



FOURTH FIVE-YEAR PLAN
ANDHRA PRADESH
(1969-70 to 1973-74)

OUTLINE AND PROGRAMMES

PLANNING AND CO-OPERATION DEPARTMENT
GOVERNMENT OF ANDHRA PRADESH

338.954A3
A552.F

CONTENTS

—o—

PART I—OUTLINE

	<i>Pages</i>
Introduction	1—2
Resources of Andhra Pradesh	3—13
Review of Economic Situation	14—27
Approach and objectives	28—53
Fourth Five-Year Plan: An outline	53—73
Development of backward Regions	74—138
Employment	139
Financial Resources	145

TABLES

I—State income at Current and Constant prices. ..	152
II—Production of principal crops in Andhra Pradesh.	153
III—Index numbers of Agricultural production in A.P.	154
IV—Land utilisation in Andhra Pradesh... ..	155
V—Additional Irrigation potential created under Five Year Plans in Andhra Pradesh.	156
VI—Cropping pattern in A.P.	157
VII—Registered Factories and Employment in A.P. ..	158
VIII—Distribution of registered factories by range of Employment A.P.	159
IX—Monthly average production of selected Industries in Andhra Pradesh.	160
X—Index numbers of Industrial production in Andhra Pradesh.	162
XI—Mineral production in Andhra Pradesh. ..	163

	<i>Pages</i>
XII—Index numbers of Mineral production in Andhra Pradesh.	1644
XIII—Joint Stock Companies at work in A.P.	1655
XIV—Power Statistics A.P.	1665
XV—Employment in Andhra Pradesh (1961 to 1969).	1677
XVI—Registrations and Placements at Employment Exchange in Andhra Pradesh.	1688
XVII—Industrial Situation in Andhra Pradesh.	1699
XXVIII—Index numbers of whole sale prices in Hyderabad city (Base August 1939-100)	1700
XIX—Consumer prices index numbers for industrial working class at selected centres in Andhra Pradesh.	1711
XX—Select socio-economic characteristics for A. P. Vis-a-vis All India.	1722
XXI—Statement showing the allocation of Plan outlay in Andhra Pradesh since its formation (1956-74)	1733
XXII—Perspective of Investment & Income in A. P.	1744
XXIII—Sectoral outlays proposed by Planning Commission and State Government	1755
XXIV—Sectoral distribution of the outlay and the region-wise break up.	1881
XXV—Allocations under Special Development Programme of Rayalaseema	1832
XXVI—Allocations under Special Development Programme of Coastal Andhra	1884
XXVII—Programme for the utilisation of Rs. 43.72 Crores for Telangana	1885
XXVIII—Provision in the IVth Plan for sectors included in the Special Programme for Telangana	1889
XXIX—Additional Taxation measures introduced during the Second and Third Plans.	1990
XXX—Additional taxation in 1966—67 to 1968—1969.	1992

PART II—SECTORAL PROGRAMMES

1. Agriculture	..	..	..	..	1—26
2. Minor Irrigation	..	..	..	..	27—34
3. Soil Conservation and Land Development				..	35—39
4. Ayacut Development	..	..	..	..	40—46
5. Animal Husbandry	..	..	..	..	47—57
6. Dairying and Milk Supply	..	..	..	..	58—66
7. Forests	—	..	..	..	67—74
8. Fisheries	..	..	..	..	75—79
9. Warehousing and Marketing			..	..	80—83
10. Co-operation	..	..	..	..	84—102
11. Community Development	..	..	..	..	103—105
12. Irrigation	..	..	..	..	106—133
13. Power	..	..	..	..	134—157
14. Large and Medium Industries			..	..	158—169
15. Village and Small Scale Industries			..	..	170—179
16. Mineral Development	..	..	..	..	180—189
17. Handlooms	..	..	..	..	190—195
18. Roads and Road Transport	..		..	..	196—209
19. General Education	..	..	..	..	210—220
20. Technical Education	..	..	..	..	221—225
21. Medical Services	..	..	..	..	226—236
22. Public Health	..	..	..	..	237—241
23. Urban Water Supply and Drainage	..		..	..	242—249

	<i>Pages</i>
24. Rural water Supply	250—254
25. Housing	255—261
26. Welfare of Scheduled Tribes.. .. .	262—273
27. Welfare of Scheduled Castes and other Backward Classes	274—278
28. Social Welfare	279—282
29. Craftsmen Training and Employment Schemes ..	283—285
30. Statistics	286

Part I—Outline

INTRODUCTION

The National Development Council decided in 1967 that the Forth Five-Year Plan should be formulated for the period 1969-74. With reference to this, the Planning Commission suggested in February, 1968 that the States may undertake a review of economic development and also take preliminary steps for formulating a Plan. Accordingly, we constituted 12 Working Groups for formulating the State's Fourth Plan. The aggregate of the outlays recommended by these Working Groups came to Rs. 628 crores. It was subsequently decided that we should make in the State Plan special provision for Chronically Drought Affected Areas, Metropolitan Areas and Tribal Areas. In order to provide for this, the outlay of the State's Draft Fourth Plan was raised to Rs. 650 crores and a Draft Outline of the State's Plan conforming to this outlay was prepared and presented to the Planning Commission in October, 1968.

The draft proposals were considered by the Central Working Groups in October, 1968, and by the State Advisory Committee in November, 1968. On the basis of the discussions of the Central Working Groups the outlay on the Plan came to about Rs. 651 crores. There were discussions with the Planning Commission for finalising the outlay on the State's Fourth Five-Year Plan in January, 1969 and subsequently in November-December, 1969. In the Draft Memorandum on the Fourth Five-Year Plan presented to the National Development Council in March, 1970, the size of our State's Fourth Plan was shown by the Planning Commission as Rs. 420.50 crores, comprising of Rs. 240 crores Central assistance and Rs. 180.50 crores State resources. In June, 1970, the Planning Commission communicated the sectoral distribution of this outlay. The State Government could not however finalise the Fourth Plan for the outlay of Rs. 420.50 crores indicated by the Planning Commission, since it would not have been possible to fulfil even the minimum spill-over commitments within an outlay of this order. Considering the constraint of resources, the original

proposals were revised with a view to reducing the outlay to the maximum extent possible while fulfilling the inevitable spill-over commitments. As a result of this exercise, it was decided in November, 1970 that the outlay on the State's Fourth Five-Year Plan would have to be at least Rs. 530 crores if the existing commitments were to be fulfilled. Consequently detailed review of the schemes included in the draft proposals was again taken up and revised proposals for an outlay of Rs. 530 crores were formulated which are included now in the present document.

It will be seen from the chapter on Resources that an outlay of the order of Rs. 530 crores is in excess of the available resources according to the present assessment. The outlay on the Fourth Plan in the first three years comes to Rs. 266 crores leaving an outlay of 264 crores for two years which comes to about 50 per cent of the total outlay. If we take into consideration the spill-over commitments on the one hand and the constraint of resources on the other, it will be evident that the outlay in the last two years of the Fourth Plan cannot decline so much as to restrict the total outlay to the amount already approved by the Planning Commission, nor can it be stepped up so much as to be able to reach a total outlay of Rs. 530 crores. However, a more definite view of what can reasonably be expected to be the final outlay on the Fourth Plan can be taken only after the outlay on the Annual Plan 1972-73 is known. It is, therefore, proposed to take up a reappraisal of this Plan as soon as the Annual Plan for 1972-73 is finalised.

RESOURCES OF ANDHRA PRADESH

The year 1956 would go down in the history of the Andhras as most memorable for, during that year, the new State of Andhra Pradesh came into existence consequent on the States' Re-organisation Act, bringing more than 30 million Telugu-speaking people under one composite administrative unit. Andhra Pradesh with an area of more than 106,000 square miles and a population of about 36 millions (1961—in 1971 it is about 43 million) is the fifth largest and the fourth most populous State in the Indian Union. The State is situated in a tropical region between 13°N to 20°N and 77°E to 85°E. It is bounded on the East by the Bay of Bengal, on the North-East by Orissa and Madhya Pradesh, on the North by Maharashtra, on the West by Mysore and on the South by Madras State. The State has a long coast line of 600 miles running from Ichapuram taluk in Srikakulam District in the North to Sulerpet taluk in Nellore District in the South. There are seven working ports in the State including one major port, i.e., Visakhapatnam and two intermediate ports (Kakinada and Masulipatnam). Visakhapatnam is the only major port between Calcutta and Madras with an excellent natural harbour, whose hinterland stretches into Madhya Pradesh and Orissa. Manganese and Iron ore exports constitute a major part of the shipments from Visakhapatnam. The ports of Kakinada and Masulipatnam have a rich hinterland comprising Coastal Andhra Pradesh producing agricultural commodities and minerals.

2. The State is divided into 20 districts for administrative purposes. (In 1971 Ongole district was formed making it 21 districts). Naming the districts in a clockwise order from the north-east, they are Srikakulam, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, (now Ongole also), Nellore, Chittoor, Cuddapah, Anantapur, Kurnool, Mahbubnagar, Hyderabad, Medak, Nizamabad, Adilabad, Karimnagar, Warangal, Khammam and Nalgonda districts. The State of Andhra Pradesh came into being by tagging on the Telugu speaking districts of the erstwhile Hyderabad State with the Andhra State that had already been formed out of the old composite Madras State. It is usual to refer to the region constituted by

the 9 districts of Mahbubnagar, Hyderabad, Medak, Nizamabad, Adilabad, Karimnagar, Warangal, Khammam and Nalgonda drawn from the erstwhile Hyderabad State as the Telangana region. As regards the rest of the State the southern plateau districts of Kurnool, Cuddapah, Anantapur and Chittoor are referred to as the Rayalaseema or the Ceded districts and the rest of the Coastal districts are appropriately called the Coastal Andhra. These areas present great regional disparities in their economic development, the Coastal Andhra region obviously being the most prosperous area and the other two being backward. Historically, politically, as well as administratively as also from the point of economic development these three distinct areas form convenient regions for demarcation and study. A co-ordinated and integral development of the three regions has been possible only now after they came under a single and uniform administration of the Andhra Pradesh State Government.

3. The population of the State according to 1961 census is 359.83 lakhs (the estimated population for 1965-66 is 393.41 lakhs). Over the decade 1951-61 the population of the State has increased by 15.7 per cent as against 21.5 per cent in All-India. The Coastal Region is most densely populated and it accounts for 45.4 per cent of the State's population with 31.4 per cent of the State's land area. Next to Hyderabad district, West Godavari District with 657 persons per square mile is the most densely populated district in the State. East Godavari, Krishna and Srikakulam districts occupy the third, fourth and fifth places respectively in the State from the point of density. The Rayalaseema region is most sparsely populated and it accounts for 19.3 per cent of total population with 26.8 per cent total land area of the State. The man land ratio is therefore the highest in this region. The density of population in this region is only 244 persons per square mile as against 490 in the coastal region. The Telangana region accounts for 35.3 per cent of State's population and 42.8 per cent of the State's land area. The density of population is 286. Hyderabad district with 688 persons per square mile is the most densely populated district in the State. (Telan-

gana here includes all the area of nine districts of Telangana).

The population of the state according to 1971 census is 433.95 lakhs. Over the decade 1961-71 the population of the State has increased by 20.6 per cent as against 24.57 per cent in All-India. Its density of population is 157 persons per square K.M., as compared to 182 persons per square K.M., of All-India. Hyderabad district has the highest density of population (362 persons per sq. K.M.), followed by Krishna (285 persons per sq. K.M.), West Godavari (281 persons per sq. K.M.), followed by East Godavari (281 persons per sq. K.M.) and Srikakulam (265 persons per sq. K.M.) in the decreasing order of density per square K.M. Adilabad has the lowest density of 79 persons per square K.M.

Among the three regions the Coastal Andhra is the most densely populated region. Its population (192.96 lakh persons) accounts for 44.47 per cent of the total population with only 31.45 per cent of the area of the State. Its density is 223 persons per square K.M.

The Rayalaseema has the lowest density with 113 persons per Sq. K.M. Its population (838.28 lakh persons) accounts for 19.19 per cent of the State's population with 26.76 per cent of the area of the State.

The population of the Telangana region (157.71 lakh persons) accounts for 36.34 per cent of the State's population and its geographical area 41.8 per cent of the State. Its density of population is 137 persons per sq.K.M. (Telangana here includes all the areas in the nine districts of Telangana).

4. Viewing the State as a whole from the east three distinct physical zones can be discerned, viz., (1) the Coastal Plains, (2) the Eastern Ghats and (3) the Western Penneplains. The Coastal Plains stretch right along the coast of the State from the northern most point in Srikakulam district to the Southern most point in Nellore district. In the midst of this region is located the shallow fresh water lake of Kolleru which is a natural depression between the Godavari and Krishna deltas into which the waters of the region drain covering an area of about 100 square miles during rainy

season. The Madras—Calcutta Broad gauge railway line and the GNT road pass right along this coastal plain. Next to the Coastal Plains to the West, except for a wide stretch of about 100 miles between the Godavari and Krishna rivers, a series of hills are met with both to the north of river Godavari as also south of river Krishna. These are referred to as the Eastern Ghats. Unlike the Western Ghats of India these hills do not form a continuous range running from the northern edge to the southern edge. The hills in this region are wooded by thin forest, the rainfall being scanty (about 40") and the rocks are porous or fissured. The main Madras—Bombay railway strikes diagonally across the South of the region and is one of the most interesting traverses in India. The rock formations in this region are of very ancient origin. The rest of the State forming a large wide belt that covers the western part consists of the Deccan Penneplains developed on the Archæan gneisses. All the Telangana districts and the Kurnool (except the Nallamalais portion), and Anantapur districts of Rayalaseema fall under this region. The area covered by this region is generally poor with scanty rainfall and mostly dry cultivation is carried on. Towards the north of the region a belt of Gondwanas with coal deposits has been preserved along the lower Godavari trough. Much of this is below 500 feet and most of the area is largely covered by dryish deciduous forests. With the poor sandy red soils of the gneisses and granites; a variable rainfall of 25-35" and May mean temperatures in the 90s, life is hard except in favoured basins, where soilwash and tank irrigation give some prosperity. Bare hills, reddish-khaki plains with scattered thorny scrub, rivers merely ribbons of sand for half the year or more, tanks banded into the little valleys, all combine to produce a landscape with a desolate and brooding charm. This area is however, considered to be generally rich in mineral resources which have not been exploited in full.

5. Andhra Pradesh is popularly and rather appropriately referred to as a "River State". The major as well as the minor rivers that flow through the State number about 34. Of these 5 are the more important rivers, namely, the Godavari, Krishna, Pennar, Vamsadhara and Nagavali. It is estimated that all these

rivers together annually carry 150 million acre feet of water into the Bay of Bengal. The Godavari with its 900 miles length is by far the longest and the broadest river in South India. Though its irrigation and power potentialities are immense, most of its waters at present go waste into the sea. It is fed by a number of tributaries important among them being Pranahita, Manjira, Sabari and Penganga. The Godavari branches off at Dowleshwaram, 40 miles inland, giving rise to the fertile delta region known as Konaseema. The Dowleshwaram anicut across the Godavari near Rajahmundry is one of the oldest anicuts in the country. The Krishna is 800 miles long and flows through the Centre of the State. It has 19 tributaries, important among them being Tungabhadra, Bhima and Musi. Like the Godavari it has also formed one of the richest deltas in the country. Both Godavari and Krishna are rain-fed rivers and flow into the Bay of Bengal. Apart from being a source of irrigation and hydro-electricity, these rivers also form the main inland water ways in the State.

6. The major portion of the State is covered by the red variety of soils. The red soils are generally efficient in organic matter and poor in plant nutrient but rich in phosphoric contents. The moisture holding capacity of the red soils is also poor and therefore, irrigation is necessary to raise good crops. Most of the tract covered by this type of soil except where tank or river irrigation is provided is cultivated by rather poor dry crops which have to depend mostly on the vicissitudes of the monsoons. The great part of the Telangana and Rayalaseema districts and the upland portion of Nellore, Guntur, West Godavari, East Godavari, Visakhapatnam and Srikakulam are covered by the red soils.

The next largest proportion in extent is made up of black soils. This type of soil is rich in calcium and potash but poor in nitrogen. The black soils retain moisture and irrigation is not a necessity in raising healthy crops. These soils are particularly suitable for cotton cultivation. Dry crops like jowar and bajra are also grown on these soils. Tobacco is grown in considerable extent in this type of soil in certain parts

of the State. The districts of Telangana as Adilabad, Karimnagar, Warangal and Khammam districts, have a good belt of this type of soil along the course of river Godavari. Mahbubnagar district and Krishna district and the Western portion of Anantapur district as also the Kunderu basin of Cuddapah district, portions of Guntur district, have a fair amount of black soils. Other districts except the north-eastern districts also have isolated patches of black soils.

Next in extent comes the coastal alluvium, which may be distinguished from the deltaic alluvium that will be discussed next. The coastal alluvium stretches as a narrow belt all along the coast except for a short break in Visakhapatnam district where the spurs of the Eastern Ghats meet the sea. The coastal alluvial belt varies greatly in width at times forming a mere narrow sandy belt. In composition this is made up of sand or sandy loam. It is generally not rich in plant nutrient and organic matter. Casuarina and cashew plantations are raised extensively on this belt in Nellore, Guntur and Srikakulam districts. In Krishna a large portion is covered by mangroves or swamps.

Next comes the most important soil from the point of agricultural production, *viz.*, the deltaic alluvium. Though limited in extent and obviously concentrated in the delta region of the Godavari and Krishna, these alluvial soils deposited by the waters of the two great rivers are clayish in character and rich in plant nutrient and highly conducive to good paddy cultivation. Traces of alluvium belt are observed along the coasts of the Nagavalli and Vamsadhara rivers in Srikakulam district and along the Pennar in Nellore district which tracts are also noted for their rich paddy cultivation.

The last in extent come the laterite soils. The laterite soils vary from deep reddish to brown or black in colour. They are generally poor in organic matter and plant nutrient. They are porous and usually well drained. Laterite pockets occur in Srikakulam, Visakhapatnam, East Godavari and Nellore districts as also on the western edge of Medak district. These soils are well suited for horticulture and also production of pulses and oil seeds.

7. Andhra Pradesh receives its rainfall both from the south-west as well as the north-east monsoons. The south-west monsoon generally spreads itself out from early June till about the end of September. The north-east monsoon occurs from October to December. By virtue of the varying land formations of the plateau and the east coast with the intervening hill ranges the effects of the monsoons in the different regions of the State vary considerably. In the Telangana region the monsoon sets in early towards the end of May or early in June and most of the rainfall occurs in the months of August and September. Thereafter with a short break, the north-east monsoon sets in and brings in a few showers in the months of October and November. The average annual rainfall ranges from about 75 cm., in the south to about 20 cm., in the north with considerable fluctuations. The Rayalaseema region is a zone of precarious rain fall, annual average being hardly 66 cm. The maximum rain fall is received in this area in the month of September with slight secondary in the month of May. Agriculture is dependent mostly on the vicissitudes of the monsoon which often fails and this area has long been known as "Stalking ground of famines". The Coastal area generally receives the highest average rainfall of about 100 cm. The area north of the Godavari receives the heavier rainfall of about 100 to 125 cms. Though the coastal area receives the benefit of both the monsoons the Eastern Ghats to some extent act as a barrier for this region to derive the fullest benefit of the south-west monsoon. The hill ranges also prevent the returning of south-west monsoon winds from reaching the west plateau. The main incidence of rain in the coastal region occurs in the month of October. The area is also susceptible to frequent cyclones that generally occur between October and December.

8. The State may be generally described as having a hot summer and a pleasant winter. The summer months, March to June will be fairly hot throughout the State, May being the hottest month. The maximum and minimum temperatures for the State may be 41.4° centigrade and 13.9° centigrade respectively. Generally the maximum temperature reached during summer months in Telangana region is about 39° centi-

grade and in Rayalaseema about 38° and in the Coastal Andhra about 37°. The variation in the maximum and minimum temperatures keeps increasing as one goes from the coast into the interior.

9. The physical features, the river systems, the soils, and the climatic conditions described earlier give a clue to the pattern of agriculture prevailing in the State.

10. The State, if not the whole State at least in some portions, is well served by its rivers for irrigation. These rivers have still greater potential for irrigation and generation of electric power. Ground water resources are believed to be considerable though not even half such resources have been exploited. A major portion of the irrigation is concentrated in the coastal deltaic districts. With the fuller development of the irrigation potential in the higher reaches of the rivers and the execution of several medium and minor irrigation works contemplated under the State's Five-Year Plan, some of the economically backward areas also will have the benefit of irrigation. When the irrigation potential is fully developed, the State will not only rank first in the area irrigated under public projects, but will also have the highest percentage of its area under irrigation.

11. A necessary adjunct to agriculture is animal husbandry. The cattle are the primary suppliers of draught power for agricultural operations and their voidance is the primary source of nutrition to the soil. Cows and buffaloes are the principal source of milk. Thus cattle form the back-bone of the agricultural economy of Andhra Pradesh. The coastal districts have a higher density of bovine and poultry population than the Telangana and Rayalaseema districts. The prosperous conditions of agriculture in the Coastal Region have obviously led to the concentration of cattle in that area. Andhra Pradesh can claim to have some of the best breeds of draught as well as milch cattle. Andhra Pradesh has the highest number of sheep accounting for over 1/5 of India's sheep population. They are found in good number in Nellore, Anantapur, Chittoor, Mahabubnagar, Kurnool, Karimnagar and Nalgonda districts. Goat population of the

State accounts for about 12.5% of the country's goat population. They are found in large numbers in Rayalaseema districts. Pigs, made up most of indigenous variety of pigs are reared by people of the poorest classes. The rearing of exotic breed of pigs has been proving popular in the coastal delta districts. Andhra Pradesh has about 16 per cent of poultry of the country ranking first amongst the States of India. It is the largest exporter of poultry products in India, exporting eggs and live birds to distant places like Delhi, Amrutsar, Calcutta, Madras, Bombay, etc. The poultry keeping however, is not done on scientific or commercial scale.

12. The State has a long coastline of about 600 miles, the estuaries, lagoons and back-waters covering nearly 400 miles, a river system with about 2,800 miles in overall length with tanks and ponds covering about 25,000 acres and reservoirs 275,000 acres. There is ample scope for development of inland fisheries, in the back-waters, estuaries of rivers, the streams, ponds and reservoirs.

13. Forests cover an area of 22,577.1 square miles which works out to about 21.29% of the geographical area. This falls far below the standard laid down by the National Forest Resolution of 1952 that 1/3 of the total land surface of the country should be under forests. The forests of the State are mostly of the Tropical Deciduous type. However, on account of the variations in climate and edaphic factors different types of forest growth are discernible *viz.*, Moist Deciduous, Tropical Dry Forests, *Eugenia Alternifolia*, Tropical Thorn Forest, Tropical Inferior Deciduous Forests, Evergreen Scrub type, Tidal and Mangrove Forests, Beach or Dune Forests and Bamboo Forests.

14. The State possesses a variety of geological formations, the oldest being the Dharwar group of rocks. These rocks are well distributed throughout the State and possess rich minerals. Horn blends schists and ferruginous quartzites are found in parts of Anantapur, Khammam, Warangal, Karimnagar and Adilabad districts. The ranges of Eastern Ghats covering Krishna, West Godavari, East Godavari, Visakhapatnam and Srikakulam districts are composed of Khondalites.

These rocks possess deposits of manganese, graphite,, bauxite and iron ores. The peninsular granites cover Chittoor, Anantapur, Kurnool, Mahbubnagar, Nalgonda, Hyderabad, Medak, Nizamabad Karimnagar and Adilabad districts. These granites are mainly used in masonry constructions. The Purna formations are sedimentary rocks younger than Dharwar and Peninsular granites. They are mainly composed of limestones and shales and they occupy the major part off Kurnool and Cuddapah districts and parts of Mahbubnagar, Nalgonda, Guntur, Hyderabad, Khammam Warangal, Karimnagar and Adilabad districts. Asbestos, baryte and steatite occur in these formations. The Gondawana formations occur in the Godavari valley.. The coal deposits of Kothagudem Collieries occur in this formation. The Deccan trap is the next geological formation. It starts from East Godavari and passes through Telangana. The rock is used in grinding and crushing stones.

15. Andhra Pradesh is rich in a variety of minerals, the chief of which are asbestos, bayrites, coal, chromite, iron ore, manganese ore, kyanite, mica, beryl, China-clay and limestone. Graphite, steatite, limenite, gypsum, ochre, fireclay, quartz, gold and diamonds also occur.

16. The State is quite favourably placed in respect of raw materials for the further development of industry. Agricultural products like paddy, sugarcane groundnut, cotton and tobacco are the chief raw materials readily available in the State. Livestock is yet another important source for industries like tanning and leather goods manufacture. The rich fishery potential also can provide a base for several industries. The forest resources like timber and bamboo could be fully utilised for industrial exploitation. The State is rich in minerals though some are of poor quality. With the fairly prosperous middle class farmers in this fairly rich agricultural State, Andhra Pradesh can be considered to provide a very good market for consumer goods. With the development of industries, the rapid expansion of power and transport and the greater urbanisation, demand may be created for capital goods as well besides an increase in the demand for consumer goods. The strategically central location of the

State and its capital city Hyderabad with good communications all round is yet another factor conducive to the rapid development of industry.

17. The State has great potential for Hydro Power development. The non-cocking and low and medium grade coal available in this State is particularly suitable for being utilised for the purpose of thermal generation of electricity.

18. The State has 2,902 miles of Railway lines of which the broad gauge forms 56 per cent. The railway net work is not spread out uniformly and considerable bottlenecks of railway transport are felt at busy junctions as Vijayawada. Coal, iron ore, cement, manganese ore, foodgrains, oilseeds and sugar are the chief commodities transported by rail. The road communications are also not uniformly spread out. The Coastal Andhra though forming $\frac{1}{3}$ rd of the total area of the State has half of the road mileage. The Telangana and Rayalaseema areas are rather poorly served. The road communications are often interrupted by its rivers thus hampering the steady movement of traffic. There are about 1000 miles of inland waterways, mostly made up of the Krishna—Godavari delta canals and the Buckingham Canal which runs from Vijayawada to Madras.

REVIEW OF ECONOMIC SITUATION

The economy of Andhra Pradesh, since the beginning of the Third Five-Year Plan upto the end of 1969-70, presented mixed trends. The depressive trends of the economy were discernable towards the close of the Third Plan continuing upto 1968-69. A partial recovery was, however, noticed in 1969-70. The mainstay of the State's economy being agriculture, repeated failure of the monsoons since 1965-66 upto 1967-68 and failure of the south-west monsoon and damage caused to the standing crops over a vast area in the rich coastal districts by two severe cyclones during 1968-69 affected agricultural production. However, the comparatively better performance of other sectors of the economy counteracted to some extent the shortfall in the agricultural sector and helped to maintain the overall growth of the economy, though marginally. The benefits of economic growth were partly off set by a higher rate of growth of population of 2.06 per cent per annum during the decade 1961-71 compared to 1.57 per cent during 1951-61.

State Income :

The State income estimates which serve as a broad indicator measuring the growth of the economy as a whole, reveal that the State's economy, registered a steady improvement in the first four years of the Third Plan. The State Income at constant 1960-61 prices increased from Rs. 983 crores in 1960-61 to Rs. 1,191 crores in 1964-65 or an increase by 21.1 per cent. Similarly, the per capita income at constant 1960-61 prices increased from Rs. 275 in 1960-61 to Rs. 309 in 1964-65 or an increase by 12.4 per cent. In the subsequent years, however, the State was unfortunate in being affected by adverse seasonal conditions in the agricultural sector in all the years from 1965-66 to 1968-69, though the intensity was of varying degree. Thus in 1965-66 and 1968-69, there was widespread failure of crops due to the failure of the south-west monsoon in the Kharif season and the latter year by two successive cyclones in the coastal districts in November and May of that year. In 1966-67 and 1967-68 though the seasonal conditions were fairly satisfactory in some parts of the State, they were not

so in some others. The shortfalls in the agricultural sector during these years resulted in the State Income at constant prices being somewhat lower than the level achieved in 1964-65. In 1969-70, however, the overall State Income was slightly higher than that in 1964-65 primarily due to the good performance of the non-agricultural sectors. (Table I)

Consumption Levels:

In order to assess the impact of economic growth over a period of time it is necessary to compare the levels of consumption among different fractile groups of population. The information on consumer expenditure in the rural and urban areas of the State is being collected annually by the National Sample Survey since last few years. However, the tabulation of this data earlier has been done according to the per capita consumer expenditure classes, while in recent years. It is being done according to fractile groups. As such comparable data for the part to assess the rise in consumption levels is not available. However, the information for the latest available year *viz.*, 1967-68 for Andhra Pradesh and All India is given in the following table:

Estimates of the share of different fractile groups in total consumption, 1967-68.

Fractile Group:	Rural		Urban	
	A. P.	All India	A. P.	All India
1	2	3	4	5
0.5	2.34	1.48	2.22	1.14
5.10	3.11	2.02	2.90	1.64
10.20	7.10	4.01	6.74	4.25
20.30	7.68	6.08	7.29	5.35
30.40	9.17	7.09	8.08	6.42
40.50	8.77	8.13	8.27	7.57
50.60	9.90	9.29	9.99	8.88
60.70	10.01	10.68	9.41	10.47
70.80	11.52	12.46	10.70	12.59
80.90	12.68	15.15	14.45	15.90
90.95	7.91	9.37	9.49	10.24
95.100	9.81	13.24	10.46	15.15
Total Population :	100.00	100.00	100.00	100.00

(Source: National Sample Survey (22nd Round)
July, 1967—June, 1968.)

It will be observed from the above table that the poorest 60 per cent of the population have a higher share of total consumption *viz.*, 48.07 per cent in rural and 45.49 per cent in urban areas in Andhra Pradesh as compared to All-India (39.10 per cent in rural areas and 35.25 per cent in urban areas). The percentage shares of each of the fractile groups of the poorest 60 per cent of the population in Andhra Pradesh are observed to be consistently higher than the corresponding shares in All India both in case of rural as well as urban areas. The share in total consumption of the higher fractile groups of population in Andhra Pradesh are lower than the shares of the corresponding fractile groups in All India. It is thus seen that the inequalities in the shares of consumption are comparatively less in Andhra Pradesh than in All India though the general level of economic development in Andhra Pradesh is very much below that of All-India as explained separately.

Agricultural Production :

Agriculture forms the mainstay of the State's economy contributing the bulk of the State Income. The agricultural production as measured by the Index Numbers of agricultural production with 1956-57 as base, rose steadily in the first four years of the Third Five-Year Plan, reaching a peak level in 1964-65, when the Index moved upto 134.3 against 108.2 in 1960-61. Since then, the State had been subjected to vagaries of monsoons affecting agricultural production. The record production reached in 1964-65 could not be achieved again in subsequent years largely due to the abnormal weather conditions during the monsoon periods. The production of foodgrains in 1965-66 was estimated to be only 60.98 lakh tonnes against 76 lakh tonnes in 1964-65 and improved to 69.33 lakh tonnes in 1966-67. Although, the year 1967-68 turned out to be good for the country as a whole so far as Andhra Pradesh was concerned, it was only marginally good as the foodgrains production recorded a slight increase to 71.92 lakh tonnes, compared to the previous year. But in the succeeding year *i.e.*, 1968-69, while the country as a whole reaped a bumper harvest of 94 million tonnes of food grains, Andhra Pradesh account-

ed for a very low output of 59.44 lakh tonnes of foodgrains due to the widespread drought conditions that prevailed throughout the State in the Kharif season. Added to this, widespread damage was caused to the standing crops specially rice in the Coastal districts by a severe cyclone in November, 1969. However, due to the favourable course of the South-west monsoon during the year 1969-70, the foodgrains production in the State registered considerable improvement, compared to the previous year. The output estimated at 68.91 lakh tonnes, accounted for 15.9 per cent increase over that of the previous year. During the agricultural year 1970-71, the performance of the South-West monsoon was, by and large, favourable in spite of a let-up in the monsoon activity during July, 1970 and the foodgrains production is expected to be more than the previous year's level.

Although the trends in the agricultural production since the last year of the Third Five-Year Plan and upto 1969-70 do not indicate any significant progress, certain favourable changes in the overall structure of the agricultural economy observed over the period merit attention, as these have long-range effects on the agricultural sector. (Tables II and III).

Land Utilisation:

Over the period under review, there has been a significant increase in the area sown more than once which has increased from 1.03 million hectares in 1960-61 to 1.63 million hectares in 1968-69 or an increase by 69.2 per cent which is mainly due to the extension of Irrigation through major, medium and minor projects (Table IV).

Irrigated areas:

The additional irrigation potential created under the Major and Medium Projects during the First, Second and Third Five-Year Plans amounted to 390.52 thousand hectares. During the three Annual Plans, i.e., 1966-67 to 1968-69 the additional irrigation potential created under Major and Medium Projects (excluding Nagarjunasagar) was worked out to 37.23 thousand

hectares. The additional irrigation potential created under Nagarjunasagar Project alone during this period amounted to 303.51 thousand hectares, thus taking the total additional irrigation potential created under all Plans upto 1968-69 to 731.26 thousand hectares.

Under Minor Irrigation works the additional area brought under irrigation by the end of the Third Plan was 405.90 thousand hectares. During the Three Annual Plans i.e., 1966-67 to 1968-69 another extent of 329.82 thousand hectares was brought under irrigation through Minor Irrigation sources (Table V).

Crop Pattern :

A significant shift in the cropping pattern of the State could be observed over the period under review. Between the period, 1960-61 and 1968-69, the area under Non-food crops rose by about 33 per cent as against about 5 per cent increase only in the area under foodgrains. This trend is significant in that the shift towards non-food crops indicates higher value of agricultural output yielding higher rate of return to the cultivators (Table VI).

Industrial Structure :

Over the period under review, the percentage share of the large and small scale manufacturing sector in the State Income showed a steady increase. In 1969-70, the contribution of the manufactures (at constant prices) to the State Income was 10.7 per cent as against 7.8. per cent in 1960-61. The income from manufacturing sector increased from about Rs. 77 crores in 1960-61 to Rs. 131 crores in 1969-70 at constant 1960-61 prices.

However, Andhra Pradesh still lags behind other States in regard to industrialisation. In 1969-70, the contribution of large and small scale manufacturers formed 15.9 per cent of the National Income of the country against 10.7 per cent only in the State. In terms of investments in large scale industry, according to the results of the Annual Survey of Industries (1966), Andhra Pradesh accounted for only Rs. 236

crores as against Rs. 734 crores in Madras, Rs. 1,328 crores in Maharashtra and Rs. 1,477 cores in West Bengal. The State's share in the total investment in large scale industry in the country as a whole, worked out to just 3 per cent as against 9 per cent for Madras, 17 per cent for Maharashtra and 19 per cent for West Bengal.

However, during the past few years, some significant progress was made in strengthening the industrial base in the State through the location of large sized public sector undertakings, such as Bharat Heavy Electricals, Synthetic Drugs Factory, Hindustan Machine Tools (Hyderabad Unit) Hindustan Aeronautics (Hyderabad Unit), Hindustan Heavy Vessels and Plates Factory and by expansion of the existing Public Sector Units *viz.*, Praga Tools and Hindusthan Shipyard. In the private sector, the establishment of Coromandal Fertilizers, Indian Detonators, Usha Sewing Machines, Usha Refrigerators *etc.*, and new spinning units in the co-operative sector, expansion of the two Paper Mills besides a new Cement Unit in the backward area of Karimnagar district have helped in strengthening the industrial base of the State.

The expansion of the industrial base of the State could be noticed in the increase in the number of registered factories. The number of registered factories increased from 3,160 in 1961 to 3,736 in 1968, or an increase by 18.2 per cent while the employment in their factories rose from 1.82 lakhs to 2.19 lakhs during the same period, representing an increase of 20.5 per cent.

Noticeable shifts over the period under review in the structure of the industrial sector were in the direction of an increase in the number of large scale units. The number of factories with employment between 100-500 workers rose by 69.1 per cent while those with more than 500 but less than 1,000 workers rose by 42.9 per cent and those of over 1,000 workers showed an increase of 46.2 per cent as against 40 per cent increase in the number of factories with less than 20 workers each. Industry-wise, the number of factories classified under metal group, chemical group and forestry group showed a substantial increase of 69.5

per cent, 60.9 per cent and 93.8 per cent respectively in 1968, compared to the position in 1961, as against 2.4 per cent rise accounted for by the Agro-based factories. In terms of employment in the registered factories, the chemical based factories showed an increase of 149.9 per cent over the period under review followed by a rise of 66.4 per cent by the metal group, while agro-based factories showed only 8.0 per cent increase in employment (Tables VII and VIII).

Industrial Production :

The general index of Industrial Production in Andhra Pradesh with base 1960=100 rose to 179 by 1965 and in the subsequent two years i.e., 1966 and 1967 the index, however moved down to 170 and 167 due to recessionary trends being active during the period. Complete recovery from the recessionary trends was noticed in 1968 when the index reached 217 accounting for an increase of 21.2 per cent over the levels of 1965. The growth was maintained in both 1969 and 1970 when the index rose further to 236 and 288 representing 8.8 per cent and 32.7 per cent increase over 1968 respectively. The performance of individual industries like Jute textiles, cotton yarn, cement, paper machine tools, cigarettes and sugar, which showed higher growth rates contributed to the overall growth in industrial production (Tables IX and X).

Mineral Production :

Andhra Pradesh is endowed with vast mineral resources. It ranks third in the country in terms of mineral output. Over the period under review, the output of minerals has gone up appreciably. The index of minerals production in Andhra Pradesh with 1960 as base, rose to 155.0 by 1965 accounting for an increase of 55 per cent. A marginal fall in the index (149.2) was observed in the year 1969 due to a fall in the production of asbestos, coal, iron ore, and mica. The fall in coal output, a major mineral of the State was due to a slump in the market of steam coal on account of slow progress of thermal projects and switch over of some railway lines to diesel, while the output of iron ore was lower because of the lower iron content of the ore available in the State and consequently poor demand for low-grade iron ore. (Tables XI and XII).

Industrial Finance :

Marked expansion of industrial credit facilities could be noticed in the State over the period under review. Apart from the State Financial Corporation, there are now three development Corporations, *viz.*, Andhra Pradesh Industrial Development Corporation, Andhra Pradesh Small-scale Industrial Development Corporation and Andhra Pradesh Mining Corporation besides the newly started Agro-Industries Corporation designed to accelerate the process of Industrial development of the State. There has also been considerable expansion of the short-term credit made available to the Industry in the State through Commercial Banks over the period.

The Andhra Pradesh State Financial Corporation, the premier capital market institution in the State, stepped up its financial assistance to the industry in the State to an appreciable extent over the period under review. During the Second Five-Year Plan 174 applications involving an amount of Rs. 1.94 crores were sanctioned. During the Third Plan the number of applications increased to 259 and the amount sanctioned to Rs. 7.60 crores. During annual plans 273 applications were sanctioned covering an amount of Rs. 5.97 crores.

Apart from loan assistance, the State Financial Corporation extended special schemes of assistance to the industry by way of guarantees for deferred payments and under-writing of capital issues. The total liability under guarantees borne by the corporation upto the end of 1969-70 amounted to Rs. 2.20 crores on 23 applications, of which the outstanding amount was Rs. 0.27 crore. The total under-writing business done by the corporation upto the end of 1969-70 aggregated to Rs. 0.41 crore in regard to 11 concerns of which Rs. 0.28 crore finally devolved on the Corporation.

The Andhra Pradesh Industrial Development Corporation was set up during the Third Five-Year Plan period. It was designed to render financial assistance to the industries, to participate in joint ventures with the private industrialists and to take up directly schemes of its own. The Corporation renders assist-

ance to the industry by way of under-writing of capital issues, participation in the share capital and deferred payment facilities. Upto the end of 1969-70, the Corporation received 99 applications for various forms of assistance amounting to Rs. 19.51 crores of which the Corporation sanctioned Rs. 6.84 crores while an amount of Rs. 5.42 crores was actually disbursed. The Corporation's investment upto the end of 1969-70 aggregated to Rs. 4.51 crores.

Among the Direct Promotion Schemes taken up by the Corporation, the Ball-Bearings' Unit costing Rs. 3.5 crores with Japanese collaboration has already been commissioned while the Integrated Glass Project with an estimated outlay of Rs. 3.5 crores, with technical collaboration of Hungary, is in an advanced stage of execution. The Corporation has also participated in several Joint-ventures which include Switch Gear Project, Sodium Metal, Potash Chemicals, Winding Wires, Ferrites *etc.* The Corporation has taken over the management of the Acetic Acid Plant at Hyderabad which was lying idle and activated the Republic Forge Unit.

The Small-scale Industrial Development Corporation supplies raw materials to the small industrial units from its various centres in the State besides rendering technical assistance. The Corporation has taken up feasibility studies in regard to various small-scale industries with a view to induce the small entrepreneurs to take some of them. It has its own production units. The total sales of raw materials by the Corporation during 1968-69 were valued at Rs. 138.92 lakhs against Rs. 101.81 lakhs in 1967-68.

There has been considerable expansion of short term credit through commercial banks to the manufacturing industry. The bank credit against industry has gone up from Rs. 11.67 crores in 1960 to Rs. 14.07 crores in 1965 and to Rs. 39.08 crores in 1969.

Corporate Sector :

The number of Joint Stock Companies in Andhra Pradesh has risen steadily over the period under review. The number of companies of all types has risen

from 446 in 1960-61 to 584 in 1967-68 accounting for an increase of 31.0 per cent while the paid-up capital had risen from Rs. 24.56 crores to Rs. 50.85 crores registering an increase of 107.0 per cent. Though the number of public limited companies had remained more or less the same over the period, their aggregated paid-up capital had risen from Rs. 21.24 crores to Rs. 39.94 crores. (Table XIII).

Power:

Power generation which acts as pace setter to the industry had gone up from 881.7 mkh. in 1960-61 to 1471.1 mkh. by the end of the Third Five-Year Plan and further to 2625.0 mkh. in 1969-70 accounting for an increase of 66.8 per cent and 78.4 per cent respectively. The installed capacity was increased from 213.0 m.w. in 1960-61 to 291.8 m.w. by 1965-66 and further to about 600 m.w. by 1969-70. A significant increase in the consumption of power by industries was evident as it rose from 374.7 mkh. in 1960-61 to 574.6 mkh. in 1965-66 and further to 1307.1 mkh. by 1969-70 accounting for an increase of 53.1 per cent and 127.9 per cent respectively. A more significant feature of the consumption pattern was the increased usage of electric power for agriculture, the consumption of which rose from 9.0 mkh. in 1960 to 113.4 mkh. in 1965-66 and further to 328.6 mkh. in 1969-70 representing an increase of 1160.0 per cent and 189.8 per cent respectively.

The increase in the power capacity and generation was followed by extension of power facilities to more towns and villages. The towns and villages electrified by the end of 1969-70 numbered 7,200 as against 4,318 in 1965-66 and 2,655 in 1960-61. The total number of pumpsets energised at the end of 1969-70 were 1.58 lakhs as against 0.18 lakh in 1960-61. (Table XIV).

