. to give first hand information regarding development activities.

The scheme is proposed for taking local journalists and also inviting journalists from other States for touring around Goa, Daman and Diu and in important cities of the neighbouring States, etc., in order to enable them to give desired publicity in a fitting manner in the columns of their journals after making the comparative study of the developments made in this territory with the development of other States.

ADVERTISEMENTS

Plan outlay: — Rs. 2.50 lakhs

Under this scheme, advertisements in Press/newspapers/journals etc. plays an important role in bringing home to the public the achievements of the Plan.

Under this scheme, pictorial/statistical/display advertisement will be issued to leading dailies, special number weeklies/souvenirs, etc. Special supplements to give due publicity to Plan activities of Government will also be brought out. With the increase in tempo of development propaganda through this media will be intensified.

SETTING UP OF DARK ROOM

Plan outlay: — Rs. 0.50 lakhs

Main object is to curtail the expenditure involved in developing, enlarging, etc. of the films in commercial studios. Setting up of this unit will lead to saving of precious time and money. Further our own processing is essential in the interest of official photo coverages.

It will be possible to undertake extensive coverage of ancient relics spread all over the territory.

The scheme envisages purchase of camera and other equipment and maintenance of staff for the purpose.

COMMUNITY LISTENING SCHEME

Plan outlay: — Rs. 1.00 lakh

This is a centrally sponsored scheme initiated for providing as far as possible all the Village Panchayats with the community listening radio sets in order to facilitate wider reach of A. I. R. broadcast especially on development projects.

The scheme envisages distribution of radio sets for the remaining 80 villages of Goa, Daman and Diu. It is also envisages purchase of necessary accessories/sets and maintenance of new and old sets as well.

III — Local Bodies

GRANTS AND LOANS TO LOCAL BODIES

1. Grants to Municipalities:— A programme for improving communication facilities mainly in rural areas, was undertaken during the Third Five Year Plan, as it was noticed, after liberation of this Territory in December, 1961, that this sphere of development had been almost completely neglected during the erstwhile Portuguese regime.

The programme had to be implemented mainly through Municipalities as these bodies exercised their jurisdiction over entire talukas including rural areas, under the existing municipal law.

During the Third Five Year Plan period grants totalling Rs. 32.38 lakhs were given to Municipalities for improvement of communications, against the actual requirement of Rs. 60.00 lakhs.

Now, during the Fourth Five Year Plan, however, the jurisdiction of Municipalities will be limited, under the new Municipal Act to the urban areas only. As such a provision of only Rs. 0.30 lakhs has been made for road improvement works in the Fourth Five Year Plan period.

2. Loans to Municipalities:— Loans to Municipalities are granted for enabling them to raise remunerative assets and thus increase their income. Such loans are granted for the construction of markets, shops, residential quarters, godowns, etc. During 1966-67 and 1967-68 the total amount granted as loans to Municipalities was Rs. 9.03 lakhs.

During the Fourth Five Year Plan period an outlay of Rs. 30.00 lakhs is proposed for grant of loans to Municipalities.

3. Grants to Municipalities for Slum Clearance Scheme:— The slum clearance scheme will be implemented through the Municipalities during the Fourth Five Year Plan. Those Municipalities which come upto undertake the scheme will be granted subsidies for the acquisition of land, construction of buildings, etc. in accordance with the scheme approved by the Government of India.

During the Fourth Five Year Plan period, an outlay of Rs. 20.00 lakhs has been proposed for the slum clearance scheme.

IV — Evaluation Unit

Unit under the Planning and Development Department: Till the end of Third Five Year Plan, there was no Evaluation Organisation in this Territory. In 1967-68 an Evaluation Unit was started under the Planning and Development Department. The Unit has so far functioned with a limited staff and conducted a few case studies only.

The total expenditure on the plan schemes during the Third Five Year Plan amounted Rs. 15.28 crores. The expenditure on the Plan Schemes during the last two years, i. e. 1966-67 and 1967-68, has been Rs. 5.22 crores and Rs. 8.11 crores respectively. Similarly an amount of Rs. 7.97 crores has been provided for the Plan Schemes for the year 1968-69. A systematic and objective evaluation of plan-schemes is very necessary for a proper formulation and implementation of the rural development programmes. The Evaluation Unit will be required to take up evaluation studies of important plan projects. The criteria for the selection of such projects have already been fixed up.

The Unit is headed by an Evaluation Officer and is assisted by staff as per statement below. The total expenditure on this scheme during the Fourth Five Year Plan period is expected to be Rs. 6.00 lakhs.

STATEMENT SHOWING EXISTING AND THE REQUIRED STAFF FOR THE EVALUATION ORGANISATION

I. Existing staff:—

Designation	Scale
One Evaluation Officer	Rs. 900-1250
One Research Officer	Rs. 350-950
One Investigator	Rs. 210-425
One U. D. C.	Rs. 130-300
One stenographer (Junior)	Rs. 130-300
Two L. D. C.'s	Rs. 110-180
One Driver	Rs. 110-180
One peon	Rs. 70-85

II. Additional staff required:—

One Field Investigation Officer	Rs. 350-950
Three Field Investigators	Rs. 210-425
One Typist	Rs. 110-180
One peon	Rs. 70-85

III. *Contingencies*:—

1. One Jeep	Rs. 20,000
2. Two Typewriters	Rs. 2,400
3. One Facit Calculating machine ...	Rs. 1,600
4. One Duplicator	Rs. 2,000
5. Furniture	Rs. 6,000
6. Books and publications	Rs. 2,000
7. Other charges	Rs. 15,000
Total	Rs. 49,000

V — Other Miscellaneous Schemes

As it is being experienced that it is very difficult get suitable private accommodations, at the reasonable rates in the important cities of this Territory for housing the Divisional and Sub-Divisional Offices of this Department, it is felt necessary to construct the buildings of its own at the places where the Sub-Divisional Offices and Divisions are presently situated. Sub-Divisional Office buildings at Mapusa, Canacona and Sanquelim are required to be constructed. Besides the buildings for Works Division VIII at Margao and Divisional Office building at Bicholim are also required to be undertaken by P. W. D. urgently. A total provision of Rs. 10.00 lakhs is, therefore, asked for the Fourth Five Year Plan period. Out of this provision, a sum of Rs. 9.10 lakhs is likely to be utilised during the next financial year, i. e. 1969-70, for the construction of P. W. D. Office building at Altinho, Panaji and other works which are now in progress. The balance amount of Rs. 0.90 lakhs may be required for the year 1970-71, for settlement of Final bills and for the completion of the remaining portion of the works.

ABSTRACT STATEMENTS

STATEMENT — I

Outlay and Expenditure 1966 to 1969

(Rs. in lakhs)

Developmental Head/Sub Head	1966-67		1967-68		1968-69	
	Approved Outlay	Actual Expenditure	Approved Outlay	Actual Expenditure	Approved Outlay	Anticipated Expenditure
1	2	3	4	5	7	8
I. Agricultural Programme						
1. Agricultural Production ...	64.56	32.41	50.00	45.19	52.50	48.96
2. Minor Irrigation ...	17.65	0.31	12.00	5.12	29.50	26.22
3. Soil Conservation ...	10.83	1.22	15.00	9.54	18.00	16.98
4. Ayacut Development Programme ...	-	-	-	-	-	-
5. Animal Husbandry ...	21.34	12.13	20.00	24.34	25.00	29.23
6. Dairying and Milk Supply ...	4.30	8.00	12.00	18.30	18.30	21.81
7. Forests ...	17.57	16.58	30.00	18.88	21.00	20.50
8. Fisheries ...	27.38	14.76	20.00	15.97	32.00	25.20
9. Warehousing and Marketing	9.25	2.71	8.00	3.32	2.25	0.75
Total ...	172.88	88.12	167.00	122.36	198.55	189.65
II. Cooperation and Community Development						
1. Cooperation ...	8.25	6.02	7.00	6.31	2.75	2.94
2. Community Development ...	25.05	25.36	25.00	23.18	15.00	17.57
3. Panchayats ...	2.60	6.75	4.00	3.00	2.50	2.50
Total ...	35.90	38.13	36.00	32.49	20.25	23.01
III. Irrigation and Power						
1. Irrigation ...	8.50	7.185	10.00	14.25	6.00	8.68
2. Flood Control ...	-	-	-	-	-	-
3. Power ...	145.47	88.875	128.00	150.00	133.00	19.25
Total ...	153.97	96.06	138.00	164.25	139.00	99.93
IV. Industry and Mining						
1. Large and Medium Industries ...	21.73	16.40	26.42	23.431	23.00	22.99
2. Mineral Development ...	-	-	2.00	0.135	-	0.50
3. Village and Small Industries	-	-	16.58	6.554	10.00	10.41
Total ...	21.73	16.40	45.00	30.12	38.00	33.90
V. Transport and Communications						
1. Roads ...	57.33	76.07	75.00	79.49	80.00	73.95
2. Road Transport ...	-	-	-	-	-	-
3. Ports and Harbours ...	20.18	14.40	35.00	15.04	41.00	41.00
4. Other Transport ...	-	-	-	-	-	-
5. Tourism ...	13.55	2.66	4.00	3.98	5.00	4.00
Total ...	91.06	93.13	114.00	98.51	126.00	118.95

STATEMENT — I (Conld.)

(Rs. in lakhs)

1	2	3	4	5	7	8
VI. Social Services						
1. General Education	62.28	57.96	91.00	87.14	53.20	90.732
2. Technical Education	17.60	14.76	32.00	16.29	26.00	14.528
3. Cultural Programme	3.45	0.55	3.00	1.15	0.80	1.433
4. Health	86.21	42.03	66.00	40.23		
Water Supply (Rural and Urban)	61.50	36.62	75.00	119.00	75.00	135.00
Other Programme	A	A	A	A	43.60	36.72
Medical	A	A	A	A	20.00	30.03
Pharmacy	A	A	A	A	2.00	0.50
5. Housing and Urban Development: —						
Housing	20.00	9.23	16.25	9.61	4.00	15.57
Urban Development (Town Planning)	-	0.22	0.75	0.42	-	0.50
6. Welfare of Backward Classes	3.67	0.25	1.00	0.81	2.50	8.06
7. Social Welfare	11.96	11.98	12.00	12.84	1.00	1.555
8. Labour and Labour Welfare	2.05	1.97	8.00	0.92	2.50	1.582
9. Public Cooperation	2.27	0.64	2.00	0.18	0.30	18.70
Total	<u>270.99</u>	<u>176.21</u>	<u>307.00</u>	<u>288.59</u>	<u>230.90</u>	<u>354.91</u>
VII. Miscellaneous						
1. Statistics	0.96	0.35	1.00	0.90	2.50	2.26
2. Information and Publicity	3.63	1.44	5.00	3.99	3.00	3.64
3. Local Bodies	13.65	11.95	26.00	24.48	20.00	17.72
4. Evaluation Unit	0.90	0.01	1.00	0.85	0.50	0.80
5. Hill and Border Areas	-	-	-	-	-	-
6. Others	22.46	-	-	3.69	-	-
Total	<u>41.60</u>	<u>13.75</u>	<u>33.00</u>	<u>33.91</u>	<u>26.00</u>	<u>24.42</u>
Grand total	<u>788.13</u>	<u>521.80</u>	<u>840.00</u>	<u>770.23</u>	<u>773.70</u>	<u>844.77</u>

A — Included in "Health".

Head/Sub-Head 1	1969-70			1970-71		
	Total	Capital	Foreign Exch.	Total	Capital	Foreign Exch.
	2	3	4	5	6	7
I. Agricultural and Allied Programme						
<i>(i) Agricultural production:</i>						
1. Improved Seed Programme ...	6.00	4.00	-	5.20	2.30	-
2. Manures and Fertilizers ...	15.81	11.97	-	6.01	1.57	-
3. Plant Protection ...	6.87	-	-	7.00	-	-
4. Agricultural Machinery and implements ...	11.96	9.00	4.00	6.05	3.00	-
5. Commercial Crops:						
a) Horticulture Development ...	7.66	2.06	-	9.95	1.92	-
6. Agricultural Education ...	-	-	-	-	-	-
7. Agricultural Research:						
a) Agri-Horti-Research and Chemistry Section ...	1.70	-	0.25	8.44	6.74	-
8. Extension Training and Farmer's Education:						
a) Extension Training Centre ...	1.16	-	-	2.36	1.20	-
9. Agricultural Statistics ...	0.50	-	-	0.50	-	-
10. Intensive Cultivation Programme (I. A. D. P. I. A. A. P., H. V. P. etc.) ...	-	-	-	-	-	-
11. Land Development:						
a) Utilization of Cultivable Wasteland ...	1.60	1.00	-	1.60	1.00	-
12. Consolidation of Holdings ...	-	-	-	-	-	-
13. Others:						
a) Agricultural Information and Publicity ...	0.60	-	0.50	0.60	-	-
b) Agricultural Exhibition and Shows ...	1.20	-	-	1.20	-	-
c) Subsidy and Pumps ...	1.50	-	-	1.50	-	-
d) Construction of Department Bldgs. ...	2.00	2.00	-	2.00	2.00	-
e) Cadastral ...	20.80	20.80	-	19.80	19.80	-
f) Abolition of various tenures in Goa under Land Reforms ...	-	-	-	10.00	-	-
Total ...	79.36	50.83	475	82.21	39.53	-
<i>(ii) Minor Irrigation:</i>						
1. New percolation wells ...	-	-	-	4.00	-	-
2. Lift irrigation from streams, reservoirs etc. ...	1.00	-	-	1.50	-	-
3. Installation of electric pumps ...	1.50	-	-	2.00	-	-

Plan Outlay

(Rs. in lakhs)

1971-72			1972-73			1973-74			Fourth Plan Outlay		
Total	Capital	Foreign Exch.	Total	Capital	Foreign Exch.	Total	Capital	Foreign Exch.	Total	Capital	Foreign Exch.
8	9	10	11	12	13	14	15	16	17	18	19
5.90	2.00	-	6.10	1.00	-	5.10	-	-	28.30	9.30	-
5.86	0.57	-	16.66	10.57	-	7.56	0.57	-	51.90	25.25	-
8.56	-	-	9.97	-	-	10.91	-	-	43.31	-	-
6.07	3.00	-	5.09	2.00	-	5.21	2.00	-	34.38	19.00	4.00
13.70	2.84	-	15.68	2.35	-	18.79	2.72	-	65.77	11.89	-
-	-	-	-	-	-	-	-	-	-	-	-
3.72	2.00	-	1.74	-	-	1.74	-	-	17.34	8.74	0.25
1.16	-	-	1.16	-	-	1.16	-	-	7.00	1.20	-
0.50	-	-	0.50	-	-	0.50	-	-	2.50	-	-
-	-	-	-	-	-	-	-	-	-	-	-
1.60	1.00	-	1.60	1.00	-	1.60	1.00	-	8.00	5.00	-
-	-	-	-	-	-	-	-	-	-	-	-
0.60	-	-	0.60	-	-	0.60	-	-	3.00	-	0.50
1.20	-	-	1.20	-	-	1.20	-	-	6.00	-	-
1.50	-	-	1.50	-	-	1.50	-	-	7.50	-	-
1.00	1.00	-	-	-	-	-	-	-	5.00	5.00	-
19.80	19.80	-	19.80	19.80	-	19.80	19.80	-	100.00	100.00	-
30.00	-	-	30.00	-	-	30.00	-	-	100.00	-	-
101.17	32.21	-	111.60	36.72	-	105.66	26.09	-	480.00	185.38	4.75
6.00	-	-	6.50	-	-	3.50	-	-	20.00	-	-
1.50	-	-	0.50	-	-	0.50	-	-	5.00	-	-
2.00	-	-	1.25	-	-	1.75	-	-	8.50	-	-

1	2	3	4	5	6	7
4. Installation of diesel pumps ...	1.50	-	-	2.00	-	-
5) Others	9.86	4.86	-	8.40	2.00	-
Total	13.86	4.86	-	17.90	2.00	-
(iii) <i>Soil Conservation</i>	-	-	-	25.50	2.00	-
(iv) <i>Ayacut Development Programme:</i>	-	-	-	-	-	-
(v) <i>Animal Husbandry:</i>						
1. Cattle Development	12.65	3.75	-	9.00	1.50	-
2. Feeds & Fodder Development ...	1.65	-	-	3.50	0.50	-
3. Poultry Development	5.55	1.90	-	5.00	1.00	-
4. Pigery Development	1.02	0.70	-	0.60	0.15	-
5. Animal Health	3.43	3.00	-	2.50	1.50	-
6. Special Schemes	2.15	2.00	-	2.00	1.80	-
Total	26.45	11.35	-	22.60	6.45	-
(vi) <i>Dairying and Milk Supply:</i>						
1. Pilot Pasturisation Scheme ...	0.10	0.10	-	0.25	0.25	-
2. Ponda Milk Scheme	9.50	9.50	2.00	8.00	4.50	1.00
3. Rural Dairy Centres	-	-	-	-	-	-
4. Rural Dairy Extension	0.85	-	-	1.50	0.50	-
5. Loans for purchase of Milch animals	4.50	4.50	-	5.00	5.00	-
6. Training of Dairy personnel ...	0.05	-	-	0.10	-	-
7. Assistance to Dairy Cooperatives	0.75	0.50	-	1.25	1.00	-
8. Dairy Development Staff	-	-	-	0.10	-	-
9. Survey & Statistics	0.10	-	-	0.20	-	-
Total	15.85	14.60	2.00	16.40	11.25	1.00
(vii) <i>Forests:</i>						
1. Survey and Demarcation	0.50	-	-	0.50	-	-
2. Wild Life	0.10	-	-	0.10	-	-
3. Working Plan	0.50	-	-	0.50	-	-
4. Forest Protection	0.10	-	-	0.10	-	-
5. Forest Publicity	0.10	-	-	0.10	-	-
6. Plantation	10.50	10.50	-	10.50	10.50	-
7. Communications	2.86	2.86	-	1.00	1.00	-
8. Buildings	2.00	2.00	-	0.50	0.50	-
9. Introduction of extensive Cashew Plantations	11.76	11.76	-	11.34	11.34	-
10. Farm Forestry	0.16	0.16	-	0.16	0.16	-
Total	28.58	27.28	-	24.80	23.50	-

II (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
2.50	-	-	1.25	-	-	1.75	-	-	9.00	-	-
6.94	2.00	-	10.90	2.00	-	12.40	3.00	-	48.50	13.86	-
18.94	2.00	-	20.40	2.00	-	19.90	3.00	-	91.00	13.86	-
25.50	2.00	-	22.50	2.00	-	22.50	2.00	-	96.00	8.00	-
-	-	-	-	-	-	-	-	-	-	-	-
7.00	1.00	-	6.00	0.50	-	5.35	0.50	-	40.00	7.25	-
3.00	0.50	-	2.35	0.25	-	2.00	-	-	12.50	1.25	-
4.80	0.60	-	3.60	0.50	-	2.05	-	-	21.00	4.00	-
0.70	-	-	0.73	0.15	-	0.70	-	-	3.75	1.00	-
3.50	0.25	-	3.30	0.25	-	2.98	-	-	15.71	5.00	-
1.20	1.00	-	1.50	1.20	-	0.19	-	-	7.04	6.00	-
20.20	3.35	-	17.48	2.85	-	13.27	0.50	-	100.00	24.50	-
0.50	0.50	-	0.35	0.35	-	0.30	0.30	-	1.50	1.50	-
6.25	0.50	-	6.25	0.50	-	5.00	0.50	0.50	35.00	15.50	3.50
1.50	0.50	-	1.50	-	-	1.50	-	-	4.50	0.50	-
1.00	-	-	0.90	-	-	0.75	-	-	5.00	0.50	-
6.00	6.00	-	2.50	2.50	-	2.00	2.00	-	20.00	20.00	-
0.15	-	-	0.10	-	-	0.10	-	-	0.50	-	-
2.00	1.75	-	2.00	1.75	-	1.00	0.75	-	7.00	5.75	-
0.30	-	-	0.30	-	-	0.30	-	-	1.00	-	-
0.10	-	-	0.10	-	-	-	-	-	0.50	-	-
17.80	9.25	-	14.00	5.10	-	10.95	3.55	0.50	75.00	43.75	3.50
0.50	-	-	0.50	-	-	0.50	-	-	2.50	-	-
0.10	-	-	0.10	-	-	0.10	-	-	0.50	-	-
0.50	-	-	0.50	-	-	0.50	-	-	2.50	-	-
0.10	-	-	0.10	-	-	0.10	-	-	0.50	-	-
0.10	-	-	0.10	-	-	0.10	-	-	0.50	-	-
10.50	10.50	-	10.50	10.50	-	10.50	10.50	-	52.50	52.50	-
1.00	1.00	-	1.00	1.00	-	1.00	1.00	-	6.86	6.86	-
0.50	0.50	-	0.50	0.50	-	0.50	0.50	-	4.00	4.00	-
12.08	12.08	-	12.08	12.08	-	12.08	12.08	-	59.34	59.34	-
0.16	0.16	-	0.16	0.16	-	0.16	0.16	-	0.80	0.80	-
25.54	24.24	-	25.54	24.24	-	25.54	24.24	-	130.00	123.50	-