Social Services:

Under Education, there was satisfactory growth in the number of institutions providing general educational facilities in the period 1961-69. The number of primary schools increased from 31,991 in 1960-61 to 36,702 in 1968-69. They serve nearly 97 per cent of

the rural population within one mile at the end of 1968-69. The enrolment in these schools increased from 25.26 lakhs to 30.80 lakhs students. The boys enrolled constitute 72.7 per cent of the population in the relevant age group. Upper primary schools increased from 983 in 1960-61 to 2,870 in 1968-69. The enrolment in these schools increased from 2.13 lakhs in 1960-61 to 7.19 lakhs in 1968-69. High/Higher Secondary Schools increased from 1,244 institutions in 1960-61 to 2,903 in 1968-69 and their enrolment from 5.53 lakh students in 1960-61 to 11.23 lakh students. Thus while there has been only 20 per cent increase in the enrolment of boys into primary schools, the enrolment in other schools has been more than doubled during the period under review.

Colleges of general education increased from 58 in 1960-61 to 131 in 1968-69. The enrolment in these colleges increased from 40.9 thousand students to 132.3 thousand students. Colleges of professional and technical education increased from 34 to 41 and their enrolment from 11,784 students to 21,863 students in the period under review.

The medical facilities in the State also recorded satisfactory progress in the period 1960-61 to 1968-69. Number of Hospitals and dispensaries (Government and Private) which were 988 in 1960-61 rose to 1,489. Their bed strength increased from 19,345 to 27,128 in the same period. The population to bed ratio decreased from 1,860 in 1960-61 to 1,545 in 1968-69.

Protected water supply is provided to 45 municipalities of the 82 in the State leaving 37 municipalities to be covered. Regarding drainage facilities, only two towns *viz.*, Vijayawada and Eluru are provided with the facilities besides Hyderabad city in the State at the beginning of Fourth Plan. Even these two towns are not covered fully by drainage facilities.

A survey conducted regarding drinking water facilities in rural areas revealed that in 1960-61 nearly 84 per cent of the total villages and hamlets did not have even one good source of drinking water and the rest did not have adequate drinking water from existing sources. As against this position in 1960-61,

adequate drinking water facilities are provided to 31,996 villages and hamlets upto 1968-69 constituting 70 per cent of the former category *i.e.*, those not having even one source of drinking water.

In many villages, the water available from existing sources is polluted. These villages have to be provided with protected water supply. Government have identified 974 schemes for providing protected water supply. Of these schemes 239 schemes were taken up for execution and 160 were commissioned by the beginning of Fourth Plan since 1960-61.

Employment and Labour :

Trends of employment in the organised sectors in Andhra Pradesh indicated a steady increase over the period under review. The employment in the public sector rose from 5.66 lakhs in 1962 to 6.83 lakhs in 1969 or an increase by 20.7 per cent while employment in registered factory sector rose from 1.90 lakhs in 1961 to 2.79 lakhs in 1968, representing 46.8 per cent increase. But, in terms of annual rates of growth, the employment in the public sector of Andhra Pradesh was subdued since 1966 though in 1969, some improvement was noticeable. On the other hand, the employment in the registered factory sector showed steady increase between 1961 to 1963 but tended to decline during 1964 and 1965 and again showed improvement thereafter. The recessionary trends which set in the industry in 1965 and continued upto 1967 were largely responsible for the static employment situation in the factory sector, while the reduced plan outlays under the annual plans after the Third Five-Year Plan, could not keep up the growth of employment, in the public sector. The employment in the public sector in the State in 1969 formed only 4.1 per cent of the employment in the organised sector in All India (166.27 lakhs). Similarly the employment in the factory sector in the State in 1968 formed only 5.9 per cent of the employment in this sector in All India. However, the labour force in the State formed 7.8 per cent of All India, as per the population census, 1971. (Table XV).

Unemployment :

The unemployment position over the period under review as judged by the Employment Exchange Sta-

tistics showed a rising trend in the registrations and those on the live register. The number of candidates on the live register at the end of the year slightly exceeded one lakh during the period 1960 to 1962 but rose to 1.34 lakhs in 1963. In the following year i.e., 1964, there was a slight decline but in subsequent years the figure swelled continuously, reaching 2.81 lakhs in 1970. On the other hand, the placements effected by the employment exchanges moved up and down over the period under review, but always fell far short of the number of employment seekers. Table XVI).

Labour Situation :

The labour situation as reflected by the mandays lost due to industrial disputes was comparatively satisfactory during 1960 to 1963 but thereafter, there was a sudden spurt in the losses between 1964 to 1967. In 1968, the labour situation improved to a considerable extent, but in 1969 the situation again worsened due partly to the Telangana agitation. In 1970, however, the position generally improved compared to the preceding year. (Table XVII).

Price Situation :

The wholesale price situation as measured by the index of wholesale prices in Hyderabad City showed an upward trend since 1964, indicating more than 10 per cent increase per annum upto 1967. In the year, 1968, the index moved down by 7.4 per cent compared to the level reached in 1967, but in the following year, the index rose again by 7.0 per cent. The upward trend in the general index was accounted for by an increase in the indices of both food and non-food articles. (Table XVIII).

The consumer price index numbers for industrial working class at selected centres in Andhra Pradesh revealed a movement in the upward direction. The average consumer price index numbers in 1970 were 66 to 89 per cent higher than in 1960, much of this increase being accounted for by the period upto 1967. In the subsequent years, however, though the price index continued to move upwards, the rate of increase,

generally was less than that observed earlier. (Table XIX).

Levels of development in Andhra Pradesh and India:

Despite the impressive progress in several sectors indicated above the position at the beginning of the IVth Plan was that the level of development of Andhra Pradesh was lower than the All India average in several respects. Thus the per capita net domestic product of Andhra Pradesh in 1968-69 was Rs. 478 as against Rs. 552 for All India. The per capita consumption of power is very low in the State being 44 kwh as against 76 kwh., for All India (1968-69). The number of factory workers are 516 per lakh population as against 866 for All India (1969). The percentage of literacy is only 24.56 as against 29.34 per the country as whole (1971). The road mileage per lakh of population is 78 for Andhra Pradesh as against 102 for All India. The birth rate is lower than All India and death rate higher than All India (1961) showing the poor state of health conditions. The low rate of growth of population (20.60 per cent for Andhra Pradesh against 24.66 per cent over 1961-71) is thus explicable and confirms the observation that this is a backward State. The preponderance of agricultural sector is evident from the contribution of agriculture and allied sectors to net domestic product which is 51.8 per cent for Andhra Pradesh as against 43.8 per cent for All India (1968-69). The comparative position of Andhra Pradesh in respect of several indicators is given in Table XX.

APPROACH AND OBJECTIVES

In the process of the overall development of the economy of the State, the investment in the State sector is only one of several factors that affect this process although it constitutes in itself a very significant factor. Investments in the private and Central sectors are two other important factors that affect the economy of the State. But, even more important than these are the effects of social and economic policies that are evolved at the national level. Thus, in important matters such as in arresting the increase of prices which distort the entire plan frame or in achieving a larger measure of income distribution, the impact of national policies is likely to be far greater than that of any re-arrangement of Plan priorities or sectoral allocations within a State Plan. Undoubtedly, such Plan priorities and sectoral allocations even within the State Plan have necessarily to be informed and guided by national objectives and policies and they can play a significant role in helping to achieve such objectives. But, to the extent that any such decisions in regard to the State Plan itself remain unsupported by corresponding policy decisions required for pursuit of the same objectives, the Plan by itself will not be a strong enough instrument for achieving them. In formulating the approach and the objectives of the Plan (therefore, the overall national objectives incorporated in the National Plan have been taken into account. However, in evolving the strategy required for achieving these objectives within the context of the State Plan the social and economic situation of the State has naturally to be taken into account. From the review of the economic situation in Andhra Pradesh during the decade 1960-70, it will be seen that certain important conclusions emerge.

The most striking is the fact that inspite of substantial progress in many fields, the State continues to be backward in respect of per capita income indicating in general the lower level in the State in respect of other criteria such as consumption of power, percentage of literacy, standards of health, road mileage etc. In part, this is due to the magnitude of the problems with which the State was confronted when the process of planned development was initiated and in

part it is due to the national policies which in fact gave no weightage in favour of backward areas. Hence, unless appropriate policy decisions to reallocate the Central assistance, Central sector schemes, institutional finances *etc.*, in favour of backward States like Andhra Pradesh are taken, there would be widening gaps in the levels of development of various regions.

As will be seen from the projections with regard to State and per capita incomes given subsequently in this chapter, the position is that over the next three Plan periods a large gap between the per capita income of the State and the average per capita income for all-India will persist. The distribution of Central assistance to the States for the Plan could be specially used as one of the instruments for reducing these regional disparities. But, the Fourth Five-Year Plan itself admits that "in the existing arrangements such help will not be substantial". Ultimately, however, it is not even Central assistance but the overall developmental outlays in the State that have an impact on its economy and some procedure would have to be evolved whereby larger developmental outlays are ensured for the backward States.

While the State itself is backward compared to the all-India average, there are, within the State, regions whose level of development is lower than even the State average. While in several sectors the rate of growth in these regions has in the Plan period, been higher than the corresponding rate in the more advanced areas, the base from which they started was so low that they have not yet caught up with the level of the advanced areas. While the gap in development, therefore, may not be widening in all cases, it continues to persist and has not narrowed in several respects. Any strategy for the development of the State will therefore, necessarily have to provide for the more accelerated development of the backward areas within the State itself.

It will be observed that the State still continues to be largely dependent on the agricultural sector which accounts for large proportion of the total State income and that any vicissitudes in seasonal conditions have a sizeable effect on agricultural production and con-

sequently on the total State income and the per capita income. The State, no doubt, is fortunate in having assured irrigation to some extent in the Krishna and Godavari deltas but a large part of the State especially in the Telangana and Rayalaseema regions and in the upland taluks of Coastal districts, is having a low percentage of irrigated area. Many of these areas, especially in Rayalaseema and parts of Telangana even when irrigated are mostly under precarious sources of irrigation. These areas are the more backward regions of the State and therefore if the Plan programmes are to have any tangible results for the people of these areas, the first and foremost step will have to be to stabilise their agriculture.

In spite of the various measures taken by the State to attract industries, the industrial base in the State is still small. It is for this reason that the State Income and the per capita incomes showed wide variations over time reflecting the dependence of the economy on the vagaries of monsoon. In our scheme of planning the setting up of industrial units is largely the responsibility of the private and the Central sectors. The performance of these two sectors in Andhra Pradesh in terms of the investments made in the industrial field, has not so far been encouraging. To attract more and more industrial units to the State and thereby diversify the State's economy, it is imperative that on one hand the necessary infrastructural facilities such as land, power, water etc., are developed and provided for, and that on the other adequate incentives are given to the industrial entrepreneurs to attract them to locate industries within the State. Thus, so far as the State sector plan is concerned, attention should be paid to the development of power, the development of the industrial areas and to a careful examination of the incentives needed for location of industries in different parts of the State.

Prices have risen substantially in the State over the decade 1960-70. Price increase of this order will introduce imbalances in the economy which in turn will have their repercussions on the plan programmes. The rise in prices in the State, however, is not an isolated phenomenon and is observed all over the country. Remedial measures for the control of the

prices would need to be taken through appropriate policies on all All-India basis. The State Government can only take action to mitigate the impact of the rise in prices of consumer goods on the weaker sections of the population by opening consumer co-operative stores etc.

The unemployment situation has become rather acute during the last three years, the problems of educated unemployment having become even more serious. This situation requires the creation of more job opportunities in the Plan programmes and also suitably increasing the level of plan investments in those areas where the problem is more severe. In so far as the plan programmes are concerned, the completion of spill-over schemes on which considerable investments have already been made, taking up quick yielding and short duration new schemes, identifying surplus man power available in educated categories and giving priority for schemes aimed at creating more employment opportunities for these categories etc., would help in solving this problem. In the matter of relieving the unemployment situation, efforts would have to be made not only in the State Plan but also in the private and the central sectors, for identifying the areas where further investments would be necessary to relieve the unemployment of educated, skilled and unskilled categories of man power.

The taking up of a large irrigation project such as Nagarjunasagar within the State Plan and the heavy investments that have had to be made for Power generation have led to a certain distortion in the sectoral allocations in the Plans. Investments in the sectors of Irrigation and Power were necessary from a long range point of view since ultimately these alone enable firm foundations being laid for a sustained development of the State. Unfortunately, unlike certain other States where Irrigation projects of this magnitude and Power Generation Projects were taken up in the Central sector, thus saving the States from the burden of these investments while assuring them of the benefits, in the case of Andhra Pradesh, an investment of the order of Rs. 180 crores up-to-date on Nagarjunasagar project alone has had to be accommodated within the State Plans. This means that about 18 per cent

of the total outlay under the Plans from 1956 up-to-date has gone for one project alone. And if we take the total of the investments in the sectors of Irrigation and Power this percentage will come to about 29. Another effect of this sectoral distortion in investments has been that the State had had to draw a large part of the Central assistance in the past in the form of loans. Thus 1966-67, 91 per cent of the total Central assistance to the State was loans and 9 per cent grants against 50 per cent of loan assistance and 50 per cent of grants in the case of a financially stronger State such as Maharashtra. The effect of this in the future will be that (a) the spill-over commitments which are still considerable will have to be met first, thus necessitating the continuance of the same pattern of allocations at least for the Fourth Plan period; and (b) a huge loan liability for the State which necessitates large repayments of loans to the Centre during the Fourth Plan period thus weakening the financial position of the State during this period. Thus, it would be seen that the net effect of these two factors is that precisely during the period that a large burden of investment has to continue to be borne by the State because of spill-over commitments, its financial ability to bear such commitments is impaired because of the loan liability created by the past investments.

The approach to Fourth Five-Year Plan of Andhra Pradesh is guided by the broad policy frame work indicated at the national level and is formulated in the context of the resources and special problems of the State.

The objectives of the Fourth Plan are necessarily conditioned by the above factors. These objectives could be summarised as follows:—

- (a) to aim at a 4-5 per cent annual rate of growth of the economy as a whole with growth rate of 4 per cent in the agricultural sector and 8-10 per cent in the industrial sector;
- (b) to complete the irrigation projects already taken up and ensure full utilisation of the potential created, so as to reduce the impact of the vicissitudes of monsoons on agricultural production thus imparting greater stability to

the economy of the State as a whole as well as to the general level of well being of the larger portion of the population;

- (c) to diversify agricultural production in the State by emphasizing intensive cropping and encouraging a deliberate shift to high value crops;
- (d) to expand generation and utilisation of power, in view of its role as a crucial infrastructural facility necessary both for agricultural and industrial production, by completing all spill-over generation schemes and strengthening the transmission and distribution system;
- (e) to provide unfastructural facilities for industries so as to attract private and Central sector investments thus enabling the creation of a substantial industrial base in the State with special emphasis on backward areas;
- (f) to reduce regional disparities within the State by adopting suitable policies and by so determining sectoral allocations, within the constraints of the overall Plan outlays, as to strengthen the infrastructure for agricultural and industrial development as well as the social infrastructure in the backward areas of of the State;
- (g) to achieve greater distributive justice by ensuring that the poor and vulnerable sections of the community are given special weightage in respect of the implementation of various development schemes so as to increase their share of the benefits from the process of planned development;
- (h) to ensure that within the constraint of the sectoral allocations the choice of schemes and techniques is guided by the need to provide maximum employment opportunities;
- (i) to ensure by well-defined measures a greater flow of Central, private and institutional finances to this backward State, and in particular to the more backward areas within the State; and

- (j) to ensure adequate co-ordination and integration between the State Plan and the various Central sector schemes and schemes that could be financed by institutions so that they also conform to the broad objectives of the State Plan indicated above and thus complement and augment the investment pattern in the State Plan.

Plan Outlay :

In October, 1968, a draft outline of the Fourth Five-Year Plan of Andhra Pradesh with an outlay of Rs. 650 crores was proposed after a critical review of the performance and achievement under Plan schemes, spill-over commitments, the potentialities of the State and the needs of balanced regional development. These draft proposals were considered by the Central Working Groups which consisted of officers of the State Government, Central Ministries concerned and Planning Commission. The recommendations of these Working Groups envisaged an outlay of Rs. 651 crores. However, in June, 1970 the Planning Commission determined that the size of the State's Fourth Plan could be only Rs. 420.50 crores on the basis of a Central assistance of Rs. 240.00 crores and the State's resources of Rs. 180.50 crores.

This was carefully considered by the State Government and it was felt that the outlay approved by Planning Commission *viz.*, Rs. 420.50 crores was such that even the minimum spill-over commitments especially in Irrigation and Power could not be fulfilled within this outlay. In 1968, it was estimated that the total spill-over commitment was of the order of Rs. 350 crores and this would be even more now due to the rise in prices. Considering the fact that these spill-over commitments were mostly in Irrigation and Power this would have meant that in a Plan of the size suggested by the Planning Commission either practically no allocation would be available for several sectors or most of the spill-over works would have had to be considerably delayed with the result that the benefits would not be derived from the investments already made. However, in view of the constraint of resources, the State accepted the position that a drastic

reduction in the Rs. 650 crores Plan size envisaged in the draft proposals would be necessary and therefore the draft Plan was re-examined with a view to providing only for the spill-over commitments and the minimum outlays in other sectors. This exercise indicated that the total outlay required even for this purpose would be Rs. 530 crores. The State Government have, therefore, fixed the size of the State's Fourth Plan at Rs. 530 crores.

The following Table shows the increase in outlay during the Fourth Plan period over the Third Plan period in the States sector in the National Plan along with the corresponding increase in the case of Andhra Pradesh :

	(Rs. crores)		
	<i>Expenditure in Third Plan</i>	<i>Outlay approved by the Planning Commission</i>	<i>Percentage increase in Fourth Plan over Third Plan</i>
National Plan (States Sector)	4,165	6,606	58.7
Andhra Pradesh	352	420	19.3

It will be seen from the above Table, that as against a percentage increase of 58.7 in the outlay during the Fourth Five-Year Plan under States sector of the National Plan the corresponding percentage increase in Andhra Pradesh with the outlay of Rs. 420.50 crores approved by the Planning Commission will be only 19.3 which would be the lowest among the neighbouring States. On the other hand with the outlay of Rs. 530 crores proposed by the State Government, the percentage increase in Andhra Pradesh over its Third Plan outlay will go upto 50.3 per cent which also is less than the percentage increase in the States sector as a whole. Even with the outlay of this order the position is that Andhra Pradesh would be below the all-India average in the economy of development even by 1980-81.

In the national Fourth Five-Year Plan, it is explained that while modern industry will continue to be given priority certain fields of productive activity particularly in agricultural and related primary pro-

duction which have been relatively neglected so far are proposed to be given special attention. The course of industrial development is meant to provide for future technological advance and dispersal of industrial activity and enterprise. The Plan proposes the use of regional and local planning. Most important the objective is to ensure that the benefits are evenly distributed among all sections of the population by attempting a policy of implementation wherein the weakest are looked after first and the benefits of development are made to flow to underdeveloped regions and more backward sections of the community so that the objective of growth with social justice is achieved.

In the National perspective, the net domestic product at market prices is expected to reach Rs. 64,440 crores by 1980-81 from Rs. 31,760 crores in 1968-69. By 1973-74 it is expected to raise to Rs. 41,860 crores. The ratio of net investment to net national product is expected to increase from the current level of 11.2 per cent and the planned 14.7 per cent in 1973-74 to 17-18 per cent by 1980-81. The per capita net domestic product is expected to increase from 552 in 1968-69 to Rs. 643 in 1973-74 and Rs. 844 in 1980-81. The population is estimated at 690 million by 1980-81 as against 527 million for the year 1968-69.

For the State also a very rough perspective has been worked out to indicate the very broad magnitudes (*vide* Table XXII). The detailed studies underway are expected to throw up more accurate information on the perspective. According to the State perspective the State income is estimated at Rs. 4,195 crores by 1983-84 on the assumption that over the next Fifth and Sixth Plans the State Plan outlay would increase by 50 per cent successively and that a similar trend would prevail in respect of Central and institutional finance. The assumption with regard to the private investment is that it would be a function of State income. The per capita income of the State under these circumstances in 1980-81 would be Rs. 659 as against Rs. 844 for all India thus indicating a large gap between the per capita income of the State and the per capita income of All-India even at the end of this period. This underlines the need for planning for a

higher outlay for the Fourth Plan than what would be apparently possible in the light of the resources in sight at present. This would necessitate substantial increase in Central assistance to States as well as stepping up of Central investments in the Fifth and Sixth Plans if regional imbalances are not further increased.

Process of Plan formulation :

It would be relevant here to mention briefly the process of the preparation of the Plan itself. The State Government took up a review of the development of the State from 1951-68 and a survey of the economic development of the State was got ready as a base for preparation of the Fourth Five-Year Plan. Working Groups were constituted for different subjects with a view :

- (a) to making a critical review of the performance and achievement in the Plan schemes;
- (b) to making an assessment of the spill-over commitments;
- (c) to revising the earlier Working Groups reports regarding the original Fourth Plan proposals in the light of (a) and (b) above; and
- (d) to specifying the objectives and programmes in the respective sectors for the new Fourth Five-Year Plan 1969-74 taking into account the potentialities of the State.

Each Working Group was also required to study and analyse the employment potential of the programmes.

It was also ensured that Block Development plans were prepared for various Blocks in the State and taken into consideration in the preparation of the Plan. More specifically, the Zilla Development Boards were requested in March, 1968 to undertake a review of the performance of different programmes taken up in Five-Year Plans and send reports to Government and Heads of Departments concerned. The report was to contain :

- (a) the objective of the scheme—whether this was well-conceived and continued to be valid;
- (b) whether the scheme had been well designed for achieving the specific objectives;
- (c) whether on the basis of performance the scheme should be continued or not; and
- (d) if the scheme was to be continued what modifications would be suggested.

The Working Groups were also requested to ensure that the proposals for each Department indicated the schemes and outlays which would form part of the District Plans. It will thus be seen that the involvement of agencies available for planning at the local level and State level was ensured. The process was eventually a two-way one in which the filed experience and the assessment of local potentialities at the local level could be taken into account at the State level while bearing in mind the considerations of State and national priorities.

The Draft Outlay of the Fourth Five-Year Plan prepared on the basis of the recommendations of the Working Groups came to Rs. 650 crores. Since a decision could not be taken immediately on the size of the Plan, the detailed Plan proposals could not be finalised. However, various sectoral programmes were tentatively worked out, keeping the Draft Outline in view and depending on the resources available and the reorientation necessary in the Plan. Keeping in view the objectives mentioned above, the programmes were finalised from year to year. Meanwhile more field studies were made in terms of regional development strategy and programmes and these have been appropriately introduced in the present Plan.

When the Government took a decision in 1970 to revise the outlay on the State's Fourth Plan to Rs. 530 crores, a review was undertaken of the schemes included in the original draft proposals. The actual progress in the year 1969-70 and the allocations made for 1970-71 were taken into account while reappraising the original proposals. On the basis of this exercise,

the proposals to be included in the present Plan for a total outlay of Rs. 530 crores have been finalised.

Institutional Arrangements:

There is the State Advisory Committee on Planning consisting of the Central Ministers and M.Ps. from the State, certain Members of the Legislature and representatives of various professional organisations to advise the Government on the broader aspects of planning such as the general lines of approach, its content *etc.* Besides this, there are special arrangements in regard to the review of developmental schemes in the Telangana region. The Annual Plan proposals for the region as well as proposals for schemes to be taken up under the Special Development funds are being submitted to the Regional Committee and are considered in detail by the Subcommittee on Development of that Committee. As part of the Prime Minister's eight-point programme, two other Committees have been constituted for the Telangana region. There is a Telangana Development Committee consisting of the Chief Minister, a Member of the Planning Commission, all Ministers from the Telangana Region in the Cabinet and the Chairman of the Regional Committee, which reviews from time to time the actual implementation and working of the Plan schemes. There is an official committee consisting of the Adviser, Planning Commission, representatives of the Union Ministries of Finance and Home Affairs, the Additional Chief Secretary, the Finance Secretary and the Planning Secretary, which undertakes periodic reviews of the actual implementation of the Plan programmes. The State Government have also appointed a Technical Committee to render technical advice to the Government in the preparation of a perspective Plan for the Telangana Region.

The State Government constituted a Planning and Development Board for the Rayalaseema region consisting of all M.Ps. and Members of the Legislature from the Rayalaseema region, the Chairman Zilla Parishads and the Collectors of the Districts of the region, and certain selected Heads of Departments. The Planning and Development Board for Rayalaseema besides advising Government in regard to Plan

schemes pertaining to Rayalaseema and reviewing their progress, has also undertaken the preparation of a long-term Plan for the eradication of famine in this region.

With a view to making implementation of Plan schemes more effective at the district level, several powers of the Heads of Departments in respect of important Departments like Agriculture, Co-operation and industries have been delegated at the district level.

A Directorate of Groundwater has been established with a view to ensuring a scientific exploitation of the groundwater resources of the State. A Housing Federation has been set up especially for the Scheduled Castes and Tribes with a view to taking up a crash programme of housing for these weaker sections on a large scale.

In respect of institutions established earlier, a strengthening and reorientation of these institutions has been taken up with two objectives in view: (a) In the case of institutions like the co-operatives which have a bearing on the rural population, to reorient them so as to make them subserve the interests of weaker sections to a larger degree than in the past; (b) in the case of the institutions set up for encouraging industrial development, such as the APIDC, the APSSIDC *etc.*, to ensure that the development of backward areas within the State is given higher priority so that the regional disparities could be reduced.

Regional Allocations:

In connection with the determination of the fair share of Telangana in the developmental outlays under the Plan, the question of evolving a formula for allocating the Plan outlays between the different regions of the State has been under discussion. For the Annual Plan 1971-72 it was agreed that pending a final decision on this question, the Plan outlays would be allocated between the regions on the basis of 90 per cent based on population according to 1971 census and that the balance of 10 per cent be given as a weightage for backwardness with distribution *pro rata* on the basis of the population in the backward areas in each

region. For working out the weightage to be given to each region under this 10 per cent allocation a ranking of districts according to backwardness done by the Planning Commission was adopted. The population of such backward districts in each region was taken into consideration and on this basis the distribution of the 10 per cent amount was to be in the ratio of 5 : 3 : 2 between Telangana, Rayalaseema and Coastal Andhra. On this basis the Rayalaseema region was entitled to only Rs. 3.00 crores, out of the Backward Areas provision of Rs. 10.00 crores, as against Rs. 4.00 crores already allotted for the Special Rayalaseema Development schemes in the Vote on Account Budget. Since the Special Development schemes of Rs. 4.00 crores for Rayalaseema as recommended by the Executive Committee of the Planning and Development Board for Rayalaseema were already sanctioned, it was decided that the additional Rs. 1.00 crore for Rayalaseema might be retained and adjusted within the total normal Plan allocation for the Andhra region. The question as to what formula has to be adopted for the remaining part of the Fourth Plan period is still under correspondence with the Planning Commission.

For the years 1969-70 and 1970-71 there was no particular formula for making regional allocations. However, in the year 1970-71 an amount of Rs. 4.00 crores was given over and above the Plan allocation for the Rayalaseema region and Rs. 2 crores for backward areas in the Coastal region.

Tentatively, in working out the proposals for the Rs. 530.00 crores Plan the actual outlays for 1969-70 and 1970-71 had been adjusted for 1971-72. For the remaining two years the formula adopted for 1971-72 had been projected. On this basis, the break-up of the outlay of Rs. 530 crores would come to Rs. 223 crores for Coastal Andhra, Rs. 105 crores for Rayalaseema and Rs. 203 crores for Telangana. On the other hand, if the formula agreed to for 1971-72 is applied to the total Plan outlay the allocations for Coastal Andhra will be Rs. 222.25 crores, Rs. 104.34 crores for Rayalaseema and Rs. 204.27 crores for Telangana. Since the difference is not much and can be adjusted over the last two years once a final decision is taken, work on the preparation

of the Fourth Plan has been continued on the original tentative allocations pending a final decision by the Government on the formulae to be adopted.

Table XXIV shows the sectoral distribution of the outlay region-wise for Andhra Pradesh. In each sector there are certain schemes which directly benefit the region exclusively. Such schemes are treated as regional schemes and outlays indicated against the respective regions. There are also schemes which either cannot be treated as regional schemes or which directly benefit more than one region. Such schemes are treated as State-wide schemes and the outlays are allocated among all the three regions. The outlays on such State-wide schemes are allocated between Andhra and Telangana in the ratio of 2 : 1. The Andhra allocation is again divided between Coastal Andhra and Rayalaseema in the ratio of 7:3 based on the ratio of the population. The total outlay for each region will thus consist of the total outlay on the regional schemes in that region plus the regional share of the outlay on State-wide schemes.

Broad priorities :

During the Annual Plans 1966-69 the total outlay was about Rs. 234 crores. During the Fourth Five-Year Plan the total outlay is estimated to be Rs. 530 crores which compares with the outlay of Rs. 234 crores in the 3 years 1966-69, Rs. 352 crores in the Third Plan period and Rs. 189 crores in the Second Plan. In all the Plans, greatest emphasis has been on Irrigation and Power. Over time the outlay on Irrigation and Power increased from about 51 per cent in the Second Five-Year Plan to 53 per cent in Third Year Plan and 67 per cent during the three Annual Plans. In the Fourth Plan however, it would be about 62 per cent. The allocation for social services has correspondingly declined substantially from about 17.5 per cent in the Second Plan to 15 per cent in the Third Plan and 9 per cent in the Annual Plan and about 13 per cent in the Fourth Plan. This decline is halted in the Fourth Plan and reorientation in terms of greater emphasis for the social services in the Fourth Plan is sought to be achieved, by increasing the percentage outlay to 13. Agriculture and allied programmes account for about 9 per cent in the Second

Plan and 15 per cent in the Third and Annual Plans. In the Fourth Plan, the percentage has slightly declined to 11% but in absolute terms there is an increase in the Fourth Plan compared to the Annual Plans. However while judging the relative allocations for Agriculture it has to be borne in mind that the improved inputs for agriculture like credit and fertilisers are not reflected in the Plan outlays while the outlays for Irrigation provide the other essential input of water. Co-operation is another sector in which increased emphasis is indicated in the Fourth Plan the percentage outlay being 3.7 as compared to 2.5 during the Annual Plans. Industries accounts for about 3.71 per cent in the Fourth Plan compared to about 3 per cent in the Annual Plans. A detailed account of the outlays in respect of various sectors is given in the table appended (Tables XXI and XXIII) showing the comparative position between the Second and Third Plans, the Annual Plans and Fourth Plan.

Power, Irrigation and Agriculture have received the highest priority in the Fourth Five-Year Plan. Since Andhra Pradesh has a per capita consumption of Power which is very much lower than for the country and since Power is an important infrastructural facility for both industrial development and agricultural production, Power has been accorded the highest priority with an allocation of 37.2% of the total outlay. The basic objectives of Power Development are the completion of the spill-over power schemes for generation, strengthening of the distribution system and ensuring dependable distribution, provision of power to backward areas, expansion of power to villages primarily with the objective of energising pumpsets, provision of power for purposes of industrialisation and the extension of power to Harijanawadas where the main villages have already been electrified.

Irrigation has been accorded the next priority in the Plan allocation. Extension of Irrigation facilities is essential for diversifying agricultural production and increasing crop yields. Due to the spill-over commitments of Nagarjunasagar, Pochampad and Tungabhadra High Level Canal large outlays are required for irrigation under the Major and Medium Sectors. The basic objectives are to ensure maximum utilisation of

the irrigation potential already created, ensure completion of the projects already taken up, complete the continuing medium irrigation projects and take up a few medium irrigation projects, particularly in scarcity affected or backward areas.

In respect of Minor Irrigation, the objectives are to formulate a scientific well sinking programme to provide irrigation facilities in scarcity areas and supplementary irrigation in respect of areas already irrigated; to provide Minor Irrigation facilities especially in the upland taluks of Coastal Andhra, dry areas of Rayalaseema and Telangana in terms both of restoration of abandoned tanks and construction of new tanks; and lastly to take up Lift Irrigation Schemes wherever the natural situation permits. The institutional finance from Land Mortgage Banks is proposed to be used on a large scale in implementing the Minor Irrigation Programme other than tanks.

Agriculture including the Community Development and Co-operation are accorded the next priority. In the case of Agriculture Sector what is important is not merely allocations for schemes but the need to integrate with programmes in other sectors especially Irrigation and Power to ensure internal consistency in terms of flow of services, credit and inputs through Co-operative structure, the Agro-industries Corporation, Agricultural University etc. The broad objectives in the agricultural sector are to increase agricultural production, emphasise intensive cropping, increase productivity per acre, bring about a shift from low value crops to high value crops and in the ultimate analysis to enable dependable and diversified agricultural production. The strategy is in terms of extension, demonstration and research including supply of seeds through the State Directorate of Agriculture. The plan also envisages use of the Agro-Industries Corporation for provision of inputs and the Agricultural University for research. The Soil Conservation programmes are to be taken up on a priority basis in chronically drought affected areas as they are a basic infrastructure for dry farming. The delineation of priority areas and co-ordination with Forestry programmes under catchments of irrigation projects and with central sector schemes with the Rural Work Programme have to be

emphasised. Under Ayacut development provision of long term credit for land development excavation of field channels and laying of ayacut roads are provided for. In the Co-operative Sector the major activities is still the provision of agricultural credit. Besides, the plan provision made for items such as loans to weak Co-operative Central Banks etc., the entire institutional structure has to be critically reviewed and strengthened if the plan targets are to be achieved.

Next in priority are the development of processing and marketing facilities. While the interests of weaker sections are sought to be served necessary changes in the institutional structure for credit, special allocation is given to certain specific aspects through co-operative for weaker sections. Under Warehousing and Marketing appropriate institutional arrangements for marketing and the provision of physical facilities are emphasised.

The Animal Husbandry programme has as its objectives the provision of adequate animal health facilities, development of cattle through intensive cattle development projects and Key Village Blocks, development of animal feeds and fodder, creation of a exportable surplus of animal products especially to urban areas; and encouragement of commercial poultry.

Dairying and Milk supply are given special importance, in view of the great demand for these schemes and the fact that they can be so designed as to benefit small farmers on a large scale. The basic objectives are to meet the growing needs of milk and dairy products in the State especially in the urban areas, to develop dairying as an export industry, to develop dairying as an important supplementary occupation in the rural areas, especially for the landless labour and marginal farmers.

The Forestry development programme aims at consolidation and increase of the productive capacity of existing forests with emphasis on fast growing species. Improvement and strengthening of the research and training facilities are considered necessary. It is also proposed to take up protective measures like soil and water conservation.

The Fisheries programme is given priority to the development of marine fisheries through construction of mechanised boats. Further development of inland fisheries through improvement to the nurseries for production of fish in the State and training in fisheries are also contemplated.

In respect of Mineral Development, the objectives of the programme are on the one hand to intensify the surveys for location of minerals and estimate the economic value of the deposits and on the other to aid mineral exploration and processing with the help of Andhra Pradesh Mining Corporation. It is proposed to give priority to backward and drought affected areas in taking up mineral survey and exploitation.

Industrial development is considered particularly essential for the diversification of the economy. The objectives are development of Medium and Large Industries for purposes of diversification of the economy and also to help more balanced regional development by appropriate location of these activities. While the Government is concerned with promotional activities and provision of infrastructural facilities the Andhra Pradesh Industrial Development Corporation has taken up joint ventures to establish industries. In respect of village and Small Scale Industries the objectives are to promote a number of small industries with a view to initiating a process of diversification and industrialisation of the economy, to promote labour intensive small industries, to provide employment, to encourage small industries in important industrial centres to enable their development as ancillary to large industries, to promote village industries especially handicrafts and leather industry as decentralised employment oriented scheme for the weaker sections. It is also proposed to develop the handloom industry with the help of technical guidance, marketing facilities, use of co-operative forms of organisation and with incentives and rebate schemes.

Transport and Communications have a crucial role to play in economic development. The State is inadequately endowed with communication facilities especially roads. However due to constraint of resources and large spill-over commitments in Irrigation and Power the allocation for this sector in the Fourth Plan could not be larger. The objectives of this

programme are essentially to improve the national highways in the Central sector, complete important spill-over schemes relating to arterial roads and construction of rural road works. One important and large item is the construction of approach road for the rail bridges especially road-cum-rail bridge across the Godavari near Rajahmundry. Improvement in the services provided by the A.P.S.R.T.C. and completing the spill-over works relating to ports especially Masulipatnam port are other important items in this sector.

In respect of social services it is clear that the State lags behind the All India levels in terms of literacy and in terms of general health. Due to the large spill-over commitments in other sectors and the constraint of resources the allocations for this sector are not commensurate with the requirements if the leeway is to be made up. However in absolute terms the allocation in the Fourth Plan does represent a set up over the three Annual Plans. In the field of general education, the important objectives are increasing the percentage enrolment in the primary and secondary schools by emphasising provision of physical facilities including serving of mid-day meals, expansion and improvement of Mathematics and Science education, introduction of a revised pattern of education through Junior Colleges and lastly strengthening of Post-Graduate Education. In respect of technical education the objective is provision of technical institutions appropriately dispersed with a view to creating the opportunities for technical education and training. The emphasis is on reorientation of the training facilities and improving the quality with a view to meeting the changing requirements of technical personnel and providing training facilities for such avocations as are in demand.

In regard to medical facilities the plan envisages strengthening and expansion of taluk hospitals and headquarters hospitals, provision of adequate facilities in primary health centres and facilities for specialised treatment. In the field of Indian Medicine and Homoeopathy the provision of a number of dispensaries and necessary clinical and training facilities in the State is proposed. In regard to Public Health programmes, a new reorientation is sought to be given in the Fourth

Plan by emphasising strengthening of permanent institutional arrangements in terms of Primary Health Centres, analytical laboratories, production of vaccines and training programme for staff.

The problem of rural water supply is given high priority in the Plan. The objective is to provide adequate and healthy water to all human settlements in the State. In respect of urban water supply and drainage which is an essential civic amenity the objective is to provide protected water supply facilities in respect of as many municipalities as possible in the State and give special emphasis to water supply to the twin cities.

In regard to Housing, the objectives are to provide house sites and housing facilities in the rural areas especially to Scheduled Castes and Scheduled Tribes; to provide housing facilities in select villages on a planned basis in rural areas; to make the slum clearance programme in the urban areas more effective to provide for housing for Industrial workers, and schemes of Low and Middle Income Housing schemes. It is proposed to take up strengthening of Andhra Pradesh Scheduled Castes and Scheduled Tribes Housing Federation as a massive programme for Housing for the Scheduled Castes and Scheduled Tribes.

For welfare of Scheduled Tribes programmes of Education and economic uplift are given a high priority. It is also proposed to make use of central sector and institutional programmes for this purpose apart from programmes in the normal sectors of development in the Plan. Further, land legislation, housing facilities, adequate facilities for provision of daily requirements for the tribals and purchase of the products collected by them at reasonable prices are proposed in the plan. The most important agency for many of these programmes will be the Girijan Co-operative Corporation. The provision made separately for the welfare of Scheduled Castes and other backward classes should really be considered additive i.e., in addition to the benefit these weaker sections should get from various other schemes and programmes in the normal plan. The objectives of this programme are to strengthen and expand educational facilities, to emphasise programmes

of economic uplift by providing loans for cultivation as well as physical inputs.

In respect of craftsmen training and employment schemes, the objectives are to provide facilities for starting two labour welfare centres and provide equipment to the centres already set up; provide medical facilities to industrial workers and their families by appropriate contribution to ESI schemes, establishment of vocational guidance units, and introduction of more popular trades in Industrial Training Institutes.

Lastly, a number of schemes are proposed in the field of statistics to fill up gaps in the viability of the data required in the context of planning and also to improve the quality and timeliness of the data already available. It is proposed to take up special surveys as required for planning.

Weaker Sections :

In the context of planned development the problem of ensuring that the fruits of development reach all the sections of the people especially the under-privileged has to be emphasized. The fact that progress in this regard has not been substantial was realised by the Government and hence intensive efforts are being made by the State Government during the Fourth Five-Year Plan to ensure that the problems of the weaker sections are effectively tackled.

The first problem that arises relating to the programme for weaker sections is identification of weaker sections. The identification of weaker sections is beset with a number of problems. To start with it is possible to recognise two important groups of communities viz., Scheduled Castes and Scheduled Tribes who could easily be identified as the most cognizable homogeneous, identified compact group of weaker sections. In addition, we could also think of economically backward sections in general. Further, the small farmers could be identified as yet another section in the rural areas which requires special attention. The marginal farmers is yet another category of weaker sections. The agricultural labour in rural areas especially in

the drought affected areas would be another category of weaker sections. Moreover, there are number of rural artisans who require special treatment. In urban areas also, there may be certain types of people who require programmes of special nature— as per example; the rickshaw pullers, the auto-rickshaw drivers *etc.* In general, there is also need to identify a number of educated unemployed who have to be considered as a category of weaker sections.

A number of activities contemplated under the plan in sectors such as Irrigation, Communications *etc.* would have an impact on the weaker sections also partly in terms of providing employment and partly in terms of providing necessary infrastructure which will have indirect beneficial effect on the weaker sections. The programmes of Irrigation and Power which are emphasised to a large extent in the State Plan would thus have its beneficial effect on the weaker sections also. In addition, in respect of number of activities especially in agriculture and animal husbandry in the matter of implementation, special reorientation towards weaker sections is contemplated.

Scheduled Castes constitute 13.82 per cent of the total population (1961) of the State. Most of the members of Scheduled Castes are agricultural labour. The programmes of assignment of land has been taken up to provide permanent economic base for the Scheduled Castes. It is estimated that more than 20 lakh acres had been distributed for the landless poor and between 1st November, 1965 to end of December, 1970 alone 9.49 lakh acres has been assigned and 4.62 lakh eligible families have been covered. Majority of the beneficiaries belong to Scheduled Castes. Follow-up action in order to enable them to bring the land effectively under cultivation and provide necessary assistance for making them viable farmers are contemplated in the State Plan especially under the co-operative sector and in the Plan for Scheduled Castes welfare. Specific programmes for welfare of Scheduled Castes include an outlay of about Rs. 2 crores. For educational schemes alone more than a crore is set apart and a number of measures of economic uplift to cover supply of milch cattles, interest free loans for purchase of plough

bullocks, agricultural implements etc. are proposed. In addition, certain specific programmes such as electrification of Harijanawadas, digging of new wells under central sector programmes like Rural Works Programme would benefit the Scheduled Castes. Moreover, separate provision has been made for the welfare of Scheduled Castes in the special allocations meant for backward areas in all the three regions.

For Scheduled Tribes, who constitute 3.68 per cent of State population as per 1961 census certain amount of weightage is given by virtue of allocations that special agency areas get for tribal blocks. It has been recognised that full protection is essential for the tribal people in matters of eviction, land alienation, scaling down of debts, regulation of money lending etc. The existing protective legislations were recently reviewed and suitably amended to plug the loop holes in the laws.