1	2	3	4	5	6	7
(viii) <i>Fisheries</i>	27.16	22.30	0.70	16.95	10.21	-
(ix) <i>Warehousing and Marketing:</i>						
1. Agricultural marketing	1.25	1.00	-	4.00	3.80	-
2. Administration	-	-	-	0.05	-	-
Total	1.25	1.00	-	4.05	3.80	-
Total: Agricultural and Allied Pro- gramme	192.51	132.22	7.45	210.41	98.74	1.00
II. Cooperation and Community Develop- ment						
(i) <i>Cooperation:</i>						
1. Credit	0.77	0.30	-	1.61	0.93	-
2. Marketing	0.02	-	-	0.22	0.20	-
3. Processing other than Sugar Fac- tories and large processing units...	-	-	-	-	-	-
4. Cooperative Sugar factories ...	-	-	-	-	-	-
5. Cooperative farming	-	-	-	0.18	0.18	-
6. Cooperative training education ...	0.04	-	-	0.11	-	-
7. Administration	-	-	-	-	-	-
8. Others	0.60	0.05	-	2.42	1.87	-
Total	1.43	0.35	-	4.54	3.18	-
ii) <i>Community Development</i>	21.92	2.00	-	19.52	2.00	-
iii) <i>Panchayats</i>						
a) Training of non-official mem- bers of Village Panchayats ...	0.25	-	-	0.25	-	-
b) Training of Panchayat Secre- taries	0.70	-	-	0.80	-	-
c) Loans to Village Panchayats for remunerative schemes ...	1.00	1.00	-	1.50	1.50	-
d) Incentive grants to Village Panchayats	0.05	-	-	0.20	-	-
Total	2.00	1.00	-	2.75	1.50	-
Total: Cooperative and Community Development	25.35	3.35	-	26.81	6.68	-
III. Irrigation and Power						
i) <i>Irrigation</i>						
a) Continuing	-	-	-	-	-	-
b) New	-	-	-	191.50	191.50	-
2. Flood control, drainage, anti- water logging and anti-sea ero- sion	-	-	-	-	-	-
3. Investigation and Research ...	6.50	6.50	-	2.00	2.00	-
Total	6.50	6.50	-	193.50	193.50	-

II (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
24.55	16.40	-	23.30	14.56	-	27.35	16.22	-	119.31	79.69	-
0.75	0.50	-	-	-	-	-	-	-	6.00	5.30	-
0.10	-	-	0.10	-	-	0.10	-	-	0.35	-	-
0.85	0.50	-	0.10	-	-	0.10	-	-	6.35	5.30	-
244.55	89.95	-	224.92	87.47	-	225.27	75.60	0.50	1097.66	483.98	8.25
1.50	0.92	-	1.12	0.55	-	1.00	0.55	-	6.00	3.25	-
0.35	0.20	-	0.51	0.30	-	0.30	0.05	-	1.40	0.75	-
-	-	-	-	-	-	-	-	-	-	-	-
6.00	6.00	-	6.00	6.00	-	7.00	7.00	-	19.00	19.00	-
0.30	0.24	-	0.29	0.24	-	0.31	0.24	-	1.08	0.90	-
0.25	-	-	0.30	-	-	0.30	-	-	1.00	-	-
0.40	-	-	0.50	-	-	0.50	-	-	1.40	-	-
3.90	3.30	-	3.15	2.80	-	3.05	2.70	-	13.12	10.72	-
12.70	10.66	-	11.87	9.89	-	12.46	10.54	-	43.00	34.63	-
19.52	2.00	-	19.52	2.00	-	19.52	2.00	-	100.00	10.00	-
0.10	-	-	0.10	-	-	0.05	-	-	0.75	-	-
0.30	-	-	0.20	-	-	0.20	-	-	2.20	-	-
2.00	2.00	-	2.00	2.00	-	3.00	3.00	-	9.50	9.50	-
0.10	-	-	0.10	-	-	0.10	-	-	0.55	-	-
2.50	2.00	-	2.40	2.00	-	3.35	3.00	-	13.00	9.50	-
34.72	14.66	-	33.79	13.89	-	35.33	15.54	-	156.00	54.12	-
250.00	250.00	-	300.00	300.00	-	300.00	300.00	-	850.00	850.00	-
-	-	-	-	-	-	-	-	-	191.50	191.50	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	8.50	8.50	-
250.00	250.00	-	300.00	300.00	-	300.00	300.00	-	1050.00	1050.00	-

1	2	3	4	5	6	7
<i>ii) Power</i>						
1. Generation	-	-	-	1.00	1.00	-
2. Transmission and Distribution:						
a) Inter-State links	-	-	-	20.00	20.00	-
b) Trunk Transmission Lines	-	-	-	-	-	-
c) Others	94.73	94.73	0.50	65.27	65.27	0.50
3. Rural Electrification	41.69	41.69	-	44.41	44.41	-
4. Investigations	-	-	-	-	-	-
5. Miscellaneous	-	-	-	-	-	-
Total	136.42	136.42	0.50	130.68	130.68	0.50
Total: Irrigation & Power	142.92	142.92	0.50	324.18	324.18	0.50
IV. Industry and Mining						
<i>(i) Large and Medium Industries:</i>						
1. State Industrial Projects	-	-	-	-	-	-
2. Industrial Areas	-	-	-	-	-	-
3. Industrial Development Corporation	-	-	-	-	-	-
4. State Finance Corporation... ..	-	-	-	-	-	-
5. Others:						
a) Cost of preparation of feasibility report	1.00	-	-	1.00	-	-
b) Power subsidy to Large Scale & Medium Industries	40.00	-	-	45.00	-	-
Total	41.00	-	-	46.00	-	-
<i>(ii) Mineral Development</i>	2.90	2.90	-	3.10	3.10	-
<i>(iii) Village and Small Industries:</i>						
1. Development of Ind. Estate, Excess and Cap. Cont. to Goa, Daman & Diu Ind. Dev. Corporation	29.00	29.00	-	1.50	1.50	-
2. Assistance to Maharashtra State Financial Corporation	5.00	5.00	-	1.00	1.00	-
3. Establishment of Ind. Research and Chemical Laboratory and quality marking scheme	-	-	-	-	-	-
4. Strengthening of the staff of the Directorate	-	-	-	0.15	-	-
5. Incentive to Small Scale Industries	5.67	-	-	5.33	-	-
6. Common Service Facility Centre Altinho	3.50	3.50	-	0.45	0.45	-
7. Financial Assistance to Small Scale & Cottage Industries, under State aid to Industries Rules	2.00	2.00	-	2.00	2.00	-
8. Loan & Share Capital to Ind. Coop. Societies	0.66	0.66	-	0.35	0.35	-

I (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
-	-	-	-	-	-	-	-	-	1.00	1.00	-
13.60	13.60	-	-	-	-	-	-	-	33.60	33.60	-
-	-	-	-	-	-	-	-	-	-	-	-
60.00	60.00	1.00	50.40	50.40	6.40	40.00	40.00	1.00	310.40	310.40	9.40
51.90	51.90	-	53.00	53.00	-	60.00	60.00	-	251.00	251.00	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
125.50	125.50	14.00	103.40	103.40	6.40	100.00	100.00	1.00	596.00	596.00	9.40
375.50	375.50	1.00	403.40	403.40	6.40	400.00	400.00	1.00	1,646.00	1,646.00	9.40
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
1.00	-	-	1.00	-	-	1.00	-	-	5.00	-	-
225.00	-	-	225.00	-	-	215.00	-	-	750.00	-	-
226.00	-	-	226.00	-	-	216.00	-	-	755.00	-	-
-	-	-	-	-	-	-	-	-	6.00	6.00	-
1.50	1.50	-	1.50	1.50	-	1.50	1.50	-	35.00	35.00	-
1.00	1.00	-	1.50	1.50	-	1.50	1.50	-	10.00	10.00	-
5.00	5.00	-	1.80	1.80	-	1.80	1.80	-	8.60	8.60	0.20
0.20	0.20	-	0.30	-	-	0.35	-	-	1.00	-	-
5.66	-	-	6.00	-	-	6.04	-	-	28.70	-	-
0.40	0.40	-	0.35	0.35	-	0.30	0.30	-	5.00	5.00	-
2.00	2.00	-	2.00	2.00	-	2.00	2.00	-	10.00	10.00	-
0.34	0.34	-	0.35	0.35	-	0.30	0.30	-	2.00	2.00	-

1	2	3	4	5	6	7
9. Development of handicraft ...	0.60	-	-	0.75	-	-
10. Handloom Coop. Societies & Establishment of Dye House ...	0.09	0.025	-	0.04	0.02	-
11. Financial Assistance to Backward classes ...	0.24	0.24	-	0.10	0.10	-
12. Export Promotion ...	-	-	-	0.25	-	-
13. Establishment of Maharashtra Small Scale Ind. Dev. Corporation ...	0.20	0.20	-	0.20	0.20	-
14. Study tour of Small Industrialists & Training to artisans ...	0.02	-	-	0.05	-	-
15. Mobile Workshop ...	-	-	-	0.95	-	-
16. Training of staff of Directorate of Industries ...	-	-	-	0.015	-	-
17. Rural Industries Project ...	2.00	2.00	-	2.00	2.00	-
18. Techno Economic Survey ...	0.20	-	-	-	-	-
19. Khadi and Village Industries Board ...	0.05	0.05	-	0.05	0.05	-
Total ...	49.23	42.675	-	15.11	7.67	-
Total Industry & Mining ...	93.13	45.575	-	64.21	10.77	-
V. Transport and Communication						
<i>(i) Roads:</i>						
Spillover ...	57.88	57.88	-	42.08	41.08	-
New ...	56.14	53.04	-	40.00	35.00	-
Total ...	113.92	110.92	-	82.08	76.08	-
a) Rural Roads ...	8.82	8.82	-	20.00	10.00	-
b) Others ...	105.10	102.10	-	62.08	66.08	-
<i>(ii) Road Transport:</i>						
<i>(iii) Ports, Harbours:</i>						
1. Modernisation of lights and navigational aids ...	0.50	0.50	-	1.00	1.00	1.00
2. Extension and strengthening of Panaji Jetty ...	4.00	4.00	-	0.50	0.50	-
3. Development of Ports at Daman and Diu ...	1.50	1.50	-	2.00	2.00	-
4. Construction of terminals sheds, etc. ...	0.50	0.50	-	1.00	1.00	-
5. Mechanised barges for Diu ...	7.50	7.50	-	7.50	7.50	-
6. Making Cumbarjua Canal navigable at all tides ...	20.00	20.00	-	20.00	20.00	-
7. Survey of inland waterways ...	3.00	3.00	-	1.00	1.00	-
8. Acquisition of Dredging Unit ...	25.00	25.00	-	125.00	125.00	5.00

II (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
0.75	-	-	0.75	-	-	0.65	-	-	3.50	-	-
0.04	0.02	-	0.04	0.02	-	0.04	0.02	-	0.25	0.15	-
0.08	0.08	-	0.04	0.04	-	0.04	0.04	-	0.50	0.50	-
0.25	-	-	0.25	-	-	0.25	-	-	1.00	-	-
0.20	0.20	-	0.20	0.20	-	0.20	0.20	-	1.00	1.00	-
0.025	-	-	0.025	-	-	0.025	-	-	0.12	-	-
0.20	-	-	0.20	-	-	0.20	-	-	1.50	-	-
0.015	-	-	0.015	-	-	0.015	-	-	0.06	-	-
2.00	2.00	-	2.00	2.00	-	2.00	2.00	-	10.00	10.00	-
-	-	-	-	-	-	-	-	-	0.20	-	-
0.05	0.05	-	0.05	0.05	-	0.05	0.05	-	0.25	0.25	-
19.71	12.59	-	17.37	9.81	-	17.26	9.71	-	118.68	82.455	0.20
245.71	12.59	-	243.37	9.81	-	233.26	9.71	-	879.68	88.455	0.20
37.00	35.00	-	30.00	28.00	-	28.00	25.00	-	194.96	186.96	11.00
40.00	35.00	-	37.00	33.00	-	32.00	29.00	-	205.04	185.04	-
77.00	70.00	-	67.00	61.00	-	60.00	54.00	-	400.00	372.00	11.00
19.00	8.00	-	16.00	6.00	-	15.00	6.00	-	78.82	38.82	-
58.00	62.00	-	51.00	55.00	-	45.00	48.00	-	321.18	333.18	11.00
-	-	-	-	-	-	-	-	-	-	-	-
1.00	1.00	1.00	1.00	1.00	-	0.50	0.50	-	4.00	4.00	2.00
-	-	-	-	-	-	-	-	-	4.50	4.50	-
2.00	2.00	-	2.50	2.50	-	2.00	2.00	-	10.00	10.00	-
1.00	1.00	-	1.00	1.00	-	0.50	0.50	-	4.00	4.00	-
1.00	1.00	-	1.00	1.00	-	-	-	-	17.00	17.00	-
5.00	5.00	-	4.00	4.00	-	1.00	1.00	-	50.00	50.00	-
0.50	0.50	-	0.50	0.50	-	-	-	-	5.00	5.00	-
-	-	-	-	-	-	-	-	-	150.00	150.00	5.00

1	2	3	4	5	6	7
9. Construction of a Wall at Caranzalem	0.70	0.70	-	0.80	0.80	-
10. Expansion of Marine Workshop at Betim	3.00	3.00	-	3.00	3.00	-
11. Construction of new jetties and ramps	3.50	3.50	-	2.00	2.00	-
12. Slipways at Daman and Diu ...	0.50	0.50	-	0.50	0.50	-
13. Passenger sheds and other amenities	0.50	0.50	-	0.50	0.50	-
14. Acquisition of new launches and ferries	10.00	10.00	-	5.00	5.00	-
15. Miscellaneous (Repairs)	1.00	1.00	-	0.50	0.50	-
Total	81.20	81.20	-	170.30	170.30	6.00
(iv) <i>Other Transport</i>	-	-	-	-	-	-
(v) <i>Tourism</i>	5.82	4.50	-	3.30	1.70	-
Total: Transport and Communications	200.94	196.62	-	255.68	248.08	6.00
VI. Social Services						
(i) <i>General Education:</i>						
1. Elementary Education	14.32	9.00	-	23.50	9.00	-
2. Secondary Education	32.12	16.50	-	19.33	5.00	-
3. University Education	21.01	5.00	-	12.00	5.00	-
4. Teachers' Training:						
a) Elementary	1.45	1.00	-	2.00	1.00	-
b) Secondary	0.50	-	-	1.25	-	-
5. Social Education	3.35	-	-	3.75	1.00	-
6. Other Educational Programmes ...	8.68	2.00	-	9.67	1.50	-
7. Cultural Programmes	3.11	-	-	3.15	-	-
Total	84.54	33.50	-	74.70	22.50	-
(ii) <i>Technical Education</i>	26.45	15.55	0.25	17.00	15.00	2.90
(iii) <i>Health:</i>						
1. Medical Education	3.00	-	-	3.00	-	-
a) Medical College	70.75	67.68	2.50	95.73	93.11	1.88
b) Pharmacy College	6.75	-	-	5.75	-	0.50
2. Training Programme	1.00	-	-	1.00	-	-
a) Medical College	-	-	-	-	-	-
3. Hospitals and dispensaries ...	28.70	19.00	-	16.45	9.00	-
4. Primary Health Centres	7.50	5.00	-	7.50	5.00	-
5. Control of Communicable diseases.	14.65	-	-	19.00	-	-

II (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
0.50	0.50	-	0.50	0.50	-	-	-	-	2.50	2.50	-
3.00	3.00	-	3.00	3.00	-	2.00	2.00	-	14.00	14.00	-
2.00	2.00	-	1.50	1.50	-	1.00	1.00	-	10.00	10.00	-
0.50	0.50	-	0.50	0.50	-	-	-	-	2.00	2.00	-
1.00	1.00	-	1.00	1.00	-	0.70	0.70	-	3.70	3.70	-
5.00	5.00	-	5.00	5.00	-	5.00	5.00	-	30.00	30.00	-
0.50	0.50	-	1.00	1.00	-	1.00	1.00	-	4.00	4.00	-
23.00	23.00	1.00	22.50	22.50	-	13.70	13.70	-	310.70	310.70	7.00
-	-	-	-	-	-	-	-	-	-	-	-
3.30	1.80	-	3.30	1.80	-	3.28	1.80	-	19.00	11.60	-
103.30	94.80	1.00	92.80	85.30	-	76.98	69.50	-	729.70	694.30	7.00
21.00	2.00	-	19.00	-	-	18.54	-	-	96.36	20.00	-
20.00	5.00	-	21.00	5.00	-	22.00	6.00	-	114.50	37.50	-
12.50	5.00	-	13.00	5.00	-	13.49	4.00	-	72.00	24.00	-
1.25	-	-	1.50	-	-	1.50	-	-	7.70	2.00	-
1.75	-	-	2.25	-	-	2.25	-	-	8.00	-	-
4.00	-	-	4.25	-	-	4.58	-	-	19.93	1.00	-
9.50	0.85	-	9.00	-	-	8.50	-	-	45.35	4.35	-
3.20	-	-	3.25	-	-	3.34	-	-	16.05	-	-
73.20	12.85	-	73.25	10.00	-	74.20	10.00	-	379.80	88.85	-
17.75	15.00	-	18.00	10.00	0.94	18.00	5.95	-	97.20	61.50	5.94
3.00	-	-	3.00	-	-	3.00	-	-	15.00	-	-
35.05	32.43	1.88	9.99	7.37	1.87	7.99	5.36	1.87	219.51	205.95	10.00
4.5	-	-	4.00	-	0.5	4.00	-	0.5	25.00	-	2.00
1.00	-	-	1.00	-	-	1.00	-	-	5.00	-	-
-	-	-	-	-	-	2.00	-	-	2.00	-	-
8.45	2.00	-	6.70	-	-	6.70	-	-	67.00	30.00	-
8.00	5.00	-	4.00	-	-	3.00	-	-	30.00	15.00	-
10.64	-	-	10.15	-	-	10.15	-	-	56.50	-	-