The Girijan Co-operative Corporation is being strengthened and its activities enlarged with a view to make use of the institutional finance and serve the interests of the tribals especially in the agency areas. Further, Central sector schemes for tribal areas are being appropriately integrated with the State Plan. It can also be seen that in respect of special funds for backward areas in all the three regions specific allocations are being made for the welfare of tribals. The major programme in the tribal areas include Minor Irrigation, Drinking water, communications and economic uplift. Thus to get a clear idea of the programmes for welfare of tribals apart from the benefits that might accrue to the tribals from the various sectors and programmes contemplated in the State Plan for tribal welfare, the provision for tribal welfare in the special funds for backward areas, special plan for Telangana and Central sector schemes have to be taken into account.

In view of the importance of housing scheduled castes and Scheduled Tribes, a separate corporation has been established for provision of houses for scheduled castes and scheduled tribes with the help of finances made available from Life Insurance Corporation.

The programmes for economically backward sections in general are not many and are usually dovetailed into the programmes for Scheduled Castes.

In respect of small farmers, the State plan contemplate emphasis on this section in provision of agricultural credit from the co-operative sector. Further, Central sector schemes for small farmers development are being made use of. A legislation is contemplated wherein appropriate representation for small farmers in the management of co-operatives and earmarking substantial portion of the credit for small farmers are under examination.

The schemes under Animal Husbandry sector especially Dairying and Milk Supply are expected to contribute substantially to the welfare of the small and marginal farmers.

The problem of agricultural labour in rural areas requires special attention. Substantial number of agricultural labour are from scheduled castes and scheduled tribes itself. The programme of assignment and other programmes meant for scheduled castes and scheduled tribes is expected to cover naturally a portion of the agricultural labour. A number of Minor Irrigation and Communication Schemes contemplated in the Plan are expected to provide relief in terms of employment to agricultural labour. Due to large areas that are likely to be brought under irrigation continuing employment is anticipated for agricultural labour in these areas. In chronically drought affected areas, problem of agricultural labour is particularly acute and the Central sector schemes *viz.*, Rural Works Programme is expected to provide substantial employment for the sections and at the same time create productive assets. In addition, crash scheme for rural employment under Central sector is also expected to provide employment to a number of agricultural labour in the rural areas.

For rural artisans such as Washermen, Fishermen, *etc.*, programmes are contemplated under the co-operative sector for self-employment and productive avocations. Similarly, for urban workers also with the

help of co-operative form of organisation a number of productive avocations are suggested.

Employment and Craftsmen training schemes are expected to have beneficial impact on the employment position though only to a marginal extent. The programme of reorientation of the training facilities towards trades which have demand is note-worthy.

In respect of educated unemployed no special programme is contemplated in the plan though Central sector schemes in this regard is proposed to be utilised substantially. A number of schemes for the various weaker sections have been identified and explained in the respective chapters in the State Plan and description of the programmes under Central sector are also given separately.

Fourth Five-Year Plan—An Outline :

The total outlay in the Fourth Five-Year Plan comes to Rs. 530 crores. Out of the total outlay an amount of about Rs. 28 crores is provided for development of backward regions. The allocations upto 1971-72 have been adjusted among different sectors while for 1972-73 and 1973-74 they will be allocated among different sectors separately depending on the specific needs. The allocation of this amount as between different sectors considered as Special Development Fund for backward regions, is discussed in a separate chapter on development of backward regions. The sectoral distribution and detailed programmes have in fact been worked out only for an amount of about Rs. 502 crores.

The largest allocation goes to Irrigation and Power which account for about 62 per cent. The social services account for about 13 per cent. Agriculture and allied programmes come next with an allocation of about 11 per cent. Industries account for about 4 per cent, Co-operation about 4 per cent and Transport and Communication about 3 per cent.

In this outline, it is proposed to briefly highlight the various programmes under different sectors the details of which have been elucidated in part II.

In Agriculture, the State Plan is carefully integrated with a number of Central sector schemes. Central sector schemes mainly consist of Research and Extension of improved practices for select crops. Besides, farmers training in high yielding varieties cultivation and multiple cropping pattern practice are also taken up. The agricultural production programme in the State accounts for Rs. 648.94 lakhs in the Fourth Five-Year Plan which is divided between different agencies as follows:—

	<i>Rupees in lakhs</i>
Director of Agriculture ...	282.44
Agricultural University ...	212.57
Agro Industries Corporation ...	132.74
Registrar of Co-operative Societies ...	21.19

The major schemes of State-wide importance under the Director of Agriculture relate to the training of officers in plant protection, establishment of laboratory for testing pesticides, integrated scheme for local manurial resources, cost of foreign experts, survey of cash crops and establishment of field information and propaganda unit at headquarters. Among the schemes of regional importance are plant protection and pest control for which highest priority is accorded; production of foundation seed and seed multiplication, seed processing, testing and certification, establishment of soil testing laboratories, coconut, cotton, fruit, oil seeds development schemes, subsidised distribution of agricultural implements, intensive demonstration schemes, and integrated sugarcane development schemes.

Under the Agricultural University, agriculture and veterinary education accounts for Rs. 164.37 lakhs and Agricultural research for Rs. 48.20 lakhs. The programmes of the Agricultural University may be broadly divided into 3 components *viz.*, Education, Research University Grants Commission and Indian Council for and Extension. The University gets grants from the Agricultural Research but the State Government also provides assistance primarily in the nature of matching grants.

The Agro Industries Corporation has been provided with an amount of Rs. 132.74 lakhs. This is towards programmes envisaged by the Corporation which essentially consist of reclamation of land by earth-moving machinery such as tractors, sinking of tube wells and bore wells, hire purchase of agricultural equipment such as tractors, farm implements, pumpsets, establishment and modernisation of food processing plants, organisation of workshops and provision of servicing facilities.

In respect of the Minor Irrigation programme, the total allotment is Rs. 25.62 crores. For exploitation of surface water resources an amount of Rs. 12.82 crores is earmarked. The Chief Engineer (Minor Irrigation) is expected to take up a number of restoration schemes of Minor Irrigation tanks at a cost of Rs. 11.10 crores and Chief Engineer (Panchayati Raj) is expected to take up similar schemes at a cost of about Rs. 1.72 crores. The total additional gross area likely to be either stabilised or brought under irrigation for the first time is expected to be 5.48 lakh acres.

In respect of ground water resources an allocation of Rs. 156 lakhs is made for purposes of ground water survey. Further, under the co-operative department, programmes are contemplated for grant of long term loans to the agriculturists by making contributions towards debentures floated by the Land Mortgage Bank. The Land Mortgage Bank has drawn up a programme of lending Rs. 125.00 crores during the Fourth Five-Year Plan period and the share of the State Government of Rs. 10.19 crores towards debenture participation has been provided in the Plan. It is expected that about 1.26 lakh wells would be sunk during the period. In addition, installation of about 24,000 oil engines and about 68,000 electric pumpsets are envisaged. There is also a tube well scheme to be implemented by the Chief Engineer (Minor Irrigation).

An amount of Rs. 370.12 lakhs is provided for soil conservation programme in the State Plan. The total area likely to be covered is 4.80 lakh acres. This excludes the soil conservation programme under central sector schemes. In regard to land development, the provision in the Fourth Plan is Rs. 66.34 lakhs. An

amount of Rs. 41.70 lakhs is provided towards participation in the ordinary debenture floated by the Co-operative Central Land Mortgage Bank for advance of loans for purchase of tractors and power tillers. The total loans that will be advanced by the banks is fixed at about Rs. 10.21 crores covering 4,000 tractors and power tillers. The second scheme involving an outlay of Rs. 24.64 lakhs is intended for starting 66 Co-operative Joint Farming Societies to give waste land to landless to enable reclamation of these lands and resettlement of landless poor.

Development of Ayacuts is of special importance in the context of exploitation of the irrigation potential to the optimum. No doubt, there are central sector schemes for command areas in Nagarjunasagar and Pochampad. There is, however, a concurrent commitment on the part of the State. The total outlay on Ayacut Development is Rs. 12.33 crores. This programme covers a number of departments. The major part of this provided under Registrar of Co-operative Societies, *viz.*, 687 lakhs is for participation in the Special Debenture to be floated by the Andhra Pradesh Central Land Mortgage Bank for Land Development under Irrigation Projects.

The other allocations department-wise are Board of Revenue Rs. 305.20 lakhs, Chief Engineer (Major Irrigation) Rs. 157.14 lakhs, Director of Agriculture Rs. 37.39 lakhs, Director of Animal Husbandry Rs. 24.87 lakhs, Agricultural University Rs. 11.73 lakhs, Inspector-General of Registration and Stamps Rs. 9.47 lakhs. These programmes include cost of localisation, acquisition of land for field channels, excavation of field channels, ayacut roads, seed farms, agriculture and allied extension and demonstration activities.

An amount of Rs. 185.32 lakhs is proposed for various programmes under Animal Husbandry during the Fourth Plan. The most important programme in this sector relates to animal health. This programme covering a provision of Rs. 71.46 lakhs consists of establishment of veterinary new dispensaries, upgrading of existing dispensaries and hospitals, establishment and strengthening of clinical laboratories and establishment of animal health centres. Cattle

development is another item of significance in this sector involving an outlay of Rs. 45.70 lakhs. This includes extension of existing intensive cattle development blocks, opening of key village blocks, strengthening and expanding existing livestock farms, and semen collection centres. Poultry development accounts for Rs. 21.53 lakhs involving the development of State level marketing organisation for poultry projects, increasing the number of poultry sub-centres and strengthening the existing district and regional poultry facilities. Sheep development programmes include strengthening and expanding existing sheep breeding farms, sheep and woollen extension centres and importing exotic breeds. This programme involves an outlay of Rs. 9.62 lakhs. Piggery development involves an outlay of Rs. 2.42 lakhs. In addition, feed and fodder development, education, research and training are also contemplated.

Dairying and Milk Supply has been given importance due to its special relevance to the small and marginal farmers. The programme envisages an investment of Rs. 385.46 lakhs in the Fourth Plan, out of which the integrated milk projects at Hyderabad and Vijayawada alone account for Rs. 222.07 lakhs. The milk supply to the twin cities and the Milk Supply Factory at Vijayawada account for about one crore each. Towards the programme of intensive milk supply Rs. 163.39 lakhs is provided covering a number of centres. Basically the programme involves opening of a number of milk cooling and milk chilling centres.

An outlay of Rs. 306.50 lakhs is provided for Forestry development in the Fourth Five-Year Plan. The most important programme under Forestry development relates to teak plantation, involving an outlay of Rs. 121.17 lakhs. Quick growing species are proposed to be developed with an outlay of Rs. 71.94 lakhs. Similarly, casurina red sanders and cashew plantations account for Rs. 26.44 lakhs, Rs. 5.35 lakhs and Rs. 5.00 lakhs respectively. Forest education is also given importance involving an outlay of Rs. 6.00 lakhs. Other programmes include forest management, forest research, buildings, communications, cultural operations, forest consolidation etc. One of the important schemes

is Nehru Zoological gardens on which an outlay of Rs. 34 lakhs is contemplated.

Fisheries development is contemplated with an outlay of Rs. 208. 83 lakhs. Major emphasis is on marine fisheries development. The development of marine fisheries centre at Kakinada involves an outlay of more than a crore. This is meant for construction and modernisation of boats including strengthening of boat building yard at Kakinada. The development of inland fisheries involving an outlay of Rs. 40 lakhs is meant for improvement to fish farms, nurseries, production of fish seed *etc.* The utilisation of funds from the Agricultural Refinance Corporation and the Co-operatives are also emphasised. The programmes also cover training in Fisheries and assistance to small fishermen. Towards Warehousing and Marketing schemes, an amount of Rs. 16 lakhs is provided in the Fourth Five-Year Plan. The major programmes in this sector are share capital to State Warehousing Corporation, strengthening of Directorate of Marketing, loans to Market Committee and provision for grading facilities for cotton.

The Co-operative form of organisation is one of the most important instruments available for implementing a policy of growth with social justice particularly in the rural sector. The total Fourth Plan outlay under the head "Co-operation" covers an amount of Rs. 1,083.62 lakhs. It should be noted that in respect of many of these schemes the provision represents only a part of the total activity contemplated since institutional finance is expected to flow in large proportion as a result of the provision made in the plan under this sector. Credit accounts for a large portion of the outlay *viz.*, Rs. 560.35 lakhs. The provision is meant for managerial subsidy to viable societies, grant for bad debt reserve of village societies and Central Banks, loan assistance to District Co-operative Central Banks and share capital contribution to credit institutions. The bulk of the outlay is meant for the last item mentioned. For marketing and processing an outlay of Rs. 172.35 lakhs is indicated. This is to be utilised towards share capital contribution to the primary and district marketing societies and construction of godowns for developing co-operative marketing. The

major outlay is meant for the latter item. For sugar factories, an amount of Rs. 158 lakhs has been included and this is towards share capital assistance to the sugar factories—for setting up new factories as well as for expansion of the existing factories. There is a provision of Rs. 56.23 lakhs for consumer co-operatives and this amount is meant to advance loans for construction of godowns and buildings as also contribution towards share capital to the central and primary consumer co-operatives concerned. A specific provision of Rs. 51.29 lakhs is made towards co-operatives for weaker sections. This amount is to be utilised for loan assistance to co-operatives for weaker sections like washermen, rickshaw pullers, auto-rickshaw drivers, taxi-drivers, destitute and disabled persons and for labour contract societies. It is also proposed to organise specially societies for providing employment opportunities for educated unemployed, co-operative training and education accounts for a provision of Rs. 38.88 lakhs. Provision is also made for co-operative farming and strengthening of administration.

An amount of Rs. 850 lakhs is provided for Community Development. The Community Development funds along with the other funds to be provided by the State Government will be released to the reorganised blocks. The distribution of funds to the reorganised blocks is on the basis of their classification as "Advance", "Ordinary", "Backward" and "Tribal Blocks" depending upon their level of development. Funds will be allotted on varying per capita basis in inverse proportion to the level of development achieved by the Blocks so that Blocks which are less developed will get larger funds compared to others which are better off.

Major and Medium Irrigation account for a substantial outlay of Rs. 132.88 crores. Out of this an outlay of Rs. 103.53 crores is for continuing irrigation schemes. The provision for the Nagarjunasagar Project is Rs. 44.50 crores, while for the Pochampad Project it is Rs. 30.00 crores. For all other spill-over schemes the provision made is Rs. 29.03 crores. In respect of new schemes, an amount of Rs. 25.62 crores is indicated. Flood control and drainage, investigation and engineering research account for Rs. 2.10

crores and Rs. 1.48 crores respectively. With this outlay on irrigation it is expected that an additional irrigation potential of 9.63 lakh acres will be created taking the cumulative potential to 28.39 lakh acres by the end of Fourth Plan. Apart from the Nagarjunasagar and Pochampad Projects the more important schemes are Yeleru Reservoir, Godavari Barrage, Vamsadhara project, Somasila Project, Thandava reservoir, Vottigadda reservoir, Kanpur canal, Guntur Channel, Gandikota project, T.B.P.H.L.C. Gazuladinne project, Pulivendla scheme, Togurupeta project, Swarna project, Ukachittivagu project and Kadam project.

Power is another sector which accounts for a substantial portion of the outlay in the Fourth Five-Year Plan. The total outlay in the Fourth Plan for Power is Rs. 197.12 crores. The generation schemes alone account for about Rs. 113 crores. More than Rs. 104 crores out of this will be taken up by the spill-over commitments only. The spill-over commitments relate to Kothagudem Thermal plant Stage III (Rs. 35.49 crores) Lower Sileru Scheme (Rs. 32.51 crores), Srisailam scheme (Rs. 21 crores). The other schemes are Kothagudem Thermal scheme (Stages I, II Rs. 3.77 crores), Ramagundam Thermal scheme Stage II (Rs. 5.53 crores), Balimela Dam and Power House (Rs. 5.8 crores) and Upper Sileru scheme (Rs. -0.16 crore). Towards Transmission and Distribution including Rural Electrification an amount of Rs. 84.14 crores is indicated. Inter-State links and trunk transmission lines, account for about Rs. 26.66 crores whereas distribution and rural electrification account for about Rs. 57.48 crores. During the Fourth Five-Year Plan, it is expected that 7 lakhs services including 1,50,000 agricultural services would be provided. Further, it is expected that due to generation programmes, generating capacity of 282 M.W. would be created during the Fourth Plan apart from advance action for increasing generating capacity in future.

Industrialisation programmes are considered essential in view of the small industrial base of this State. The programme of Large and Medium Industries is carried out in the State through the Director of Indus-

tries and Andhra Pradesh Industrial Development Corporation. An amount of Rs. 852.83 lakhs is allotted for Director of Industries. Out of this an amount of Rs. 462.96 lakhs is proposed to be spent on the scheme for industrial development areas. The aim of this scheme is to acquire and develop large areas of land at strategic places in the State which will be growth centres for development. An amount of Rs. 109.19 lakhs is proposed to be spent on incentives. This scheme contemplates liberal incentives such as tax relief and power subsidy. The Third scheme is meant for provision of water supply for industries in Visakhapatnam. This involves a project called Mehadrigadda reservoir designed to yield 70 lakh gallons of water per day. The provision for the scheme during the Fourth Plan is Rs. 240 lakhs. The Andhra Pradesh Industrial Development Corporation was set up to give a fillip to industrial activities in the State. A new development in the activities of the Corporation is the setting up of joint ventures with private enterprise. The total allotment from the plan to the Corporation is Rs. 337.87 lakhs. It is expected that a number of industries would be set up during the Fourth Plan with the help of this amount provided for the Corporation.

The Village and Small Scale Industries have been given importance in view of their labour intensive nature, capacity for regional dispersal and also capacity to initiate a process of diversification. The total allocation in the Fourth Five-Year Plan is Rs. 277.28 lakhs. Of this the Small Scale Industries programme accounts for Rs. 116.54 lakhs. This programme consists of strengthening of the tool room workshops, bulk loans to small industries, facilities for quality marking of light Engineering goods, testing laboratories for manufacturing of quality products, establishment of industrial estates. The programmes of strengthening toolroom workshops and industrial estates account for more than Rs. 45 lakhs each. The Handicrafts programme accounts for Rs. 57.19 lakhs. One of the important elements of the handicrafts programme is financial assistance to handicrafts co-operatives. Leather industry is proposed to be encouraged by taking up improvement of the quality of foot-wear locally manufactured on scientific lines, training of

qualified candidates and building up of the export potential of foot-wear. An amount of Rs. 39.11 lakhs is set apart for this purpose. Khadi industry and industrial co-operatives accounts for Rs. 4.40 lakhs and Rs. 3.81 lakhs respectively. Towards Khadi and Village Industries a provision of Rs. 2.42 lakhs is indicated. The main programme for Development of Khadi is under the Khadi and Village Industries Board and is outside the Plan.

The programme of mineral development is implemented by the Director of Mines and Geology and the Andhra Pradesh Mining Corporation. The Fourth Plan programmes under the Director of Mines and Geo., with an outlay of Rs. 14.04 lakhs consist of intensification of mineral surveys and taking up of research work and pilot studies. Under the scheme "Intensification of mineral surveys" which is the most important component, an intensive programme of mineral exploration has been drawn up to fully assess the potentialities of mineral occurrences. The Andhra Pradesh Mining Corporation, which is intended to undertake the prospecting of strategic and important minerals, mining of such minerals and the establishment of mineral based industries, has been given an allocation of Rs. 51.15 lakhs during the Fourth Plan period.

The Handloom Industry has been provided an amount of Rs. 352.24 lakhs. A major part of the outlay in the Fourth Plan will be spent on granting of rebate on handloom cloth sales, development of powerlooms and improvement of techniques provision of share capital loans to Weavers' Co-operative Societies, provision of marketing facilities and provision of assistance for housing. The State's participation in the shape of "Share Capital loans" in co-operative spinning mills and wool technical schemes are also proposed.

The most important programme under Transport and communications is road development. The road programme is carried out by the Chief Engineer (Roads and Buildings) and Chief Engineer (Panchayati Raj). The total provision for roads in the Fourth Plan is Rs. 1321.71 lakhs of which Rs. 1237.37 lakhs is for the road works to be implemented by the Chief Engineer (Roads and Buildings) and the balance for those

implemented by the Chief Engineer (Panchayati Raj) Rs. 132.99 lakhs is meant for spill-over schemes under the Chief Engineer (Roads and Buildings). One of the important new schemes that is proposed to be taken up is a road-cum-rail bridge across Godavari near Rajahmundry for which approaches have to be formed in the State sector. Road works under Chief Engineer (Panchayati Raj)) are meant to cover spill-over commitments on rural road works started in earlier plans for which an amount of Rs. 54.33 lakhs is indicated. The Andhra Pradesh State Road Transport Corporation proposes to improve the passenger services especially in the metropolitan areas. The State Government has provided a loan assistance of Rs. 2.53 crores for this purpose to the Andhra Pradesh State Road Transport Corporation. For the Development of minor ports, a provision of Rs. 43.00 lakhs is made. With this outlay, it is proposed to complete a few spill-over works on Krishnapatnam port with an outlay of Rs. 1.5 lakhs and to take up major works on Masulipatnam port to resume its functioning.

The allocation for General Education in the Fourth Plan is Rs. 16.72 crores. Of this the allocation for Elementary Education involve an outlay of Rs. 545.27 lakhs. It is proposed to enrol about 6 lakh additional children in the primary schools and 1.86 lakh children in the Upper primary schools. To encourage this and reduce drop outs emphasis is laid on provision of physical facilities and improvement in the quality of mid-day meals. For secondary education, the allocation is Rs. 266.55 lakhs. It is proposed to enrol 91,000 students and upgrade a number of upper primary schools into High Schools. Here also the emphasis is on qualitative programmes in the field of secondary education especially expansion and improvement of mathematics and science education through inservice training and provision of laboratory facilities. As part of the educational reform an Intermediate course has been introduced which involves establishment of Junior Colleges and a provision of Rs. 346.89 lakhs has been made for this purpose. It is necessary to ensure that adequate equipment etc., is available in the Junior Colleges. The allocation for Higher Education includes grants for strengthening and development of Post-Graduate

Centres starting Post-Graduate studies in a few Government Colleges and to a certain extent construction of buildings for colleges. An amount of Rs. 360.06 lakhs is proposed for higher education. Teachers training programme, strengthening of administrative machinery, expansion of physical education facilities *etc.*, are also proposed to be taken up with an outlay of about Rs. 1.54 crores.

In the field of Technical Education, the programmes involve an outlay of Rs. 170 lakhs. A number of programmes of quality improvement, diversification of courses, sandwich type of courses, and the expansion and diversification of women's polytechniques have been proposed.

Under Medical Services the outlay for modern medicine is Rs. 348.25 lakhs. The schemes having a major share in the outlay are improvements to District and Taluk Headquarters hospitals, Government General Hospitals and medical education. For Indian Medicine and Homoeopathy, an amount of Rs. 19 lakhs has been provided in the Fourth Plan.

Under Public Health, important programmes such as eradication of communicable diseases and the Family Planning Programme *etc.*, are in the Central Sector. The schemes in the State Plan include training programmes for the staff, introduction of Sanitary Inspector courses in medical colleges at Hyderabad and Kurnool, starting of a number of new Primary Health Centres and health education units *etc.* The provision for this scheme is Rs. 186 lakhs.

For Urban Water Supply and Drainage, an amount of Rs. 17.23 crores is provided. Of this, an amount of Rs. 7.99 crores has been allotted for the schemes to be implemented by the Public Health Engineering Department. Out of this, the spill-over urban water schemes are expected to cost Rs. 78.50 lakhs and Hyderabad drainage improvements Rs. 99.18 lakhs. New Water Supply Schemes costing Rs. 621.32 lakhs are proposed to be taken up to cover a number of Municipalities. Altogether 23 original water supply schemes plus 10 water supply improvement schemes in addition to 5 spill-over schemes and Hyderabad

drainage improvements are expected to be taken up by the Chief Engineer (Public Health). The Chief Engineer (Roads and Buildings) is expected to carry out improvements to the Hyderabad Water Works including Rajendranagar Water supply scheme at a cost of Rs. 150 lakhs. Further improvement to the Manjira Water Supply Scheme is to be taken up involving an outlay of Rs. 61 lakhs for Phase I and Rs. 711 lakhs for Phase II.

Towards Rural Water Supply an amount of Rs. 503.81 lakhs is proposed and for Protected Water Supply Schemes Rs. 250 lakhs is proposed in the Fourth Five-Year Plan. With this amount, it is proposed to provide drinking water to 10,500 villages and hamlets and complete 200 protected water supply schemes. It is also proposed to make full use of institutional finances especially from the Life Insurance Corporation of India, for Protected Water Supply Schemes. In addition, rigs supplied by UNICEF are proposed to be utilised in the drought areas.

For Housing an amount of Rs. 764.12 lakhs is provided. The following table will show the distribution of this amount among different programmes, under Housing:—

	(Rs. in lakhs)		
	L. I. C. Loans	State Plan Funds	Total
L. I. G. H.	246.28	89.78	335.06
M. I. G. H.	97.77	..	97.77
Village Housing Project	32.64	6.89	39.53
Land Acquisition and Development	70.50	..	70.50
Rental Housing Scheme	87.25	..	87.25
Slum Clearance	..	120.96	120.96
Subsidised Industrial Housing scheme	..	13.05	13.05
Total	534.44	229.68	764.12

This outlay includes an amount of Rs. 534.44 lakhs to be obtained as loan from the L.I.C. The Director, Municipal Administration and the Municipal Corporation of Hyderabad have been provided with Rs. 33.36 lakhs and Rs. 87.60 lakhs respectively for implementing Slum Clearance Programme. A sum of Rs. 69.00 lakhs for Rental Housing Scheme has been made which will be utilised primarily for purpose of giving loans for construction of houses and for giving them to low income group population on rental or hire purchase system. The Housing Board has been provided with an amount of Rs. 19.78 lakhs for undertaking the construction of Low Income Group Housing Programmes. For construction of houses for industrial labour an allotment of Rs. 13.05 lakhs has been made. Under Village Housing Project to develop select villages in planned manner by providing housing and other amenities, the Director of Town Planning has been provided with an amount of Rs. 6.90 lakhs.

The allocation for programmes for the welfare of Scheduled Tribes is Rs. 581.09 lakhs. The programmes in the allocation cover educational programmes, programme for economic uplift, health, housing as well as other schemes such as training of tribals as Village Officers etc. The programme for economic uplift of the tribals included supply of plough-bullocks, minor irrigation schemes, colonisation schemes, assistance to specialised trades, free distribution of agricultural implements, housing grants and financial assistance to Girijan Co-operative Corporation. The schemes under the education programme are establishment of hostels and Ashram Schools, supply of books etc., scholarships and financial assistance for tribal boys seeking employment. The programme of housing and health consists of assistance to housing, provision of hostel facilities and digging of drinking water wells.

Towards the welfare of Scheduled Castes and other backward classes, an outlay of about Rs. 2.45 crores is provided. For educational schemes, Rs. 107.03 lakhs is provided for Scheduled Castes and Rs. 32.25 lakhs for backward classes. The education scheme consists of opening of hostels, pre-matric scholarships, aid for clothing, book banks etc. The programmes for economic uplift meant only for Scheduled Castes is expected

to cover Rs. 57 lakhs involving interest free loans to the educated unemployed, supply of milch cattles, interest free loans for purchase of plough-bullocks, agricultural implements etc. Supply of milch cattle programme is proposed as part of the programme for backward classes also.

In the programme for Social Welfare, a provision of Rs. 22.96 lakhs is made for Women and Child Welfare Schemes. The programmes consists of opening of a regional home for physically handicapped, construction of buildings for State home and service home etc., grant-in-aid for State Welfare Advisory Board, scheme for providing employment to Women at District Headquarters and opening Women Welfare branches in tribal areas. The Inspector-General of Prisons has been provided with Rs. 3.89 lakhs for strengthening of field staff for probation work and a scheme for establishment of a remand home. An amount of Rs. 3.75 lakhs is provided in the Fourth Plan for Director of Social Welfare to open two orphanages.

For Craftsmen Training and Employment Schemes, the total allocation is Rs. 52.54 lakhs. Craftsmen Training Schemes have been provided with Rs. 35.79 lakhs primarily for reorientation of existing training system to suit the demands of the economy. Vocational guidance units are proposed to be started and towards the employment service schemes Rs. 2.85 lakhs is provided. Under Labour and Labour Welfare Schemes Rs. 4.70 lakhs is provided primarily for strengthening labour welfare establishment. To provide medical facilities to industrial workers and other families appropriate contribution of Rs. 9.20 lakhs is proposed under the Employees State Insurance Scheme.

An outlay of Rs. 10 lakhs has been proposed for schemes of the Bureau of Economics and Statistics to enable filling up the gaps in the availability of the data required in the context of Planning. It is proposed to take up surveys on distributive trade, goods traffic road, housing facilities, and a working classes, family budget enquiries.

Central Sector Programmes: A brief outline:

In the National Plan an outlay of about rupees eight hundred crores has been proposed for Centrally Sponsored Schemes,

The criteria for selection of Centrally Sponsored Schemes as explained in the National Fourth Five-Year Plan are as follows:—

- (a) that they relate to demonstrations, pilot projects, surveys and research;
- (b) that they have a regional or inter-State character;
- (c) that they require lump sum provision to be made until they could be broken down territorially; and
- (d) that they have an overall significance from the All-India angle.

It is proposed to briefly indicate the nature of Central Sector Schemes in different sectors in the State.

The most important of the schemes for Agricultural Development are those relating to integrated dry land agricultural development in Anantapur area in the Rayalaseema Region and Ibrahimpatnam area in Telangana Region and schemes for maximisation in production of certain important crops like Cotton in areas of assured water supply, Groundnut, Mesta and exportable varieties of Tobacco. There is also a scheme for farmer's training and education. The other centrally sponsored schemes for Agricultural Development included in the Plan are those relating to the facilities for foliar spraying of Jute and Mesta; development of Wheat and Cotton under wells; Subsidised sale of improved Jute seed; development of Castor; Soyabean demonstration; pilot projects for multiple cropping; Niger and Sun-flower demonstration; production of tall and Dwarf hybrid coconut seedlings; Castor demonstration; laying demonstration plots for improved practices in cashewnut cultivation; production of cashew air layers; soil survey in I.A.D.P. areas and survey of cashewnut. There is also a scheme under which loans and share capital are provided for the establishment of service centres and for providing customs service in tractors and agricultural machinery.

Soil Conservation Schemes in the catchment area of river valley projects under Pochampad, Nagarjuna-sagar and Nizamsagar Projects are implemented in the

State as centrally sponsored schemes in the Fourth Plan. Centrally sponsored schemes in the field of Animal Husbandry include schemes relating to Rinderpest Eradication and a large scale sheep breeding farm at Mamidipalli. Under dairying and milk supply the All-India Co-ordinated Research Project for chilling and transplantation of milk to city dairies is being implemented at the central dairy at Hyderabad, while the All-India Co-ordinated Project to evolve economic methods for the utilisation of the surplus sub-standard milk is being implemented at Vijayawada.

The centrally sponsored schemes for the development of Forests relate to a package scheme for cashew-nut, soil conservation works in Machkhund and forest resources survey.

A scheme for landing and berthing facilities for fisheries is being implemented for the development of Fisheries in the Fourth Plan.

There are three important centrally sponsored schemes for the development of co-operatives. They are subsidies towards agriculture and credit stabilisation fund; subsidy for establishment of service centres and custom service in tractors and other agricultural machinery and margin money requirements of co-operatives for distribution of chemical fertilizers.

In the field of community development scheme relating to the applied nutrition programme is the most important. Other schemes are composite programme for women and pre-school children, encouragement of economic activities at Mahila Mandals; incentive awards to Yuvak Mandals in non-applied nutrition programme blocks; and composite programme for women and pre-school children demonstration feedings.

A scheme relating to basic and fundamental research on Engineering problems related to river valley projects is implemented as a centrally sponsored scheme in the Fourth Plan in the irrigation sector in State.

Under Village and Small Scale Industries the rural industrial project and loans to the industrial corporation etc., under Rural Industries are centrally spon-

sored schemes in the Fourth Plan. Besides these a scheme for survey of Village and Small Scale Industries is also included as a centrally sponsored scheme.

There is a centrally sponsored scheme for roads of economic importance and inter-state significance. Three roads are proposed in the Fourth Plan under this scheme. They are—Yadagiri-Raichur road, Narsaraopet-Burgampahad road; and Kothagudem-Lankapalle road.

The scheme relating to development of Kakinada Port has also been included as a centrally sponsored scheme in the Fourth Plan.

The most important of the centrally sponsored schemes relating to the development of general education are those relating to the maintenance and appointment of Hindi Teachers in Government and non-Government Secondary Schools, Telugu Academy—University level book production and National Scholarship schemes. The other schemes included under this head are farmer's education and functional literacy projects; quality improvement schemes, curricular development works *etc.*, award of merit scholarship to the children of working Teachers of Primary and Secondary Schools; sports talent research scholarships to outstanding sportsman and sport women studying in the schools; and financial assistance to Sanskrit Pandits who are in indigent circumstances.

In the field of Technical Education there are schemes relating to the regional Engineering College at Warangal and construction of students' hostels of Engineering Institutions.

The four centrally sponsored schemes under Medical and Public Health are the domicile T.B. campaign in Telangana, other T.B. Sanitoria Clinics in Andhra, leprosy control programmes and establishment of Post-Graduate Departments in various Medical Colleges. Very significant schemes in Public Health programme relate to Family Welfare centres, eradication of small pox and Malaria, Cholera and Filaria control are also programmed. Primary Health Centres are also receiving assistance to a limited extent as

centrally sponsored schemes in the Fourth Plan. Family Planning constitutes the most important element of central schemes in this field.

There is a scheme for a special investigation division for rural water supply under centrally sponsored schemes.

There are three important centrally sponsored schemes for the welfare of scheduled castes and these relate to scholarships for Post-Matriculation studies; grants-in-aid to Zilla Parishads for Girls' Hostels and house sites for persons engaged in unclean occupations.

The centrally sponsored schemes for the development of scheduled tribes are those relating to Girls' Hostels, Scholarships for Post Matriculation studies Pre-Examination Training, grants-in-aid and loans to Andhra Pradesh Girijan Cooperative Finance Corporation, aid to Training and Research Institute; grant-in-aid to Panchayat Samithis for tribal development blocks; and special nutrition scheme for children. Special schools, Government hostels and supply of milch animals, bullocks ploughs and carts are the three schemes proposed for denotified tribes. In the field of Welfare, in addition to the above, there are two centrally sponsored schemes, one for associate women workers camp and the other for rural youth workers camps.

Towards statistics and survey there are schemes for conducting assessment surveys for the determination of spread and yield rates of high yielding varieties in cultivators' fields and extent of adoption of improved practices such as fertiliser application, plant protection, etc.; Pilot studies of World Agricultural Census; Pilot Research for Growth Centre at Sathenapalli and the Timely Reporting of Agricultural Statistics.

In addition to these, the funds for National Highways Programme are provided by the Government of India. The Government of India have approved a Programme of Rs. 37.00 crores for National Highways in Andhra Pradesh. Out of this it is expected that an outlay of the order of Rs. 26.00 crores will be incurred in the Fourth Five-Year Plan period.

Besides the programmes mentioned above, the State is also likely to benefit from many of the new Central Sector Programmes such as Rural Works Programme, Crash Programme for provision of employment in Rural areas, Small Farmers Development agencies and Marginal Farmers and Agricultural Labourers Development agencies.

To meet twin objectives of creating permanent assets in the rural areas particularly chronically drought affected areas and providing employment to the agricultural labourers, the rural works programme has been taken up. The programme was commenced in 1970-71 in 54 districts spread over 13 States all over the country. In Andhra Pradesh the programme is being implemented in the districts of Mahabubnagar, Kurnool, Anantapur, Cuddapah and Chittoor and two taluks of Ongole district. The total outlay envisaged for the programme is Rs. 10.00 crores, that is 2.00 crores for each of the five districts. The works taken up under the programme cover Minor Irrigation, Soil Conservation, Afforestation and Communications.

The Government of India have formulated a scheme known as "Crash Schemes for Rural Employment" in order to alleviate the prevailing conditions of unemployment and underemployment in Rural areas. The main feature of the scheme is to provide labour intensive projects in all the districts of the State. The works under taken under this scheme are rural infrastructure including road works, land reclamation and development of Panchayat lands, drainage and embankments etc., water conservation-cum-ground water re-charging works etc., Minor Irrigation Works like construction and restoration of storage tanks etc., and soil conservation or afforestation schemes requiring manual labour.

The Small Farmers Development Scheme is being implemented in three districts viz., Cuddapah, Srikakulam and Nalgonda. This programme is intended to develop the small farmers into viable farmers through a package of programmes. It involves a total outlay of about Rs. 15.00 crores. The major activities contemplated are supply of milch cattle, sheep rearing, crop

loans, medium term and long term loans for wells, oil engines, electric motors etc.

The Marginal Farmers and Agricultural Labourers Development Scheme, being implemented in Nalgonda, and Visakhapatnam envisages an outlay of about Rs. 5.00 crores. A number of activities are contemplated under this scheme to improve the lot of marginal farmers by taking up important subsidiary occupations like poultry, dairying, sheep rearing, carpentry etc.

Further a pilot project for tribal development covering tribal areas of Srikakulam district involving an outlay of Rs. 1.50 crores by Government of India is being implemented under Central Sector. The programme is meant for economic uplift of tribals based on family approach.

DEVELOPMENT OF BACKWARD REGIONS

In order to assess regional differences, the concept of region should first be clarified. In broad terms, a region may be "homogeneous", *i.e.* in terms of common characteristics of the area or it may be "polarised", *i.e.* in terms of the interdependencies, or it may be a "policy region" which is dependent on policy considerations. The region with operational significance is a policy region which has as its base the homogeneous and polarisation elements. The definition depends on the purpose in view and is based more on social balance and political significance than on scientific accuracy. Implicit in the concept of region is the technique and process of regionalisation. With regard to criteria, it is possible to visualise a number of criteria for the delineation of a region, but the criteria for delineation of a region will themselves depend on the concept of a region, which again is dependent on the regional policy. The crucial question, therefore, is one of determining the policy towards regional development.

That the Government should intervene to bring about balanced regional development is now well accepted. The Third Five-Year Plan set out in some detail the general approach to balanced regional development. It was also stated that "in drawing up and implementing the Second Plan, the regional aspects of development were dealt with in three different ways. Firstly, through the plans of States emphasis was given to programmes which had a direct bearing on the welfare of the people in different parts of the country. Secondly, special programmes were undertaken in particular areas where development had either received a temporary set-back, or was being held back by certain basic deficiencies. In the third place, steps were taken to secure more dispersed development of industry which, in turn, creates conditions for development in several related fields".

So far as the Third Plan itself was concerned, emphasis was laid on the fact that since some of the most important Plan schemes fell within the State Plan, the size and pattern of outlays for the States under the Third Plan had been so calculated as to "reduce disparities of development between different States, although

in the nature of things this is a process which must take time". Besides this, several features in the Third Plan were indicated as being intended to "enlarge the possibilities of development in areas which have in the past been relatively backward". Among these were the intensive development of agriculture, expansion of irrigation, village and small industries, expansion of power, development of roads and road transport, educational facilities, provision of water supply and programmes for the welfare of Scheduled Tribes and Scheduled Castes.

The location of basic industries as means for achieving regional development was mentioned both in the Second and the Third Plans. Technical and economic limitations were emphasized, but it was stated that subject to these considerations the claims of under developed regions should be kept in view.

In contrast to the fairly elaborate treatment of this aspect in the Third Five-Year Plan, the Fourth Five-Year Plan, while it deals in detail with regional development in the sense of physical planning, particularly of urban and metropolitan areas, makes only a brief mention of the correction of regional imbalances. While describing it as a problem that is "highly complex" the Plan document states that "differences in development between State and State arise out of variations in activity in the three sectors—co-operative, private and public". With regard to the first, it is stated that "no specific new programmes or policies of the Central Government could help materially in this regard. "With regard to the second it is stated that this would depend" on the extent of entrepreneurship within the State and the resources commanded by it". With regard to the third, it is stated that "availability of resources with Governments of States for planned development is the heart of the matter". This is in contrast to the approach in the Third Plan where the State Plan outlays were taken as important instruments for the reduction of regional disparities. While the Third Plan emphasized the crucial role of the State Plan outlay in reducing regional disparities, the Fourth Plan document mentions only the allocation of Central assistance and that too with the corollary that in the existing arrangement such help will not be sub-

stantial. The whole question of adopting a positive policy in regard to planned development for achieving reduction of regional disparities, therefore, remains unresolved.

In all these discussions, regional disparity has been taken to mean the disparity in the levels of development between different States. However, an attempt has sometimes been made to define a region as an area smaller than that of a State and pose the problem as one of identifying such underdeveloped regions all over the country and of seeking to achieve their development irrespective of the level of development of the State as a whole in which such regions may occur. To the extent however, that many of the policies and programmes that are needed to be adopted for developing such regions happen to fall within the States sector and have to be provided for in the State Plan, the level of development of the State becomes a very crucial factor, since States which on the whole are more developed and financially stronger would be better placed to tackle such problems within their allocations than the States which, besides having such underdeveloped regions, happen to be less developed in other respects also and are as States financially weaker. The problem of backward regions has, therefore, necessarily to be considered as a two tier problem, viz. less developed States as one level and less developed regions within the State as another. National policy in regard to balanced regional development should concern itself with problems related to less developed States and should make a distinction between the problems of backward areas that occur within a less developed State and those that occur within a State that is otherwise advanced.

Despite the development achieved over the three Plan periods in various sectors, Andhra Pradesh happens to be one of the less developed States in the Union. However, within the State also problems of regional imbalances have been arising. While, therefore, as mentioned above, at the national level the State should be the unit for judging relative levels of development and evolving policies for reducing the disparities between these levels, there is need now to consider the position within the State itself and to see

how far, within the constraints of the overall Plan outlays which are feasible for the State as a whole, policies and programmes could be adopted to reduce intra-State regional disparities. This will necessarily involve the preparation of regional Plans as part of the State Planning process.

In terms of Plan process, regional problem could be approached in different terms, *viz.*:

- (a) disaggregation of national Plans and expression of national Plan in regional scales;
- (b) aggregation of regional Plans prepared in regional setting;
- (c) a Plan for a particular region in the over all context.

A successful policy would invariably involve a combination and co-ordination of all the three aspects. To work out a rational policy of regional development a study of the process of regional development is essential. A purposeful regional development policy must define the goals, both social and economic which must be consistent with the dominant national aspirations.

The tasks of regional development could be summarised as follows:

- (1) The national policy itself should express the regional policy element in terms of regionalisation, the broad frame work in terms of spatial order desired and in terms of time dimension;
- (2) The regions have to be clearly delineated;
- (3) A series of regional studies should be done by collecting the data on regional and inter-regional relations;
- (4) A Plan strategy has to be evolved related to each type of region in the context of over all national developmental policy; and
- (5) Detailed Plans and programmes have to be worked out in the light of the strategy evolved.