1	2	3	4	5	6	7
6. Family Planning:						
a) Urban Family Welfare Planning Centre	1.00	-	-	1.00	-	-
b) Rural Family Welfare Training Centre	1.00	-	-	1.00	-	-
c) Sub-Centres	2.00	-	-	2.00	-	-
d) Training	0.50	-	-	0.25	-	-
e) Sterilization	5.00	-	-	5.00	-	-
f) Intra-Uterine Contraceptive Service	0.50	-	-	0.75	-	-
g) F. P. Bureau	4.00	2.00	-	2.00	-	-
7. Indigenous system of Medicines ...	-	-	-	-	-	-
8. Other Programmes	7.50	-	-	7.20	-	-
Total	157.85	93.68	2.50	159.53	107.11	2.38
(iv) Water Supply and Sanitation:						
1. Urban:						
a) Water Supply	70.90	70.90	0.05	52.45	52.45	-
b) Sewerage and Drainage	32.85	32.85	-	21.74	21.74	-
2. Rural:						
a) Piped	3.00	3.00	-	6.75	6.75	-
b) Wells	0.25	0.25	-	5.00	5.00	-
Total	107.00	107.00	0.05	85.94	85.94	-
(v) Housing:						
1. Subsidized Industrial Housing ...	1.00	-	-	1.00	-	-
2. Low Income Group Housing ...	2.00	-	-	2.00	-	-
3. Village Housing Projects	2.00	-	-	2.00	-	-
4. Plantation Labour Housing ...	-	-	-	-	-	-
5. Others	6.00	-	-	5.00	-	-
Total	11.00	-	-	10.00	-	-
(vi) Town Planning and Urban Development:						
1. Town Planning	-	-	-	-	-	-
2. Urban Development:						
a) Survey to be carried out by Survey of India or Land Survey Department	3.00	-	-	3.00	-	-
Total	3.00	-	-	3.00	-	-
(vii) Welfare of Backward Classes:						
Scheduled Tribes, Scheduled Castes and Other Backward classes:						
(a) Education	0.22	-	-	2.00	-	-
b) Economic Uplift	1.00	-	-	1.50	-	-
c) Health Housing and Other Schemes	1.00	-	-	1.50	-	-
Total	2.22	-	-	5.00	-	-

II (Comtd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
1.00	-	-	1.00	-	-	1.00	-	-	5.00	-	-
1.00	-	-	1.00	-	-	1.00	-	-	5.00	-	-
2.00	-	-	2.00	-	-	2.00	-	-	10.00	-	-
0.15	-	-	-	-	-	-	-	-	0.90	-	-
5.00	-	-	4.00	-	-	4.00	-	-	23.00	-	-
0.75	-	-	0.80	-	-	0.80	-	-	3.60	-	-
2.10	-	-	2.20	-	-	2.20	-	-	12.50	2.00	-
-	-	-	-	-	-	-	-	-	-	-	-
7.35	-	-	7.25	-	-	7.20	-	-	36.50	-	-
90.00	39.43	2.38	57.09	7.37	2.37	56.04	5.36	2.37	516.15	252.95	12.00
41.20	41.20	-	5.55	5.55	-	4.90	4.90	-	175.00	175.00	0.05
15.20	15.20	-	14.60	14.60	-	3.61	3.61	-	88.00	88.00	-
6.75	6.75	-	6.75	6.75	-	6.75	6.75	-	30.00	30.00	-
5.00	5.00	-	5.00	5.00	-	4.75	4.75	-	20.00	20.00	-
68.15	68.15	-	31.90	31.90	-	20.01	20.01	-	313.00	313.00	0.05
1.00	-	-	1.00	-	-	1.00	-	-	5.00	-	-
2.00	-	-	2.00	-	-	2.00	-	-	10.00	-	-
2.00	-	-	2.00	-	-	2.00	-	-	10.00	-	-
-	-	-	-	-	-	-	-	-	-	-	-
5.00	-	-	5.00	-	-	4.00	-	-	25.00	-	-
10.00	-	-	10.00	-	-	9.00	-	-	50.00	-	-
-	-	-	-	-	-	-	-	-	-	-	-
3.00	-	-	3.00	-	-	3.00	-	-	15.00	-	-
3.00	-	-	3.00	-	-	3.00	-	-	15.00	-	-
2.70	-	-	3.30	-	-	3.78	-	-	12.00	-	-
2.50	-	-	1.50	-	-	2.50	-	-	9.00	-	-
2.50	-	-	1.50	-	-	2.50	-	-	9.00	-	-
7.70	-	-	6.30	-	-	8.78	-	-	30.00	-	-

1	2	3	4	5	6	7
(viii) Social Welfare:						
1. Family and child Welfare Projects	-	-	-	-	-	-
2. Women Welfare	-	-	-	-	-	-
3. Child Welfare	-	-	-	-	-	-
4. Eradication Beggary	-	-	-	-	-	-
5. Social Defence	-	-	-	-	-	-
6. Rehabilitation of the Handicapped	-	-	-	-	-	-
7. Grant-in-aid to Voluntary Organisations	-	-	-	-	-	-
8. Training, Research and Administration	-	-	-	-	-	-
9. Others	2.20	-	-	2.20	-	-
Total	2.20	-	-	2.20	-	-
(ix) Craftsmen Training and Labour Welfare:						
1. Craftsmen Training	5.89	3.00	-	8.00	6.40	-
2. Apprenticeship Training	-	-	-	1.25	-	-
3. Part-time classes for Industrial Workers	-	-	-	-	-	-
4. Rural Training Institutes... ..	-	-	-	-	-	-
5. Employment Service Schemes ...	-	-	-	-	-	-
6. Labour Welfare/Administration:						
a) Opening of a Labour Welfare Centre	1.22	1.00	-	0.25	-	-
b) Strengthening of Labour Administration	0.70	0.30	-	0.45	-	-
c) Visual Publicity scheme through Mobile Cinema Van ...	0.55	0.45	-	0.15	-	-
7. Employees State Insurance ...	-	-	-	-	-	-
Total	8.36	4.75	-	10.10	6.40	-
x) Public Cooperation:						
a) Lok Karya Kshetras (Rural) ...	0.15	-	-	0.15	-	-
b) Lok Karya Kshetras (Urban)...	0.15	-	-	0.15	-	-
c) Planning Forums	0.07	-	-	0.07	-	-
d) Association for Moral and Social Hygiene	0.07	-	-	0.07	-	-
e) Strengthening of Voluntary Organisations	1.50	-	-	1.50	-	-
f) Research Training Pilot Project.	0.06	-	-	0.06	-	-
Total	2.00	-	-	2.00	-	-
Total: Social Services... ..	400.62	254.48	2.80	369.47	236.95	5.28

I (Contd.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
2.20	-	-	2.20	-	-	2.20	-	-	11.00	-	-
2.20	-	-	2.20	-	-	2.20	-	-	11.00	-	-
5.50	4.00	-	4.00	3.00	-	3.64	3.00	-	27.03	19.40	-
1.50	-	-	1.50	-	-	1.75	-	-	6.00	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
0.27	-	-	0.29	-	-	0.31	-	-	2.34	1.00	-
0.48	-	-	0.50	-	-	0.52	-	-	2.65	0.30	-
0.17	-	-	0.19	-	-	0.20	-	-	1.26	0.45	-
-	-	-	-	-	-	-	-	-	-	-	-
7.92	4.00	-	6.48	3.00	-	6.42	3.00	-	39.28	21.15	-
0.15	-	-	0.15	-	-	0.15	-	-	0.75	-	-
0.15	-	-	0.15	-	-	0.15	-	-	0.75	-	-
0.07	-	-	0.07	-	-	0.07	-	-	0.35	-	-
0.07	-	-	0.07	-	-	0.07	-	-	0.35	-	-
1.50	-	-	1.50	-	-	1.50	-	-	7.50	-	-
0.06	-	-	0.06	-	-	0.06	-	-	0.30	-	-
2.00	-	-	2.00	-	-	2.00	-	-	10.00	-	-
281.92	139.43	4.13	210.22	62.27	3.31	199.65	44.32	2.37	146.88	737.45	17.89

1	2	3	4	5	6	7
VII. Miscellaneous						
<i>(i) Information and Publicity:</i>						
1. Community Listening Scheme ...	0.542	-	-	0.20	-	-
2. Others	3.128	-	-	3.217	-	-
Total	3.68	-	-	3.42	-	-
<i>(ii) Statistics:</i>						
a) Core Schemes:						
Training Programme	0.10	-	-	0.10	-	-
Machine Tabulation Unit	1.00	-	-	0.50	-	-
Strengthening/Creation of Unit for Statistics of resources for plan- ning	0.29	-	-	0.20	-	-
Preparation of Municipal Statistical Year Book and District Statisti- cal Hand Books	0.21	-	-	0.10	-	-
b) Transport (Core Schemes):						
Survey of Goods traffic by road ...	0.29	-	-	-	-	-
c) Irrigation and Power:						
Setting up a Statistical Cell in S. S. D. for collection and coordi- nation of irrigation (including minor irrigation) flood control and power Statistics	0.29	-	-	0.10	-	-
Total	2.18	-	-	1.00	-	-
<i>iii) Local Bodies:</i>						
a) Grants to Municipalities for road improvement works	12.97	-	-	5.03	-	-
b) Loans to Municipalities for remun- erative schemes	5.00	5.00	-	5.00	5.00	-
c) Grants to Municipalities for Slum Clearance Scheme	5.00	-	-	5.00	-	-
Total	22.97	5.00	-	15.03	5.00	-
<i>iv) Evaluation Unit:</i>						
	1.20	-	-	1.20	-	-
<i>(v) Other Miscellaneous Schemes:</i>						
a) Construction of building for P.W.D. offices including Division and sub- -Division office building	9.10	9.10	-	0.90	0.90	-
Total: Miscellaneous	39.13	14.10	-	21.55	5.90	-
Grand Total	1094.60	789.265	10.75	1272.31	931.30	12.78

II (Conlid.)