Essentially the basic proposition in a regional development policy has to be in terms of provision of a lead sector or export base for the region, differentiating the region by appropriate specialisation and greater integration of the region with the rest of the national economy. This being the basic principle, the strategy has to be based on, how the specific activities are to be distributed between different regions?

In the context of a specific region the strategy would necessarily evolve out of all these considerations. Thus, it is clear that adequate regional balanced development has to be appropriately planned at the National, State and regional level. The long term measures would involve a detailed and integrated planning for which effort has already been initiated in the State of Andhra Pradesh for preparation of regional Plans on the following lines.

- (1) A survey of—
 - (a) The existing physical potential.
 - (b) The structure of the economy of the region.
 - (c) The economic linkages existing with other regions.
 - (d) The unique advantage available to the region or that could be developed.
- (2) Based on the above an identification of the primary activity and secondary activity.
- (3) Evolution of a strategy for regional development in the light of the above.
- (4) Expression of the strategy in terms of programmes *viz.* the infrastructural investment, the administrative machinery, the linkages in terms of the various technical processes for the activity, the need to create external economies, the need to provide well-thought out spatial distribution of activities and urban hierarchy etc.
- (5) The financing of such a programme by Government, by institutions, etc., and the concomitant policy orientation for all these institutions.
- (6) Evolving supporting measures in terms of research and policy.

Andhra Pradesh has distinct advantages for dovetailing the work of economic planning with that of regional economic planning in as much as the State has three distinct regions. Each of these regions has broad characteristics required for being treated as distinct physical planning region in itself.

Characteristics of Broad Regions of Andhra Pradesh :

A meaningful regional balanced development is possible through appropriate policy which should involve an appreciation of the physical conditions existing and identification of appropriate strategy of development for each region and for the different sub-regions within a region. With this end in view, a preliminary analysis has been indicated with reference to which the various sectoral programmes in the Fourth Five-Year Plan have been formulated. The broad features of tentative strategy in respect of each of the three regions is given in the following paragraphs:—

The State of Andhra Pradesh came into existence on 1st November, 1956. Andhra Pradesh now comprises of 21 districts. The Telangana region covers 9 districts, *viz.*, Mahaboobnagar, Nalgonda, Hyderabad, Medak, Nizamabad, Adilabad, Karimnagar, Warangal and Khammam, while the Andhra region covers 12 districts *viz.*, Srikakulam, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Ongole, Nellore, Chittoor, Anantapur, Cuddapah and Kurnool. Within the Andhra region Chittoor, Anantapur, Cuddapah and Kurnool Districts and Giddalur and Markapur taluks now in Ongole district constitute the Rayalaseema region while the rest form the Coastal Andhra region.

According to the provisional figures of 1971 Population Census, the population of Andhra region in 1971 was 276.24 lakhs against 157.71 lakhs in the Telangana region. Thus, the population of the Telangana region constitutes 36.3 per cent of the total population of the State. The area of Telangana region, however, constitutes 41.8 per cent of the area of the State being 44.31 thousand square miles out of 106.05 thousand square miles.

Rayalaseema covers an area of 28.38 thousand square miles with a population of 83.28 lakhs. The

population of Rayalaseema is slightly less than one-fifth of the State.

The Coastal Andhra Region of the State is more densely populated than either the Telangana region or the Rayalaseema region. The density of population in Coastal Andhra in 1971 was 578 persons per square mile against 356 in Telangana and 293 in Rayalaseema. Thus, the density in Telangana was about 3/5ths of that in Coastal Andhra.

Telangana :

The Telangana region comprises of the nine districts of Adilabad, Hyderabad, Karimnagar, Khammam, Mahbubnagar, Medak, Nalgonda, Nizamabad and Warangal. After the Reorganisation of States on 1st November, 1956, Bhadrachalam and Nugur taluks of East Godavari district were added to Khammam district, while Munagalaparagana comprising 23 villages was transferred from Krishna district to Nalgonda district.

The annual rainfall in the region varies from about 25" to 50". Generally the rainfall is satisfactory in the northern and eastern parts of the region, while the south western tract of the region comprising parts of Hyderabad, Mahbubnagar and Nalgonda districts and Jangaon taluk of Warangal district, has a low rainfall with low dependability. In this area, the problem of soil erosion is also severe. Generally, the soils of the region are responsive to the application of chemical fertilisers but are deficient in plant nutrients and, therefore required higher doses of fertilisers. The region has a sizeable area under black cotton soils which would be useful for growing cotton and tobacco crops extensively. The yields per acre of irrigated crops in the region are generally comparable with those obtaining elsewhere in the State. The same cannot be said about the dry crops, the yields of which are generally low, because these crops are mostly dependent on the vagaries of monsoon. The cropping pattern in the region, especially in the case of dry crops, is heavily weighted in favour of low income yielding crops such as millets and pulses. The irrigated area in the region is only 21 per cent against 37 per cent in the rest of the State.

The region is also of fairly rich in mineral resources, the most important of which are coal, iron ore and limestone. There are also deposits of other minerals such as clays, quartz, barytes, graphite etc. The exploitation of these minerals, however, is not commensurate with the reserves. The region is also rich in forest resources containing nearly 44.5 per cent of the forest area of the State. Teak and bamboo are extensively found in the forests of this region. In spite of the availability of natural resources the region is backward compared to the rest of the State in many sectors. This is primarily due to the inadequate investments, both in the private and public sectors, in developing the available potential. Consequently, the per capita income in the region is lower than that in the rest of the State.

Keeping in view the special problems and the potential available in different parts of the region, the strategy indicated for the development of this region is as follows:—

(a) Since irrigation is the most important input for agricultural production and since the region has a low percentage of irrigated area, it is necessary that all the available surface irrigation should be developed as quickly as possible.

(b) It is estimated that the development of the entire surface irrigation potential available would only take the percentage irrigation in the region from the present 21 per cent to about 36 to 37 per cent of the cultivable area. It is therefore necessary that simultaneously steps have to be taken to explore and develop the underground water potential to the maximum extent possible.

(c) The cropping pattern within the region requires diversification with emphasis on high income yield crops. The region has sizeable area under black cotton soil and this should be made use of in growing commercial crops, such as cotton and tobacco more extensively than now.

(d) The application of chemical fertilizers and adoption of improved technology should be accelerated from the present low levels. Even in regard to irri-

gated crops, it is necessary that emphasis is laid on irrigated dry crops, so that the water resources available in the region could be used more extensively.

(e) To conserve water resources of the region, it is necessary to adopt improved methods of water management such as lining of canals, larger localisation for irrigated dry crops, growing of short duration crops, multiple cropping etc.

(f) The soil conservation programme should be taken up in a large way both to conserve the top soil as well as to conserve rain water for dry cultivation.

(g) The dry farming techniques should be developed and adopted, especially in those areas where the irrigation resources are low such as the tract in the south-western part of the region.

(h) The forest resources of the region should be exploited to their optimal level. This requires a sustained programme of afforestation with commercial species, planting of quick growing species etc.

(i) The animal husbandry programme should be oriented towards upgrading of the livestock. Priority should be given for the development of dairying, poultry and sheep rearing and the marketing of these products.

(j) The region possesses large resources of coal, limestone and iron ore. The exploitation of these minerals is, however, not commensurate with the available reserves. The coal available in the region is of non-coking type and not directly useful for conventional steel production. Experiments should, therefore, be carried out to use them in the manufacture of pre-reduced pellets containing 89 to 95 per cent of iron with the lower grade iron available in the region. Similarly, the possibilities of low temperature carbonisation of these coals should also be explored.

(k) Minerals such as quartz, dolomites and graphite which are located in the region, but for which no prospecting has been taken up, should be explored quickly and their commercial exploitation expedited.

(l) The region offers good scope for establishing agro, mineral and forest based industries. These possi-

bilities should be explored and an integrated programme for the development of these resources based industries should be drawn up.

(m) Adequate incentive should be offered in the form of developed sites, concessional supply of water and electricity etc., for attracting large, medium and small industries in the private and central sectors in the region.

(n) The communication facilities in the region should be improved quickly with a view to connect all the villages with the important trading and commercial centres.

The social service facilities, especially education and health, in the region require greater attention.

Rayalaseema :

Rayalaseema comprises Anantapur, Chittoor, Cuddapah and Kurnool Districts and also the Giddalur and Markapur taluks of Ongole district. With an area of about 28,000 square miles and a population of 8 millions this is a predominantly agricultural region. Agriculture itself is dependent on rainfall with only 10 per cent of the areas under assured irrigation sources. Rainfall is low, uneven and uncertain. It is a dryhumid area. The major crops are groundnut, millets, cotton and paddy.

Rayalaseema is treated as a division in the natural region of Deccan. It is also treated as a natural economic region for planning in India. It is a distinct physiographic region known as the Rayalaseema plateau.

Nature is unfavourable to the area. While rainfall is scanty, uneven and uncertain the region is endowed with predominantly red shallow soils. Surface water has been almost exhausted. Ground water potentiality is low. The mineral potential is primarily in terms of lime stone, barytes, asbestos, china clay and low grade iron ore. (The existence of diamond and gold is indi-

cated). The levels for socio-economic development and resource potential are low. On its own, the regions' capacity of diverting rural population to industrial and urban area is considered low both in the immediate distant future. This is therefore treated as a "problem region". (Economic Regionalisation of India—Problems and Approaches 1968).

Large scale manufacture accounted for about 1.5 per cent of regional income during the last decade while small scale manufacturing accounted for 4 per cent. The number of establishments registered have declined from 644 in 1957 to 595 in 1968. There has been a marginal increase in the number of workers employed from about 17,000 to about 18,000. The total factory employment in Rayalaseema is only 7 to 8 per cent of the total factory employment in the State. With regard to the industrial structure, the small units predominate. There are a few mineral-based industries which could be termed as producing basic goods in this area employing about 1/7th of workers (1969). Capital goods are not manufactured at all in the region. Intermediate goods in terms of chemicals and engineering goods employ less than 30 per cent of the labour force. Consumer goods, especially agro-based production, account for a major portion of the existing employment. A large percentage of the growth during the period 1962-1969 has been accounted for by transport equipment, repairs and services, metal and agro-based industries.

The major export items of the region are oil seeds. Minerals and mineral products are important followed by vegetables and fruits. Minerals and metals are mainly transported by rail. In 1970, for instance, of the total movement, 25 per cent was agricultural products, 60 per cent mineral products including cement and the rest was sugar and vegetable-oils which could be categorised as "unmanufactured products".

The few major centres of activity of the region are mostly situated around the railway lines and all of them fall under the influence of the metropolitan centres of Madras, Bangalore, Hyderabad and to some extent Bombay. On the basis of an analysis of the structure of the region's economy as also the potential

and functional linkages with other regions, the strategy that could be indicated is as follows :

- (a) Development of crops using least water and emphasis on dry land agriculture. Major crops to be developed are groundnut and cotton;
- (b) Development of agro-based industries to the full, especially groundnut and cotton;
- (c) Development of an industrial complex based on groundnut and cotton covering all the possible process;
- (d) Development of minerals and mineral-based industries constituting a mineral based industrial complex using lime stone, barytes and asbestos;
- (e) A policy of concentrated decentralisation involving the growth centres already delineated wherein infrastructural facilities have to be provided in a concentrated way;
- (f) Effective functional linkage with metropolitan centre through transport and communications and also the possibility of developing a nodal central within the region in the long run either in the Guntakal-Gooty belt or the Cuddapah-Proddatur belt against the background of the possibility of exploiting the advantage of the steel plant at Hospet in the long run; and
- (g) A crash programme for the establishment of foot loose industries and central sector-undertakings since, at the moment, there is no strong economic base in the region to sustain growth and attracting outside capital and entrepreneurship for a number of foot loose activities and the maximum use of concessional institutional finance in the area to strengthen the economic base.

Coastal Andhra :

This region consists of a belt of varying width between the Eastern Ghats and the Bay of Bengal

comprising the eight Coastal districts of Srikakulam, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Ongole and Nellore. According to the 1971 the total population of the region is 198.35 lakhs covering an area of 37.33 thousand square miles. The length of Coast line is about 600 miles with seven working ports including one major port as Visakhapatnam and two intermediate ports at Kakinada and Machilipatnam. Visakhapatnam is the only major port between Calcutta and Madras with an excellent natural Harbour, the hinterland of which stretches into Madhya Pradesh and Orissa.

2. All the major rivers of the State, *viz.*, the Godavari, Krishna, Denhar, Vamsadhara and Nagavali flow through this region. The soils of the region are among the richest obtaining in the State. The normal annual rainfall of the region averages 1,017 mm., varying from 832 mm., in Guntur district to 1,138 mm., in East Godavari. Added to these natural resources the enterprise of the cultivators has made the region one of the richest agricultural areas in the country.

3. Agriculture is basic to the economy of the region and the resources available for agricultural development are very high. Green revolution has already become, to a substantial extent, a fact. The basic crop is Paddy followed by Sugar cane and fruits and Vegetables. The other Commercial crop of significance is tobacco. In addition, groundnut, cotton and millets are also grown. The level of productivity is high in respect of all these commodities.

4. As regards forest wealth, the production of bamboo is most impressive. Bamboo is used by the Andhra Paper Mills at Rajahmundry. In the forest areas of the eastern zone valuable minor forest produce is collected by the tribals.

5. The region possesses sizeable mineral resources such as Mica (Nellore), Manganese (Srikakulam), Copper (Guntur), Limestone, Graphite Clay *etc.*

6. The region, inspite of its agricultural prosperity, has not been able to develop a substantial industrial

base so far. Industry and mining contribute only 8.3 per cent of the total income generated in the region. The workers engaged in manufacturing industries are only 1.3 per cent of the total population. Even the existing industrial structure is very much loaded in favour of agro-based in the region. The major industrial undertakings of the region are the Andhra Pradesh Paper Mill at Rajahmundry. Government Ceramic Factory in Nellore district and the Hindustan Shipyard at Visakhapatnam. The recent additions to the industrial set-up in the region are Bharat Heavy Plates and Vessels, the Dry Dock Project, the Coromandal Fertilisers and the Caltex Refinery—all of them in and around the Visakhapatnam town. Agnigundala Copper Project under erection in Guntur district is a land mark in the mineral development of the area.

7. As regards Transport and Communications, the region is fairly well provided with a net work of Railways National Highways and othe roads.

8. To sum up, the resources position and the background of the Coastal Andhra Economy could be expressed as follows:—

- (a) Generally high agricultural prosperity;
- (b) Existence of a substantial agricultural surplus;
- (c) Substantial demand for consumer goods;
- (d) Existence of a major port at Visakhapatnam, two minor ports and adequate rail and road facilities;
- (e) Availability of mineral resources especially manganese in the east, copper-lead complex and limestone in the centre and mica in the southern zone;
- (f) Existence of a long Coast line with potential for the development of fisheries; and
- (g) Substantial minor forest produce in the tribal areas.

9. In the light of the above considerations, the broad strategy for the development of Coastal Andhra would be as follows:—

- (a) Diversification of agriculture by introducing a variety of crops and intensification of agriculture;
- (b) Fuller development of agro-based industries including dairy products appropriately spread over the area.
- (c) Development of demand based industries spread over a number of centres in the region to cater to the growing consumer demand;
- (d) Development of a major industrial complex based on ports, especially heavy industries and engineering industries in Visakhapatnam. Visakhapatnam is destined to develop as a major metropolitan centre between Madras and Calcutta. Hence effective policy measures have to be taken to aid this development;
- (e) Development of industrial complexes in the important centres in prosperous areas, *viz.*, the Guntur-Vijayawada belt and the Rajahmundry-Kakinada belt;
- (f) Development of minerals and mineral-based industries in Visakhapatnam, Guntur and Nellore districts;
- (g) Development of sea-food processing industries and the necessary infrastructure along the coast-line;
- (h) Special efforts to Plan certain industries based on minerals and forests in the tribal belt of the Region; and
- (i) With the substantial agricultural prosperity, the natural process of regional development would be in terms of demand-based and export-based industries. With the available surplus, local demand and resources, dependence on outside capital will not be essential though this need not be ruled out. Concentration should, however, be on the development of enterpreneurial skill within the area.

Regional Development Policy :

Besides the preparation of regional Plans for the three distinct regions of Telangana, Rayalaseema and Coastal Andhra, the identification of different areas in the State for special purposes based on selected criteria related to these purposes has also been done from time to time as follows:—

- (1) In connection with the preparation of special Plans for drought affected areas, 75 taluks in the State have been identified as drought affected of which 33 are in the hard core;
- (2) For purposes of allocation of Community Development Funds, the Community Development Blocks in the State have been classified as advanced, ordinary, backward and tribal;
- (3) For purposes of certain concessions related to the establishment of industries, the Government of India have identified certain backward areas based on the recommendations of the Pande Committee; and
- (4) In connection with the allocation of Plan outlays between the three regions, *viz.*, Telangana, Rayalaseema and Coastal Andhra, it was decided for the Annual Plan 1971-72 that for 10 per cent of the total Plan outlay weightage would be given for backward areas. For this purpose, all the districts were ranked by the Planning Commission on the basis of certain criteria prescribed by them.

Drought affected Taluks :

Chronically drought affected taluks have been delineated on the basis of certain criteria which have been prescribed in consultation with the Planning Commission who have stated that they are basically sound. The criteria are as follows:—

The chronically drought affected taluks in the State have been identified on the basis of the minimum average annual rainfall of 30 inches in each taluk for a period of 21 years between 1942-62 as indicated below :

- (i) All taluks where the annual average deficit rainfall was short of the minimum of 30 inches

by 3 inches or more for 10 years or more during the period of 21 years, i.e., 1942-62 as chronically drought affected;

- (ii) All taluks where the annual average deficit rainfall was short of the minimum of 30" by 7" or more for 7 years or more during the period of 21 years i.e., 1942-62 as chronically drought affected; and
- (iii) All taluks where the Annual average deficit rainfall was short of the minimum of 30" by 7.5" or more for a period of 8 years or more during the period of 21 years i.e., 1942-62 as 'hard core'.

The list of Taluks is given in Annexure I.

With regard to the drought affected areas priority is given for Hydrological survey. Further, all the Heads of Departments have been instructed to give priority to the schemes under the drought affected areas. Moreover, special programmes like Rural Works Programme have been taken up in the drought affected areas. Special grants from the State Government have been given to most of the drought areas.

Backward Taluks for Community Development Programmes:

The criteria for declaring the Blocks as backward or forward are as follows:—

	<i>Weightage</i>
(a) Per capita land revenue assessed within the block ...	15
(b) Percentage of irrigated area to cultivated area ...	26
(c) Percentage of children of the age-group of 6-11 attending schools ...	10
(d) Literacy-District-wise ...	10
(e) District-wise national income ...	15
(f) Road mileage for 100 square miles within the block ...	25
Total ...	100

With regard to the blocks delineated as backward *etc.*, the Community Development Funds are distributed on a varying per capita basis depending on the level of development of each block as shown below :

	<i>Rupees per head in the block</i>
(a) Advanced Blocks	... $\frac{3}{4}$ X
(b) Ordinary Blocks	... X
(c) Backward Blocks	... $1\frac{1}{4}$ X
(d) Tribal Blocks	... 2 X

The list of Blocks is given in Annexure II.

Backward districts for Industrial concessions :

The following districts have been declared as industrially backward for concessions to be offered by the Financial Institutions :

Anantapur, Nellore, Chittoor, Cuddapah, Kurnool, Ongole, Srikakulam, Khammam, Nalgonda, Karimnagar, Medak, Mahabubnagar, Nizamabad and Warangal.

It is expected that concessions relating to rate of interest, extension of initial moratorium in the repayment of loans, longer amortisation period for loans, participation in risk capital, reduction in the underwriting commission, reduction in commitment charges, consultants' charges and certain other concessions are expected to flow to these districts. Further, the following tract have been approved to qualify for outright grant and subsidy by the Centre amounting to 1/10th of the capital investment of new units having a fixed capital investment of not more than Rs. 50 lakhs in the area. The tract from the Rayalaseema region comprises blocks of Chandragiri from the district of Chittoor, Proddatur, Kamalapuram, Cuddapah, Pulivendla, Rajampet, Kodur, Sidhout from the district of Cuddapah, Singanamala, Tadipatri, Gooty from the district of Anantapur, Kurnool, Dhone from the district of Kurnool. The tract also includes the Municipality of Tirupathi, Proddatur, Cuddapah, Anantapur, Tad-

patri, Guntakal and Kurnool. The tract from the Telangana region comprises blocks of Siddipet from the district of Medak, Peddapalli, Sultanabad, Karimnagar, Huzurabad from the district of Karimnagar, Hanamakonda, Narasampet, Mahbubabad from the district of Warangal, Khammam, Tirumalapalem from the district Khammam; Suryapet, Nalgonda, Mungodu, Nakrekal from the district of Nalgonda and Kalwakurty, Amangal from the district of Mahbubnagar. The Municipal towns falling within the above areas would also be entitled to the Central subsidy of 10 per cent. The State Government on its part is taking steps to create necessary infrastructure in the various growth centres identified in the tract, provide certain incentives and get number of feasibility reports prepared with the active co-operation of various promotional undertakings.

Weightage in Plan allocations for backward areas :

In connection with the determination of the fair share of Telangana in the developmental outlays, it was agreed during the discussions that the Chief Minister had with the Union Minister for Planning and the Chairman, Regional Committee in May, 1971 that weightage should be given for backward areas to the extent of 10 per cent of the Plan outlay on the basis of the ratio of the population in such areas in each region. The weightage so determined was 5 : 3 : 2 for three regions of Telangana, Rayalaseema and Coastal Andhra. The Plan outlays for 1971-72 were therefore allocated to the three regions to the extent of 90 per cent on the basis of the population of each region according to the 1971 Census and the balance of 10 per cent was allocated between the three regions in the ratio of 5 : 3 : 2 mentioned above.

REGIONAL DEVELOPMENT EFFORT—A REVIEW :

As a back drop for appreciating the regional development effort in Andhra Pradesh it is essential that a review be made of the plan expenditure and the progress achieved in different regions in respect of important developmental activities such as Agriculture, Irrigation, Industries, Credit, Communications, Education, Health etc.

The new State of Andhra Pradesh was created exactly 7 months after the commencement of the Second Plan. By the time the States Re-organisation Act was given effect to, the Second National Five-Year Plan was already finalised and under implementation and therefore the Second Plan of Andhra Pradesh was evolved by combining the Second Five-Year Plan of erstwhile Andhra State and the Telangana component of the Second Five-Year Plan of the erstwhile Hyderabad State. Thus, the new State of Andhra Pradesh could not have a direct involvement in the formulation of the Second Plan of the State.

The new Andhra Pradesh State has so far implemented the Second Plan, the Third Plan and the three Annual Plans for the years 1966-67, 1967-68 and 1968-69. The Fourth Five-Year Plan of the State has commenced from 1st April, 1969.

In the Second Plan, an amount of Rs. 188.60 crores was spent in the State's Sector. Out of this, Rs. 64.42 crores was spent in the Telangana region and the remaining Rs. 124.18 crores in the Andhra Region. The expenditure incurred in the Telangana region during this Plan formed 34.2 per cent of the total expenditure in the State. Separate figures for Rayalaseema and Coastal Andhra in the Andhra region are not available.

In the Third Plan, Andhra Pradesh spent Rs. 352.42 crores in the State—Rs. 205.82 crores in the Andhra region and Rs. 146.60 crores in the Telangana region including Rs. 15.62 crores for special development schemes of Telangana. The expenditure in the Telangana region formed 41.6 per cent of the total plan expenditure. Even excluding the expenditure on special development schemes, the expenditure in the Telangana region was of the order of 37.2 per cent of the total plan expenditure.

In the three Annual Plans for the years 1966-67, 1967-68 and 1968-69, the State has spent Rs. 234.06 crores—Rs. 135.26 crores in the Andhra region and Rs. 98.80 crores in the Telangana region including Rs. 5.88 crores on the special development schemes of

Telangana. The expenditure in the Telangana region would form 42.2 per cent of the total plan expenditure in the State. If the special development schemes are excluded the plan expenditure in Telangana formed 40.7 per cent of the total.

11. The progress achieved since the formation of the State under the more important sectors of development is reviewed region-wise in the following paragraphs.

Agriculture :

12. The expenditure in the plans during 1956-57 to 1968-69 Agricultural Sector (including Co-operation and Community Development) was of the order of Rs. 157.09 crores in the State. Out of this, Rs.52.89 crores was spent in the Telangana region forming 33.7 per cent of the total. The expenditure on major and medium irrigation during the above period was of the order of Rs. 78.18 crores in the Telangana region out of Rs. 209.81 crores in the State as a whole constituting 37.3 per cent of the total expenditure.

13. During this period there has been a considerable increase in the overall agricultural production. The gross value of agricultural production in the State has been compiled, on lines indicated by the Central Statistical Organisation, only from the year 1960-61 onwards. As per these figures, the gross value of agricultural production, at current prices, in the Telangana region, increased from Rs. 141.36 crores in 1960-61 to Rs. 355.27 crores in 1967-68 or an increase by 151.32 per cent. In the Andhra region, the gross value of agricultural production increased from Rs. 456.38 crores in 1960-61 to Rs. 909.70 crores in 1967-68, or an increase by 99.33 per cent. Within the Andhra region, the corresponding increase in Rayalaseema and Coastal Andhra was 108.55 and 78.88 per cent respectively. In 1968-69, the entire State suffered from wide spread drought conditions during the earlier part of the kharif season while in the later part of Kharif and Rabi, the Coastal districts of the State suffered from two severe cyclones which caused considerable damage to the standing crops. Hence, in year 1968-69 is not taken for purposes of comparative analysis,

**GROSS VALUE OF AGRICULTURAL PRODUCTION AT
CURRENT PRICES**

(Rs. in crores)

Region	Gross value of Agricultural production at current prices			Percentage incre- ase over 1960-61 in the years	
	1960-61	1964-65	1967-68	1964-65	1967-68
	(2)	(3)	(4)	(5)	(6)
(1) Coastal Andhra	.. 314.54	505.06	655.97	60.57	108.55
Rayalaseema	.. 141.84	215.18	253.73	51.71	78.88
Andhra Region	. 456.38	720.24	909.70	57.82	99.33
Telangana region	.. 141.36	270.14	355.27	91.10	151.32
Andhra Pradesh	.. 597.74	990.38	1,264.97	65.69	111.63

Source : Bureau of Economics and Statistics.

14. During 1960-61 to 1967-68, the gross value of agricultural production at constant (1960-61) prices increased by 17.73 per cent in Coastal Andhra, 6.35 per cent in Rayalaseema and 47.38 per cent in Telangana.

**GROSS VALUE OF AGRICULTURAL PRODUCTION
AT CONSTANT (1960-61) PRICES.**

(Rs. in crores)

Region	Gross value of Agricultural production at constant prices			Percentage incre- ase over 1960-61 in the years.	
	1960-61	1964-65	1967-68	1964-65	1967-68
	Coastal Andhra	.. 314.54	395.05	370.30	25.60	17.73
Rayalaseema	.. 141.84	158.14	150.85	11.49	6.35
Andhra Region	.. 456.38	553.19	521.15	21.21	14.19
Telangana region	.. 141.38	203.57	208.34	44.01	47.38
Andhra Pradesh	.. 597.74	756.76	729.49	26.60	22.04

Source : Bureau of Economics and statistics.

15. During the period 1956-57 to 1967-68 there has been a substantial increase in the production of several important agricultural commodities. For instance, the production of rice in the Telangana region increased from 6.34 lakh tonnes in 1956-57 to 13.30 lakh tonnes in 1967-68, or an increase by 109.8 per cent while in the Andhra region it increased from 27.19 lakh tonnes to 32.70 lakh tonnes *i.e.*, by 20.4 per cent. Some parts of the State were affected by drought conditions in 1967-68 also and therefore the comparison will be more appropriate if a good agricultural year in the recent past such as 1964-65 is taken up for comparison. The production of rice increased by 100.2 per cent in the Telangana region and 34.5 per cent the Andhra region during 1956-57 to 1964-65. Within the Andhra region the production of rice increased by 31.5 per cent in Coastal Andhra and 50.8 per cent in Rayalaseema during this period.

PRODUCTION OF RICE BY REGIONS

Region	Production (in lakh tonnes)			Percentage increase in 1964-65 over 1956-57	% increase in 1969-70 over 1956-57
	1956-57	1964-65	1967-68		
Coastal Andhra	22.90	30.11	27.47	31.5	20.0
Rayalaseema	4.29	6.47	5.23	50.8	21.9
Andhra Region	27.19	36.58	32.70	34.5	20.4
Telangana Region	6.34	12.69	13.30	100.2	109.8
Andhra Pradesh	33.53	49.27	46.00	46.9	37.2

Source : Season and Crop Reports of Andhra Pradesh, 1956-57, 1964-65, and 1968-69 issued by the Bureau of Economics and Statistics, Andhra Pradesh, Hyderabad.

16. If we consider the total foodgrains production, it will be observed that in the Telangana region, the production went up from 14.54 lakh tonnes in 1956-57 to 24.75 lakh tonnes in 1964-65, or an increase by 70.2 per cent. On the other hand, in the Andhra region the production went up by 17.6 per cent from 43.44 lakh tonnes to 51.07 lakh tonnes.

PRODUCTION OF FOOD GRAINS BY REGIONS

Region	Production (in lakh tons)			Percentage increase in 1964-65 over 1956-57	Percentage increase in 1967-68 over 1956-57
	1956-57	1964-65	1967-68		
Coastal Andhra	.. 30.42	37.93	34.24	24.7	12.6
Rayalaseema	.. 13.02	13.14	11.30	0.9	(—)13.2
Andhra Region	.. 43.44	51.07	45.54	17.6	4.8
Telangana region	.. 14.54	24.75	25.25	70.2	73.6
Andhra Pradesh	.. 57.98	75.32	70.79	30.8	22.1

Source : Season and Crop report of Andhra Pradesh, 1956-57, 1964-65 and 1967-68 issued by the Bureau of Economics and Statistics, Andhra Pradesh, Hyderabad.

17. Much of the increase in production was achieved by an increase in the productivity per acre as can be seen from the following table.

GROSS VALUE OF OUTPUT PER ACRE OF CROPPED AREA AT CONSTANT (1960-61)

Region	Prices (in Rs.)				
	Gross value of outlay per acre at constant prices.			Percentage increase	
	1960-61	1964-65	1967-68	in 1964-65 over 1960-61	in 1967-68 over 1960-61
Coastal Andhra	.. 303	341	323	12.5	6.6
Rayalaseema	.. 179	203	195	13.3	9.0
Andhra Region	.. 249	285	271	14.4	8.9
Telangana Region	.. 130	168	168	29.3	29.3
Andhra Pradesh	.. 205	240	231	17.3	12.7

Source: Bureau of Economics and Statistics, Andhra Pradesh, Hyderabad

The gross value of output per acre at constant prices increased by 6.6 per cent in Coastal Andhra, 9.0 per cent in Rayalaseema and 29.3 per cent in Telangana during 1960-61 to 1967-68.

18. The main factors responsible for an increase in the productivity per acre over the period under review were the extension of irrigation, use of improved seeds, consumption of chemical fertilizers on an increasing scale and the adoption by the cultivator of better farming techniques.

Irrigation :

19. Over the period from 1956-57 to 1968-69 the gross area irrigated in the Andhra region increased from 60.71 lakh acres to 71.67 lakh acres, or an increase by 18.1 per cent. On the other hand, in the Telangana region, the gross area irrigated decreased from 23.00 lakh acres to 26.47 lakh acres or an increase by 15.1 per cent. Within the Andhra region, the corresponding increase in Coastal Andhra was 17.7 per cent and Rayalaseema 19.2 per cent.

GROSS AREA IRRIGATED BY REGIONS

Regions	Gross area irrigated (lakh acres)			Percentage increase in 1964-65 over 1956-57	Percentage increase in 1967-68 over 1956-57
	1956-57	1964-65	1967-68		
Coastal Andhra	47.59	53.91	56.03	13.3	17.7
Rayalaseema	13.12	15.90	15.64	21.2	19.2
Andhra Region	60.71	69.81	71.67	15.0	18.1
Telangana Region	23.00	25.33	26.47	10.1	15.1
Andhra Pradesh	83.71	95.14	98.14	13.7	17.2

Source : B. E. & S. S. & C. Report.

20. The percentage of cropped area irrigated increased from 18.6 per cent in 1956-57 to 21.3 per cent in 1967-68 in the Telangana region. The corresponding increase in Rayalaseema was from 16.4 to 20.2 per cent and in Coastal Andhra from 45.9 to 48.9 per cent.

GROSS AREA IRRIGATED AS A PERCENTAGE OF CROPPED AREA

(*Figures in lakh acres*)

Regions	1956-57			1967-68		
	Gross cropped area	Gross area irrigated	Percentage of irrigated area to cropped area	Gross cropped area	Gross area irrigated	Percentage of irrigated area to cropped area
Coastal Andhra	103.58	47.59	45.9	114.65	56.03	48.9
Rayalaseema	80.15	13.12	16.4	77.31	15.64	20.2
Andhra Region	183.73	60.71	33.0	191.96	71.67	37.3
Telangana Region	123.77	23.00	18.6	124.19	26.47	21.3
Andhra Pradesh	307.50	83.71	27.2	316.15	98.14	31.0

Source : B. E. & S. S. & C. Report.

Fertilizers :

21. The distribution of nitrogenous chemical fertilisers through the departmental agencies increased from 1.00 lakh tonnes in 1957-58 to 8.44 lakh tonnes in 1968-69 in the Andhra Region while in the Telangana region, it has increased from a mere 0.14 lakh tonne to 2.44 lakh tonnes. In 1957-58 the consumption of fertilisers in the Talangana region formed only 11.9 per cent of the total consumption in the State while in 1968-69 the consumption went upto 22.4 per cent of the total. Within the Andhra Region, the distribution of nitrogenous fertilisers through departmental agencies increased by 629 per cent in Coastal Andhra and 13.83 per cent in Rayalaseema over this period.

**DISTRIBUTION OF NITROGENOUS FERTILISERS THROUGH
GOVERNMENT AGENCY, BY REGIONS**

Regions	Fertilisers distributed (*000 tonnes)			Consumption per acre of gross irrigated area in 1968-69 (in kgs.)
	1957-58	1968-69	Percent- age in- crease	
Coastal Andhra ..	84.6	616.3	629.1	111.3
Rayalaseema ..	15.4	228.1	1,383.1	161.77
Andhra Region ..	100.0 (88.1)	844.4 (77.6)	744.4	121.6
Telangana Region ..	13.5 (11.9)	243.9 (22.4)	1,710.2	122.6
Andhra Pradesh ..	113.5 (100.0)	1,088.3 (100.0)	859.3	121.8

Source : Director of Agriculture.

22. Taking into consideration the phosphatic fertilisers also, the distribution of which is now with the private agency, the consumption of total chemical fertilisers went up from 1.19 lakh tonnes in 1957-58 to 11.62 lakh tonnes in 1968-69 in the Andhra region while in the Telangana region it went up from 0.16 lakh tonne to 3.49 lakh tonnes during the same period. In terms of consumption per acre of gross irrigated area there has been a spectacular increase in both the regions.

**DISTRIBUTION OF FERTILISERS (BOTH NITROGENOUS AND
PHOSPHATIC) BY REGIONS**

Regions	Distribution of Chemical fertilisers (*000 tonnes)			Consumption per acre of gross irrigated area (in kgs.)		
	1957-58	1968-69	percent- age in- crease	1957-58	1958-59	Percent- age in- crease
Andhra ..	*119	1,162	876.5	19.6	167.3	753
Telangana ..	16	349	2,081.2	7.0	175.5	2,407
Andhra Pradesh .	135	1,511	1,019.3	16.1	169.1	950

Source : Director of Agriculture.

*Break up for Coastal Andhra and Rayalaseema for 1957-58 is not available.

23. The oil engine and electric motor pump sets utilised for agricultural purposes have expanded remarkably over the period 1956-57 to 1969-70.

24. The number of electric motor pump sets used for irrigation purposes increased from 231 in 1956-57 to 57,297 in 1969-70 in the Telangana region. On the other hand, in the Andhra region, the number increased from 4,699 in 1956-57 to 1,00,347 in 1969-70. In 1956-57, the number of electric motor pump sets used for irrigation purposes in Telangana formed 4.7 per cent of the total pump sets in the State while in 1969-70 the percentage has increased to 36.3.

PUMPSETS ELECTRIFIED BY REGIONS

Regions	NUMBER OF PUMPSETS ELECTRIFIED			Percentage Increase in 1967-68 over 1956-57	Percentage Increase in 1969-70 over 1956-57
	1956-57	1967-68	1969-70		
Coastal Andhra	2,911	29,599	46,952	917	1,573
Rayalaseema	1,783	31,479	53,395	1,661	2,886
Andhra Region	4,699 (95.3)	61,078 (66.8)	100,347 (63.7)	1,200	2,036
Telangana Region	231 (4.70)	30,301 (33.2)	57,297 (36.3)	13,017	24,704
Andhra Pradesh	4,930 (100.0)	91,379 (100.0)	1,57,644 (100.0)	1,754	3,098

1. Source : Andhra Pradesh State Electricity Board.
2. Figures in brackets indicate percentage to State total.

25. If the number of Electric Motor pumpsets energised is compared with the area irrigated under wells, it will be observed that the number of electric motor pumpsets available per 1,000 acres of well irrigated area increased from a mere 1 in 1956-57 to 73 in 1968-69 in Telangana as against an increase from 7 to 77 in Rayalaseema and from 14 to 149 in Coastal Andhra.

**ELECTRIC MOTOR PUMPSETS PER THOUSAND ACRES OF
WELL IRRIGATED AREA BY REGIONS**

Regions	1956-57			1968-69		
	Electric motor pump-sets (No.)	Area irrigated under wells ('000 acres)	No. of pump-sets per 1,000 acres of well irrigated area	electric motor pump sets (No.)	Area irrigated under wells ('000 acres)	No. of pump-sets per 1,000 acres of well irrigated area
Coastal Andhra .	2,911	206	14.1	44,068	295	149.4
Rayalaseema .	1,788	267	6.7	43,010	562	76.5
Andhra Region	4,699	473	9.9	87,078	857	101.6
Telangana Region	231	321	0.7	43,301	592	73.1
Andhra Pradesh	4,930	794	6.2	1,30,379	1,449	90.0

Source : Andhra Pradesh Electricity Board.

26. Similarly the number of Oil Engines used for irrigation purposes have also increased substantially. They increased by 156 per cent in Telangana, 148 per cent in Coastal Andhra and 240 per cent in Rayalaseema over the period 1956 to 1966.

OIL ENGINE PUMPSETS, BY REGION

Region	NUMBER OF OIL ENGINES			Percentage increase in 1966 over 1956
	1956	1961	1966	
Coastal Andhra	.. 4,727	9,082	11,706	148
Rayalaseema	.. 5,003	9,187	16,995	240
Andhra Region	.. 9,730 (58.0)	18,369 (54.1)	28,701 (61.4)	195
Telangana Region	.. 7,041 (42.0)	15,571 (45.9)	18,040 (38.6)	156
Andhra Pradesh	.. 16,771	33,940	46,741	179

source : Live Stock Census, 1966.

27. The number of Oil Engines Pumpsets available per 1,000 acres of well irrigated area increased from 22 in 1956 to 46 in 1966 in the Telangana region against an increase from 19 to 38 in Rayalaseema and from 23 to 39 in Coastal Andhra.

OIL ENGINE PUMPSETS PER THOUSAND ACRES OF WELL IRRIGATED AREA BY REGIONS

Region	1956-57			1966-67		
	Oil engine pumpsets (No.)	Area irrigated under wells (000 acres)	No. of pumpsets per 1000 acres well irrigated	Oil engines pumpsets (No.)	Area irrigated under wells (000 acres)	No. of pumpsets per 1000 acres irrigated area.
Coastal Andhra .	4,727	206	22.9	11,706	304	38.5
Rayalaseema ..	5,003	267	18.7	16,995	447	38.0
Andhra Region .	9,730	473	20.6	28,701	751	38.2
Telangana Region	7,041	321	21.9	18,040	391	46.1
Andhra Pradesh .	16,771	794	21.1	46,741	1,143	40.9

Source : 1. Quinquennial Livestock Census report 1956 and 1966.
2. Season and Crop Report 1956-57 and 1966-67.

Co-operative Credit:

28. The development of Agriculture depends in part, on the availability of cheap credit during the peak season for agricultural operations. In order to make available such credit at cheap rates of interests within the reach of the common cultivator, the development of Co-operative Societies has been taken up as one of the main plans of agricultural development.

29. It will be observed from the following table that there has been significant progress during the period 1956-57 to 1968-69 in the number and activities of Primary Agricultural Credit Societies. The number of credit societies increased from 3,074 in 1956-57 to 6,427 in 1968-69 or by 109.1 per cent in the Telangana region as against an increase from 6,616 in 1956-57 to

8,754 in 1968-69 or by 32.3 per cent in the Andhra region. The membership had increased during the same period by 325.9 per cent in the Telangana region and 93.4 per cent in the Andhra region. There had also been a substantial increase under owned funds, deposits, borrowings from central Financing Agencies, working capital and loans issued in both the regions while the growth in the Telangana region had been more pronounced. The amount of loans issued in the Telangana region had increased from a mere Rs. 61.48 lakhs in 1956-57 to Rs. 719.59 lakhs in 1968-69 or by 1070.4 per cent while in the Andhra region the increase was from Rs. 803.69 lakhs in 1956-57 to 1869.31 lakhs in 1968-69 or by 13.6 per cent.

PRIMARY AGRICULTURAL CREDIT SOCIETIES

<i>Item</i>	<i>Unit</i>	<i>Region</i>	1956-57	1968-69	<i>Percent- age in- crease</i>
1. Primary Agricultural credit societies.	Number	Andhra	6,616	8,754	32.3
		Telangana	3,074	6,427	109.1
		A.P.	9,690	15,181	56.7
2. Membership	.. Lakh Nos.	Andhra	7.55	14.60	93.4
		Telangana	1.16	4.94	325.9
		A. P.	8.71	19.54	124.3
3. Own funds	.. Rs. Lakhs	Andhra	247.97	835.03	236.7
		Telangana	47.67	272.88	472.4
		A. P.	295.64	1,107.91	274.7
4. Deposits	.. Do.	Andhra	52.28	227.45	335.1
		Telangana	1.56	47.16	2,923.1
		A. P.	53.84	274.61	410.0
5. Borrowings from central Financing Agents.	Do.	Andhra	739.31	1,919.82	159.8
		Telangana	72.98	1,032.95	1,315.4
		A. P.	812.29	2,952.77	263.5
6. Working Capital	Do.	Andhra	1,039.56	2,982.29	286.9
		Telangana	122.21	1,353.00	1,007.1
		A. P.	1,161.77	4,335.29	273.2
7. Loans	.. Do.	Andhra	903.69	1,869.31	132.6
		Telangana	61.48	719.59	1,070.4
		A. P.	865.17	2,588.90	199.2

Source: Registrar of Co-operative Societies, Andhra Pradesh, Hyderabad.

30. The progress was similarly impressive even in regard to the disbursement of long term credit. The number of primary Land Mortgage Banks in the Telangana Region increased from 12 in 1956-57 to 66 in 1968-69 while in the Andhra Region they increased from 57 in 1956-57 to 115 in 1968-69. The loans issued by the Land Mortgage Banks in the Telangana region increased from Rs. 5.32 lakhs in 1956-57 to Rs. 631.81 lakhs in 1968-69 while in the Andhra Region they increased from Rs. 69.35 lakhs to 1,320.84 lakhs over the same period.

PRIMARY LAND MORTGAGE BANK.

Item	Andhra		Percentage increase.	Telangana		Percentage increase.
	1956-57	1968-69		1956-57	1968-69	
1. No. of banks	57	115	101.7	12	66	450.0
2. Membership (lakhs No.)	1.04	5.08	388.4	0.10	1.83	1,730.0
3. Share capital (Rs. lakhs)	29.23	353.94	1,110.9	1.51	136.72	9,054.3
4. Working capital (Rs. lakhs)	412.62	4,824.02	1,069.1	13.68	1,858.16	13,583.0
5. Loans issued (Rs. lakhs)	69.35	1,320.84	1,804.6	5.32	631.81	11,876.1

Source: Registrar of Co-operative Societies, Andhra Pradesh, Hyderabad.

Animal Husbandry:

31. Animal Husbandry forms an important aspect of agricultural development. The provision of facilities for treatment of cattle is an important scheme under the Animal Husbandry Programmes. It will be seen from the table below that there has been a rapid increase in the Veterinary institutions in all the regions of the State during 1956-57 to 1968-69.

VETERINARY INSTITUTIONS, BY REGIONS

Region	Veterinary institutions		Percentage increase in 1968-69 ⁹ over 1956-57 ⁷
	1956-57	1968-69	
Coastal Andhra	107	319	198
Rayalaseema	72	144	100
Andhra Region	179 (62.8)	463 (61.7)	159
Telangana Region	106 (37.2)	287 (38.3)	171
Andhra Pradesh	285	750	163

Source : Statistical Abstract of Andhra Pradesh.

If the dispensaries under the control of Extension Officers (Animal Husbandry) and those under the charge of Livestock Inspectors in the old Community Development Blocks are also taken into account, the position regarding the total number of veterinary institutions in the State will be as follows:—

VETERINARY INSTITUTIONS INCLUDING BLOCK VETERINARY DISPENSARIES

Region	Number of veterinary institutions		Percentage increase in 1968-69 over 1956-57	No. of institutions available per lakh of bovine population in 1968-69
	1956-57	1968-69		
Coastal Andhra	107	513	379	7.0
Rayalaseema	72	234	225	6.5
Andhra Region	179 (62.8)	747 (63.3)	317	6.8
Telangana Region	106 (37.2)	433 (36.7)	308	5.3
Andhra Pradesh	285	1,180	314	6.2

Source : Director of Animal Husbandry.

Power :

32. During the period 1956-57 to 1969-70 there has been a spectacular progress in rural electrification in the State, while the development in the Telangana region has been even more impressive. In the Telangana region the number of towns and villages electrified increased from a mere 18 in 1956-57 to 2,539 in 1969-70 while in Coastal Andhra they increased from 398 to 3,108 and in Rayalaseema from 147 to 1,553. In 1956-57 the number of towns and villages electrified in the Telangana region formed only 3.2 per cent of the total in the State while in 1969-70 they formed as much as 35.3 per cent.

TOWNS AND VILLAGES ELECTRIFIED, BY REGION

Region	Number of electrified				Per- centage in- crease in 1967-68 over 1956-57	Per- centage in- crease in 1969-70 over 1956-57
	1956-57	1967-68	1968-69	1969-70		
Coastal Andhra .	398	2,372	2,674	3,108	496	681
Rayalaseema ..	147	1,048	1,292	1,553	637	956
Andhra Region .	545 (96.8)	3,456 (69.8)	3,966 (68.7)	4,661 (64.7)	534	755
Telangana Region	18 (3.2)	1,494 (30.2)	1,792 (31.3)	2,539 (35.3)	8,200	14,006
Andhra Pradesh	563 (100.0)	4,950 (100.0)	5,758 (100.0)	7,200 (100.0)	779	1,179

Source : Electricity Board.

33. There has been a substantial rise in the overall consumption of power in all the three regions of the State. Between 1957-58 and 1969-70 the total consumption of power increased by 528 per cent in Coastal Andhra, 645 per cent in Rayalaseema and 745 per cent in Telangana. In 1969-70 the per capita consumption of power in the Telangana region, though higher than that in the Rayalaseema was however lower than that in Coastal Andhra. The per capita consumption of power for irrigation purposes was 6.3 kwh., in Telangana against 12.9 kwh., in Rayalaseema and 6.9 kwh., in Coastal Andhra.

CONSUMPTION OF ELECTRICITY, BY REGIONS

Region	Total consumption (lakh kwh.)		Percentage in- crease in 1969-70 over 1957-58	Per capita consumption in 1969-70 (kwh.)		
	1957-58	1969-70		Indus- trial	Agricul- ture	Total
Coastal Andhra	1,673.6	10,507.6	528	37.6	6.9	55.4
Rayalaseema ..	404.6	3,013.1	645	15.0	12.9	36.1
Andhra Region	2,078.2	13,520.7	551	30.7	8.8	49.5
Telangana Region ..	673.5	5,693.5	745	20.6	6.3	37.1
Andhra Pradesh	2,751.7	19,214.2	598	27.1	7.9	45.1

Source : Electricity Board.

Industry:

34. The allocations in the State Plan are meant for the provision of infrastructural facilities such as power, water, land, etc., for the development of industries while the bulk of the investment on the industrial projects has to come from the Central Government sector and the private sector.

35. During 1956-57 to 1968-69 the plan expenditure was Rs. 12.46 crores in the Telangana region against Rs. 19.01 crores in the Andhra region towards the development of industries and mines. The plan expenditure in the Telangana region formed 40.0 per cent of the total expenditure in the State.

36. During the years 1960-61 and 1968-69, the income generated from manufacturing (Mining and Large Scale manufacturing) sector at current prices increased from Rs. 13.95 crores in 1960-61 to Rs. 33.88 crores in 1968-69 in Telangana as against Rs. 24.23 crores in 1960-61 to Rs. 51.42 crores in Andhra region. The income in Telangana region constituted 36.5 per cent of the total income in 1960-61 and 39.7 per cent in 1968-69. At 1960-61 prices, the income increased from Rs. 13.95 crores in 1960-61 to Rs. 24.45 crores in 1968-69 in Telangana region as against Rs. 24.23 crores

in 1960-61 to Rs. 37.74 crores in 1968-69 in Andhra region. The income increased by 142.8 per cent at current prices and 75.2 per cent at 1960-61 prices in Telangana region as against 112.3 per cent at current prices and 55.8 per cent at 1960-61 prices in Andhra region.

**INCOME GENERATED FROM MANUFACTURING
(MINING AND FACTORY ESTABLISHMENTS)**

	<i>At current prices</i>			<i>(Figures in Rs. crores) At 1960-61 prices</i>		
	1960-61	1968-69	<i>Percentage increase.</i>	1960-61	1968-69	<i>Percentage increase.</i>
Coastal Andhra .	21.13	45.68	116.2	21.13	33.53	58.7
Rayalaseema ..	3.10	5.75	85.3	3.10	4.21	35.8
Andhra Region ..	24.23 (63.5)	51.43 (60.3)	112.3	24.23 (63.5)	37.74 (60.7)	55.8
Telangana Region	13.95 (36.5)	33.88 (39.7)	142.8	13.95 (36.5)	24.45 (39.3)	75.2
Andhra Pradesh .	38.18 (100.0)	85.30 (100.0)	123.4	38.18 (100.0)	62.19 (100.0)	62.9

Source : Bureau of Economics and Statistics, Hyderabad, A. P.

37. The information on the investments made by the Central Government on industrial and mineral projects and major ports is available according to their location. A perusal of these figures shows that 67.0 per cent of the total investments in the State were in the Telangana region.

**CENTRAL SECTOR INVESTMENT ON INDUSTRIAL
PROJECTS (INCLUDING MAJOR PORTS) BY REGIONS**

<i>Region</i>	<i>Investment as at the end of 1967-68</i>	<i>Percentage to the total</i>
	<i>(Rs. in crores)</i>	
Andhra	41.77	33.0
Telangana	84.86	67.0
Andhra Pradesh ..	126.63	100.0

Source : Planning Department,

38. During 1957-69 while the number of factories registered under the Factories Act increased by 48.7 per cent in the Andhra region and by 38.9 per cent in the Telangana region, the total employment in these factories however, increased by 73.6 per cent in the Andhra region and by 91.9 per cent in the Telangana region over this period. Within the Andhra region, the increase in employment was 75.5 per cent in Coastal Andhra and 73.0 per cent in Rayalaseema.

FACTORIES REGISTERED UNDER THE FACTORIES ACT,
BY REGIONS

Region	No. of factories		Percentage increase	No. of workers		Percentage increase
	1957	as on 1-1-1969		1957	as on 1-1-1969	
Coastal Andhra . .	1,904	2,989	57.0	1,08,740	1,90,845	75.5
Rayalaseema . .	644	799	24.1	16,875	27,191	73.0
Andhra Region . .	2,548 (70.9)	3,788 (72.3)	48.7	1,25,615 (74.4)	2,18,036 (72.4)	73.6
Telangana Region	1,046 (29.1)	1,453 (27.7)	38.9	43,327 (25.6)	83,131 (27.6)	91.9
Andhra Pradesh .	3,594 (100.0)	5,241 (100.0)	45.8	1,68,942 (100.0)	3,01,167 (100.0)	78.3

Source : Statistical Abstract, 1957 and 1969.

Transport and Communications :

39. The plan expenditure during 1956-57 to 1968-69 in the Telangana region on roads and transport was Rs. 16.75 crores against Rs. 16.93 crores in the Andhra region. The expenditure in the Telangana region, thus formed as much as 49.7 per cent of the total.

40. During 1956-57 to 1965-66 the road mileage (excluding municipal roads) increased by 147.4 per cent in the Telangana region against 33.2 per cent in the Coastal Andhra and 32.2 per cent in Rayalaseema. However, in spite of this substantial increase in the road mileage over the plans, the Telangana region still continues to be backward in regard to road facilities. In 1965-66 the road length per 100 square miles of area was 20 miles in Telangana against 29 miles in Rayalaseema and 38 miles in Coastal Andhra and in terms of road length per lakh population it was 64

miles in Telangana against 106 miles in Rayalaseema and 72 miles in Coastal Andhra.

ROAD MILEAGE (ALL EXTRA-MUNICIPAL ROADS)
BY REGIONS

Region	Government roads		Per-centage increase	Total roads		Per-centage in-crease	Road length in 1965-66	
	1956-57	1965-66		1956-57	1965-66		100 Sq. miles of area	Lakh popu-lation
Coastal Andhra	4,226	5,456	29.1	9,488	12,641	33.2	38	72
Rayalaseema	2,616	3,479	33.0	6,188	8,178	32.2	29	106
Andhra Region	6,842 (66.8)	8,935 (65.8)	30.6 (81.1)	15,676 (81.1)	20,819 (69.8)	32.8	34	82
Telangana Region	3,404 (38.2)	4,642 (34.2)	36.4	3,647 (18.9)	9,024 (30.1)	147.4	20	64
Andhra Pradesh..	10,246 (100.0)	13,577 (100.0)	32.5	19,323 (100.0)	29,843 (100.0)	54.4	28	76

Source : C.E. R & B. Andhra Pradesh.

41. The number of registered motor vehicles on road has increased by 252 per cent in the Telangana region against 168 per cent in Coastal Andhra and a mere 33 per cent in Rayalaseema during 1957 to 1969.

REGISTERED MOTOR VEHICLES ON ROAD,
BY REGIONS

	No. of vehicles on 31st March			Percentage increase.	
	1957	1968	1969	1968 over 1957	1969 over 1957
Coastal Andhra	10,443	27,154	27,979	160	168
Rayalaseema	4,501	5,206	5,995	16	33
Andhra Region	14,944 (56.5)	32,360 (48.3)	33,974 (45.6)	117	127
Telangana Region	11,517 (43.5)	34,575 (51.7)	40,527 (54.4)	200	252
Andhra Pradesh	26,461 (100.0)	66,935 (100.0)	74,501 (100.0)	153	182

Source: Commissioner of Transport, Andhra Pradesh.

42. The number of post offices in the Telangana region increased by 93.4 per cent during 1956-69 while the corresponding increase in the Andhra region was 91.1 per cent. Thus the development of postal facilities is fairly even in both the regions. However, within the Andhra region, the development was faster in Rayalaseema with an increase by 130.8 per cent against 73.9 per cent in Coastal Andhra.

POST OFFICES : BY REGIONS

Region	No. of Post offices as on 31st March.			Percentage in- crease in	
	1956	1966	1969	1966 over 1956	1969 over 1956
Coastal Andhra	.. 3,180	5,362	5,531	68.6	73.9
Rayalaseema	.. 1,369	3,057	3,160	123.3	130.8
Andhra Region	.. 4,549 (67.9)	8,419 (68.0)	8,691 (67.6)	85.1	91.1
Telangana Region	.. 2,153 (32.1)	3,969 (32.0)	4,165 (32.4)	84.4	93.4
Andhra Pradesh	.. 6,702 (100.0)	12,388 (100.0)	12,856 (100.0)	84.8	91.8

Source : Statistical Abstract, 1956, 1966 and 1969

Education :

43. The plan expenditure on general and technical education in the Telangana region during 1956-57 to 1968-69 was of the order of Rs. 16.43 crores as against Rs. 21.67 crores in the Andhra region. The expenditure in the Telangana region thus formed about 43.1 per cent of the total plan expenditure on Education in the State.

44. Over the decade 1956-57 to 1968-69 there had been a remarkable increase in the educational institutions in the State, the increase being generally more in case of Telangana, followed by Rayalaseema. The number of primary schools increased by 37.73 per cent in the Telangana region against an increase by 38.42 per cent in Rayalaseema and 16.42 per cent in Coastal

Andhra. In 1956-57 the primary schools in the Telangana region formed 26.5 per cent of the total in the State while by 1968-69 this proportion increased to 28.8 per cent. The scholars in the primary schools increased by 14.02 per cent in the Telangana region against 25.94 per cent in the Andhra region. However, it will be noted that still the enrolment in the Telangana region is not commensurate with the number of institutions. In 1968-69 though the number of primary schools in the Telangana region formed 28.8 per cent of the total in the State, the enrolment was only 18.5 per cent of that in the State as a whole.

PRIMARY SCHOOLS (INCLUDING PRE-PRIMARY) AND SCHOLARS, BY REGIONS

Region	Schools (No.)		Percent- tage increase	Scholars (Lakh persons)		Percent- tage increase
	1956-57	1968-69		1956-57	1968-69	
Coastal Andhra .	15,093	17,571	16.42	14.91	17.86	19.73
Rayalaseema ..	6,223	8,614	38.42	5.04	7.27	44.33
Andhra Region .	21,316 (73.5)	26,185 (71.2)	22.84	19.95	25.13 (81.5)	25.94
Telangana Region	7,684 (26.5)	10,583 (28.8)	37.73	5.00	5.70 (18.5)	14.02
Andhra Pradesh	29,000 (100.0)	36,768 (100.0)	26.79	24.95	30.83 (100.0)	23.55

Source : Director of Public Instruction, Andhra Pradesh.

45. The Middle/Upper Primary Schools increased manifold in all the three regions during the period 1956-57 to 1968-69 unlike in the case of the primary schools, the enrolment in the Middle/Upper Primary Schools in the Telangana region was more in conformity with the population proportion of the region. For instance, in 1968-69 the Telangana region accounted for 32.1 per cent of the total enrolment in the Middle/Upper Primary Schools in the State.

**MIDDLE/UPPER PRIMARY SCHOOLS AND SCHOLARS
BY REGIONS**

Region	Schools (No.)		Per- centage Increased	Scholars (000 persons)		Per- centage increase
	1956-57	1968-69		1956-57	1968-69	
Coastal Andhra .	77	1,266	1,544	13.8	347.8	2,420
Rayalaseema ..	27	438	1,522	4.0	98.5	2,363
Andhra Region .	104	1,704	1,538	17.8	446.3	2,407
	(38.1)	(59.3)		(21.1)	(67.9)	
Telangana Region	169	1,166	590	66.7	262.6	294
	(61.9)	(40.7)		(78.9)	(32.1)	
Andhra Pradesh .	273	2,870	951	84.5	708.9	739
	(100.0)	(100.0)		(100.0)	(100.0)	

Source : Director of Public Instruction, Andhra Pradesh.

46. In the case of High/Higher Secondary/Multi-purpose schools the increase in the number of schools and scholars in them was much more marked in the Telangana region than in the Andhra region. Within the Andhra Region the increase was more in Rayalaseema than in Coastal Andhra. The number of these schools increased from 105 in 1956-57 to 1,191 in 1968-69 in the Telangana region against an increase from 480 to 1,170 in Coastal Andhra and from 147 to 542 in Rayalaseema during the same period. In 1956-57 the schools in the Telangana region formed only 14.3 per cent of all the schools in the State while by 1968-69 they formed as much as 41.0 per cent. Similarly, the enrolment in the Telangana region in High/Higher Secondary/Multipurpose schools formed 44.7 per cent of the total in 1968-69 against only 21.5 per cent in 1956-57.

**HIGHER/HIGHER SECONDARY/MULTIPURPOSE SCHOOLS
AND SCHOLARS, BY REGIONS**

Region	Schools (No.)		Per- centage increase	Scholars (000 persons)		Per- centage increase
	1956-57	1968-69		1956-57	1968-69	
Coastal Andhra .	480	1,170	144	221.2	449.1	103
Rayalaseema .	147	542	269	78.4	171.4	119
Andhra Region .	627	1,712	173	299.6	620.5	107
	(85.7)	(59.0)		(78.5)	(55.3)	
Telangana Region	105	1,191	1,034	82.1	502.0	511
	(14.3)	(41.0)		(21.5)	(44.7)	
Andhra Pradesh .	732	2,903	296	381.7	1,122.5	194
	(100.0)	(100.0)		(100.0)	(100.0)	

Source : Director of Public Instruction, Andhra Pradesh.

47. There has been a similar development of college education. The number of colleges (including professional) increased from 30 in 1956-57 to 94 in 1968-69 in the Telangana region against an increase from 55 to 109 in Coastal Andhra and from 13 to 35 in Rayalaseema.

48. The enrolment in the colleges increased during the same period by 312.2 per cent in Telangana against 122.8 per cent in Andhra Region. Within Andhra region again the increase in the number of scholars is more marked in Rayalaseema.

COLLEGES (INCLUDING PROFESSIONAL) AND SCHOLARS, BY REGIONS.

Region	College (No.)		Percentage increase	Scholars (000 persons)		Percentage increase
	1956-57	1968-69		1956-57	1968-69	
Coastal Andhra . .	55	109	90.9	32.0	62.6	95.6
Rayalaseema . .	13	35	169.2	7.4	25.2	240.5
Andhra Region	68	144	111.7	39.4	87.8	122.8
Telangana Region	30	94	213.3	12.3	50.7	312.2
Andhra Pradesh .	98	238	142.9	51.7	138.5	167.9

FACILITIES FOR TECHNICAL EDUCATION BY REGIONS

Region	In-Take Colleges	Capacity in Degree (No. of seats)		In-take	Capacity in Polytechnics (No. of seats)	
	1956-57	1967-68	Percentage increase	1956-57	1967-68	Percentage increase
Coastal Andhra .	216	540	150.0	490	1,545	215.3
Rayalaseema . .	120	473	294.1	..	570	..
Andhra Region .	336 (61.0)	1,013* (60.7)	201.5	490 (57.0)	2,115 (60.7)	331.6
Telangana Region	215 (39.0)	657** (39.3)	205.6	370 (43.0)	1,370 (39.3)	270.3
Andhra Pradesh .	551 (100.0)	1,670 (100.0)	203.1	860 (100.0)	3,485 (100.0)	305.2

*Includes 83 seats in Regional Engineering College, Warangal.

**Includes 42 seats in regional Engineering College, Warangal.

Source ; Director of Technical Education.

FACILITIES FOR MEDICAL EDUCATION, BY REGIONS

Region	Number of Colleges In-Take capacity (No. of Seats)				Percentage increased
	1956-57	1968-69	1956-57	1968-69	
Coastal Andhra ..	2	2	230	300	30.4
Rayalaseema ..	1	2	50	250	400.0
Andhra Region ..	3	4	280	550	96.4
Telangana Region ..	2	2	158	270	70.9
Rangaraya Medical College, Kakinada .. ..	..	1	..	150	..
Kakatiya Medical College, Warangal .. ..	..	1	..	150	..
Andhra Pradesh ..	5	8	438	1,120	155.7

Source : Director of Medical & Health Services, A. P., Hyderabad.

Medical and Public Health :

49. Another important field under the Social Services sector which received considerable attention in the plans was the provision of medical facilities in the urban as well as rural areas of the State. During the period 1956-57 to 1968-69 about Rs. 9.83 crores was spent on Medical and Public Health programmes in the Telangana region against Rs. 17.20 crores in the Andhra region, the expenditure in the Telangana region forming 36.4 per cent of the total.

The number of Government hospitals and dispensaries in the Telangana region increased from 143 in 1956-57 to 427 in 1968-69 as against an increase from 253 to 974 in the Andhra region. As regards hospital beds, the number of beds increased from 5,215 in 1956-57 to 9,502 in 1968-69 in the Telangana region against an increase from 8,780 to 11,416 in the Andhra region.

GOVERNMENT HOSPITALS AND DISPENSARIES
(ALLOPATHIC), BY REGIONS

Region	No. of Hospitals and Dispensaries		Percentage increase in 1968-1969 over 1956-57
	1956-57	1968-69	
Coastal Andhra	173	686	297
Royalaseema	80	288	260
Andhra Region	253 (63.9)	974 (69.5)	285
Telangana Region	143 (36.1)	427 (30.5)	199
Andhra Pradesh	396 (100.0)	1,401 (100.0)	254

Source : Director of Medical and Health Services, Andhra Pradesh

HOSPITAL BEDS : BY REGIONS.

Region	No. of Hospital Beds		Percentage increase in 1968-69 over 1956-57	No. of beds per lakh population in 1968-69
	1956-57	1968-69		
Coastal Andhra	6,926	7,808	12.7	41
Royalaseema	1,854	3,608	94.6	44
Andhra Region	8,780 (62.7)	11,416 (54.7)	13.0	42
Telangana Region	5,215 (37.3)	9,502 (45.3)	82.0	62
Andhra Pradesh	13,995 (100.0)	20,918 (100.0)	49.5	49

Source : Director of Medical and Health Services.

It will thus be seen that the State has progressed substantially in various fields since 1956 and there has been an acceleration in its economic development and that by and large the three regions of the State have shared this progress.

Special Regional Development Programmes in Fourth Five-Year Plan:

The chronically drought affected areas have been identified and special emphasis on certain items like Hydrological survey, Minor Irrigation, well sinking programme etc are proposed for the drought affected taluks in the State Plan. In respect of distribution of funds for community development as between different blocks principles enunciated already giving weightage to the backward blocks have been taken cognizance of. Further, in respect of tracts identified as backward for industrial concessions provision has been made for creation of necessary infrastructure facilities and formulation and preparation of feasibility studies.

In the State Plan regional programmes have been differentiated from State-wide schemes. Out of the overall allocation indicated for the region on the basis of population and the weightage for the backwardness of the region allocations to different sectors have been made keeping in view the overall strategies dictated for each region. A special plan has been drawn up for the utilisation of Telangana surpluses which is briefly described subsequently. The allocations made in this special plan take into account the allocations available in the Fourth Plan and are additive to such allocations; they are therefore not included in the allocations shown in this document. While these allocations from the Telangana surpluses for Special Development schemes are thus over and above the allocations shown in this Plan, the allocations due to Telangana based on the weightage for its backwardness in respect of 10 per cent of the total outlay has been built into the normal plan and the various sectoral programmes have been detailed in the Plan document. In respect of Rayalaseema, however, the allocations that accrue to Rayalaseema by virtue of the weightage that the region gets due to its backwardness are set apart as special development funds—though as part of the Plan—and allocation between different sectors are decided on the basis of recommendations of the Planning and Development Board for Rayalaseema. These allocations amount to Rs. 16 crores during the Fourth Five-Year Plan. They have been finalised as per the

recommendations of the Rayalaseema Board as indicated in Table XXV. The programmes for the year 1970-71 and 1971-72 have already been approved while the programmes for 1972-74 are indicated in the regional development plan as approved by the Rayalaseema Board. It is evident that more than 50 per cent of the allocation is for rural electrification while more than 10 per cent is for drinking water supply. About 10 per cent is for welfare of the Scheduled Castes and Scheduled Tribes. Irrigation accounts for about 8.8 per cent. Some of the interesting features of the special development programme of Rayalaseema area are the amounts set apart for feasibility reports preparation of project reports and industrial infrastructure.

In respect of Coastal Andhra the special allocation amounts to about Rs. 8 crores. The allocations for 1970-71 and 1971-72 have been finalised as indicated in Table XXVI. It is evident that nearly 50 per cent is meant for the welfare of the Scheduled Castes and Scheduled Tribes while about more than 40 per cent is meant for irrigation. The allocation for 1972-73 and 1973-74 are likely to be finalised in consultation with the development Board proposed for Coastal Andhra areas.

Consequent on the determination of the un-utilised Telangana surpluses by the Bhargava Committee, a special provision of Rs. 45 crores has been made for the accelerated development of Telangana from 1st April, 1968 to the end of Fourth Plan. To enable the State Government to complete this programme during Fourth Plan period, the Central Government are giving suitable loan assistance to the State Government. Taking into account a minus saving of Rs. 1.28 crores in 1968-69 in Telangana, the net amount that will be available during the Fourth Plan period is Rs. 43.72 crores. This is in addition to the share of Telangana in the State's Fourth Plan outlay. The Central Government have requested the State Government to furnish to them the programme for the utilisation of the amount of Rs. 43.72 crores dovetailing it with the State Plan so as to serve as a plan of action for the remaining years of the Fourth Plan period.

The Planning Commission have approved a Plan of Rs. 420.50 crores for the State of Andhra Pradesh in the Fourth Plan period. But on account of the substantial spill-over commitments on irrigation and power the State Government are executing a plan of Rs. 530 crores. The proposals for the Fourth Plan had been finalised having regard to this over all outlay and the due share of Telangana in it and without reference to the allocations likely to be available under special development funds. The allocations made in the plan for the social development funds take into account the allocations available for these schemes in the Telangana share of the Fourth Five-Year Plan, and are thus in all cases additive to the Fourth Plan allocations.

While preparing the programme for the utilisation of the special assistance, the guidelines indicated by the Telangana Development Committee, one of the high powered committees appointed by the State Government in pursuance of the eight point programme of Prime Minister have been kept in view. Funds for special development schemes in Telangana were being provided at the instance of the Andhra Pradesh Regional Committee, even before 1969 and during the period certain road works and water works were taken up whose spill-over commitment has to be met. Provisions had therefore to be made for these inevitable spill-over requirements also.

So far as the first three years (1969-72) are concerned the schemes implemented and under implementation are based on the recommendations of the Andhra Pradesh Regional Committee. Keeping in view the trend and the level of investment during this period and the total amount still available provision has been made for 1972-74. The overall plan for the 5 years so formulated has been generally approved by the Development Sub-Committee of the Regional Committee.

It may however be mentioned that this programme is likely to again under go a change especially in the sectors like social welfare, roads and minor irrigation in view of the fact that the Andhra Pradesh Regional Committee have decided to take up a larger programme of rural electrification for the current year, for which the spill-over commitments in 1972-74 will be larger

than those indicated in this programme. This will mean that the allocation of Rs. 13.86 crores for rural electrification in this programme will have to be increased thus necessitating a reduction in other sectors.

Enclosed is a statement (Table XXVII) giving at a glance the expenditure in 1969-71 and the amounts allocated for the period 1971-74 for different schemes during the Fourth plan period. It will be seen that the maximum allocation is for rural electrification with an investment of Rs. 13.86 crores. Irrigation comes next with Rs. 10.84 crores, including Rs. 6.00 crores for Pochampad. The other important sectors are communications and protected water supply schemes which have been earmarked —Rs. 5.83 crores and Rs. 4.11 crores respectively. Social Welfare including Tribal Welfare has been allocated Rs. 2.62 crores, Education Rs. 1.54 crores and Milk Supply schemes Rs. 1.19 crores.

In Table XXVIII are given the expenditure in the normal plan 1969-71, allotments made in 1971-72 and the balance for the remaining two years 1972-74 for the sectors which are included in this programme.

Central sector schemes such as Rural Works Programme, Dry Farming Projects, Small Farmers and Marginal Farmers development Agencies, agricultural schemes *etc.*, have all been taken up through a scientific identification of the regions and adequate integration with programmes in normal and special plans ensured.

ANNEXURE I

LIST OF CHRONICALLY DROUGHT AFFECTED TALUKS IN
ANDHRA PRADESH

<i>Sl. No.</i>	<i>District</i> <hr/> <i>Taluk</i>
--------------------	---------------------------------------

I. Anantapur

1. Anantapur*
2. Tadpatri*
3. Dharamvaram*
4. Kalyandurg*
5. Rayadurg*
6. Penukonda*
7. Madakasira*
8. Hindupur*
9. Kadiri*
10. Uravakonda*
11. Gooty*

II. Chittoor

12. Chittoor* (including Banga-
rupalem Sub-Taluk)
13. Chandragiri
14. Madanapalli*
15. Voyalpad*
16. Punganur
17. Palmaneer*
18. Kuppam
19. Puttur

III. Cuddapah

20. Cuddapah
21. Kamalapuram
22. Rayachoti
23. Rajampet*
24. Badvel*
25. Jammalamadugu
26. Proddatur*
27. Pulivendla

IV. Kurnool

28. Kurnool*
29. Done*
30. Nandikotkur
31. Adoni*
32. Aluru*
33. Pattikonda*
34. Koilkuntla*

<i>Sl. No.</i>	<i>Districts Taluk</i>
--------------------	----------------------------

35. Banganapalli*
36. Arlagadda
37. Atmakur
38. Nandyal

V. Ongole

39. Ongole (Former)
40. Darsi*
41. Podili*
42. Kanigiri
43. Kandukur*
44. Giddalur
45. Markapur
46. Addanki

VI. Nellore

47. Udayagiri
48. Atmakur*
49. Kavali

VII. Guntur

50. Sattanapalli
51. Vinukonda
52. Palnadu

VIII. Hyderabad

53. Hyderabad (West)
54. Ibrahimpatnam
55. Hyderabad (East)
56. Chevella* (Shabad)

IX. Mahabubnagar

57. Kalwakurthy*
58. Nagarkurnool
59. Wanaparthy
60. Alampur
61. Makthal*
62. Shadnagar
63. Achampet
64. Kollapur
65. Gadwal
66. Atmakur

X. Nalgonda

67. Suryapet
68. Bhongir

<i>Sl. No.</i>	<i>District</i>
	<i>Tauk</i>

- 69. Huzurnagar
- 70. Deverkonda
- 71. Miryalaguda
- 72. Ramannapet*
- 73. Nalgonda.

XI. Warangal

- 74. Jangaon*

XII. Medak

- 75. Narayanakhed.

*These taluks represent 'hard-core'.

ANNEXURE II

<i>S.No. and Name of the Block</i>				<i>Nature of Classification</i>
(1)				(2)
SRIKAKULAM DISTRICT				
1. Gara	..	..	..	.. Ordinary.
2. Saribujjili	..	..	..	.. Advanced.
3. Narasannapet	..	..	..	.. Do.
4. Kotabommali	..	..	..	.. Ordinary
5. Cheepurupalli	..	..	..	.. Do.
6. Ranastalam	..	..	..	.. Do.
7. Shermohammedpuram	..	..	..	.. Do.
8. Tekkali	..	..	..	.. Do.
9. Kasibugga	..	..	..	.. Do.
10. Ichapuram	..	..	..	.. Do.
11. Mandasa	..	..	..	.. Do.
12. Pathapatnam	..	..	..	.. Do.
13. Kothuru	..	..	..	.. Do.
14. Parvathipuram	..	..	..	.. Do.
15. Kurupam	..	..	..	.. Do.
16. Bhadragiri	..	..	..	.. Tribal.
17. Salur	..	..	..	.. Ordinary
18. Pachipenta	..	..	..	.. Tribal.
19. Seethampeta	..	..	..	.. Tribal.
20. Palakonda	..	..	..	.. Advanced.
21. Rajam	..	..	..	.. Ordinary.
22. Veeraghattam	..	..	..	.. Do.
23. Bobbili	..	..	..	.. Do.
24. Badangi	..	..	..	.. Do.

S. No. and Name of the Block.

*Nature of
Classification
(2)*

(1)

VISAKHAPATNAM DISTRICT.

1. Pendurthi	..	..	..	.. Ordinary.
2. Sabbavaram	..	..	..	Do.
3. Kasimkota	..	..	..	Do.
4. Bheemunipatnam	..	..	..	Do.
5. Bhogapuram	..	..	..	Do.
6. Nellimerla	..	..	..	Do.
7. Gantyada	..	..	..	Do.
8. Srungavarapukota	..	..	..	Ordinary.
9. Viyyampeta	..	..	..	Do.
10. Ravikamatam	..	..	..	Do.
11. K. Kotapadu	..	..	..	Do.
12. Madugula	..	..	..	Do.
13. Araku	..	..	..	Tribal.
14. Kilaguda	..	..	..	Do.
15. Ananthagiri	..	..	..	Do.
16. Gamparai	..	..	..	Do.
17. Paderu	..	..	..	Do.
18. G. Madugole	..	..	..	Do.
19. Chintapalli	..	..	..	Do.
20. Koyyuru	..	..	..	Do.
21. Narsipatnam	..	..	..	Ordinary.
22. Kotauratla	..	..	..	Do.
23. Ellamanchili	..	..	..	Do.
24. Nakkapalli	..	..	..	Do.

*S. No. and Name of the Block**Nature
of Classification*

(1)

(2)

EAST GODAVARI DISTRICT

1. Samalkot	..	..	..	Advanced.
2. Tallarevu	..	..	..	Do.
3. Pithapuram	..	..	..	Do.
4. Amalapuram	..	..	..	Do.
5. Mummidivaram	..	..	..	Do.
6. Kothapeta	..	..	..	Do.
7. P. Gannavaram	..	..	..	Do.
8. Razole	..	..	..	Do.
9. Rajanagaram	..	..	..	Ordinary.
10. Korukonda	..	..	..	Advanced.
11. Rayavaram	..	..	..	Do.
12. Kapileswarapuram	..	..	..	Do.
13. Rampachodavaram		..	..	Tribal.
14. Marredumilli	..	..	..	Tribal.
15. Rangampeta	..	..	..	Ordinary.
16. Peddapuram	..	..	..	Advanced.
17. Sankhavaram	..	..	..	Ordinary.
18. Annavaram with Headquarters at Bendapurdi	..		..	Do.
19. Addateegala	..	..	..	Tribal.
20. Rajavommangi	..	..	..	Do.

WEST GODAVARI DISTRICT.

1. Bhimadole	..	..	..	Advanced.
2. Peddapadu	..	..	..	Do.
3. Chintalapudi	..	..	..	Ordinary.

<i>S. No. and Name of the Block</i>	<i>Nature of Classification</i>
(1)	(2)

WEST GODAVARI DISTRICT—(Contd.)

4. Nallajerla	.. .. .	Do.
5. Ganapavaram	.. .. .	Advanced.
6. Nidadavole	.. .. .	Ordinary.
7. Gopalapuram	.. .. .	Do.
8. Peravali	.. .. .	Advanced.
9. Pennumantra	.. .. .	Do.
10. Koyyalagudem	.. .. .	Ordinary.
11. Buthayagudam	.. .. .	Tribal.
12. Polavaram	.. .. .	Do.
13. Mogaltur	.. .. .	Advanced.
14. Poduru	.. .. .	Do.
15. Akividu	.. .. .	Do.
16. Vissakoderu	.. .. .	Do.

KRISHNA DISTRICT

1. Bandar	.. .. .	Advanced.
2. Bantumalli	.. .. .	Do.
3. Avanigadda.	.. .. .	Ordinary.
4. Movva	.. .. .	Advanced.
5. Nuzvid	.. .. .	Ordinary.
6. Tiruvur	.. .. .	Do.
7. Vissannapet	.. .. .	Do.
8. Gannavaram	.. .. .	Advanced.
9. Vuyyur	.. .. .	Advanced.
10. Gudivada with Headquarters at Moturu	.. .. .	Do.

S. No. and name of the Block

Nature of
Classification

(1)

(2)

KRISHNA DISTRICT—(Contd.)

11. Kaikalur	..	..	..	Do.
12. Mandavalli	..	..	..	Do.
13. Nandigama	..	..	..	Ordinary.
14. Kanchikacherla	..	..	..	Do.
15. Jaggayyapet	..	..	..	Do.
16. Mylavaram	..	..	..	Do.
17. Kankipadu	..	..	..	Advanced.

GUNTUR DISTRICT.

1. Tadikonda	..	..	..	Backward.
2. Mangalagiri	..	..	..	Ordinary.
3. Prathipadu	..	..	..	Do.
4. Rajupalem	..	..	..	Backward.
5. Phirangipuram	..	..	..	Do.
6. Tyallur	..	..	..	Do.
7. Tenali	..	..	..	Advanced.
8. Amartalur	..	..	..	Do.
9. Emani	..	..	..	Do.
10. Repalli	..	..	..	Do.
11. Pallapatla	..	..	..	Do.
12. Ongole	..	..	..	Ordinary.
13. Maddipadu	..	..	..	Do.
14. Korisapadu	..	..	..	Backward
15. Bapatla	..	..	..	Ordinary.
16. Vetapalem	..	..	..	Advanced.
17. Ponnur	..	..	..	Do.

*Sl. No. and Name of the Block**Nature of
Classification*

(1)

(2)

GUNTUR DISTRICT—(Contd.)

18. Narsaraopet	..	..	..	Backward.
19. Nadendla	..	..	..	Do.
20. Santhamagalur	..	..	..	Ordinary.
21. Gurazala	..	..	..	Backward.
22. Macherla	..	..	..	Do.
23. Piduguralla	..	..	..	Backward.
24. Vinukonda	..	..	..	Do.
25. Ipur	..	..	..	Do.

NELLORE DISTRICT.

1. Sullurpet	..	..	..	Ordinary.
2. Gudur	..	..	..	Do.
3. Kota	..	..	..	Do.
4. Venkatagiri	..	..	..	Do.
5. Kovvur	..	..	..	Advanced.
6. Buchireddipalem	..	..	..	Ordinary.
7. Kavali	..	..	..	Do.
8. Vinjamur	..	..	..	Backward.
9. Udayagiri	..	..	..	Ordinary.
10. Rapur	..	..	..	Backward.
11. Podalakur	..	..	..	Ordinary.
12. Atmakur	..	..	..	Do.
13. Venkatachalam	..	..	..	Advanced.
14. Indukurpet	..	..	..	Do.
15. Kondapi	..	..	..	Ordinary.
16. Ulavapadu	..	..	..	Do.

*S. No. and Name of the Block**Nature of
Classification*

(1)

(2)

NELLORE DISTRICT—(Contd.)

17. Kanigiri	..	..	..	Backward.
18. Velligandla	..	..	..	Do.
19. Podili	..	..	..	Ordinary.
20. Tarlapadu	..	..	..	Backward.
21. Tallur	..	..	..	Do.

CHITTOOR DISTRICT

1. Chittoor	..	..	..	Ordinary.
2. Gangadharanellore	..	..	..	Do.
3. Bangarupalem	..	..	..	Do.
4. Puttur	..	..	..	Do.
5. Karvetinagar	..	..	..	Do.
6. Chandragiri	..	..	..	Do.
7. Pulicherla	..	..	..	Do.
8. Kalahasthi	..	..	..	Advanced.
9. Thothambedu	..	..	..	Ordinary.
10. Satyavedu	..	..	..	Do.
11. Pichatur	..	..	..	Do.
12. Madanapally	..	..	..	Do.
13. Thambulapally	..	..	..	Backward.
14. Vayalapad	..	..	..	Ordinary
15. Chinnagottigallu	..	..	..	Do.
16. Punganur	..	..	..	Do.
17. Chowdepally	..	..	..	Do.
18. Palmaneer	..	..	..	Do.
19. Kuppam	..	..	..	Do.

*S. No. and Name of the Block**Nature of
Classification*

(1)

(2)

CUDDAPAH DISTRICT.

1. Rayachoti	..	..	.. Ordinary.
2. Lakkireddipalli	..	..	.. Backward.
3. Kamalapuram	..	..	.. Ordinary.
4. Cuddapah	..	..	.. Do.
5. Jammalamadugu	..	..	.. Backward.
6. Muddanur	..	..	.. Ordinary.
7. Proddatur	..	..	.. Do.
8. Pulivendla	..	..	.. Do.
9. Rajampet	..	..	.. Do.
10. Kodur	..	..	.. Do.
11. Porumamilla	..	..	.. Do.
12. Sidhout	..	..	.. Do.

ANANTAPUR DISTRICT

1. Singanamala	..	..	.. Backward.
2. Kudair	..	..	.. Ordinary.
3. Tadipatri	..	..	.. Backward.
4. Gooty	..	..	.. Do.
5. Uravakonda	..	..	.. Do.
6. Dharmavaram	..	..	.. Ordinary.
7. Chennakothapally	..	..	.. Backward.
8. Kalyandurg	..	..	.. Backward.
9. Kambadur	..	..	.. Do.
10. Raydurg	..	..	.. Do.
11. Kanakal	..	..	.. Do.

S. No. and name of the Block.

*Nature of
Classification*

(1)

(2)

ANANTAPUR DISTRICT—(Contd.)

12. Penukonda	..	..	.. Ordinary.
13. Madkasira	..	..	.. Do.
14. Kodiganahalli	..	..	.. Do.
15. Kadiri East	..	..	.. Do.
16. Kadiri West	..	..	.. Backward.

KURNOOL DISTRICT

1. Adoni	..	..	.. Backward.
2. Yemmiganur	..	..	.. Do.
3. Alur	..	..	.. Do.
4. Pathikonda	..	..	.. Do.
5. Kurnool	..	..	.. Ordinary.
6. Kodumur	..	..	.. Do.
7. Dhone	..	..	.. Backward.
8. Nandikotkur	..	..	.. Do.
9. Atmakur	..	..	.. Ordinary.
10. Markapur	..	..	.. Backward.
11. Yerragondapalem	..	..	.. Ordinary.
12. Giddalur	..	..	.. Do.
13. Bestawarpet	..	..	.. Do.
14. Nandyal	..	..	.. Do.
15. Koilkuntla	..	..	.. Do.
16. Banaganapalle	..	..	.. Backward.
17. M. V. Nagar	..	..	.. Ordinary.