(Rs. in lakhs)

8	9	10	11	12	13	14	15	16	17	18	19
0.20	-	-	0.038	-	-	0.02	-	-	1.00	-	-
3.215	-	-	3.215	-	-	3.215	-	-	16.00	-	-
3.42	-	-	3.25	-	-	3.23	-	-	17.00	-	-
-	-	-	-	-	-	-	-	-	0.20	-	-
0.50	-	-	0.50	-	-	0.50	-	-	3.00	-	-
0.10	-	-	0.10	-	-	0.10	-	-	0.79	-	-
0.10	-	-	0.10	-	-	0.10	-	-	0.61	-	-
-	-	-	-	-	-	0.29	-	-	0.58	-	-
0.10	-	-	0.10	-	-	0.23	-	-	0.82	-	-
0.80	-	-	0.80	-	-	1.22	-	-	6.00	-	-
4.00	-	-	4.00	-	-	4.00	-	-	30.00	-	-
8.00	8.00	-	6.00	6.00	-	6.00	6.00	-	30.00	30.00	-
5.00	-	-	3.00	-	-	2.00	-	-	20.00	-	-
17.00	8.00	-	13.00	6.00	-	12.00	6.00	-	80.00	30.00	-
1.20	-	-	1.20	-	-	1.20	-	-	6.00	-	-
-	-	-	-	-	-	-	-	-	10.00	10.00	-
22.42	8.00	-	18.25	6.00	-	17.65	6.00	-	119.00	40.00	-
1308.12	734.93	6.13	1226.75	668.14	9.71	1188.14	620.67	3.37	6089.92	3744.305	44.74

STATEMENT
Improved Project costing

Head of Development	Total Expenditure			Fourth Outlay	
	Total Estimated Cost	The end of III Plan	1968-69	Total	Foreign Exch.
1	2	3	4	5	6
Agricultural Programme.					
1. Cadastral Survey	260.00	0.975	0.112	100.00	-
Irrigation and Power.					
2. Salauli Irrigation Project	1000.00	-	14.71	450.00	-
3. Tillari Project	1490.00	-	4.35	600.00	-
4. Power Development in Goa	947.04	182.574	413.084	563.00	9.40
Transport and Communications.					
5. Construction of Zuari Bridge and its approach Road	170.00	-	-	130.00	8.00
Social Services.					
6. Water Supply Laying Cast Iron Gravity mains from Curti to Ambora-Margao-Vasco	128.00	-	38.00	90.00	-
7. Medical College	207.71	-	20.00	187.71	10.00
Total	4202.75	183.549	490.256	2120.71	27.40

III

one crore and above

1969-70		1970-71		1971-72		1972-73		1973-74	
Total	Foreign Exch.	Total	Foreign Exch.	Total	Foreign Exch.	Total	Foreign Exch.	Total	Foreign Exch.
7	8	9	10	11	12	13	14	15	16
20.80	-	19.80	-	19.80	-	19.80	-	19.80	-
6.50	-	93.50	-	100.00	-	125.00	-	125.00	-
-	-	100.00	-	150.00	-	175.00	-	175.00	-
134.73	0.50	123.27	0.50	116.60	1.00	95.40	6.40	90.00	1.00
5.00	-	20.00	8.00	35.00	-	35.00	-	35.00	-
30.00	-	40.00	-	20.00	-	-	-	-	-
65.20	2.50	88.73	1.88	23.80	1.88	4.99	1.87	4.99	1.87
262.23	3.00	488.30	10.38	465.20	2.88	455.19	8.27	449.79	2.87

STATEMENT IV

Check-list in respect of principal projects costing Rs. 1 crore and above

1. Name of project with brief description and location: Cadastral Survey Scheme of Goa.

2. Gestation period in year: 7-10 years.

3. Cost estimates and outlays: (Rs. round lakhs) Rs. 100.00.

a) *Total estimated cost*

1) Total Rs. 260-00

2) Foreign Exchange: Nil

b) *Outlay and expenditure*

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.
1	2	3	4	5	6	7	8	9	10	11	12
20.95	—	100.00	—	20.00	—	19.00	—	59.40	—	139.05	...

4. Programme of output/benefit

Item	Unit	Progress upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7
Land Development	Cadastral Survey	Theodolite Surve 40	260	40	45	178
		P. T. Survey 20	190	30	40	120
		Scientific Classification of Lands	57	—	—	57

5. Training of technical and managerial personnel: 100 personnel to be recruited and trained to surveyors.

6. Employment (Man-Years):

1966-67	1967-68	1968-69	Fourth Plan (Year by year)				
			1969-70	1970-71	1971-72	1972-73	1973-74
1	2	3	4	5	6	7	8
33	87	161	465	465	465	465	465

I. Additional requirements:

Skilled:

a) Technical ...	205	} Either 140 to be recruited or brought on deputation immediately on receipt of Government approval.
b) Non-technical ...	99	

II. Staff required on continuing basis:

Skilled:

	1968-69	End of Fourth Plan
a) Technical ...	12	354
b) Non-technical ...	149	111

1. Name of the project with brief description and location: Tillari Project.

2. Gestation period in years: 4 to 5 years.

3. Cost, estimates and outlays: (Rs. round lakhs) 1490.00 lakhs.

a) Total estimated cost

(i) Total Rs. 1490.00 lakhs

(ii) Foreign Exchange: Nil.

b) Outlay and expenditure

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.
1	2	3	4	5	6	7	8	9	10	11	12
4.35	—	600.00	—	—	—	100.00	—	500.00	—	890.00	—

4. Programme of output/benefit

Item	Unit	proposed upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7
—	Acres	—	63000 acres to be irrigated	—	—	63000 acres to be irrigated

5. Training of technical and managerial personnel: Nil.

6. Employment (Man-Years) This will give employment opportunities to nearly 150 to 200 labourers per year from the commencement till its completion.

I. Additional requirements:	1966-67	1967-68	1968-69	Fourth Plan (year by year from 1971-72)
	Skilled:			
a) Technical	—	—	—	20
b) Non-technical	—	—	—	19
Unskilled	—	—	—	10

II. Staff required on continuing basis:	1968-69	End of Fourth Plan
	Skilled:	
a) Technical	—	—
b) Non-technical	—	—
Unskilled	—	—

1. Name of project with brief description and location: Construction of Zuari Bridge and its approaches on River Zuari.

2. Gestation period in years: 2 years.

3. Cost estimates and outlays: (Rs. round lakhs) 170.00 lakhs.

a) *Total estimated cost*

(i) Total Rs. 170.00 lakhs.

(ii) Foreign Exchange: Rs. 8.00 lakhs.

b) *Outlay and expenditure*

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total	F. E.	Total	F. E.	Total	F. E.	Total	F. E.	Total	F. E.	Total	F. E.
1	2	3	4	5	6	7	8	9	10	11	12
—	—	130.00	8.00	5.00	—	20.00	8.00	105.00	—	40.00	—

4. Programme of output/benefit

Unit	Item	Progress upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7

After completion of the Bridge it will give better communication facilities to the Public and Ferry Service will be saved.

5. Training of the technical and managerial personnel: Nil.

6. Employment (Man-Years: It will give employment to about 455 to 500 persons, both skilled and unskilled during the period 5 to 6 years i.e. upto the completion of the project.

	1966-67	1967-68	1968-69	Fourth Plan (year by year)
I. Additional requirements:				
Skilled:				
a) Technical	—	—	—	75 persons for 5 years.
b) Non-technical	—	—	—	180 persons for 5 years.
Unskilled	—	—	—	200 persons for 5 years.

II. Staff required on continuing basis:	1968-69	End of Fourth Plan
Skilled:		
a) Technical	—	—
b) Non-technical	—	—
Unskilled	—	—

1. Name of project with brief description and location: Salauli Irrigation Project.

2. Gestation period in years: 4 to 5 years.

3. Cost estimates and outlays: (Rs. round lakhs) 1000 lakhs.

a) *Total estimated cost*

(i) Total cost Rs. 1000 lakhs.

(ii) Foreign Exchange: Nil.

b) *Outlay and expenditure*

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.		Total F. E.		Total F. E.		Total F. E.		Total F. E.		Total F. E.	
1	2	3	4	5	6	7	8	9	10	11	12
14.71	—	450.00	—	6.50	—	93.50	—	350.00	—	550.00	—

4. Programme of output benefit.

Item	Unit	Progress upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7
—	Acres	—	27000 acres to be irrigated	—	—	27000 acres to be irrigated

5. Training of technical and managerial personnel: Nil.

6. Employment (Man-Year): This will give employment opportunities to nearly 100 labourers per year from the Commencement till its completion.

	1966-67	1967-68	1968-69	Fourth Plan (year by year from 1971-72)
I. Additional requirements:				
Skilled:				
a) Technical	—	—	—	20
b) Non-technical	—	—	—	19
Unskilled	—	—	—	10
II. Staff required on continuing basis:	1968-69	End of Fourth Plan		
Skilled:				
a) Technical	—	—		
b) Non-technical	—	—		
Unskilled	—	—		

1. Name of Project with brief description and location: Power Development of Goa in the Union Territory of Goa, Daman and Diu. The project mainly consists of erection of Transmission and Distribution Lines and sub-stations in the Territory of Goa to electrify all the villages and meet the power demands of various major industries like Pelletization and Fertilizer plants.

2. Gestation Period: Four Years.

3. Cost Estimate and Outlays: (Rs. Round lakhs).

a) Total estimated cost

i) Total: Rs. 563.40 lakhs.

ii) Foreign Exchange: Rs. 9.40 lakhs.

b) *Outlay and expenditure*

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 approved		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.
1	2	3	4	5	6	7	8	9	10	11	12
413.084	30.42	563	9.40	134.73	0.50	126.27	0.50	302	0.50	*	*

* Can not be forecast at this stage.

4. Programme of output/benefit.

Item	Unit	Progress upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7
i) Installed capacity ...	(000KW)	1.566	1.50	1.50	—	—
ii) Electricity generated (000KWH)		3060	3000	3000	—	—
iii) Electricity Sold ... (000KWH)		59,755	1792160	70991	116809	632,045
iv) Rural Electrification:						
a) Villages electrified ...	Nos.	.88	151	52	40	52
b) Pump sets energised by electricity ...	Nos.	—	100	20	20	60
c) Tube wells energised by electricity ...						