*Sl. No. and Name of the Block**Nature of
Classification*

(1)

(2)

MAHABOONNAGAR DISTRICT.

1. Mahaboobnagar	..	..	.. Backward.
2. Jadcherla	..	..	.. Do.
3. Shadnagar	..	..	.. Do.
4. Kalwakurthy	..	..	.. Do.
5. Amangal ..	..	..	.. Do.
6. Bijnapally	..	..	.. Backward.
7. Nagarkurnool	..	..	.. Do.
8. Achampet	..	..	.. Tribal.
9. Kollapur		..	.. Backward.
10. Gadwal ..	..	..	.. Do.
11. Alampur	..	..	.. Do.
12. Wanaparthy	..	..	.. Ordinary.
13. Makthal	..	..	.. Backward.
14. Atmakur	..	..	.. Do.
15. Kodangal	..	..	.. Do.
16. Kosgi	..	..	.. Do.

HYDERABAD DISTRICT

1. Hayatnagar	..	..	.. Ordinary.
2. Medichal	..	..	.. Do.
3. Ibrahimpatnam	..	..	.. Backward.
4. Rajendranga	..	..	.. Ordinary.
5. Chevella	..	..	.. Backward.
6. Tandur	..	..	.. Do.
7. Pargi	..	..	.. Ordinary.
8. Vicarabad	..	..	.. Backward.

S. No. and name of the Block

*Nature of
Classification*

(1)

(2)

MEDAK DISTRICT

1. Medak	..	..	.. Ordinary.
2. Jogipet	..	..	.. Backward.
3. Ramayanpet	..	..	.. Ordinary.
4. Narsapur	..	..	.. Do.
5. Patancheru	..	..	.. Backward.
6. Zahirabad	..	..	.. Do.
7. Narayankhed	..	..	.. Do.
8. Siddipet	..	..	.. Do.
9. Dubbak	..	..	.. Ordinary.
10. Gazwel	..	..	.. Do.

NIZAMABAD DISTRICT.

1. Dichpalli	..	..	.. Ordinary.
2. Armoor	..	..	.. Do.
3. Bheemgal	..	..	.. Backward.
4. Yedpalli	..	..	.. Ordinary.
5. Banswada	..	..	.. Do.
6. Madnoor	..	..	.. Backward.
7. Kamareddy	..	..	.. Do.
8. Domkonda	..	..	.. Do.
9. Yellareddy	..	..	.. Ordinary.

ADILABAD DISTRICT

1. Adilabad	..	..	.. Backward.
2. Utnoor	..	..	.. Tribal.

S. No. and name of the Block.

Nature of
Classification

(1)

(2)

ADILABAD DISTRICT—(Contd.)

3.	Boath	..	..	..	Backward.
4.	Nirmal	..	..	..	Do.
5.	Khanapur	..	..	..	Do.
6.	Mudhol	..	..	..	Do.
7.	Luxettipet	..	..	..	Do.
8.	Wankidi	..	..	..	Tribal.
9.	Asifabad	..	..	..	Backward.
10.	Chinnur	..	..	..	Do.
11.	Sirpur	..	..	..	Do.

KARIMNAGAR DISTRICT.

1.	Karimnagar	..	..	..	Ordinary.
2.	Husnabad	..	..	..	Do.
3.	Gangadhara	..	..	..	Backward.
4.	Huzarabad	..	..	..	Ordinary.
5.	Bheemadevarapalli	..	..	..	Backward.
6.	Peddapalli	..	..	..	Do.
7.	Sultanabad	..	..	..	Do.
8.	Manthani	..	..	..	Do.
9.	Mahadevpur	..	..	..	Do.
10.	Metpalli	..	..	..	Do.
11.	Jagtial	..	..	..	Do.
12.	Malliyal	..	..	..	Ordinary.
13.	Vemulawada	..	..	..	Backward.
14.	Sircilla	..	..	..	Do.

*S. No. and Name of the Block.**Nature of
Classification*

(1)

(2)

WARANGAL DISTRICT.

1. Ghanapur	..	..	.. Backward.
2. Wardhanpet	..	..	.. Do.
3. Hanamkonda	..	..	.. Ordinary.
4. Jangaon	..	..	.. Backward.
5. Kodakondla	..	..	.. Do.
6. Cherial	..	..	.. Do.
7. Parkal	..	..	.. Ordinary.
8. Chityal	..	..	.. Backward.
9. Mahabubabad	..	..	.. Ordinary.
10. Marripeda	..	..	.. Backward.
11. Narsampet	..	..	.. Tribal.
12. Gudur	..	..	.. Backward.
13. Mulgu	..	..	.. Ordinary.
14. Eturnagaram	..	..	.. Backward.

NALGONDA DISTRICT

1. Nalgonda	..	..	.. Ordinary.
2. Mungode	..	..	.. Backward.
3. Nakrekal	..	..	.. Ordinary.
4. Suryapet	..	..	.. Backward.
5. Nagaram	..	..	.. Do.
6. Bhongir	..	..	.. Ordinary.
7. Alair	..	..	.. Do.
8. Ramannapet	..	..	.. Backward.
9. Mothkur	..	..	.. Do.

*S.No. and name of the Block.**Nature of
Classification*

(1)

(2)

NALGONDA DISTRICT—(Contd.)

10. Miryalaguda	..	..	..	Backward.
11. Peddavoora	..	..	..	Do.
12. Deverkonda	..	..	..	Do.
13. Chintapalli	..	..	..	Do.
14. Huzurnagar	..	..	..	Do.
15. Kodad	..	..	..	Do.

KHAMMAM DISTRICT.

1. Khammam	..	..	..	Ordinary.
2. Tirumalaipalem	..	..	..	Do.
3. Madhira	..	..	..	Do.
4. Kallur	..	..	..	Do.
5. Kothagudem	..	..	..	Backward.
6. Ashwaraopet	..	..	..	Tribal.
7. Burgampad	..	..	..	Do.
8. Yellandu	..	..	..	Backward.
9. Buddimalla	..	..	..	Tribal.
10. Venkatapuram	..	..	..	Do.
11. Bhadrachalam	..	..	..	Do.
12. Kunavaram	..	..	..	Do.
13. Vararamachandrapuram	..	..	..	Do.

EMPLOYMENT

As early as in 1954 it was declared that "the central objective of our economic policy from now on must be to create full employment within a reasonable period, say 10 years from now". One of the principal aims in our Plans has thus been the expansion of employment opportunities not only to absorb the backlog of unemployed at the beginning of each Plan period, but also to provide job opportunities for the increase in the work force in every Plan. With increasing numbers added to the work force on account of the rapid rise in the population, a situation has been reached at the beginning of the Fourth Plan period when the magnitude of the problem of unemployment, underemployment and disguised unemployment has assumed serious proportions. While the problem is more or less universal, there is a marked variation in the situation from region to region, the backward regions being more vulnerable to the rigours of the problems of unemployment and more so of underemployment and disguised unemployment.

In Andhra Pradesh which is a comparatively backward State with a large degree of dependence on agriculture, the problem of unemployment and underemployment is acute. Further, in chronically drought affected areas of Rayalaseema and the backward Telangana region, where in substantial tracts subsistence agriculture is practiced, the problem of unemployment and underemployment is particularly acute. In the recent past, the problem of educated unemployed has also come to the fore. In these circumstances, substantial emphasis on creation of employment opportunities in the Plans becomes an urgent issue.

Generation of employment as an objective cannot be viewed as a programme in isolation but should be built into partly the sectoral strategies and what is more important into the techniques of production that are contemplated. Though the deteriorating situation in regard to unemployment is admitted, a correct assessment of the unemployment situation is, however, difficult due to lack of precise data on the subject. The gaps in the existing data and their reliability has

been elaborated by the Committee of Experts on unemployment Estimates. However, it is necessary to attempt an assessment, even if it has necessarily to be a crude one at present, of the unemployment and underemployment situation in the State before attempting to indicate any policy measures, and the possible impact that these measures might have on employment situation in this State. Therefore, with the available data and their admitted limitations, an attempt is made below to provide a rough estimate of the unemployment situation in the State.

At the time of the formulation of the Third Plan, the Planning Commission had originally estimated that the backlog of unemployment in Andhra Pradesh would be of the order of 7.46 lakhs. Subsequently, a revised estimate of the backlog of unemployment at the beginning of the Third Plan period based on 1961 Census data and the conclusions drawn from the sixteenth round of the National Sample Survey revealed that the backlog of unemployment at the beginning of the Third Plan period was only of the order of 3.75 lakhs and that the new entrants to the labour force during the Third Plan period would be about 12.59 lakhs. Thus, the employment requirements in the Third Plan period in order to achieve full employment was worked out at 16.34 lakhs. It was at first estimated that 10.79 lakh employment opportunities would be created during the Third Plan period and that the backlog at the end of the Third Plan period would be about 5.55 lakhs, but revised estimates indicated that the employment opportunities during the Third Plan period were of the order of about 8.79 lakhs only. This would show that the backlog of unemployment at the end of the Third Plan period was roughly of the order of 7.55 lakhs.

Taking this estimate as the base, we would have to make an estimate of the additions to the labour force during the years 1966-67, 1967-68 and 1968-69 and deduct the employment opportunities that would have been created during these years, to get the position of unemployment at the beginning of the Fourth Plan period. The total additions to the labour force in the three years 1966-67, 1967-68 and 1968-69 were estimated at 7.94 lakhs. Assuming a liner relationship between

the estimated employment opportunities in the Third Plan to the total Plan outlay, the job opportunities created during the three years 1966-69 has been roughly estimated at 5.14 lakhs. Thus, on the basis of the above estimates the backlog of unemployment at the beginning of the Fourth Plan period is of the order of 10.35 lakhs.

Recently, an attempt has been made to work out the estimate of unemployed in the State using the results of the labour force surveys conducted in the State under the National Sample Survey. According to the labour force survey conducted in 1960-61 in rural areas, about 1.17 per cent of the rural population are unemployed. On the assumption that the proportion of unemployed has not materially changed in the rural areas, the number of unemployed in rural areas in 1970 is estimated at 4.07 lakhs. This does not, however, take into account the underemployment or disguised unemployment. The urban labour force surveys conducted in 1966-67 by the National Sample Survey provide information on the proportion of unemployed registering themselves in the Employment Exchanges while an *ad hoc* survey conducted in 1961 in the State provides the information on the proportion of registrants who are actually having jobs. Taking the number of registrants in Employment Exchanges and deducting from this the registrants who are already having jobs estimated on the basis of the above survey, the actual number of registrants who are unemployed has been arrived at. Considering the proportion of unemployed registering themselves with Employment Exchanges obtained in the National Sample Survey of 1966-67, the unemployed in the urban areas of the State in 1970 is estimated at 4.81 lakhs. Thus, the total unemployed in the State in 1970 will be 8.88 lakhs or say 9 lakhs. This exercise indicates that the backlog of unemployment at the beginning of the Fourth Plan period could not have been more than 9 lakhs. The effective addition to the labour force during the Fourth Plan period is expected to about 12.60 lakhs.

In the rural areas, the problem is one of underemployment than total unemployment. In the National Sample Survey conducted in 1960-61, information

was collected on the proportion of the workers in the rural areas who are seeking additional employment and also the average period in a week for which they were not working due to lack of employment. Applying these ratios to the estimate of rural population it is seen that 18.60 lakh persons in the rural areas would be available for additional work. According to this survey considering only the underemployed workers, an underemployed worker in the rural areas is, on the average, available for additional work for about 145 days in a year. On the basis of coefficients used for estimating the employment potential of the Fourth Plan as indicated by the Planning Commission, it is estimated that the Fourth Five-Year Plan investments in the State sector would generate employment to the extent of 5.1 lakh jobs.

Adopting as a very crude basis the aggregate investments employment ratios in the State Plan, it is estimated that due to investments in private, Central and institutional sectors employment to the tune of 6.60 lakh jobs would be created during the Fourth Plan period. Thus, the total additional employment which is likely to be generated due to the construction, continuing and indirect effects is estimated at 11.70 lakh jobs. There would thus still be 9.90 lakh unemployed people in the State at the end of the Fourth Five-Year Plan period. These estimates are necessarily approximate being based on rather general and somewhat crude assumptions. It is possible that due to special emphasis given for creation of employment opportunities in terms of special schemes and appropriate changes in the techniques of production larger increases in the employment opportunities may come about. It is however not possible that these could be of such a magnitude as to wipe out the entire backlog of unemployment at the end of the Fourth Five-Year Plan period or even any substantial part of it.

As mentioned earlier the problem of employment generation has to be tackled in the context of the overall sectoral strategies and the techniques of production. Isolated special efforts are likely to have only marginal significance. The overall sectoral priorities and to a marginal extent even the techniques of production are predominantly dictated by the

national policies and priorities and to that extent the possibility of reorientation of the State Plans towards employment objectives is somewhat limited.

Further, in view of the enormous spill-over commitments which we have, particularly under Irrigation and Power, any large-scale reorientation of the sectoral allocations in the Plan will be difficult and costly from the economic point of view. However, it has also to be pointed out that in judging the employment aspect of investments in sectors like Irrigation and Power, the long-range effects on employment have to be weighed against such effects in the short run, which may appear to be less employment-oriented than in sectors such as Roads. Over a longer perspective, it will be seen that investments in Irrigation and Power help build infrastructure which will provide considerable amount of employment subsequently. Thus, irrigation not only stabilises agriculture, but also increases employment potential in the rural areas. Similarly, power by helping encourage agricultural production as well as Small-scale Industries will enable a large and widely dispersed increase in employment opportunities. Hence, as in the case of computing economic costs, so also in the case of working out the employment potential, one has necessarily to consider both these aspects before taking a view on sectoral allocations in relation to employment potential.

Even so, within the broad constraints mentioned, it is proposed to make a determined effort towards creation of substantial employment opportunities during the Fourth Plan period. The objective is to provide gainful employment, particularly in rural areas and for the vulnerable sections. Even in sectors like Irrigation where, as mentioned above, certain outlays become inevitable in order to complete spill-over schemes, care would be taken to see that such techniques are adopted to the maximum extent possible as would create substantial employment opportunities.

Besides the investments within the Plan, a concerted effort will be made to see that institutional finances are availed of to the maximum extent possible for undertaking schemes that, while being productive or creating social facilities, also provide employment

opportunities. Thus, the large assistance that is being obtained from the LIC for providing housing for Scheduled Castes and Tribes would, besides providing this important amenity to the weakest sections of the society, also have a great impact on creating employment in a widely dispersed manner. Similarly, the co-operative form of organization could be utilised to organise employment-oriented societies which also would be in a position to obtain institutional finance. The same considerations would be applied while selecting schemes to be taken up in the Central sector in the State.

The measures undertaken to attract private and Central sector investments in the industrial sector in the State will also help create employment opportunities. The attempt is to undertake such measures in a dispersed manner so that such opportunities are created all over the State and particularly in the backward areas where other concessions available in respect of industrial investment will also help augment these efforts.

FINANCIAL RESOURCES

It will be seen from the enclosed table that the State Government had made concerted effort during the Second, Third and the three Annual Plan years to mobilise resources through additional taxation such as upward revision of land revenues, sales tax, electricity tariffs and the motor vehicles tax, and that the success of the State Government in raising additional tax resources in spite of its relative backwardness was impressive.

The following table presents the position with regard to resources in the Second, Third and Fourth Plan periods.

Statement

(Rs. in crores)

	Second Plan period	Third Plan period	Percentage increase in Third Plan over Second Plan.	Three Annual Plan period	Fourth Plan as finalised in Nov., 1969	Percentage increase in Fourth Plan over III Plan
State's Budgetary resources other than negotiated loans and State enterprises Additional taxation ..	59.00	29.77		15.44	-11.50	
1. Balance from current revenues ..	24.30	16.02		-17.91	21.81	
2. Contribution of Public enterprises ..	..	3.44	..	24.82	72.15	190
(a) State Electricity Board ..	..	..	..	..	70.50	
(b) Road Transport Corporation ..	..	..	..	..	1.65	
3. Small savings (net) ..	11.11	7.55		4.86	15.00	
4. Public borrowings (net) ..	28.91	58.90		19.98	41.00	
5. Unfunded debt ..	..	3.44		8.71	25.00	
6. Miscellaneous capital receipts ..	4.68	-59.58		-25.02	-186.46	
7. Additional taxation ..	24.49	47.41	93.6	35.16	135.00	185.0

(a) 1969-70 measures	..	..	..	..	..	..	88.00	
(b) 1970-71 measures		..	..	..	..	..	31.00	
(c) New measures	..	..	..	..	..	..	16.00	
8. Negotiated loans and State enterprises borrowings	..	..	..	..	..	..	45.50	
9. Withdrawal from Resources and net increase in floating debt	..	..	..	..	31.40	—28.77	..	
10. Ad hoc loans from Centre (net)			..	..	21.60	39.58	..	
Total State resources	93.49	130.18	39.0	83.91	180.50	38.0
Central assistance	95.11	222.25		161.08	240.00	
Total Plan outlay	188.60	352.43		244.99	..	

The additional taxation in the Third Plan period increased by 93.6 per cent over the Second Plan period, while the targeted additional taxation in the Fourth Plan period will increase by 185 per cent over the additional taxation in the Third Plan period. Similarly, the contributions from the public enterprises have also increased 190 per cent over Third Plan period. Despite this however, the total State resources available for the Plan increased by only 39 per cent in the Third Plan period over the Second Plan period and again by 38 per cent in the Fourth Plan over the Third Plan period. It will be seen that the main reason for this is the increasing burden of the repayment of the Central loans which is reflected in the above table by the large increase in the negative entry under Miscellaneous Capital Receipts. Thus, the repayment of Central loans which was Rs. 145.48 crores during the Third Plan period increased to Rs. 312.33 crores in the Fourth Plan.

The Central assistance has also come down as a percentage of the total Plan outlay. Thus, for the Third Plan the Central assistance was 63 per cent of the total outlay while for the Fourth Plan it will be only 58 per cent. The total Central assistance for States in the Fourth Plan was 52 per cent over 65 per cent assistance given in the Third Plan. On the other hand, the Central assistance available for Andhra Pradesh was only Rs. 240 crores in the Fourth Plan period compared to Rs. 222 crores in the Third Plan period representing only an increase of 75 per cent, which would go to show that the share of Andhra Pradesh in the total Central assistance has declined. The estimate of State's resources for the Fourth Five-Year Plan shown in the table above was worked out after discussions with the Planning Commission.

Balance from Current Revenues at 1968-69 rate of Taxation :

The balance from current revenues as assessed at the discussions with the Planning Commission in November, 1969 worked out to Rs. 15.50 crores. The Planning Commission have subsequently intimated that the State Government will get an additional amount of Rs. 6.31 crores as its share of Central taxes. Thus

the total amount under balance from current revenues comes to Rs. 21.81 crores.

Loans from Markets :

The State Government were able to raise Rs. 52.66 crores during 1964-69. Having regard to the potentialities in the State and the need to raise more resources for the Plan, the State Government originally proposed a sum of Rs. 62.05 crores to be raised under this item. The Planning Commission have however, taking into account the level of such borrowings in 1969-70 put the figure under this item at Rs. 41.00 crores.

Share in Small Savings :

The State's share in small savings collections during 1964-69 was Rs. 8.98 crores. Considering the trend of small savings collection in the State in the years preceding 1969-70 as well as in 1969-70, an estimate of Rs. 15.00 crores has been provided under this item.

Unfunded Debt :

Unfunded debt which consists largely of the Provident Fund subscriptions of the employees of the State Government are expected to provide Rs. 25.00 crores.

Miscellaneous Capital Receipts :

The most important item which is responsible for the total net State's resources available being low is a large negative entry under miscellaneous capital receipts. The main reason for this is a large repayment of loans to the centre. In fact during the IVth Plan period the repayment is estimated to be about Rs. 312 crores as against the Central assistance for the Fourth Plan of Rs. 240 crores.

State's Resources for the Plan :

It will be seen from the table in para 2 above that on account of heavy negative entry under Miscellaneous Capital Receipts the non-Plan gap in the resources is Rs. 11.50 crores and that the receipts under additional taxation will have to be utilised to meet

this gap. The State Government had therefore, represented that unless additional resource mobilisation undertaken by the State was allowed to be utilised for augmenting the size of the State Plan, there would be little to induce the public to put up with the additional tax burden and it will be difficult for the State Government to introduce additional measures of taxation under resource mobilisation contemplated by it. After careful consideration, the Planning Commission have recommended to the Ministry of Finance to extend special accommodation to the States which have had non-Plan gaps in their resources and the Government of India have agreed to this. Thus the net State's resources available for financing the Plan worked out to Rs. 180.50 crores comprising additional resource mobilisation of Rs. (135 crores) and negotiated loans and market borrowings of (Rs. 45.50 crores).

However, the minimum requirement for meeting the spill-over commitments already entered into would amount to a total outlay of Rs. 530 crores over the Plan period. The outlay in the first three years itself comes to Rs. 265 crores and if the same level as in the current year is maintained in the remaining two years without any increase, the total outlay on the Plan will still come to Rs. 475 crores. As has been explained in greater detail in a separate chapter, of the outlay of Rs. 530 crores, the outlay on the sectors other than Irrigation and Power comes to Rs. 193 crores against an outlay of Rs. 201 crores approved by the Planning Commission within their approved Plan outlay of Rs. 420.50 crores. Thus, the maximum reduction possible has been achieved in all other sectors and the higher outlay is entirely necessitated by the spill-over commitments in Irrigation and Power. Any non-fulfilment of these commitments would delay the execution of major irrigation and power projects and this will, on the one hand, adversely affect the economy of the State for a considerable period and will, on the other, increase the costs of these projects even further. It is on these considerations that the State have been pressing that they should be enabled to atleast fulfil the spill-over commitments.

As has been pointed out separately Andhra Pradesh is still one of the less developed States in the

Indian Union and even if the existing level of development is maintained, the disparity between the State and the all-India average would further increase over the Plan period. Thus, the per capita income of the State at current prices was Rs. 275 at the end of the Second Plan as against Rs. 307 for All India. At the end of the Third Plan the per capita income of the State at current prices was Rs. 387 against Rs. 426 for All-India; while in 1968-69 it was Rs. 478 for the State against Rs. 555 for All-India. Even if the State's Fourth Plan outlay is Rs. 530 crores, the per capita income for Andhra Pradesh at the end of the Fourth Plan at 1968-69 prices will be only Rs. 532 against Rs. 643 anticipated for All-India. If, even this outlay is not rendered feasible and there is an actual decline in the level of development, the situation would be far worse. As mentioned above, the State has put in every effort to raise additional resources and any further effort required in this direction would also be contemplated. However, even the maximum effort in this direction would still not be sufficient to bridge the gap in resources.

The per capita outlays on the Plan have been coming down from Rs. 27.0 in 1965-66 the last year of the Third Plan to Rs. 19.5 in 1970-71 in absolute terms. The Plan outlay during the Third Plan period in Andhra Pradesh was Rs. 352 crores and as against this outlay of Rs. 530 crores in Fourth Plan would involve a step up of only 50 per cent in absolute terms, whereas the outlay on the National Fourth Plan has been stepped up by 85.4 per cent over the Third Five-Year Plan and the States' sector Plans as a whole in the Fourth Plan have been stepped up by 73.3 per cent over the corresponding outlay in the Third Plan. It is against this background that the need to have an overall Plan outlay of at least Rs. 530 crores for the Fourth Plan period has to be appreciated.

TABLE I

STATE INCOME AT CURRENT AND CONSTANT PRICES

(Rs. in Crores)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>State Income</i>										
1. At current prices	.. 983.19	1,079.61	1,117.60	1,318.99	1,509.78	1,520.77	1,782.49	1,960.40	1,998.10	2,163.62
2. At 1960-61 prices	.. 983.19	1,058.29	1,055.47	1,112.32	1,190.84	1,082.71	1,124.93	1,163.41	1,120.01	1,221.54
<i>Per capita income (Rs.)</i>										
3. At current prices	.. 275.20	296.82	301.58	349.21	392.03	387.18	444.73	479.13	478.35	513.45
4. At 1960-61 prices	.. 275.20	290.95	284.82	294.49	309.21	275.65	280.67	284.34	268.13	289.88
<i>Index No. of State Income with 1960-61 as base:</i>										
5. At current prices	.. 100.0	109.8	113.7	134.2	153.6	154.7	181.3	199.4	203.2	220.1
6. At 1960-61 prices	.. 100.0	107.6	107.4	113.1	121.1	110.1	114.4	118.3	113.9	124.2
<i>Index No. of per capita income with 1960-61 as base :</i>										
7. At current prices	.. 100.0	107.9	109.6	126.9	142.5	140.7	161.6	174.1	173.8	186.6
8. At 1960-61 prices	.. 100.0	105.7	103.5	107.0	112.4	100.2	102.0	103.3	97.4	105.3

*Provisional.

TABLE II
PRODUCTION OF PRINCIPAL CROPS IN ANDHRA PRADESH

(In lakh tonnes)

<i>Crop</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rice	36.61	45.15	42.44	43.43	50.51	39.61	44.15	46.74	35.08	43.30
Jowar	13.56	14.47	14.05	14.03	11.38	10.16	12.06	11.98	12.77	12.70
Total Cereals & Millets	61.45	71.97	68.72	69.41	73.63	58.28	66.77	69.15	56.69	66.31
Total Pulses	2.76	3.10	2.96	3.11	3.41	2.70	2.56	2.78	2.75	2.60
Total Foodgrains	64.21	78.17	71.68	72.52	77.04	60.98	69.33	71.92	59.44	68.91
Cotton*	1.13	1.24	1.15	1.33	1.44	0.82	1.38	1.57	0.96	1.01
Tobacco	1.13	1.27	1.32	1.76	1.55	1.28	1.72	1.77	1.82	1.25
Oilseeds†	7.89	6.31	7.69	8.57	10.16	7.11	9.40	11.48	9.79	11.84
Sugarcane (Gur)	8.13	7.90	8.20	10.78	12.18	10.94	8.43	10.10	12.74	11.21

*In bales of 180 Kgs. lint each.

†Includes Groundnut, Linseed, Sesamum and Castor.

TABLE III
INDEX NUMBERS OF AGRICULTURAL PRODUCTION IN ANDHRA PRADESH

(Base : 1956-57=100)

<i>Commodity/Group</i>	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Rice ..	107.5	124.7	124.6	127.5	147.0	116.3	129.6	137.2	103.0	127.1
Jowar ..	120.5	124.3	126.7	126.5	102.9	91.9	109.1	108.4	115.5	114.9
Total Cereals and Millets ..	108.8	131.6	123.8	125.4	135.1	107.3	122.0	127.2	102.5	121.2
Total Pulses ..	90.7	98.2	101.3	105.0	113.4	88.8	84.2	91.1	90.0	88.4
Total Foodgrains ..	108.2	130.5	123.0	124.7	134.3	106.6	120.6	125.9	102.1	120.0
Total Oilseeds ..	67.8	68.5	67.9	73.3	86.8	61.8	82.0	97.9	83.6	101.8
Tobacco ..	83.4	93.9	97.7	130.0	114.2	94.7	127.8	130.8	134.5	92.4
Total Non-food crops ..	82.8	80.7	87.9	107.7	115.9	88.1	101.1	114.3	108.4	108.7
All Commodities ..	99.4	113.3	110.9	118.8	127.9	100.2	113.9	121.9	104.3	116.1

Source : Bureau of Economics and Statistics, Hyderabad.

TABLE IV
LAND UTILISATION IN ANDHRA PRADESH

(Million Hectares)

Classification	1960-61	1965-66	1966-67	1967-68	1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Forests, Miscellaneous trees etc.	6.14	6.43	6.42	6.43	6.43	6.49
Barren and Uncultivable land and land put to non-agricultural uses	4.19	4.09	4.14	4.16	4.24	4.15
Current fallows, other fallows and culturable waste ..	4.98	4.79	4.42	4.36	4.73	4.11
Permanent pastures and other grazing lands ..	1.20	1.17	1.16	1.16	1.16	1.17
Net area sown	10.79	11.00	11.34	11.37	10.92	11.51
Area sown more than once	1.03	1.09	1.33	1.43	1.54	1.63
Total Cropped area	11.82	12.09	12.67	12.80	12.46	13.14
Total Geographical area	27.30	27.48	27.48	27.48	27.48	27.48

Source : Season and Crop Report, Bureau of Economics and Statistics, Hyderabad.

TABLE V

ADDITIONAL IRRIGATION POTENTIAL CREATED UNDER
FIVE YEAR PLANS IN ANDHRA PRADESH

('000 hectares)

<i>Period</i>	<i>Nagarjuna- sagar Project</i>	<i>Other Major and Medium Projects</i>	<i>Minor Irrigation Works</i>	<i>Total</i>
(1)	(2)	(3)	(4)	(5)
By the end of Third Plan..	..	390.52	405.90	796.42
Annual Plans 1966-67 to 1968-69	..	303.51	37.23	329.82
				670.56

TABLE VI
CROPPING PATTERN IN ANDHRA PRADESH

(Area in '000 Hectares)

Year	AREA UNDER									
	Food Crops			Non-food crops			All non-food crops	Total of all crops		
	Cereals and Millets	Pulses	Total food grains	Oil seeds	Fibres	Tobacco				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
1960-61	7,893.7	1,250.3	9,144.0	1,420.7	390.6	142.8	2,134.5	11,816.4
1964-65	8,034.2	1,401.3	9,435.5	1,728.7	477.3	156.6	2,625.7	12,756.5
1965-66	7,520.5	1,310.9	8,831.4	1,852.3	382.6	152.5	2,614.1	12,090.7
1966-67	8,020.4	1,307.3	9,327.7	1,855.1	413.8	193.2	2,664.5	12,675.9
1967-68	7,885.4	1,350.3	9,235.7	2,032.4	421.8	207.4	2,854.8	12,794.2
1968-69	7,620.2	1,489.5	9,109.7	1,827.1	403.0	229.9	2,636.6	12,456.2
1969-70	8,097.8	1,471.2	9,569.0	2,020.2	419.8	204.8	2,834.7	13,145.1

TABLE VII
REGISTERED FACTORIES AND EMPLOYMENT IN ANDHRA PRADESH

St. No.	Group	Number of factories			% Variation	Employment		% Variation
		1961	1968			1961	1968	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1.	Agro-based	2,234	2,288	+2.4	1,37,771	1,48,733	+8.0	
2.	Mineral based	132	145	+9.8	7,291	9,417	+29.2	
3.	Metal based	471	799	+69.6	24,558	40,854	+66.4	
4.	Chemical based	64	103	+60.9	2,958	7,391	+149.9	
5.	Forest based	146	283	+93.8	5,466	5,675	+3.8	
6.	Others	113	118	+4.4	3,519	6,634	+88.5	
Total		3,160	3,736	+18.2	1,81,563	2,18,704	+20.5	

TABLE VIII

DISTRIBUTION OF REGISTERED FACTORIES BY RANGE OF EMPLOYMENT—ANDHRA PRADESH

<i>Range (workers)</i>	<i>Number of Factories</i>		<i>% variation</i>
	1961	1968	
(1)	(2)	(3)	(4)
Less than 20	1,716	2,402	+40.0
20—50	928	751	-19.1
50—100	310	252	-18.7
100—500	136	230	+69.1
500—1000	42	60	+42.9
Over 1000	28	41	+46.4
Total	3,160	3,736	+18.2

MONTHLY AVERAGE PRODUCTION OF SELECTED

<i>Sl. No.</i>	<i>Industry</i>	<i>Unit</i>	1960	1961	1962
(1)	(2)	(3)	(4)	(5)	(6)
1.	<i>Cotton Textiles :</i>				
	(a) Yarn	.. 000 Kgs.	1,439	1,586	1,483
	(b) Fabrics	.. 000 Mts.	2,802	2,985	2,904
2.	Jute Textiles	.. Tonnes	4,656	2,697	3,176
3.	<i>Rayon Textiles :</i>				
	(a) Yarn	.. 000 Kgs.	155	169	91
	(b) Fabrics	.. 000 Mts.	382	464	349
4.	Cement	.. Tonnes	59,891	60,877	60,511
5.	Asbestos Cement	.. „	2,202	3,303	4,829
6.	Coal	.. 000 Tons	211	233	259
7.	Paper	.. Tonnes	2,961	2,882	2,075
8.	Vanaspathi	.. Tonnes	964	962	1,137
9.	Sugar	.. „	11,064	14,458	17,972
10.	Cigarettes	.. Millions	568.2	609.4	706.0
11.	Machine tools	.. 000 Rs.	N.A.	N.A.	N.A.
12.	Detonators	.. „	..	..	..
13.	Sewing Machines	.. „	N.A.	N.A.	N.A.
14.	<i>Welding Gases :</i>				
	(a) Oxygen	.. cub-Metres	26,722	30,928	41,535
	(b) D/Acetylene	.. „	5,191	6,176	7,509

Source : Bureau of Economics and Statistics, Hyderabad.

IX

INDUSTRIES IN ANDHRA PRADESH

1963	1964	1965	1966	1967	1968	1969	1970
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1,895	1,848	2,056	1,806	2,020	2,331	2,480	2,580
2,846	2,842	3,022	2,903	2,722	2,871	2,843	3,107
2,950	3,528	3,730	3,103	3,910	4,116	3,924	4,896
72	64	81	54	149	165	166	163
488	494	443	451	455	331	231	329
76,787	81,205	1,01,110	91,237	77,732	94,006	1,14,053	1,29,545
7,777	10,512	10,690	6,081	4,514	4,493	6,350	8,366
279	290	340	346	350	337	318	293
3,144	2,904	2,962	2,709	4,258	5,430	5,761	6,616
1,321	1,169	1,616	1,058	1,555	1,423	1,603	1,503
15,936	20,626	26,380	21,128	13,655	16,197	34,387	29,498
724.8	776.1	862.1	895.1	851.3	999.7	1,000.6	1,129.0
N.A.	N.A.	1,561	1,837	2,044	2,039	2,763	3,845
..	..	331	1,462	1,817	1,792	2,001	2,308
N.A.	N.A.	257	154	441	1,114	1,013	1,456
41,023	38,358	35,945	56,521	1,01,898	90,517	1,05,962	1,22,293
6,947	7,266	13,460	13,966	17,352	17,630	17,957	19,829

TABLE X

INDEX NUMBERS OF INDUSTRIAL PRODUCTION IN
ANDHRA PRADESH

(Base : 1960=700)

Sl. No. (1)	Industry (2)	1965 (3)	1966 (4)	1967 (5)	1968 (6)	1969 (7)	1970 (8)
1.	<i>Cotton Textiles :</i>						
	(a) Yarn ..	143	126	140	162	172	179
	(b) Fabrics ..	107	83	97	102	101	111
2.	Jute ..	140	116	141	156	147	184
3.	<i>Rayon Textiles :</i>						
	(a) Yarn ..	50	33	93	103	103	102
	(b) Fabrics ..	115	118	119	86	65	86
4.	Asbestos Cement ..	485	277	205	264	288	380
5.	Cement ..	169	153	130	157	192	217
6.	Coal ..	161	164	166	160	151	139
7.	Paper ..	106	97	152	194	206	237
8.	Vanaspathi ..	167	109	161	147	166	156
9.	Machine tools ..	480	565	629	627	850	1,183
10.	Cigarettes ..	152	158	150	175	176	199
11.	Sugar ..	238	191	123	146	213	267
12.	General Index (Unadjusted)	179	170	167	217	236	288

Source : Bureau of Economics and Statistics, Hyderabad.

TABLE XI

MINERAL PRODUCTION IN ANDHRA PRADESH

<i>Sl. No.</i> (1)	<i>Mineral</i> (2)	<i>Unit</i> (3)	1960 (4)	1965 (5)	1968 (6)
1.	Asbestos	.. Tonnes	121	78	333
2.	Apatite	. ,, "	1,145	972	6,430
3.	Barytes	.. ,, "	15,592	36,170	45,526
4.	Calcite	.. ,, "	3,440	5,806	..
5.	China Clay	. ,, "	4,527	31,979	28,647
6.	Iron Ore	.. ,, "	3,32,611	1,51,248	1,78,811
7.	Limestone	.. ,, "	9,20,402	19,38,522	18,93,925
8.	Manganese	.. ,, "	40,835	1,34,299	1,42,541
9.	Mica	-- ,,	6,973	5,641	5,060
10.	Coal	-- 000 tonnes	2,517	4,040	3,971
11.	Steatite	-- Tonnes	4,036	7,858	8,665
12.	Quartz and Silica	-- Tonnes	7,547	48,350	89,053

TABLE XII

INDEX NUMBERS OF MINERAL PRODUCTION IN
ANDHRA PRADESH

<i>Item</i>			1961	1965	1969
(1)			(2)	(3)	(4)
General Index	..	..	108.6	155.0	149.2
Asbestos	..	..	88.4	64.5	Nil.
Barytes	..	..	147.6	232.0	328.3
Iron ore	..	..	65.7	46.9	33.8
Limestone	..	..	117.1	210.6	229.8
Manganese	..	..	177.3	328.9	349.5
Mica	..	..	100.4	80.9	73.3
Coal	..	..	110.1	160.5	151.9

TABLE XIII

JOINT STOCK COMPANIES AT WORK IN ANDHRA PRADESH

(Capital Rs. in crores)

Year (1)	Number of Companies			Paid-up capital			
	Public (2)	Private (3)	Total (4)	Public (5)	Private (6)	Total (7)	
1960-61	..	150	296	446	21.24	3.32	24.56
1961-62	..	146	296	442	21.57	3.78	25.35
1962-63	..	156	302	458	23.73	4.92	28.65
1963-64	..	152	316	468	24.75	5.24	29.99
1964-65	..	156	350	506	34.19	7.42	41.61
1965-66	..	155	379	534	41.10	8.42	49.52
1966-67	..	154	397	551	36.71	8.58	45.29
1967-68	..	151	433	584	39.94	10.91	50.85

TABLE XIV

POWER STATISTICS ANDHRA PRADESH

<i>Sl.No.</i> (1)	<i>Item</i> (2)	1960-61 (3)	1965-66 (4)	1969-70* (5)
1.	Installed capacity (M.W.)	213.0	291.8	619.50
2.	Electricity Generated (M. kh)	881.7	1,471.1	2,625.0
3.	Industrial Consumption (M. Kh)	374.74	570.5	1,302.1
4.	Irrigation (M. Kh.)	59.25	172.7	328.6
5.	Number of Towns and villages Electrified	2,665	4,318	7,200
6.	Number of Pumpsets Energised	17,968	57,225	1,57,644

*Provisional.

TABLE XV

EMPLOYMENT IN ANDHRA PRADESH
(1961 TO 1969)

<i>Year</i>	<i>Employment in Public sector (Lakhs)</i>	<i>Percentage increase over the previous year</i>	<i>Employment in factory sector (Lakhs)</i>	<i>Percentage increase over the previous year</i>
(1)	(2)	(3)	(4)	(5)
1961	1.90	..
1962	..	5.66	2.01	5.8
1963	..	5.88	2.43	20.9
1964	..	6.14	2.23	(—)8.2
1965	..	6.52	2.20	(—)1.3
1966	..	6.63	2.26	2.7
1967	..	6.63	2.35	4.0
1968	..	6.67	2.79	18.7
1969	..	6.83	..	..

TABLE XVI

REGISTRATIONS AND PLACEMENTS AT EMPLOYMENT
EXCHANGES IN ANDHRA PRADESH

<i>Year</i>			<i>Number of registrations</i>	<i>Number of Placements</i>	<i>Number of the live register at the end of the year</i>
(1)			(2)	(3)	(4)
1960	..	..	1.74	0.19	1.06
1961	..	..	1.95	0.36	1.07
1962	..	..	2.02	0.26	1.19
1963	..	..	2.24	0.29	1.34
1964	..	..	2.27	0.38	1.30
1965	..	..	2.51	0.41	1.44
1966	..	..	2.38	0.34	1.45
1967	..	..	2.23	0.23	1.57
1968	..	..	2.37	0.22	1.77
1969	..	..	2.66	0.21	2.19
1970	..	..	3.12	0.26	2.81

TABLE XVII
INDUSTRIAL SITUATION IN ANDHRA PRADESH

<i>Year</i>			<i>Number of disputes</i>	<i>Number of workers involved</i>	<i>Number of Mandays lost</i>
(1)			(2)	(3)	(4)
1960	..	..	61	29,767	1,98,290
1961	..	..	49	26,067	1,53,923
1962	..	..	65	26,428	71,762
1963	..	..	86	24,778	1,60,498
1964	..	..	111	85,994	5,29,070
1965	..	..	113	31,034	4,91,780
1966	..	..	114	58,099	5,12,940
1967	..	..	75	49,507	5,58,329
1968	..	..	82	25,395	2,27,555
1969	..	..	97	65,001	4,75,429
1970	..	..	116	35,945	3,37,310

Source : Commissioner of Labour, Government of Andhra Pradesh, Hyderabad.

TABLE XVIII

INDEX NUMBERS OF WHOLESALE PRICES IN HYDERABAD
CITY (BASE AUGUST 1939=100)

<i>Year</i>	<i>Food Articles</i>	<i>%increase over previous year</i>	<i>Non-food articles</i>	<i>%increase over previous year</i>	<i>General Index</i>	<i>% increase over previous year</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960	521	+4.0	597	+14.6	555	+8.8
1961 ..	524	+0.6	634	+6.2	573	+3.2
1962 .	547	+4.4	612	-3.5	575	+0.3
1963 ..	540	-1.3	613	+0.2	572	-0.5
1964 ..	661	+22.4	675	+10.1	667	+16.6
1965 ..	755	+14.2	768	+13.8	761	+14.1
1966 ..	866	+14.7	995	+29.6	992	+21.2
1967 ..	1,001	+15.6	1,044	+4.9	1,020	+10.6
1968 ..	955	-4.6	934	-10.5	945	-7.4
1969 ..	957	+0.2	1,081	+15.7	1,011	+7.0

Source : Bureau of Economics and Statistics, Hyderabad.

TABLE XIX
CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKING CLASS AT SELECTED CENTRES
IN ANDHRA PRADESH

(Base : 1960=100)

Centre	1967	1968	1969	1970	Average Annual (%) increase during 1966-67	Percentage Variation over the previous year		
						1968 over 1967	1969 over 1968	1970 over 1969
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Hyderabad	165	171	182	188	9.3	+3.6	+6.4	+3.3
Shakkarnagar	149	154	163	170	7.0	+3.4	+5.8	+4.3
Warangal	148	164	181	177	6.9	+10.8	+10.4	-2.2
Kagaznagar	149	151	162	166	7.0	+1.3	+7.3	+2.5
Visakhapatnam	151	152	156	173	7.3	+0.7	+2.6	+13.8
Rajahmundry	142	157	161	170	6.0	+10.6	+2.5	+5.6
Guntur	165	161	179	189	9.3	-2.4	+11.2	+5.6
Gudur	157	168	175	180	8.1	+7.0	+4.2	+2.9
Adoni	152	160	173	183	7.4	+5.3	+8.1	+5.8

TABLE XX

SELECT SOCIO-ECONOMIC CHARACTERISTICS FOR
ANDHRA PRADESH *Vis-a-Vis* ALL INDIA.

<i>Items</i>	<i>Year</i>	<i>A. P.</i>	<i>All India</i>
Density of population	.. 1971	406	471
Percentage growth of population	.. 1961-71	20.60	24.66
Percentage of Workers to total population	.. 1971	41.68	33.54
Number of factory workers per lakh population .. .. .	.. 1969	516	866
Per capita consumption of Electricity (kwh) ..	1968-69	44	76
Road mileage per lakh population (miles)		78	102
Percentage of literacy (All persons)	.. 1971	24.56	29.34
Per centage enrolment of the age group children 6-11 in Primary Schools	.. 1968-69	72.7	77.3
Number of hospital beds per lakh population	1968-69	51	48
Birth rate for population of 1000	.. 1961	39.7	41.7
Death rate for population of 1000	.. 1961	25.2	22.7
Per capita net domestic product (Rs.)	.. 1968-69	478	552
Percentage contribution to net domestic product from .. ..	.. 1968-69		
(a) Agricultural & Allied sectors	..	51.8	43.8
(b) Industry and Mining	..	11.5	17.3
(c) Others	.. ..	36.7	38.9

TABLE XXI
ALLOCATION OF PLAN OUTLAYS IN ANDHRA PRADESH SINCE ITS FORMATION (1956-74)

Sl. No.	Head of Development	Second Five Year Plan (1956-61)		Third Five Year Plan (1961-66)		Annual Plan (1966-69)		Fourth Five Year Plan (1969-74)	
		Expenditure in Rs. lakhs	% to total	Expenditure in Rs. lakhs	% to total	Expenditure in Rs. lakhs	% to total	Outlay in Rs. lakhs	% to total
I	Agricultural and Allied Programme	1,779.91	9.44	5,148.06	14.61	3,476.27	14.85	6,007.02	11.34
II.	Co-operation	1,956.72	10.37	2,741.31	7.78	607.14	2.59	1,937.12	3.65
III.	Irrigation and Power	9,596.33	50.88	18,662.90	52.96	15,732.19	67.22	33,002.29	62.27
IV.	Industries	1,015.15	5.38	1,519.13	4.31	710.64	3.04	1,970.41	3.72
V.	Transport and Communications	952.46	5.05	1,700.05	4.82	720.00	3.08	1,642.90	3.10
VI.	Social Services	3,305.29	17.53	5,287.84	15.00	2,135.53	9.12	6,806.69	12.84
VII.	Miscellaneous	254.44	1.35	182.31	0.52	23.25	0.10	56.04	0.10
VIII.	Special allotment for backward areas	..	..	..	..	..	..	1,578.00	2.98
		18,860.30	100.00	35,241.60	100.00	23,406.01	100.00	53,000.47	100.00

Note.—Total outlay proposed for Fourth Plan is Rs. 530.00 crores. Of this a sum of Rs. 15.78 crores is provided for development of Backward areas in the State for the years 1972-74 which will be reallocated among different sectors separately.

TABLE XXII

PERSPECTIVE OF INVESTMENT AND INCOME
IN ANDHRA PRADESH

(Rs. in crores)

Source of Investment	Fourth Plan	Fifth Plan	Sixth Plan	Total
1. State Plan ..	530.0+	795.0	1,192.5	2,517.5
2. Estimate of Central sector and Institutional finances other than those accounted for in State ..	350.0	525.0	787.5	1,662.5
3. Sub-total ..	880.0	1,320.0	1,980.0	4,180.0
4. Private investment ..	336.2	425.0	553.3	1,314.5
5. Total Investment ..	1,216.2	1,745.0	2,533.3	5,494.5
6. Total anticipated income at the end of each Plan ..	2,484.0 (2,444)*	3,182.0	4,195.0	
7. Expected population at the end of (lakh persons) ..	459.12	516.37	580.76	
8. Per capita anticipated income at the end of (Rs.) ..	541 (532)*	616	722	
9. Investment as percentage of income :				
(a) Andhra Pradesh ..	10.9	12.3	13.7	
(b) All-India ..	11.2 to 14.5	14.5 to 16	16 to 18	

+The total State income at the end of Fourth Plan, on the basis of sectoral analysis works out to Rs. 2,444 crores and hence the per capita income will be Rs. 532. Accordingly this figure has been adopted for IV Plan pending reconciliation and detailed study.

*The total plan outlay is assumed to be investment though the entire amount will not go towards capital expenditure. The underlying assumption is that the Plan expenditure other than capital will be compensated by the non-plan capital expenditure,

TABLE XXIII

OUTLAYS PROPOSED BY PLANNING COMMISSION
AND THE STATE GOVERNMENT FOR
FOURTH FIVE YEAR PLAN

(Rs. in lakhs)

<i>Head of Department</i>		<i>Outlay re- commended by the Planning Commis- sion.</i>	<i>Outlay pro- posed by the State Govern- ment.</i>
<i>Head of Development</i>			
I. AGRICULTURE AND ALLIED PROGRAMMES			
1. Agricultural Production ..			648.9.
(a) Director of Agriculture ..			282.44
(b) Agro Industries Corporation	1,000.00		132.74
(c) Agricultural University			212.57
(d) Registrar of Co-operative Societies			21.17
1.2. Land Development Registrar of Co-operative Societies			66.33
1.3. Training Centres			23.89
1.4. Minor Irrigation ..	3,000.00		2,562.49
(a) Director Ground Water Survey ..			156.74
(b) Chief Engineer (Minor Irrigation) ..			1,205.03
(c) Board of Revenue ..			..
(d) Chief Engineer (Panchayati Raj)			172.11
(e) Registrar of Co-operative Societies ..			1,018.58
(f) Planning Department ..			10.03
1.5. Soil Conservation ..	200.00		370.12
(a) Director of Agriculture ..			327.79
(b) Chief Conservator of Forests			40.61
(c) Agricultural University ..			1.72

<i>Head of Department</i>		<i>Outlay re- commended by the Planning Commis- sion.</i>	<i>Outlay pro- posed by the State Govern- ment.</i>
<i>Head of Development</i>			
1.6. Development of Ayacuts	.. ..	800.00	1,233.04
(a) Director of Agriculture	.. ..		37.39
(b) Board of Revenue	.. ..		305.20
(c) Chief Engineer (Major Irrigation)	.. ..		157.14
(d) Registrar of Co-operative Societies	.. ..		687.24
(e) Director of Animal Husbandry	.. ..		24.87
(f) Agricultural University	.. ..		11.73
(g) Inspector-General of Registration	.. ..		9.47
1.7. Animal Husbandry	.. ..	225.00	185.32
1.8. Dairying and Milk Supply		225.00	385.46
1.9. Forests	.. ..	225.00	306.50
1.10. Fisheries	.. ..	150.00	208.83
1.11. Warehousing and Marketing	.. ..	40.00	16.09
Total	.. ..	5,865.00	6,007.02
II. CO-OPERATION AND COMMUNITY DEVELOPMENT			
2.1. Co-operation	.. ..	700.00	1,083.93
2.2. Community Development	.. ..	500.00	852.74
(a) Community Development	.. ..		699.90
(b) Applied Nutrition Programme	.. ..		72.80
(c) Rural Man Power	.. ..		80.04
2.3. Panchayats	.. ..	100.00	04.5
(a) Panchayati Raj Department	.. ..		0.45
(b) Planning Department	.. ..	
Total Co-operation and Community Development	.. ..	1,300.00	1,937.12

<i>Head of Department</i> <i>Head of Development</i>	<i>Outlay re-</i> <i>commended</i> <i>by the</i> <i>Planning</i> <i>Commis-</i> <i>sion.</i>	<i>Outlay pro-</i> <i>posed by</i> <i>the State</i> <i>Govern-</i> <i>ment.</i>
III. IRRIGATION AND POWER		
3.1. Irrigation	8,600.00	13,287.71
(a) Nagarjunasagar Project	2,450.00	4,450.00
(b) Major and Medium Irrigation includ- ing Flood Control	3,650.00	5,837.71
(c) Pochampad	2,500.00	3,000.00
3.2. Power	13,300.00	19,714.58
(a) Government Works		2,966.76
(i) Chief Engineer (Srisailam)		2,100.00
(ii) Chief Engineer (Electricity Projects).		866.76
4. Electricity Board Works		16,747.82
Total Irrigation and Power	21,900.00	33,002.29
IV. INDUSTRIES AND MINING		
1. Large and Medium Industries	750.00	1,190.70
(a) Director of Industries		852.83
(b) Andhra Pradesh Industrial Develop- ment Corporation		337.87
2. Mineral Development	100.00	65.19
(a) Director of Mines and Geology		14.04
(b) Andhra Pradesh Mining Corporation		15.15
3. Metric System Controller of Weights and Measures		85.00
4. Village and Small Scale Industries	850.00	629.52
(a) Director of Industries		277.28
(b) Director of Handlooms		352.24
Total Industries and Mining	1,700.00	1,970.41

<i>Head of Department</i>	<i>Outlay re-</i>	<i>Outlay pro-</i>
<i>Head of Development</i>	<i>commended</i>	<i>posed by</i>
	<i>by the</i>	<i>the State</i>
	<i>Planning</i>	<i>Govern-</i>
	<i>Commis-</i>	<i>ment.</i>
	<i>sion.</i>	
V. TRANSPORT AND COMMUNICATION;		
1. Roads	2,200.00	1,321.71
(a) Chief Engineer (Roads and Buildings)		1,237.38
(b) Chief Engineer (Panchayati Raj)		84.33
2. Road Transport Andhra Pradesh State Roads Transport Corporation	200.00	253.51
3. Minor Ports	50.00	42.68
Other Transport	15.00	..
4. Tourism	5.00	25.00
Total Transport and Communications	2,470.00	1,642.90
VI. SOCIAL SERVICES		
1. General Education	3,520.00	1,671.66
(a) Director of Public Instruction		1,644.00
(b) Director of Archives		18.34
(c) Director of Public Libraries		9.32
2. Technical Education	300.00	170.32
(a) Director of Technical Education		165.10
(b) Cultural Programmes		5.22
3. Medical		367.04
(a) Director of Medical and Health Ser- vices	1,000.00	348.25
(b) Director of Indian Medicine		18.79
4. Public Health		186.35
5. Urban Water Supply and Drainage	1,460.00	1,722.55
(a) Chief Engineer (Public Health)		799.00
(b) Chief Engineer (Roads & Buildings)		923.55

<i>Head of Department</i>		<i>Outlay re-</i>	<i>Outlay pro-</i>
<i>Head of Development</i>		<i>commended</i>	<i>posed by</i>
		<i>by the</i>	<i>the State</i>
		<i>Planning</i>	<i>Govern-</i>
		<i>Commis-</i>	<i>ment</i>
		<i>sion</i>	
6. Rural Water Supply and Sanitation C.E. (P.R.),	.. ..	700.00	753.81
7. Housing	.. ..	750.00	764.13
(a) Andhra Pradesh Housing Board	.. ..		19.78
(b) Director of Town Planning	.. ..		6.90
(c) Registrar of Co-operative Societies	.. ..		69.00
(c) Commissioner of Labour	.. ..		13.05
(e) Commissioner of Hyderabad Corpora- tion	.. ..		87.60
(f) Director of Municipal Administra- tion	.. ..		33.36
(g) L.I.C. Loans (Planning Department.)	.. ..		534.44
8. Urban Development	.. ..	200.00	258.71
(a) Director of Municipal Administration	.. ..		68.14
(b) Director of Town Planning	.. ..		84.38
(c) Commissioner of Hyderabad Muni- cipal Corporation	.. ..		106.19
9. Welfare of Scheduled Castes and other Backward Classes	}	600.00	245.22
70. Welfare of Scheduled Tribes			581.09
11. Social Welfare	.. ..	70.00	30.60
(a) Director of Social Welfare	.. ..		3.75
(b) Director of Women Welfare	.. ..		22.96
(c) Inspector General of Prisons	.. ..		3.89
12. Craftsmen Training and Labour Welfare	.. ..	125.00	52.54
(a) Director of Employment and Training	.. ..		38.64

<i>Head of Department</i>		<i>Outlay recommended by the Planning Commission.</i>	<i>Outlay proposed by the State Government</i>
<i>Head of Development</i>			
(b) Commissioner of Labour			4.70
(c) Director of Medical and Health Services (E.S.I.)	.. ..		9.20
13. Public Co-operation	.. ..		2.67
Total Social Services	.. ..	8,725.00	6,806.69
VII. MISCELLANEOUS:			
1. Statistics, Director, Bureau of Economics and Statistics.		15.00	10.20
2. Evaluation	.. ..	5.00	5.86
3. Publicity	.. ..	70.00	37.73
4. Broadcasting	.. ..		2.25
Total Miscellaneous	.. ..	90.00	56.04
Special provision for Backward areas	.. ..		1,578.00
Grand Total	.. ..	42,050.00	53,000.47

TABLE XXIV

SECTORAL DISTRIBUTION OF THE OUTLAY
AND REGION-WISE BREAKUP.*(Rs. in crores)*

		<i>Coastal Andhra</i>	<i>Rayala- seema</i>	<i>Telan- gana</i>	<i>Total</i>
1. Agricultural programme	..	24.69	14.69	20.69	60.07
2. Co-operation and Community Development.	..	8.21	4.05	7.11	19.37
3. Irrigation	.. ..	61.47	20.15	51.26	132.88
4. Power	.. ..	79.89	39.89	77.37	197.15
5. Industries and Mining	..	8.21	3.15	8.35	19.71
6. Transport and Communications		10.28	2.62	3.53	16.43
7. Social Services	.. ..	22.86	12.75	32.45	68.06
8. Miscellaneous	.. ..	0.25	0.12	0.19	0.56
9. Special allotment for backward areas during 1972-74	..	5.26	10.52	..	15.78
Total	..	221.11	107.93	200.96	530.00

TABLE XXV
ALLOCATIONS UNDER SPECIAL DEVELOPMENT PROGRAMME OF RAYALASEEMA

<i>Head of Development</i>	<i>Allocation in Rs. lakhs</i>		<i>Total for 1970-71 and 1971-72</i>	<i>% 1972-74</i>	<i>Total for 1970-71 to 1973-74</i>	<i>Percentage to total.</i>
	<i>1970-71</i>	<i>1971-72</i>				
1. Rural Electrification	195.00	190.00	385.00	487.04	872.04	54.5
2. Major and Medium Irrigation	10.50	11.00	21.50	70.00	140.77	8.8
3. Minor Irrigation						
(a) P.W.D.	11.20	14.20	25.40			
(b) P. R.	11.07	12.80	23.87			
4. Ayacut Roads	16.00	23.60	39.60		39.60	2.5
5. Excavation of Field Channels	2.00	2.00	4.00		4.00	0.2
6. Agricultural Programmes	7.48	11.16	18.64	10.00	28.64	1.8
7. Animal Husbandry	14.78	11.01	25.79		25.79	1.6
8. Milk Supply Schemes	4.00	..	4.00		4.00	0.2
9. Fisheries	6.16	..	6.16		6.16	0.4
10. Forests	1.93	..	1.93	14.50	16.43	1.0
11. Co-operative Housing	3.75	..	3.75		3.75	0.2

12. Protected water supply	..								
13. Rural Water Supply	..								
14. Communications (P. R.)	..	..	15.00	15.00	30.00	30.00	60.00	3.8	
15. School Buildings	..	..	8.09	..	8.09		8.09	0.5	
16. Medical (Improvements to Hospitals)	..	..	3.75	..	3.75		3.75	0.2	
17. Urban Development	..	..	1.50	..	1.50		1.50	0.1	
18. Sericulture	..	..	2.10	2.04	4.14		4.14	0.3	
19. Industries and Infrastructure									
20. Industrial Research Surveys Projects Reports etc.			27.19	7.50	34.69		34.69	2.2	
21. Mining	..	..				19.00	19.00	1.2	
22. Social Welfare	..	..	15.10	33.59	48.69				
23. Tribal Welfare	..	..	5.65	4.00	9.65	79.46	137.80	8.6	
24. Women and Child Welfare	..	..	1.00	..	1.00		1.00	0.1	
25. Housing Corporation for scheduled Castes and Scheduled Tribes	..	..		20.00	20.00		20.00	1.2	
Total			400.00	400.00	800.00	800.00	1,600.00	100.0	

*As per the Regional Development, Plan approved by the Rayalaseema Board.

TABLE XXVI

ALLOCATIONS UNDER SPECIAL DEVELOPMENT
PROGRAMME OF COASTAL ANDHRA

<i>Head of Development</i>	<i>Allocations in Rs. lakhs</i>			<i>Percentage to the total</i>
	1970-71	1971-72	Total	
1. Major and Medium Irrigation :				
(a) Vamsadhara Project ..	50.00	50.00	100.00	25.0
(b) Thandava reservoir ..	..	25.00	25.00	6.3
(c) Vottigedda Project ..	7.38	..	7.38	1.8
2. Minor Irrigation ..	25.00	20.00	45.00	11.3
3. Fisheries ..	..	5.00	5.00	1.2
4. Andhra Pradesh Export—Import Corporation ..	15.00	..	15.00	3.7
5. <i>Medical</i> (Upgrading the Ongole Taluk Head-quarters hospital to District Headquarters hospital) ..	2.62	..	2.62	0.7
6. Welfare of Scheduled Tribes ..	100.00	65.00	165.00	41.2
7. Housing Federation for Sheduled Castes and Sheduled Tribes..	..	35.00	35.00	8.8
Total ..	200.00	200.00	400.00	100.0

TABLE XXVII

PROGRAMME FOR THE UTILISATION OF Rs. 43.72 CRORES FOR TELANGANA

(Rs. in lakhs)

S.No.	Head of Development Head of Department	1969-70	1970-71	1971-72	Total of Cols. (3-5)	1972-73	1973-74	Total 1969-74
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I.	Rural Electrification	436.00	300.00	300.00	1,036.00	300.00	50.00	1,386.00
II.	Irrigation	49.76	204.76	359.43	593.95	304.00	186.00	1,083.95
	1. Pochampad Project	..	100.00	165.00	265.00	199.00	136.00	600.00
	2. Minor Irrigation :							
	(a) Chief Engineer, P.W.D.-	26.56	79.39	150.80	256.75	105.00	50.00	411.75
	(b) Chief Engineer, P. R.	23.20	15.00	8.63	46.83	..	..	46.83
	3. Major Irrigation	..	10.37	15.00	25.37	..	..	25.37
III.	Communications	175.47	152.36	120.00	447.83	85.00	50.00	582.83
	(a) Chief Engineer, P. R.	132.46	130.00	110.00	372.46	85.00	50.00	507.46
	(b) Chief Engineer, P.W.D.	42.01	22.36	10.00	74.37	..	..	74.37
	(c) Municipal Roads	1.00	..	..	1.00	..	..	1.00

<i>S.No.</i>	<i>Head of Development</i>		1969-70	1970-71	1971-72	<i>Total of Cols. (3-5)</i>	1972-73	1973-74	<i>Total 1969-74</i>
(1)	<i>Head of Department.</i> (2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
IV.	Protected Water Supply Schemes	..	71.33	9.447	100.00	265.80	97.50	47.50	410.80
	(a) Ex-Town Committees	..	55.03	84.51	90.00	229.54	90.00	40.00	359.54
	(b) Municipalities	..	16.30	9.96	10.00	36.26	7.50	7.50	51.26
V.	Education	..	126.86	13.34	8.92	149.12	5.00	..	154.12
	(a) Zilla Parishad School Buildings	..	103.10	2.69	..	105.79	..	..	105.79
	(b) Buildings for Private Colleges	..	22.00	..	..	22.00	..	..	22.00
	(c) School Buildings in Municipal areas	..	1.76	1.65	..	3.41	..	..	3.41
	(d) Post-Graduate course for the teacher candidates at Osmania University	..	..	4.00	3.92	7.92	5.00	..	12.92
	(e) Post-Graduate Centre at Warangal	..	..	5.00	3.00	8.00	..	..	8.00
	(f) Other Post-Graduate Centres	..	..	..	2.00	2.00	..	..	2.00
VI.	Soil Conservation	..	..	18.69	10.00	28.69	25.00	40.00	93.69
VII.	Milk Supply Schemes	..	6.42	24.98	38.00	69.40	25.00	25.00	119.40
VIII.	Medical	..	1.39	10.46	18.00	29.85	15.00	10.00	54.85

IX. Fisheries	..	..	..	..	..	5.00	5.00	5.00	5.00	15.00
X. Co-operation and Credit	..	..	..	..	13.00	20.00	33.00	7.00	..	40.00
Assistance to Weak Co-operative Central Banks	..	..	..	..	13.00	20.00	33.00	7.00	..	40.00
XI. Housing	..	..	..	..	2.00	5.00	47.00	..	..	47.00
(a) Share Capital Contribution to Andhra Pradesh Co-operative Housing Federation	..	..	..	..	2.00	..	2.00	..	..	2.00
(b) Scheduled Castes and Scheduled Tribes Housing Federation	..	..	..	..	..	45.00	45.00	..	..	45.00
XII. Animal Husbandry	..	..	..	..	16.00	16.00	16.52	13.00	..	45.52
(a) Modern Slaughter House, Hyderabad	..	..	..	..	..	5.00	5.00	..	..	5.00
(b) I.C.D. Block	..	..	..	..	..	8.00	8.00	13.00	13.00	34.00
(c) Feed Mixing Plant, Karimnagar	..	..	..	..	..	3.00	3.00	3.52	..	6.52
XIII. Social Welfare	..	..	27.45	74.37	70.00	171.82	45.00	45.00	..	261.82
(a) Harijan and General Welfare	..	..	18.80	22.50	30.00	71.30	20.00	20.00	..	111.30
(b) Tribal Welfare	..	..	2.68	49.80	40.00	92.48	25.00	25.00	..	142.48
(c) Women and Child Welfare	..	..	5.97	2.07	..	8.04	..	..	..	8.04

<i>S.No.</i>	<i>Head of Development</i>	1969-70	1970-71	1971-72	<i>Total of Cols (3-5)</i>	1972-73	1973-74	<i>Total 1969-74</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
XIV. Industries	32.00	32.10	64.10	12.50	..	76.60
(a) Azamjahi Mills	32.00	..	32.00	..	..	32.00
(b) Industrial Co-operatives	1.00	1.00	..	..	1.00
(c) Balanagar Industrial Estate, Hyderabad	7.00	7.00	..	..	7.00
(d) Loans under State Aid to Industries Act.	2.00	2.00	..	..	2.00
(e) Andhra Pradesh Small Scale Industrial Development Corporation	0.60	0.60	..	..	0.60
(f) Electronics Complex, Kishiyaguda, Hyderabad	1.50	1.50	..	..	1.50
(g) Co-operative Sugar Factory, Miryalaguda	10.00	10.00	12.50	..	22.50
(h) Wool Spinning Mill, Mahabubnagar	5.00	5.00	..	..	5.00
(i) Co-operative Maize Starch Factory	5.00	5.00	..	..	5.00
	Total	..	894.68	940.43	1,122.45	2,957.56	942.52	4,371.58

TABLE XXVIII

PROVISION IN THE IVTH PLAN FOR SECTORS
INCLUDED IN THE SPECIAL PROGRAMME
FOR TELANGANA

(Rs. in lakhs)

<i>Head of Development</i>	<i>Expen- diture in 1969-70</i>	<i>Expen- diture in 1970-71</i>	<i>Provision in 1971-72</i>	<i>Provision 1972-74</i>	<i>Total Fourth Plan 1969-74</i>
(1)	(2)	(3)	(4)	(5)	(6)
1. Rural Electrification	491.08	563.05	301.27	643.16	1,998.56
2. Minor Irrigation ..	152.41	162.35	138.96	418.02	871.74
3. Communications	27.42	43.01	53.00	127.37	250.80
4. Protected Water Schemes ..	50.47	34.22	49.15	117.36	251.20
5. General Education .	54.14	60.42	141.84	517.39	773.79
6. Soil Conservation ..	19.37	15.18	26.00	76.49	137.04
7. Milk Supply schemes	18.03	18.19	25.00	70.63	131.85
8. Medical ..	9.71	18.75	31.46	80.47	140.39
9. Fisheries ..	1.85	2.52	5.88	23.46	33.71
10. Credit ..	4.80	20.85	21.00	25.00	71.65
11. Housing ..	14.49	49.60	67.17	161.90	293.16
12. Animal Husbandry .	6.01	8.34	10.45	28.91	53.71
13. Social Welfare ..	0.74	1.49	4.19	13.44	19.84
14. Industries ..	266.63	167.77	122.08	262.38	818.86
15. <i>Co-operation :</i>					
(a) Share Capital to Co-operative Sugar Factories ..	..	..	13.50	22.00	35.50
(b) Other Processing Units ..	5.74	3.39	6.03	22.60	37.76
16. <i>Handlooms :</i>					
(a) Woollen Industry ..	..	1.00	2.00	4.00	7.00

TABLE XXIX
ADDITIONAL TAXATION MEASURES INTRODUCED
DURING THE SECOND AND THIRD PLANS

<i>Name of the tax</i>	<i>Year in which introduced.</i>	<i>Total estimated yield during the Plan period (Rs. crores)</i>
II Plan		
1. Purchase tax on Food-grains etc.	.. 1956-57	3.05
2. Sales tax on Country Tobacco	.. 1956-57	1.40
3. Amendments to Sales-Tax Act	.. 1956-57	1.40
4. Inter State Sales Tax	.. 1956-57	1.75
5. Standardization of Land Revenue (Andhra)	1956-57	0.75
6. Increase (25%) in wet assessment (Andhra)	.. 1956-57	0.25
7. Minor changes in the Taxation Structure made by ex-Hyderabad Government	.. 1956-57	0.60
8. Andhra Court Fees and Suits Valuation Act, 1956.	.. 1956-57	0.38
9. Increase of Water rate by 25%	.. 1956-57	0.17
10. Unification of Sales Tax Laws of Andhra and Telangana	.. 1957-58	3.93
11. Additional Sale Tax on Motor Spirits	.. 1957-58	0.28
12. Additional Wet Assessment (Andhra Pradesh) Amendment Act, 1957	.. 1957-58	2.00
13. Sugar cane cess	.. 1957-58	1.33
14. Increase of Water rate by 50%	.. 1957-58	1.33
15. Levy of Surcharge on Land Revenue	.. 1957-58	1.20
16. Levy of Special Assessment on Land growing certain Commercial Corps	.. 1957-58	2.01
17. Introduction of the Madras Motor Vehicles Taxation (P. & G.) Act, 1952 in the Telangana area and the Andhra Pradesh Act, X of 1958.	.. 1958-59	0.15

<i>Name of the tax</i>	<i>Year in which introduced.</i>	<i>Total estimated yield during the Plan period (Rs. crores)</i>
18. Enhancement of rates of taxes under the Hyderabad Motor Vehicles Taxation Act, 1955 and Andhra Pradesh Act, VII of 1958. ..	1958-59	0.57
19. Enhancement of rates of taxes under the Madras Motor Vehicles (T. P. G.) Act, 1952 and the Andhra Pradesh Act, XXI of 1959 ..	1959-70	1.94
Total ..		24.49

III Plan

1. Additional land assessment	1962-63	20.70
2. Tax on Non-Agricultural lands in Urban areas	1963-64	0.10
3. Revision in the rates of Sales Tax	1963-64	7.50
4. Inter-State Sales Tax	1963-64	2.20
5. Motor Vehicles Tax	1963-64	5.31
6. Auction of Neera shops	1963-64	5.40
By State Electricity Board Increase in Electricity Tariffs	1963-64	5.00
7. Increase in the Motor Vehicle Tax	1965-66	0.45
8. Revision in the rates of Entertainment tax	1965-66	0.50
9. Land Revenue on Sugarcane areas	1965-66	0.25
Total ..		47.41

TABLE XXX
 ADDITIONAL TAXATION IN 1966-67 TO 1968-69.

(Rs. in crores)

<i>Name of the tax</i>	1966-67	1967-68	1968-69	<i>Total</i>
1966-67				
Increase in Motor Vehicle tax ..	0.55	0.60	1.20	2.35
Entertainment tax	1.00	1.14	1.31	3.45
Land Revenue on Sugarcane areas .	0.45	..	..	0.45
Revision in the rate of Sales Tax ..	4.00	4.10	4.55	12.65
Revision of Sales Tax	2.00	2.25	2.25	6.50
1967-68				
Increase in the rates of Stamp duty ..	..	0.63	1.43	2.06
Increase in the rates of Motor Vehicles. .. ..	..	0.50	1.00	1.50
Increase in the rate of Electricity Duty .. ..	..	2.00	2.00	4.00
1968-69				
Increase in the rate of Motor Vehicles .. ..	..	..	1.00	1.00
Changes in Inter State Sales Tax ..	0.20	0.50	0.50	1.20
Total	8.20	11.72	15.24	35.16

Part II—Sectoral Programmes

I. AGRICULTURE

Andhra Pradesh is predominantly an agricultural State. The contribution of agriculture and animal husbandry to the income of Andhra Pradesh was 55.6 per cent for the year 1968-69 where as for the country as a whole it was 47.9 per cent. The percentage of agricultural workers to the total workers in Andhra Pradesh was 68.7 per cent in 1961. Thus agriculture continues to be the most important activity as far as the economy of Andhra Pradesh, is concerned. An adequate rate of growth in the agricultural sector is therefore, particularly significant if substantial improvement in the standard of living of the masses has to be brought about.

Objectives:

1.2 The objectives of the Fourth Five-Year Plan in the context of agricultural development are—

- (a) to bring about increase in agricultural production primarily through increasing productivity per acre;
- (b) to introduce diversification of cropping pattern in order to provide more stable incomes and effectively meet the shortages in supplies of different commodities in the national economy;
- (c) to give special emphasis to the problems of drought affected, tribal and other backward areas by developing the necessary infrastructure and appropriate cropping pattern with special emphasis on improved seed and dry land agriculture;
- (d) to build in weightages in favour of weaker sections and small farmers in the matter of implementation of various agricultural programmes;
- (e) to adequately integrate the various supporting programmes and institutional arrangements in terms of co-operative institutions,

marketing and warehousing facilities, irrigation programmes, agricultural research etc. based primarily on area development approach;

- (f) to specially orient the agricultural programmes taking cognisance of the various natural climatic factors available in different regions of the State.

Strategy:

1.3 The strategy for agricultural development implicit in the objectives above could be mentioned as follows:

- (a) optimum exploitation of the existing irrigation facilities created and concomitant development of the irrigation potential that is being created during the plan under major and medium irrigation sources;
- (b) maximum emphasis on exploitation of minor irrigation sources and ground water especially in areas which are not having the benefit of major and medium irrigation sources. However, in respect of areas which are already endowed with substantial surface irrigation facilities a cropping pattern which could be profitably brought about by encouraging supplemental irrigation through tube wells in ayacut area is also emphasised;
- (c) emphasis on a package of improved practices comprising scientific water management, high yielding varieties of seeds, plant protection and fertilisers;
- (d) encourage short term varieties in irrigated areas to enable the agriculturists to obtain two crops where they are obtaining one now and three crops where they are obtaining two now;
- (e) encourage short term drought resistant varieties in dry land area coupled with package of practices for dry land agriculture;

- (f) emphasis on cropping pattern that will increase food production coupled with production of commercial crops of significance *viz.*, oil seeds, tobacco, cotton, sugarcane etc.;
- (g) provision of agricultural machinery such as pumpsets, power tillers, tractors etc. with a view to effectively enable the adoption of improved methods of cultivation with due regard for the farm economics;
- (h) special emphasis on soil conservation in dry areas with a view to save precious soil and also as a measure of moisture retention;
- (i) provision of adequate and integrated supporting measures in terms of marketing, processing and communications; and lastly
- (j) promotion of research on important crops and on problem areas.

Regional Approach :

1.4 The general strategies on agricultural development in terms of the appropriate infrastructural development (irrigation, power, communications, marketing etc.) research with reference to plant breeding, agronomy and plant protection, the problems of seed in terms of varieties, certification and development, the problem of administration and extension, are all applicable to the different areas appropriately oriented to the special conditions pertaining to the different regions. However, special attention has to be paid to the different regions in certain aspects on the basis of appreciation of the natural resources and appropriate regional strategy. Accordingly, in Coastal Andhra the main attention is on the problem of paddy cultivation, diversification of cropping pattern, the special problems of agricultural development in Nagarjunasagar area and tribal areas. In respect of Rayalaseema the agricultural programme is oriented towards soil and water conservation problems, economic use of water, plant protection for typical diseases like root-grub for groundnut, intensified development of citrus and banana gardens and above all, basic and applied research on dry farming techniques such as Indo-

French Project and Central sector dry land farming projects. In respect of Telangana the major emphasis is on agricultural development in Nagarjunasagar and Pochampad areas, the approach to intensive agriculture especially around Hyderabad metropolitan city and dry farming techniques especially for Hyderabad, Medak and Mahaboobnagar and Nalgonda districts. The Telangana area being comparatively under-developed with substantial potential for improvement in farming even at the existing level of technology special attention will be paid to demonstration and extension by establishing soil testing laboratories and strengthening the administration.

The regional approach is evident from the pattern of allocations in respect of regional schemes as between different regions. Thus, for instance more than 50 per cent of the total outlay, on establishment of soil testing laboratories is provided in Telangana, more than 80 per cent of the allocation for strengthening of the district administration to provide for effective administration and extension is to be found in Telangana. Similarly, the dry land fertilisation scheme, fruit development scheme and the scheme for distribution of agricultural implements find appropriate weightages in the Telangana Plan. In Rayalaseema, the Indo-French Project on dry farming techniques has been provided about Rs. 11.5 lakhs being the share of the State Plan. Introduction of cotton is given weightage in Rayalaseema area by providing more than 50 per cent of the allocation for this purpose. Nearly 60 per cent of the provision for fruit development scheme is in Rayalaseema. Weightage is also given in respect of subsidised distribution of agricultural implements. In Coastal Andhra emphasis is placed on seed farms and seed multiplication by providing more than 50 per cent of the allocation for this purpose. Integrated sugarcane development is yet another programme in which weightage has been given to Coastal Andhra.

Review:

1.5 The performance of the State in agricultural sector during the past has been quite impressive. The gross value of agricultural production (at cur-

rent prices) in the State increased from Rs. 586.55 crores in 1960-61 to Rs. 1,277.50 crores in 1967-68. While the area under cultivation has increased only marginally the yield per acre in respect of important crops such as Rice, Sugarcane, Cotton, has increased by 21.1, 10.4, 56.1 per cent respectively during the period 1955-56 to 1967-68.

(ii) The index of agricultural production for the State with base 1956-57=100 was 121.9 in 1967-68 registering an annual linear growth of 1.99 per cent. However, agriculture in the State is not free from the vagaries of monsoon. Following the recovery of production in 1967-68 from the abnormally low level of the previous two drought years 1965-66 and 1966-67, there was again a set back in 1968-69 due to adverse seasonal conditions and the index of agricultural production fell to 104.3 in that year. The production in the year 1967-68 may therefore be considered as the base level of production at the beginning of Fourth Plan. The index of productivity with the same base *viz.* 1956-57=100 was 118.7 in 1967-68 which works out 1.70 per cent of growth per annum. Apart from creation of additional irrigation facilities through the major and minor irrigation schemes implemented in the earlier plans, the strategy followed in advocating and stressing the application of fertilizers and proper manurial schedules was largely responsible for this increase in productivity. The level of consumption of nitrogenous fertilisers which was of the order of only 0.33 lakh tonnes in terms of ammonium sulphate in 1956-57 had increased to 8.17 lakh tonnes in 1967-68. The consumption of phosphatic fertilizers too had risen from 0.27 lakh tonnes to 2.68 lakh tonnes in terms of super phosphate.

(iii) The following statement shows the average yield per acre and the total outturn at the commencement of each of the Plan periods, for some of the important crops of the State.

<i>Crop</i>	1955-56		1960-61		1967-68				
	<i>Yield per acre (Kg.)</i>	<i>Total out-turn (lakh tonnes)</i>	<i>Yield per acre (Kg.)</i>	<i>Total out-turn (lakh tonnes)</i>	<i>Yield per acre (Kg.)</i>	<i>Total out-turn (Lakh tonnes)</i>			
(1t)	(2)	(3)	(4)	(5)	(6)	(7)			
1. Rice :									
(a) Coastal Andhra	535	21.96	537	24.72	535	27.92
(b) Rayalaseema	508	3.48	553	4.19	602	5.31
(c) Telangana	286	5.55	393	7.70	559	13.51
(d) Andhra Pradesh	460	30.90	501	36.61	557	46.74
2. Jowar :									
(a) Coastal Andhra	277	3.80	214	2.73	192	5.06
(b) Rayalaseema	182	2.78	182	3.24	191	2.55
(c) Telangana	144	4.92	206	7.59	186	6.95
(d) Andhra Pradesh	192	11.50	201	13.56	195	11.98
3. Ground-nut :									
(a) Coastal Andhra	469	2.15	396	1.35	303	1.83
(b) Rayalaseema	412	6.23	371	5.02	327	6.50
(c) Telangana	228	2.49	198	0.59	259	2.06
(d) Andhra Pradesh	354	10.87	350	6.94	307	10.39

4. Castor :

(a) Coastal Andhra	..	..	..	104	0.07	96	0.07	48	0.03
(b) Rayalaseema	..	..	..	61	0.03	56	0.03	67	0.03
(c) Telangana	..	..	..	72	0.52	78	0.48	87	0.56
(d) Andhra Pradesh	..	..	..	74	0.62	78	0.57	83	0.62

5. Sugar cane :

(a) Coastal Andhra	..	..	..	3,358	3.03	3,141	4.16	3,531	0.06
(b) Rayalaseema	..	..	..	2,723	0.90	3,233	1.18	3,220	1.71
(c) Telangana	..	..	..	2,570	1.33	4,885	2.79	2,926	2.33
(d) Andhra Pradesh	..	..	..	3,005	5.26	3,597	8.13	3,318	10.10

6. Cotton : ..

(a) Coastal Andhra	..	..	..	30	0.14	34	0.06	77	0.23
(b) Rayalaseema	..	..	..	24	0.90	29	0.96	24	0.66
(c) Telangana	..	..	..	17	0.24	15	0.13	49	0.68
(d) Andhra Pradesh	..	..	..	23	1.28	26	1.16	36	1.57

7. Tobacco :

(a) Coastal Andhra	..	..	..	339	1.19	320	0.96	336	1.39
(b) Rayalaseema	..	..	..	296	0.04	264	0.05	275	0.13
(c) Telangana	..	..	..	279	0.11	345	0.12	389	0.24
(d) Andhra Pradesh	..	..	..	337	1.34	320	1.13	345	1.77

(iv) The area under food-grains in the State increased from 181 lakh acres in 1950-51 to about 228 lakh acres in 1967-68 or an increase by 26.0 per cent. Much of this increase in area was achieved by the end of the First Plan period itself. The increase was only 2.5 per cent in the Second Plan period and 1.7 per cent in the subsequent period indicating the limited possibilities of further increasing the area under foodgrains. Further increase in foodgrains production therefore, could be achieved primarily by increasing the productivity per acre, notwithstanding the fact that there are still a few areas in the Rayalaseema and Telangana regions of the State where some additional land can be brought under cultivation.

(v) The area under commercial crops is also substantial which was over 75 lakh acres forming about 25 per cent of gross cropped area. Important among the commercial crops raised in the State are Sugarcane, Tobacco, Groundnut, Castor, Sesamum and Cotton. The area under Sugarcane was doubled from 1.90 lakh acres in 1956-57 to 3.85 lakh acres in 1968-69. The State occupies 6th place among States of the India Union in respect of area under this crop while it ranks 3rd in out-turn. Similarly, the State enjoys a monopoly in the country in regard to the production of Virginia variety of Tobacco. The area under all varieties of Tobacco had increased from 3.96 lakh acres in 1956-57 to 5.68 lakh acres in 1968-69. The rapid increase in area under this crop was due to introduction of Tobacco cultivation in light red soils of the State. The exploratory trials towards enlarging the scope of Tobacco cultivation in large areas is still under way.

Fourth Plan Programmes:

1.6 Programmes under agricultural development consist of schemes sponsored by both Central and State Governments. The Central Sector Schemes have the main objective of achieving national targets of agricultural production and also supplement the State Plan Schemes. It is therefore, relevant to describe the salient features of the Central sector schemes before elaborating the State plan schemes.

1.7 The Central sector schemes mainly consist of research and extension of improved practices of selected crops. Besides, there are also two general schemes *viz.*, Farmers training in high yielding varieties cultivation and multiple cropping practices. There are altogether 23 schemes a few of which were continued from earlier plans. The total cost of all the centrally sponsored schemes is estimated to be Rs. 62 lakhs per year.

The crops covered by research and extension schemes are Groundnut, Castor, Soyabean and Coconut in the category of oilseeds, cotton, jute, and mesta in the category of fibres, Tobacco and Cashewnut. There are 5 schemes under oilseeds development, 12 schemes under fibre development, one under Tobacco and two schemes for Cashewnut.

Oilseeds development schemes aim at popularising a package of improved practices on Groundnut, Aruna, Castor and Soyabean cultivation in the State. There is a research scheme for development of dwarf variety high yielding coconut seeds.

Development programme for cotton envisages popularising irrigated Cotton in rice fallows, intensive cultivation of rainfed Cotton, foliar spraying of urea on Cotton crop. Besides, there are schemes for development of extra long staple Cotton for Nagarjuna-sagar Project area and extension of Sea-Island Cotton under wells. There is also a scheme for plant protection for Cotton.

Schemes for Jute and Mesta include a package scheme for Mesta, aerial spraying of Jute and Mesta crops subsidised distribution of Jute seed and provision of improved retting facilities.

There is a scheme for Tobacco development for its extension to light soils. Besides a scheme for demonstration of improved practices of Cashewnut, plant protection and production of cashew airlayers are also covered by two more schemes under Cashewnut Development.

Under farmers training programmes, four training centres, have been established in the State. In each of

these centres 250 farmers/farmer women/young farmers are to be trained every year. The course covers all improved practices for increasing agricultural productivity.

A scheme for evolving suitable crop rotation for raising multiple number of crops in the same area in a year and popularising them is taken up in three selected Blocks at the rate of one in each region of the State. The scheme will benefit small farmers by way of getting more income from their small holdings.