5. Training of technical and managerial personnel: No special training is required.

6. Employment (Man-years):

I. Additional requirements:

	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
Skilled:								
a) Technical.	4	11	27	118	100	90	80	75
b) Non-Technical	33	9	28	75	70	40	35	30
Unskilled	28	28	31	115	98	60	50	45

II. Staff required on continuing basis:

Skilled:

	1968-69	End of Fourth Plan
a) Technical ...	332	795
b) Non-technical ...	195	445
Unskilled ...	220	588

N.B. — Staff requirement has been worked out on the basis of norms adopted in the neighbouring state Electricity Board of Maharashtra for Operation and Maintenance of Power Supply and construction purposes. By the end of Fourth-Plan all the towns and villages in Goa are expected to be electrified.

1. Name of project with brief description and location: Providing and laying Cast Iron Gravity mains from Curti to Ambora-Margao-Vasco

2. Gestation period in years: 6 months.

3. Cost estimates and outlays: (Rs. round lakhs).

a) *Total estimated cost*

i) Total: Rs. 128.00 lakhs.

ii) Foreign Exchange: Nil.

b) *Outlay and expenditure*

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.		Total F. E.		Total F. E.		Total F. E.		Total F. E.		Total F. E.	
1	2	3	4	5	6	7	8	9	10	11	12
38.00	—	128.00	—	30.00	—	40.00	—	20.00	—	—	—

4. Programme of output/benefit

Item	Unit	Progress upto 1968-69	Target for Fourth Plan	Phasing		
				1969-70	1970-71	End of 1973-74
1	2	3	4	5	6	7
—	—	—	—	Providing duplicating mains to Vasco City.	Providing duplicating mains to Margao City.	—

5. Training of technical and managerial personnel: Nil.

6. Employment (Man-years): It will give employment opportunities to nearly 1600 persons both skilled and unskilled for a period of 3 years.

I. Additional requirements:

	1966-67	1967-68	1968-69	Fourth Plan (year by year)
Skilled:				
a) Technical ...	—	—	—	100
b) Non-technical ...	—	—	—	500
Unskilled ...	—	—	—	1500

} From 1969-70 and 1970-71 i. e. for 2 years period

II. Staff required on continuing basis:

	1968-69	End of Fourth Plan
Skilled:		
a) Technical ...	—	—
b) Non-technical ...	—	—
Unskilled ...	—	—

1. Name of Project with brief description and location:

Bambolim Projects: It is a major plan scheme so far as the Goa Medical College is concerned. The project envisages mainly taking up of a full fledged Medical College complex at Bambolim, 4 miles away from Panaji Town, as well as the improvement to the existing Teaching Hospital. The cost of equipment required and the Revenue expenditure is also estimated in the Project. The E. F. C. Memo has been revised and submitted to the Government. The Planning Commission agreed, in principle, to take up this Project and has suggested some modifications in 1966, which have already been observed.

2. Gestation period in Years: First 3 years of the Fourth Five Year Plan for the Main Work and the remaining 2 years for the Purchase of Equipment, etc.

3. Cost estimates and outlay: Rs. 208.00 lakhs, approximately.

a) *Total estimated cost*

i) Total: Rs. 208.00 lakhs, approximately.

ii) Foreign Exchange: Rs. 10 lakhs.

b) *Outlay and expenditure*

(Rs. in lakhs)

Expenditure upto 1968-69		Outlay proposed 1969-74		1969-70 proposed		1970-71 proposed		Three years Total (1971-74)		Balance after 1973-74 if any	
Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.	Total F. E.
1	2	3	4	5	6	7	8	9	10	11	12
40	—	187.71	10.0	65.20	2.5	88.73	1.88	33.78	5.62		Nil

4. Programme of output/benefit

Already explained in write off of the Bambolim Project — *Vide* page 286.

5. Training of Technical and Managerial personal: The project relates to the Construction of the Medical College Complex. The already existing College will be shifted to the new premises. The project will contribute to establishment of Post-Graduates studies.

6. Employment (Man-year): Only the Ministerial Staff, such as Administrative Officer, Assistant Accounts Officer, U. D. C., L. D. C., peons and drivers will be appointed during the Plan-period.

I. Additional requirements:

Skilled:

- a) Technical This is not a new Service. The Medical College is functioning and the technical and non-technical staff is being appointed, as per the requirements.
- b) Non-Technical

Unskilled:

Two more drivers in addition to the already proposed posts and included in the Budget of Bambolim Project Plan for 1969-70.

II. Staff required on continuing basis:

Skilled — NIL
Unskilled

1968-69 End of Fourth Plan
The already proposed post.
Two (2) drivers.

**Physical
STATEMENT**

Item	Unit	1967-68
1	2	3
1. AGRICULTURE AND FORESTRY		
Area under Forests		
i) Area under work plans	406 sq. miles	-
ii) Area under quick-growing/economic plantations	—	1768.08
iii) Area under fuel plantations	Ha.	-
iv) Others	—	-
Total: Area under Forests		1768.08
Area under Orchards		
Net cropped area	Ha.	7.066
Gross cropped area	—	-
Irrigation Area		
By canals	Acres	1250
By Government Tubewells	—	-
By private Tubewells/Pump sets	(lift irrigation schemes)	70
By Masonry Wells	—	-
By Bhandaras, Tanks and Bandis	—	420
Total: Irrigated area	Net	1740
Area under Food Crops		
i) Kharif:		
Paddy	Ha.	38630
ii) Rabi:		
Paddy	Ha.	467
Area under Commercial Crops		
i) Kharif: Crop/area/Irrigated area/production:		
a) Coconut	Ha.	18000
b) Arecanut	—	1300
c) Cashewnut	—	32000
Area under High-yielding Varieties		
Wheat	Ha.	-
Paddy	—	7500
Area under Improved Varieties		
Jawar	Ha.	-
Bajra	—	-
Maize	—	40
Oilseeds (Groundnut)	—	40
Cotton	—	-
Pulses	—	-
Other Ragi	—	80
Sugercane	—	375
Wheat	—	15
Paddy	—	2.500

Programmes

V

Estimated level of Achievement

1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
4	5	6	7	8	9
-	-	-	-	-	-
1810.00	4110.00	4110.00	4110.00	4110.00	4110.00
-	80.00	80.00	80.00	80.00	80.00
-	-	-	-	-	-
1810.00	4190.00	4190.00	4190.00	4190.00	4190.00
7.066	134	229	343	418	512
-	7.200	7.429	7.772	8.190	8.702
1250	1250	1250	1250	1250	1250
-	-	-	-	-	-
230	500	750	1000	1250	1500
650	700	750	800	850	900
2130	2450	2750	3050	3350	3650
38630	38630	38630	38630	38630	38630
1117	1877	2627	3427	3477	3527
18455	18955	19455	20001	20547	21294
1300	1330	1360	1390	1420	1450
32000	33100	35300	38600	43000	48500
12000	12000	12000	14000	15000	16000
20	25	30	45	60	80
20	20	40	60	80	80
200	40	80	120	160	200
20	80	160	240	320	400
200	250	500	1000	1500	2000
100	200	400	600	800	800
575	1075	1500	2000	3000	4000
20	50	75	100	150	200
3.000	4000	6000	8000	10000	12800

1	2	3
High-yielding varieties seed distributed		
a) Cropped/area paddy	Tons	187
Improved varieties and distributed		
a) Cropped/Area:		
Jowar	Tons	-
Bajra	—	-
Maize	—	2
Groundnut	—	2
Pulses	—	-
Ragi	—	16
Sugarcane	(Lakh Setts)	93
Wheat	Tons	7.5
Paddy	—	10
Fertilizers distributed		
Nitrogenous (As N)	Tons	1,800
Phosphatic (As P205)	—	600
Potassic (As K)	—	350
Area under green Manure		
Area covered by Plant Protection		
	Ha.	300
i) Food Crops	Ha.	7837
ii) Commercial Crops		1276.5
iii) Horticulture		255
Total		9468.5
Soil Conservation on Agricultural Land		
Soil Conservation incatchment		
Area of River Valley Projects		
Area Consolidated		
Area by bunds	Acres	2500
No. of Regulated Marketing		
	Nos.	-
Storage Capacity available		
i) For fertilizers	Tons	6500
ii) For foodgrains	—	7700
iii) For others	—	-
Total	—	14200
Animal Husbandry		
Veterinary hospitals/dispensaries	Nos.	5
Artificial Insemination	—	1
Stockmen Centres	—	1
Area under fodder crops	Acres	50
Key Village Blocks	Nos.	1
Cattle Breeding Farms	—	2
Sheep Breeding Farms	—	-
Sheep and Wool Extension Centres	—	-
Wool Grading and Marketing Centres	—	-
Production of Animal products:		
a) Milk/Milk Products { Milk	Lt.	3000
{ Butter	Kg.	2000

V (Contd.)

4	5	6	7	8	9
300	300	300	350	375	400
0.3	0.25	0.5	0.7	0.9	1.2
-	0.3	0.6	0.9	1.2	1.2
10	2	4	6	8	10
10	4	8	12	16	20
4	5	10	20	30	40
8	4	8	12	16	16
50	125	375	500	750	1000
10	2.6	3.75	5	7.5	10
15	160	240	320	400	512
1800	2000	2100	2200	2400	2500
800	900	1000	1100	1300	1400
500	700	900	1000	1100	1200
500	2000	2800	3600	4400	5200
10050	20305	23610	29165	33520	38280
3700	3000	3000	7000	9000	11000
1000	1980	4960	7440	10920	14400
14750	25285	25285	31570	53440	63680

Nil

are to be completed for execution during the IV F. Y. P.

3500	2500	3000	3500	2500	2000
-	1 Sub-Yard	1 market yard	1 Sub-Yard	-	-
6500	7000	7500	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
6500	7000	7500	7500	7500	7500
12	14	15	15	15	15
1	1	1	1	1	1
1	1	1	1	1	1
100	150	200	300	400	500
1	2	3	4	5	6
2	2	2	2	2	2
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
3500	3500	5000	6500	8000	10000
2500	2500	3000	3000	3000	3000

1	2	3
b) Meat	—	—
c) Wool	—	—
No. of Government Poultry Farms	Nos.	1
No. of Poultry Cooperatives	Nos.	3
No. of Poultry Farmers trained:		
i) Short-term course		—
ii) Long-term course		—
Intensive Egg and poultry production-cum-marketing Centres		—
Fisheries		
Mechanisation of boats	No.	104
Cold storages for storing fish	No.	—
Cooperative Marketing	Quantity	—
Land and Berthing provided in harbours	No.	—
Loans advanced to Fishermen's Cooperatives	Rs. in lakhs	1.00
Fingerlings distributed	Nos.	31000
No. of Fish-seed farms	Nos.	—
2. COOPERATION		
Primary Cooperative Societies (Agricultural Credit)		
Number	Nos.	17
Membership	Nos.	60000
Share capital of members	Rs. in lakhs	9.05
Deposits of members		0.40
Agricultural Credit		
a) Short and medium terms advances during year:		
S. T.	Rs. in lakhs	7.50
M. T.		3.00
Amount outstanding at the end of the year		
S. T.		0.30
M. T.		0.86
b) Long term		
Amount outstanding at the end of the year		—
Primary Marketing Societies		
Business handled during the year	Nos.	6
	Rs. in lakhs	8.00
Processing Societies		
a) Rice mills	No.	—
b) Sugar factories	No.	—
Production	Rs. in lakhs	—
c) Cotton ginning and processing	No.	—
Business handled	Rs. in lakhs	—
d) Other	No.	—
Business handled	Rs. in lakhs	—
3. MAJOR AND MEDIUM IRRIGATION		
Estimated area under irrigation:		
a) Potential		—
b) Utilisation		—

(Contd.)

4	5	6	7	8	9
-	-	-	-	-	-
1	1	1	1	1	1
3	3	4	4	4	4
-	-	-	-	-	-
-	124	-	-	-	-
114	127	134	149	164	184
-	-	-	-	-	-
1	1	1	2	3	3
30060	-	-	-	-	-
1	-	-	-	-	-
178	179	180	181	182	183
6500	67000	68000	70000	72000	75000
10.00	10.05	10.10	10.15	10.25	10.50
0.50	0.75	0.85	1.00	1.25	1.50
9.00	10.00	11.00	13.00	13.00	15.00
4.00	4.50	4.50	5.00	5.00	5.50
2.50	3.00	3.50	3.50	4.00	4.50
0.75	0.90	0.90	0.90	1.00	1.00
3.00	1.00	1.00	1.00	1.00	1.00
10.00	3.00	4.00	4.80	4.80	5.00
6	7	9	11	14	15
8.00	10.00	12.00	14.00	16.00	20.00
-	-	-	-	-	-
-	-	-	1	-	-
-	-	-	-	-	3.50
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	10	30	50

1	2	3
4. POWER		
i) Installed capacity... ..	000 KW	2.871
ii) Electricity generated	000 KWH	3858
iii) Electricity sold	000 KWH	44,250
iv) Rural electrification:		
a) Villages electrified	Nos.	18
b) Pump sets energised by electricity	Nos.	15
c) Tubewells energised by electricity	Nos.	-
5. TRANSPORT		
i) Surface roads	000 Kms.	592
ii) Unsurfaced roads	000 Kms.	685
iii) Villages not connected by roads	Nos.	Villages of
6. EDUCATION		
General Education Enrolment		
1) Classes I-V		
Total	Nos.	1,00, 91
As percentage of hte population in this age group		86%
Girls		(41992)
As percentage of hte population in this age group		82%
ii) Classes VI-VIII		
Total	Nos.	(26187)
As percentage of population in this age group		46.5%
Girls		9499
As percentage of population in this age group		41%
iii) Classes IX-XI		
Total	Nos.	13715
As percentage of population in this age group		32.6%
Girls		4901
As percentage of population in this age group		24%
iv) University/Collegiate		
Total (Arts, Science & Commerce)	Nos.	3355
Science only	Nos.	1528
Teachers		
i) In Elementary Schools		
%age trained	Nos.	2959
In hte Secondary Schools		29% (861)
%age trained		2029
		56% (1135)
Technical Education		
1) Engineering Colleges:		
a) Number of institutions	Nos.	1
b) Sanctioned annual admission capacity	Nos.	60
c) Outturn	Nos.	-
ii) Polytechnic Education:		
a) Number of institutions	Nos.	1
b) Sanctioned annual admission capacity	-	120
c) Outturn	Nos.	5

V (Contd.)

4	5	6	7	8	9
1,566	1,566	-	-	-	-
3300	3300	-	-	-	-
60,505	71,896	118,009	354,370	620,945	633,845
63	116	156	186	201	215
50	88	126	161	206	249
-	2	4	4	4	6
652	707	-	760	800	850
625	600	580	575	555	530
Eastern Part of Goa are divided by road.					
1,04,000	1,09,000	1,15,000	1,20,000	1,25,000	1,30,000
88%	90%	92 o/o	94 o/o	96 o/o	98 o/o
(43500)	(45300)	(47500)	(49800)	(52400)	(55000)
64.8%	68 o/o	72 o/o	76 o/o	80.5 o/o	85 o/o
(29000)	(31000)	(33000)	(35000)	(36500)	(38000)
52%	56.5 o/o	61 o/o	65 o/o	68.5 o/o	72 o/o
10500	11300	12100	12900	13700	14500
45%	48 o/o	51 o/o	54 o/o	57 o/o	60 o/o
116000	18000	20000	22000	23500	25000
36%	39.5 o/o	43.3 o/o	47 o/o	50 o/o	53 o/o
5800	6550	7300	8050	8800	9500
28%	31 o/o	34 o/o	37 o/o	40 o/o	43 o/o
4100	4800	5500	6200	6900	7500
(6%)					(11 o/o)
1800	2200	2550	2900	3250	3600
3050	3150	3250	3350	3450	3550
32.7% (1000)	36.1 o/o (1140)	39.3 o/o (1280)	42.4 o/o (1420)	45.2 o/o (1560)	47.3 o/o (1700)
2140	2250	2360	2470	2580	2700
56.7% (1215)	57.5 o/o (1295)	58.2 o/o (1375)	58.9 o/o (1464)	59.4 o/o (1535)	60 o/o (1615)
1	1	1	1	1	1
60	60	60	60	60	60
-	20	30	35	40	40
1	1	1	1	1	1
120	120	120	120	120	120
20	25	30	40	40	40

1	2	3
7. HEALTH		
i) Hospitals (including Hospitals of Goa, Medical College)	Nos.	
a) Urban	Nos.	26
b) Rural	Nos.	31
ii) Dispensaries:		
a) Urban	Nos.	-
b) Rural	Nos.	31
iii) Beds:		
a) Urban Hospitals and dispensaries	Nos.	1401
b) Rural Hospitals and dispensaries	Nos.	441
iv) Primary Health Centres:	Nos.	19
Urban Health Centres	Nos.	-
v) Training of Nurses:		
Institutes	Nos.	2
Annual intake	Nos.	40
Annual outturn	Nos.	15
vi) Control of diseases:		
T. B. Clinics	Nos.	1
Leprosy Control Unit	Nos.	1
V. D. Clinics	Nos.	22
Filaria Units	Nos.	1
Head Quarter Unit	Nos.	1
vii) Maternity	Nos.	3
Child Welfare Centres	Nos.	36
viii) Medical Education:		
a) Medical Colleges	Nos.	1
b) Annual admissions	Nos.	60
c) Annual outturn	Nos.	25
ix) Pharmacy College:		
annual intake:		
B. Pharm	Nos.	20
M. Pharm.	Nos.	-
Annual outturn		
B. Pharm	Nos.	6
M. Pharm.	Nos.	-
8. WATER SUPPLY AND SANITATION		
A Urban		
Corporation Towns:		
i) Augmentation of protected water Supply ...	Million Gallons	-
ii) Population covered	Nos.	-
Other towns:		
i) Towns covered	Nos.	9
ii) Population covered	Nos.	99500
B Rural		
Piped Water Supply:		
i) Villages covered	Nos.	18
ii) Population covered	Nos.	20500

V (Contd.)

4	5	6	7	8	9
26	26	26	26	26	26
31	31	31	31	31	31
-	-	-	-	-	-
31	31	31	31	31	31
1481	1561	1586	1631	1681	1731
476	550	552	554	556	558
16	16	16	16	16	16
4	4	4	4	4	4
1	3	3	3	3	3
20	60	60	60	60	60
8	17	27	40	70	80
1	1	1	1	1	1
1	1	1	1	1	1
22	22	22	22	22	22
1	3	3	3	3	3
1	1	1	1	1	1
4	5	5	5	5	5
36	These Centre are to be integrated in Primary Health Centres				
1	1	1	1	1	1
60	60	75	80	90	100
27	30	32	35	40	48
20	20	20	20	20	20
-	8	12	16	18	20
17	20	20	20	20	20
-	8	11	12	16	20
-	-	-	-	-	-
-	-	-	-	-	-
12	13	13	13	13	13
125500	128500	128500	128500	128500	128500
21	26	28	30	32	35
26500	31500	35500	39500	42000	50000

1	2	3
Simple wells:		
i) Villages covered	Nos.	
ii) Population covered		
9. HOUSING		
i) Industrial	No. of tenements	-
ii) Slum clearance		-
iii) Low Income Group Housing		36
iv) Village Housing:		
a) No. of villages		-
b) No. of houses completed		-
v) Land acquisition and Development — Area developed ...	Acres	-
10. TRAINING OF CRAFTSMEN		
Institutions:		
a) Existing	Nos.	1
b) New		-
Existing } Outturn		35
} Intake		35
New } Outturn		-
} Intake		-
11. WELFARE OF BACKWARD CLASSES		
i) T. D. Blocks	Nos.	-
ii) Training staff by categories	Nos.	-
iii) Post-matric scholarships:		
a) General courses	Nos.	-
b) Technical and Professional courses	Nos.	-

(Cont'd.)

4	5	6	7	8	9
	20		60	80	100
24	224	424	624	744	924
48	68	88	108	128	148
-	4	8	12	16	20
-	40	80	120	160	200
-	12500	22500	32500	42500	45000
1	1	1	1	1	1
-	-	-	-	-	-
85	100	120	130	150	160
80	95	115	125	140	150
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
150	225	300	375	450	525
50	75	100	125	150	175