1.8 The agricultural programmes consisting of research and extension of improved practices will be effective only in the presence of certain infrastructure facilities like irrigation, soil conservation, land development, credit and marketing facilities. Hence the outlays proposed for the development of these infrastructure facilities are necessary for a proper appreciation of the agricultural programmes. The outlay proposed are as follows:

	<i>Rs. crores</i>
(i) Irrigation (Major, medium and minor)	160.84
(ii) Co-operation	10.84
(iii) Land Development	0.66
(iv) Soil Conservation	3.70
(v) Development of Ayacuts	12.31

An amount of Rs. 648.94 lakhs is provided for agricultural production programmes in the Fourth Plan. Of this Coastal Andhra is provided with Rs. 222.01 lakhs, Rayalaseema with Rs. 177.06 lakhs and Telangana with Rs. 249.87 lakhs. The efforts in the earlier plans for popularising the use of improved seeds and application of chemical fertilizers have resulted in the large scale consumption of these two inputs. However, the plant protection measures have not been given their due importance. With the result the cultivators as well as the Government are now feeling the loss of crop due to frequent pest attack. Plant protection has therefore, assumed the importance

of a specialised subject now. Hence the Fourth Plan lays special emphasis on the extension of plant protection and pest control for which an amount of Rs. 69.44 lakhs is provided in the Plan. Though it has been realised that improved seeds will increase the yield rates, the existing position in regard to the supply of quality seed is limited. As such the production of foundation seed and their multiplication is accorded higher priority next only to plant protection. An amount of Rs. 44.01 lakhs is provided for seed farms and seed multiplication. Among other schemes, popularisation of high yielding varieties, multiple cropping, application of optimum doses of fertilizers, establishment and strengthening of soil testing laboratories etc. are the more important schemes included in the Plan.

Agricultural Production:

1.9 The total provision for various Fourth Plan programmes under this head is Rs. 648.94 lakhs. Four heads of departments operate the programmes and the break-up of provision among different departments and regions will be as follows:

	<i>Coastal Andhra</i>	<i>Rayala- seema</i>	<i>Telangana</i>	<i>Total A. P.</i>
1. Director of Agriculture	97.90	94.51	90.03	282.44
2. Agricultural University	51.63	50.34	110.60	212.57
3. Agro-Industries Corporation	61.31	27.76	43.67	132.74
4. Registrar of Co-op. Societies	11.17	4.45	5.57	21.19
Total	222.01	177.06	249.87	648.94

A brief description of the important schemes is given separately under each department in the following paragraphs.

Director of Agriculture:

1.10 There are 6 State-wide schemes for which an amount of Rs. 17.37 lakhs is provided. Of this provision, the shares of Coastal Andhra, Rayalaseema and Telangana are Rs. 7.54 lakhs, Rs. 3.68 lakhs and

Rs. 6.15 lakhs respectively. The 6 State-wide Schemes are (i) Scheme for Training of Officers and Assistants in Plant Protection, (ii) Establishment of Pesticides Testing Laboratory at Rajendranagar, (iii) Integrated Scheme for Local Manurial Resources, (iv) Scheme for Internal cost of Foreign Experts, (v) Survey of Cash Crops and (vi) Establishment of Field Information and Propaganda Unit at Hyderabad. A brief description of these schemes is given below :

(i) *Scheme for Training of Officers, Assistants etc. in Plant Protection.*—In the agriculture extension work, plant protection has now assumed the importance of a specialised subject. This has been mainly due to the introduction of high yielding and hybrid varieties of crops which essentially need systematic adoption of plant protection measures. Further, the general assessment is that timely and effective control of pests and diseases would result in an increased production from 15 to 20 per cent. Therefore, for successful cultivation of crops it is imperative that the field staff engaged in plant protection activity and also the general extension activity should be adequately trained, from time to time, in the latest techniques of plant protection measures; whereupon the trained field staff would be in a better position to tackle the problems on the field effectively besides educating the cultivators in the methods of pest and disease control at the various stages of crop growth.

The need for having a plant protection training centre was keenly felt and as a consequence, a State level Training Centre was established at Hyderabad during the year 1965-66. In the present context of increasing agricultural production through the adoption of intensive cultivation practices there is every need to continue the functioning of the Training Centre and strengthen it suitably in order to impart training to the Agricultural Officers, Agricultural Assistants, and Village Level Workers in the science and technology of crop protection including the methods of pest and disease control.

Apart from the courses conducted in this Institute, training programmes are also conducted in the districts for the benefit of field staff and farmers besides conducting training courses for young farmers for a period of five days.

(ii) *Establishment of Laboratory for Testing Pesticides at Rajendranagar, Hyderabad.*—Pesticides play a major role in the endeavour to achieve increased production. There is now a growing awareness among the cultivators to adopt plant protection schedules in a systematic manner which has a direct bearing in the cultivation of high yielding and hybrid varieties of crops. Even though the application of plant protection chemicals adds to the cost of cultivation, the farmers are prepared to go in for the use of these chemicals in view of its obvious advantages. It is therefore, very necessary that the farmers are assured of the supply of quality pesticides and fungicides that are more efficacious, free from the danger of using spurious chemicals of substandard nature. Pesticides worth more than Rs. 3 crores are being used by the farmers of this State every year.

A standardised procedure has been evolved to analyse the different popular chemicals and the pesticides testing laboratory is following this in its analysis. There is, however, a need to further strengthen the laboratory with the equipment required for the "residue analysis" item of work. The required equipment will be purchased during the Fourth Plan period.

Studies conducted over the efficacy of the pesticides have revealed that some of the major pests are becoming immune to the commonly used pesticides. It is, therefore, felt necessary to undertake bioassay studies of important pesticide chemicals over the live insects which would facilitate in recommending the right type of pesticides. A bioassay unit is therefore, proposed to be attached to the existing Pesticides Testing Laboratory during the Fourth Plan.

(iii) *Integrated Scheme for Local Manurial Resources.*—This is an incentive scheme wherein subsidy is offered to the Municipalities and notified Panchayats which produce the maximum additional quantity of quality Urban compost. This scheme will be helpful in increasing the total production of urban compost in the State.

(iv) *Scheme for Internal cost of Foreign Experts.*—This is purely a staff scheme intended to avail

the expert advice of the specialists in the fields of Seed Production, Plant Protection, Soil Fertility, Water use Management and Agricultural implements. A team of five Foreign Experts drawn from the respective fields are helping in the "Food Production Drive" in the State. These Foreign Experts are here under the U.S.A.I.D. Programme. The experts undertake intensive tours in the districts and hold frequent discussion with the District Officials concerned to solve the field problems.

The term of the team, however, would cease by September, 1971.

(v) *Survey of cash crops (Chillies and other spices).*—Simultaneous to the efforts that are being made towards improving the yield rates of the important food and non-food crops need has been felt to develop the chillies and other spices crops of the State. In order to develop these crops on scientific lines it is essential to collect the basic statistics on these crops. A survey of cash crops is proposed during the Fourth Plan with the following objectives:

- (i) To estimate the average yield per acre of Chillies and Turmeric crops;
- (ii) To estimate the production of the above crops for the State as a whole and for the districts in which it is a major crop; and
- (iii) To collect data on cost of cultivation.

(vi) *Establishment of Field Information and Propaganda Unit at Headquarters.*—With the transfer of the Publicity Wing of the Department of Agriculture to the Information and Public Relations Department difficulty is being experienced in getting the material relating to the departmental activities printed, and published quickly. It is, therefore, felt necessary to set up a 'Printing Press' to get the material printed in time. Hence, this scheme is proposed to facilitate the effective dissemination of the Departmental activities through the printing of a Bi-monthly Telugu Journal 'Vyavasaya Vartalu' pamphlets, brochures etc. This will be a long way in providing the farmers with upto date information in time on new farming techniques through pamphlets etc.

The regional schemes are described under each region separately in the following paragraphs.

Coastal Andhra:

1.11 (i) *Plant Protection and Pest Control.*—The highest priority is accorded to plant protection and pest control programme. Plant protection is a vital activity of the agriculture department from which both supplies and services are made available to the cultivators. Five different schemes are proposed for the region in the Fourth Plan under which one additional mobile squad for each district will be established and the plant protection organisation will be strengthened considerably. The total area proposed to be covered under plant protection is 129.48 lakh acres by the end of the Fourth Plan.

(ii) *Seed Farms and Seed Multiplication.*—The scheme for production of foundation seed in the State Seed Farms will be continued in the Fourth Plan period. The foundation seed will be further multiplied in the seed villages through registered seed growers. The registered seed so produced is distributed to the farmers. At present the area under the existing Seed Farms is 1,675 acres of which 1,130 acres is wet, 204 acres irrigated dry and 341 acres dry. In Fourth Plan it is proposed to bring more area under the State Seed Farms through reclamation and provide irrigation facilities through bore wells, dug wells and installation of electric motor pumpsets. It is also proposed to construct staff quarters, office buildings etc. in the Seed Farms.

(iii) *Seed Processing, Testing and Certification.*—The seed produced in the State Seed Farms as also those produced by the registered growers have to be processed in order to eliminate inert and foreign material and for ensuring quality seed to cultivators. Since the seed processing unit at Maruteru has not been in a position to cope up with the demand, a new seed processing unit is proposed to be established at *Jangameswarapuram in Ongole district*. Seed testing is equally important as is processing, for its purity and reliability before it is distributed. The existing seed testing laboratory at Rajendranagar cannot meet the demand for testing in peak seasons.

Another seed testing laboratory has therefore, been proposed to be established at Tadepalligudem the building for which has already been constructed. Provision is made for the staff and equipment.

(iv) *Soil Testing Laboratories.*—In order to apply appropriate doses of fertilizers and follow proper cropping schedules, soil analysis is of great help to the cultivators. Soil testing laboratories have already been established in all the districts except the newly formed Ongole district. A separate soil testing laboratory for Ongole will be established in the Fourth Plan. More equipment will be supplied to all the laboratories. In addition to the existing soil testing laboratories, one mobile soil testing laboratory will be made available for the region so that soil testing can be done on a large scale.

(v) *Integrated Sugarcane Development Scheme.*—The existing yield rate of 32.5 tonnes of cane per acre will be stepped up to 38.4 tonnes for acre through the use of improved agronomic practices, high-yielding varieties and optimum doses of fertilizers. For this purpose 3 new Sugarcane Demonstration Farms will be established at Amadalavalasa (Srikakulam), Chelluru (East Godavari) and Kovvur (West Godavari), with the co-operation of the sugar factories concerned.

(vi) *Red-Rot Scheme in Amadalavalasa.*—The yield of Sugarcane crop in Amadalavalasa area is declining year after year. The reasons for this were found to be the prevalence of Red-Rot disease in the seed material. It has therefore, become necessary to replace the entire planted area with healthy seed material by raising the seed nurseries in the neighbouring districts and distributing the material to the cane growers.

(vii) *Construction of Pucca Roads in Sugar factory areas.*—The sugar factory at Etikoppaka does not have proper road facilities. During peak harvesting season great difficulty is being experienced in transporting the cane from the fields to the factory. It is therefore, proposed to construct pucca roads with the co-operation of the cane growers and the factory management.

(viii) *Oil Seeds Development Scheme.*—The scheme envisages the multiplication of high-yielding varieties of groundnut and castor on State Seed Farms and supply the seed to the cultivators. Part of the provision under this scheme will be utilised for the purchase of necessary plant protection equipment for effective control of pests and diseases on Oil Seeds Crops.

(ix) *Coconut Development Scheme.*—Procurement and distribution of quality seed nuts and laying out demonstration plots in cultivators' fields as also in the new project areas are proposed to be taken up on a large scale under this scheme. There is also a centrally sponsored scheme for production and distribution of T X D Hybrid coconut seedlings under implementation.

(x) *Pilot project for introduction of cotton.*—There are immense possibilities to bring additional areas under cotton crop particularly Sea-Island, MCU5, H.4 and Sujata varieties which have shown better results under irrigated conditions. These are finer and long staple varieties which will fetch good price in the market and as such a pilot project is introduced in the Nagarjunasagar Project area both as a State Plan Scheme and a Centrally Sponsored Scheme.

(xi) *Demonstrations.*—Popularisation of any improved practice is possible when it is successfully demonstrated in the cultivators fields and its efficacy proved. Since revolutionary changes are taking place in agriculture since the introduction of high-yielding varieties, it becomes all the more necessary to bring home to the cultivators the modern methods of farming. It is, therefore, proposed to lay out a number of demonstrations on the cultivators fields in raising profitable crops.

(xii) *Reconditioning of Saline Lands.*—Lands that yield low or where, in some cases cultivation is not possible have been mostly found to be either saline or alkaline in nature. Such lands can be reconditioned and made fertile with the application of gypsum at 3 metric tonnes per acre. This scheme is newly introduced during the Fourth Plan. In order to extend the benefits of the scheme to the small farmers the

entire cost of transport charges on 'gypsum' is subsidised since the transportation charges are higher compared to the actual cost of gypsum itself.

(xiii) *Strengthening of Administration under Nagarjunasagar Project.*—The scheme envisages popularisation of extension methods in the Nagarjunasagar Project area through laying of demonstration plots on the package of practices for different crops together with proper dosage of fertilizers and effective soil and water management. The staff working in the Nagarjunasagar Project area will be strengthened in order to help the cultivators in the processing and obtaining agricultural loans.

(xiv) *Cashewnut and Fruit Development Scheme.*—Long-term loans repayable in easy instalments with reasonable rates of interest, will be issued to the intending growers for raising cashewnut and other fruit gardens. An amount of Rs. 11.17 lakhs is provided for debenture participation floated by the A.P.C.C.L.M.B.

Rayalaseema :

1.12 (i) *Plant Protection and Pest Control.*—High priority is given to plant protection and pest control programme in the region as plant protection is vital to save the crop damage due to pests and diseases. There are five different schemes proposed in the Fourth Plan. Under these schemes the plant protection organisation will be strengthened by increasing the staff and through the provision of one additional mobile squad for each district during the Fourth Plan. The total area proposed to be covered under plant protection is 59.30 lakh acres by the end of the Fourth Plan.

(ii) *Seed Farms and Seed Multiplication.*—The scheme is intended for producing foundation seed on State Seed Farms, multiplying it in seed villages through registered growers and finally distributing the seed so multiplied to the needy cultivators. At present there are 11 State Seed Farms in the region covering an area of 2,069 acres of which 393 acres is wet, 789 acres irrigated dry and 887 acres dry. It is proposed to extend the area through reclamation and

provide irrigation facilities to the existing land. Provision is also made for the construction of staff quarters, office buildings etc.

(iii) *Coconut Development Scheme*.—Procurement and distribution of quality seednuts and seedlings and laying out demonstration plots in cultivators holdings as well as in the new project areas are proposed to be done on an intensified scale during the Fourth Plan. A centrally sponsored scheme for production and distribution of T X D Hybrid coconut seedlings is also under implementation.

The coconut seedlings will be procured from the existing 3 Coconut State Nurseries located at Srikalahasti (Chittoor), Yemmiganur (Kurnool) and Garladinne (Anantapur) in the region.

(iv) *Pilot Project for introduction of cotton*.—With the new ayacut area being developed in the Tungabhadra Project High Level Canal area in the region there are immense possibilities for bringing new additional areas under cultivation of cotton particularly Sea-Island, MCU 5, H.4 and Sujata varieties which are coming up well under irrigated conditions. Since these are superfine varieties with extra long staple lengths fetching good price in the market, this pilot project will be introduced during the Fourth Plan period both as a State Plan Scheme and as a Centrally Sponsored Scheme.

(v) *Fruit Development Scheme (Establishment of Progeny Orchards)*.—This is a new scheme proposed in the Fourth Plan which envisages the supply of quality pedigreed fruit plants. It is proposed to establish progeny orchards in selected areas and on cultivators' fields taking good progeny from the cultivators and the Agricultural University, for production of fruit plants at Garladinne and Tangadancha. After multiplication the seedlings will be distributed to the orchard growers.

(vi) *Indo-French Project in Anantapur district*.—The project aims at solving the agricultural problems arising in semi-arid zone of Anantapur district in collaboration with French Government. Under this project an area of 30 acres at Reddipalli Farm has been taken up and 12 surrounding villages have been

selected so far for conducting demonstrations on dry farming.

(vii) *Demonstrations*.—Popularisation of any improved agricultural practice needs conducting of different kinds of demonstrations, in order to prove their effectiveness. Since the scientific and technological developments in agriculture are still in the offing, it becomes all the more necessary to bring home to the cultivators the modern methods of farming. With this in view, this scheme is proposed for laying out a number of demonstrations on the cultivators' holdings in raising profitable crops.

(viii) *Subsidised Distribution of Agricultural Implements*.—This is a new scheme proposed in the Fourth Plan with the object of demonstrating the efficacy of the improved agricultural implements and distribute the same to the cultivators in the backward areas on a subsidy basis. The following ten implements have been initially selected for popularisation.

1. Victory plough.
2. Disc-Harrow.
3. Seed-cum-fertiliser drill.
4. Bullock dozer.
5. Ridge plough.
6. Maize sheller (hand operated).
7. Rampalak.
8. Ordinary M.B. Plough.
9. Winnower.
10. Duck foot harrow.

(ix) *Cashewnut & Fruit Development Scheme*.—Long-term loans repayable in easy instalments with reasonable rates of interest will be issued to the intending growers for raising cashewnut and other fruit gardens.

Telangana :

1.13 (i) *Plant Protection and Pest Control*.—The highest priority is given to pest control programme in the region by providing maximum amount for

five different schemes intended for plant protection and pest control. Under these schemes one additional mobile squad for each district will be established and the pesticides testing laboratory at Rajendranagar and the plant protection organisation will be strengthened. The total area proposed to be covered under various plant protection measures is 92.91 lakh acres by the end of Fourth Plan.

(ii) *Seed Farms and Seed Multiplication.*—The foundation seed produced in the State Seed Farms will be further multiplied in the seed villages through registered growers. The registered seed so produced is distributed to the farmers. At present there are 14 Seed Farms in the region covering an area of 1,297 acres dry. More area is proposed to be brought under acres, 482 acres wet, 300 acres irrigated dry and 515 acres dry. More area is proposed to be brought under State Seed Farms through reclamation and also by establishing new Seed Farms. It is also proposed to construct staff quarters and office buildings for the staff working in the Farms in addition to the provision of irrigation facilities through bore wells, dug wells and installation of electric motor pumpsets.

(iii) *Soil Testing Laboratories.*—Soil analysis is important for evolving appropriate manurial and fertilizer schedules. It also helps in recommending proper cropping pattern particularly after the introduction of multiple cropping. There are soil testing laboratories in all the districts which are assigned with a target of analysing 6,000 soil samples per annum per laboratory. These soil testing laboratories will be strengthened in the Fourth Plan. In addition one mobile soil testing van will be attached to the soil testing laboratory at Rajendranagar to undertake tours all over the region, analyse soil and water samples and make suitable recommendations on the spot.

(iv) *Oilseeds Development Scheme.*—The scheme envisages the multiplication of improved and high-yielding varieties of groundnut as well as castor seed in State Seed Farms and distribution of the same to the cultivators in sufficient quantities. Part of the provision under this scheme will be utilised for the purchase of plant protection equipment for effective control of pests and diseases on oil seeds crops.

(v) *Pilot Project for introduction of cotton.*—There are good prospects of bringing new area under cotton crop particularly Sea-Island. M.C.U. 5, H.4 and Sujata varieties of cotton in project areas. These varieties are of superfine quality with extra long staple lengths and are fetching good price in the market. This pilot project is introduced both as a State Plan Scheme and as a Centrally Sponsored Scheme.

(vi) *Fruit Development Scheme (Establishment of Progeny Orchards).*—This is a new scheme proposed in the Fourth Plan which envisages supply of quality pedigreed fruit plants to the cultivators. Under this scheme progeny orchards will be established at Malthumeda in Nizamabad district taking good progeny from the cultivators and the Agriculture University. After multiplication the fruit plants will be supplied to the orchard growers.

(vii) *Demonstrations.*—For the popularisation of any improved practice demonstration should be conducted on a large scale and that too, on cultivators' fields. Since scientific and technological changes in agriculture are yet to take deep roots in this region it is highly essential to conduct different kinds of demonstration to bring home to the cultivators the advantages of modern methods of farming. This scheme envisages laying out of demonstrations in raising profitable crops on a large scale.

(viii) *Subsidised distribution of Agricultural Implements.*—This is a new scheme proposed with the object of popularising the improved agricultural implements. The efficiency of the implements will be demonstrated and the implements distributed to the cultivators on subsidised rates. The implements initially selected for popularisation are (1) Victory plough, (2) Discharrow, (3) Seed-cum-fertilizer drill, (4) Bullock dozer, (5) Ridge Plough, (6) Hand operated maize sheller, (7) Rampalak, (8) Ordinary M.B. Plough, (9) Winnower and (10) Duck foot harrow.

(ix) *Strengthening of District Administration.*—As per the recommendations of the M. T. Raju Committee the area of operation by Agricultural Officers should be reduced and concentrated efforts should be

made for intensive agricultural development. The Scheme is proposed to appoint one officer of the cadre of District Agricultural Officer for each one of the Revenue Divisions.

(x) *Intensification of Administration under Nagarjunasagar Project.*—The Scheme aims at strengthening the extension activities in the project area by laying out demonstration plots on the package of practices for different crops along with proper use of fertilisers and effective soil and water management practices. The staff working under the scheme will also help the ayacutdars in processing their loan application for obtaining agricultural loans from the Land Mortgage Banks.

(xi) *Administration under Pochampad including Soil and Water Management.*—The Central Land Mortgage Bank authorities are giving institutional finance for the development of ayacut lands under the Project. Cultivators need guidance in matters of land levelling, formation of field channels, raising of profitable crops etc. This work will be attended to by the staff provided under the scheme who will also prepare soil maps etc.

(xii) *Soil Survey under Pochampad.*—The total area that will be irrigated under Pochampad Project is 6.3 lakh acres. It was originally estimated that this area would be available to the left side of Manair river. But after actual block levelling and reclamation, it was found that the area available for localisation was only 4 lakh acres. Hence it has become necessary to include areas lying to the right side of the Manair river which extends into Warangal district. This area requires to be surveyed. The results of the survey will be helpful in suggesting the suitability of land for agricultural purposes.

(xiii) *Pre-Irrigation Survey and Soil Testing under Pochampad.*—This is essentially a soil survey scheme intended for suggesting suitable cropping pattern for the areas newly brought under irrigation. Simultaneously, the scheme also undertakes soil testing work.

(xiv) *Special propaganda staff.*—For the important irrigation projects of the region like Kadam and

Rajolibanda Diversion Scheme, Alampur, some special staff is needed to carry out intensive propaganda for bringing the reclaimed area under cultivation and for recommending adoption of improved agricultural practices. In order to help the tempo of the development work in the ayacut areas, this scheme is proposed, under which special staff will be appointed to carry out extension work.

(xv) *Cashewnut and Fruit Development Scheme*.—Long term loans repayable in easy instalments with reasonable rates of interest will be issued to the intending growers for raising cashewnut and other fruit gardens. An amount of Rs. 5.57 lakhs is provided for participation in debentures floated by the A.P.C.C.L.M.B.

Agricultural University:

1.14 The Fourth Plan outlay for agricultural education, research and extension is Rs. 2.18 crores of which the shares of Coastal Andhra, Rayalaseema and Telangana will be Rs. 0.65 crore, Rs. 0.50 crore and Rs. 1.03 crores respectively.

(ii) Agricultural education, research and extension is the responsibility of the Andhra Pradesh Agricultural University which came into existence in July, 1964. The University receives assistance on the same pattern as traditional Universities receive from the University Grants Commission. The University however, needs matching grants under the Plan from the State Government, in addition to the assistance given by the Indian Council of Agricultural Research.

(iii) The programmes of Agricultural University may be broadly divided into three components viz. Education, Research and Extension. The provision ear-marked under each programme and the respective shares of the three regions areas follows:

Programme	Coastal Andhra	Rayalaseema	Telangana	Total A.P
1. Agriculture and Veterinary Education	32.89	42.83	88.65	164.37
2. Agriculture Research	18.74	7.51	21.95	48.20
Total..	51.63	50.34	110.60	212.57

(iv) The University is maintaining 6 Colleges for under-graduate courses in the faculties of Agriculture, Veterinary Science and Home Science besides a College of Basic Sciences at Hyderabad. At present a post-graduate course in Agriculture is conducted at the Agricultural College, Rajendranagar only. The University has proposed to introduce post-graduate courses in Agricultural Colleges at Bapatla and Tirupati and the Veterinary Colleges at Tirupati and Hyderabad. The I.C.A.R. provides assistance under major non-recurring items like buildings, equipment etc., while the recurring expenditure is provided for in the State Plan.

(v) The University conducts research programmes both in its constituent colleges and in the Field Research Stations. The Agricultural Research Institute at Rajendranagar is the main centre of all research activities. In all, 42 field experimental stations and about 103 research schemes were taken over by the University from 1st July, 1966 from the State Government. The I.C.A.R. has since sanctioned many massive All-India Co-ordinated Research Projects under several crops and also under Animal Husbandry which will accelerate the research activities. The amounts provided for such schemes in the State Plan are meant for only providing facilities like land, laboratories and leave salary contribution for the staff etc.

(vi) The University has a Directorate of Extension at the Apex and Extension Education Wings in all the constituent colleges for imparting instructions and practical training to under-graduate and graduate students. There is an Extension Education Institute at the Agricultural College, Rajendranagar which is run by the University as an integral part of the College and financed by the Government of India for conducting refresher courses and inservice training to the professional people in the field of Extension Education.

Agro-Industries Corporation :

1.15 The Agro-Industries Corporation Limited has been set up with the objective of promoting agro-industries and other ancillary enterprises in the State. The State has 51 per cent investment and the Centre 49 per cent in the Corporation. The authorised capital of the Agro-Industries Corporation Limited is Rs. 4.00

crores of which Rs. 3.49 crores has been subscribed. The programmes envisaged by the Corporation will broadly be as follows :

- (a) Reclamation of land by earth moving machinery such as tractors.
- (b) Sinking of tube-wells and bore-holes.
- (c) Miscellaneous land development activity.
- (d) Hire purchase of equipment—(i) pumpsets.
- (e) Modernisation of processing machinery.
- (f) Establishment of Food Processing Plants.
- (g) Organisation of workshops and service facilities.
- (h) Miscellaneous trading activities such as meeting the demands for services and supplies in the Agro-Industrial sector.

(ii) The Corporation has established one Tractor Hiring Centre in each district in the State and one additional centre at Metpally in view of the heavy demand for the machinery. The machinery deployed all over the State was 237 Bulldozers, 45 Crawler tractors, 80 wheeled tractors, 58 power drills and 25 revitalisation units. The targets for the Fourth Plan are levelling of 1.18 lakh acres, sinking of 3,754 tube-wells and revitalisation or deepening of 12,891 wells. The Corporation proposes to sell 3,686 tractors and 6,166 pumpsets during the Fourth Plan. It will also take over the Government Fruit Preservation Factory at Anantarajupet and set up a Soyabean Processing Factory in collaboration with a private industrialist in the State.

(iii) The Corporation has already established consultancy services in food technology and for selection of sites for bore-wells and tube-wells.

2. MINOR IRRIGATION

2.1. In the National Plan, the objective in respect of irrigation includes integrated use and efficient management of water resources. Minor Irrigation has played an important role in the improvement of efficiency of agricultural production in the State. Minor Irrigation programmes have the advantage of requiring less capital outlay, having shorter gestation, providing employment, utilising local labour and local material and above all they have greater capacity to disburse the facilities over a wider area. The Minor Irrigation programmes have to be conceived of in terms of an integrated approach keeping in view the other sources of irrigation.

Objectives and Strategy:

2.2. The objectives of Minor Irrigation Development in the State are:—

- (a) a scientific well sinking programme in order to provide supplementary irrigation in respect of areas already irrigated and more important for provision of irrigation facilities in scarcity areas;
- (b) provision of minor irrigation facilities especially in the upland taluks of Coastal Andhra and dry areas of Rayalaseema and Telangana in terms of tanks—both restoration of abandoned tanks and construction of tanks—and thus increase the irrigated area; and
- (c) it is also proposed to give special importance to Lift Irrigation Schemes with a view to provide irrigation facilities.

2.3. The strategy of Minor Irrigation Development is in terms of exploiting surface irrigation facilities in the scarcity areas on a priority basis and emphasising the ground-water development especially in scarcity areas with the help of institutional finance through L.M.Bs. The programmes also includes provision of loan assistance for oil engines and energisation of wells with a view to more efficient and scientific exploitation of ground water. The strategy involves a deliberate emphasis on ground water development.

2.4. The programmes in the Plan under Minor Irrigation are proposed to be carefully integrated with certain special programmes like Rural Works Programme under Central Sector wherein some of the Minor Irrigation works are also contemplated. While the productivity criterion is sought to be brought about with the help of benefit cost ratios in the Plan, a deliberate attempt is made to show special consideration for scarcity areas in deciding upon the productivity criterion by virtue of social benefits involved.

Review :

2.5. The following table shows the outlay incurred and the physical targets achieved during Third Plan period, and the three annual plan periods and the area brought under Irrigation by the departments implementing the programme.

Department	THIRD FIVE YEAR PLAN				1966-69		
	Outlay proposed Rs. Lakhs	Expendi- ture Rs. Lakhs	Target	Achievement	Outlay	Expendi- ture Rs. Lakhs	Achieve- ment (in '000 acres)
C.E. (Minor Irrigation) ..	1,808.50	1,728.89	561.60	471.00	1,070.58	993.17	616.00
C.E. (Panchayati Raj) ..	342.00	289.50	102.78	88.83	113.75	90.07	21.09
Board of Revenue ..	447.00	483.57	169.42	169.42	65.48	60.98	15.00
Director of Agriculture ..	228.50	391.82	128.94	86.20	19.28	8.11	3.46
Community Development programme ..	..	..	242.06	187.80	..	..	..
Registrar of Co-operative Societies ..	..	..	..	..	343.22	443.67	159.90
Planning S.D.B. ..	..	..	..	..	6.45	6.45	..
	2,826.00	2,893.79	1,204.80	1,003.25	1,618.76	1,602.45	815.45

As is found during the Third Five-Year Plan under Minor Irrigation sector 10.03 lakh acres were provided with irrigation potential involving an expenditure for the State to the tune of Rs. 29.00 crores. During the subsequent Annual Plans 8.15 lakh acres were provided with irrigation facilities involving an expenditure of about Rs. 16.00 crores.

Fourth Plan Programmes :

2.6. An allotment of Rs. 25.62 crores has been made for Minor Irrigation Schemes in the State Fourth Plan. Keeping in view the need for giving higher priority to ground-water schemes under minor irrigation programme, out of Rs. 25.62 crores, Rs. 12.88 crores has been made for ground-water schemes and Rs. 12.73 crores has been made for utilisation of surface water resources. Out of the amount of Rs. 12.73 crores allotted for surface water resources as much as Rs. 11.01 crores, is earmarked for works under Chief Engineer (Minor Irrigation) and Rs. 1.72 crores is for the works under Chief Engineer (Panchayati Raj). Similarly under ground water resources, an amount of Rs. 94 lakhs is allotted for tube-well scheme implemented by Chief Engineer (Minor Irrigation). Towards contribution to the debentures to be floated by the L.M.Bs., an outlay of Rs. 10.19 crores is allotted while another sum of Rs. 157.00 lakhs is made for Director, Ground-water Survey. The activities of the Co-operative Department under the Minor Irrigation programmes are (1) Grant of Long-term loans to the Agriculturists by making contributions towards debentures floated by the L.M.Bs. The Andhra Pradesh Land Mortgage Bank has drawn up a programme of lending Rs. 125.00 crores during the Fourth Plan period. The share of the State Government towards debenture participation has been provided in the State Plan. With this outlay, the L.M.B. proposes to advance loans for sinking 1,26,120 wells and for installation of 24,320 oil engines and 67,480 electric motor pumpsets. About 5,61,960 acres will be brought under irrigation by these programmes of the Land Mortgage Banks. The following table shows the break-up of the allocation for individual schemes together with the physical targets:

<i>Scheme</i>	<i>Provision (Rs. in Crores)</i>	<i>Additional gross area likely to be irrigated (lakh acres)</i>
Surface Water Resources :		
1. Restoration of Minor Irrigation works C.E. (Minor Irrigation) ..	11.01	2.36 (Stabilised) 2.75 (new)
2. Restoration of Minor Irrigation Sources under Panchayati Raj Institutions C.E. (Panchayati Raj) ..	1.72	0.37 (Stabilised)
Exploitation of Ground Water Sources :		
1. Tube-wells scheme by C.E. (Minor Irrigation)	0.94	..
2. Ground Water unit	1.57	..
3. Loans for sinking of wells supply of oil engines electric motor pumpsets (R.C.S.)	10.19	
4. Special contribution of Z.D. Works	0.18	5.62
TOTAL	24.82	8.37 (New) 2.73 (Stabilised)

Regional Schemes :

Coastal Andhra :

2.7. The total ceiling fixed by the Government for the Fourth Plan for the region is Rs. 504.21 lakhs. Out of this, an amount of Rs. 351.30 lakhs is on Minor Irrigation Schemes, Rs. 52.00 lakhs is on the Tube-well programme, Rs. 45.00 lakhs is on Lift Irrigation Schemes and Rs. 56.00 lakhs is on Investigation of Minor Irrigation Schemes.

Tube well programme.—An estimate amounting to Rs. 57 lakhs to construct 88 exploratory tube wells in the delta areas and in the up-lands of East Godavari, West Godavari, Krishna, Guntur, Nellore was sanctioned and works started during 1967-68. It is anticipated that all the 88 tube-wells will have been completed by the end of 1970-71. Out of 88 tube-wells,

31 wells are constructed in West Godavari, 9 in Nellore district and 10 each in East Godavari, Krishna and Guntur districts. A further estimate for constructing 10 tube-wells each in Srikakulam and Visakhapatnam districts, at a total cost of Rs. 10 lakhs is under consideration of Government. Out of Rs. 57 lakhs an amount of Rs. 18.29 lakhs has been spent up to the end of 1968-69. The balance amount of Rs. 38.71 lakhs will be spent during the Fourth Plan besides Rs. 10.00 lakhs for 20 exploratory tube-wells in Visakhapatnam and Srikakulam districts.

Lift Irrigation.—An amount of Rs. 20.76 lakhs is required for spill-over Lift Irrigation Schemes to pay land acquisition charges etc. An amount of Rs. 28.83 lakhs is proposed for new Lift Irrigation Schemes. There are ten Lift Irrigation Schemes under consideration of the Government. The total cost is Rs. 70 lakhs. It is expected that some of the estimates will be sanctioned and put on ground during the Fourth Plan.

Minor Irrigation (Tanks).—As many as 502 spill-over works are available at the beginning of 1970-71. They require Rs. 276 lakhs for completion. Provision has been made in Fourth Plan to complete the spill-over works.

An amount of Rs. 56.00 lakhs has been provided for investigation of Minor Irrigation Schemes. It is anticipated that a total potential of 2.96 lakh acres will be created during the Fourth Plan period. Out of the allotment of Rs. 172.00 lakhs allotted for Chief Engineer (Panchayati Raj) as much as Rs. 69.52 lakhs is allotted for restoration of breached and abandoned minor irrigation sources in Coastal Andhra. With this allotment, it is expected that an area of 17,780 acres will be stabilised.

Minor Irrigation (Wells).—The L.M.B. proposed to distribute credit to the tune of Rs. 29.71 crores during the Fourth Plan period. With this outlay, it is proposed to supply credit for sinking of 45,450 wells and also for purchasing 720 oil engine pumpsets and 22,670 electric motor pumpsets.

Royaluseema :

2.8. The total Fourth Plan ceiling fixed for the region is Rs. 291.54 lakhs. Out of this, a sum of Rs. 225.79 lakhs is on minor irrigation, Rs. 20.00 lakhs is on tube-well programme, Rs. 2.45 lakhs is on Lift Irrigation Schemes, and Rs. 23.74 lakhs on Investigation of Minor Irrigation Schemes.

Tube-Well Programme.—It is proposed to construct 40 exploratory tube-wells in the four districts of Royalaseema at a total estimated cost of Rs. 20 lakhs for which provision has been made in the Fourth Plan.

Minor Irrigation Scheme (Tanks).—At the beginning of the year 1970-71 there were 64 spill-over schemes requiring Rs. 153.53 lakhs for completion. This has been fully provided in the Fourth Plan and an amount of Rs. 39.29 lakhs has been proposed for new schemes. An amount of Rs. 23.74 lakhs has been proposed for investigation of Minor Irrigation Schemes. It is expected that a total potential of 0.39 lakh acres will be created during the Fourth Five-Year Plan after completion of the above spill-over works.

Minor Irrigation (Wells).—The Chief Engineer (Panchayati Raj) proposes to spend Rs. 56.09 lakhs in the Fourth Plan period. The L.M.B. will be providing credit to a tune of Rs. 20.21 crores for sinking 26,740 wells and for the purchase of 8,510 oil engines and 15,670 electric pumpsets.

Telangana :

The total Fourth Plan ceiling fixed is Rs. 409.22 lakhs. Out of this an amount of Rs. 315.54 lakhs is on Minor Irrigation, Rs. 22.33 lakhs is on Tube-Well Programme, Rs. 15.37 lakhs is on Lift Irrigation Schemes and Rs. 52.76 lakhs is on Investigation of new Minor Irrigation Schemes.

Tube-Well Programme.—An estimate for Rs. 31 lakhs or constructing 60 exploratory tube-wells at 10 wells in each district is under the consideration of Government. Out of this 40 wells are proposed to be constructed in the districts of Khammam, Karimnagar, Adilabad and Warangal. The estimated cost of 40

wells will work out to Rs. 22.33 lakhs which is provided in the Fourth Plan.

Lift Irrigation Schemes.—An amount of Rs. 3.75 lakhs for spill-over and Rs. 11.62 lakhs for New Schemes have been provided during the Fourth Plan.

Minor Irrigation Schemes.—At the beginning of 1970-71 there were 386 spill-over works which required Rs. 272 lakhs for completion which has been provided in the Fourth Plan. Since there are no sufficient allocations meagre provision could be made for new schemes.

An amount of Rs. 52.76 lakhs has been provided for investigation of Minor Irrigation Schemes in the region. By completing the spill-over schemes, it is expected to create potential to an extent of 1.75 lakh acres.

The amount proposed to be spent by the Chief Engineer (Panchayati Raj) during the Fourth Plan period in this region is Rs. 49.40 lakhs and with this outlay it is proposed to stabilise 12,490 acres.

Minor Irrigation (Wells).—The L.M.B. will be providing long-term loans to the tune of Rs. 34.75 crores during the Fourth Plan period for constructing 53,930 wells and for purchasing 8,790 oil engines and 29,140 electric motor pumpsets.

SOIL CONSERVATION AND LAND DEVELOPMENT

Soil Conservation :

3.1 Soil Conservation is an essential ingredient of proper land management. The value of soil conservation lies in terms of significant preservation of valuable top soil on the one hand and retention of moisture on the other which, in the long run, has a productive role in terms of higher yields especially in dry areas. Further, appropriate soil conservation measures are necessary to avoid silting of the irrigation works. In its ideal setting the whole area should be covered by appropriate soil conservation and continuous scientific maintenance. However, in view of the enormous magnitude of the problem and the scarcity of resources, certain amount of selectivity in the programmes of soil conservation and phasing have to be considered. Andhra Pradesh has a number of irrigation projects and also substantial areas liable to recurrent drought. On both these considerations, this item of work has been given priority in the State Plan.

Objectives :

3.2 The objectives of soil conservation programmes are:—

- (a) to cover the dry farming areas on priority basis with soil conservation programmes to enable soil and moisture retention and productive dry land farming; and
- (b) to take up soil conservation works on priority basis in chronically drought affected areas not only as protective and productive venture for agriculture but also as an activity which provides additional employment in the rural sector to the agricultural labour who are particularly under-employed in the dry areas.

Strategy :

3.3 The strategy of soil conservation programme is that the programmes are taken up in dry areas on a complete water shed basis. This will necessarily be preceded by standard soil survey for the identification of priority areas.

Further, the co-ordination between forestry programmes, irrigation projects and soil conservation measures is to be ensured.

Moreover, the type of soil conservation in terms of bunding etc., is proposed to be designed on the basis of soil and local conditions.

Most important in delineating the priority areas for soil conservation the possible benefits that accrue in terms of arresting the soil erosion and adding to the moisture retentivity is emphasised. Thus, for instance, the red soils of Anantapur would get greater priority than certain areas that have deep black soils.

Substantial reorientation relating to soil conservation programmes is proposed in the Fourth Five-Year Plan not only in terms of integrating this with other programmes and making it on water shed basis but also extending the concept of soil conservation to include water conservation. This would involve contour bunding, stone checks, stone terracing and bench terracing works, gully plugging and check dams wherever necessary. This wider definition of soil conservation to include deliberate measures for water conservation is a significant change contemplated in the Fourth Plan. While the greatest emphasis is given in the State Plan itself for the soil conservation programmes, the utilisation of Central Sector Schemes on a substantial scale for this programme is also envisaged.

3.4 In terms of administrative arrangements, it has been found that at present agreements have to be collected from all the cultivators under the water shed area which is proposed to be taken up for soil conservation programme. But, in practice, it has been found difficult to get co-operation of all cultivators for taking up soil conservation programme on a complete water shed basis. Since this is a community programme which gives maximum benefit when taken up on a complete water-shed basis, a legislation is contemplated by the Government to make it compulsory on the part of all the cultivators to take soil conservation measures wherever necessary. The legislation which is already

at an advanced stage is likely to be passed within the Fourth Plan and would thus help substantially the soil conservation programmes.

Regional Approach :

3.5 The soil conservation programmes are essentially regional schemes. In Coastal Andhra the total requirement for soil conservation is estimated at comparatively lesser level and specific importance is given for raising coffee plantations with the objective of water conservation as also productive use of the forest lands. The provision in respect of Rayalaseema is strikingly large and appropriately so in view of the recurrent drought conditions and the general strategy of encouraging and developing dry land agriculture in Rayalaseema. In Telangana too, there is substantial provision though not of the same order as that of Rayalaseema. There are two soil conservation training centres one at Hyderabad and another at Anantapur.

To effectively dovetail the soil conservation techniques and the soil conservation programmes to the general strategies of agricultural development, number of research and demonstration programmes both under the State and Central sector are contemplated in priority areas of Rayalaseema and Telangana.

Review :

3.6 A beginning relating to soil conservation was made during the First Plan itself. However, during the First and Second Plan periods, only an area of about 0.80 lakh acres was covered. A substantial stepping up was brought about in the Third Plan with an area of about 1.88 lakh acres. Emphasis on this programme was carried forward and in Annual Plans 1968-69, the area covered was 2.76 lakh acres. In addition, coffee plantations were also raised in the forest area in Coastal Andhra to prevent soil erosion losses. The total expenditure till 1968-69 on soil conservation programmes in the Plan is Rs. 3.97 crores of which Rs 0.56 crore was spent on coffee and other plantations. The following table would indicate the enormity of the

problem and the actual extent that has been covered by the soil conservation measures:—

Region	Total estimated area requiring S. C.	(Figures in lakh acres)	
		Area covered upto 1963-1969	Balance yet to be covered
Coastal Andhra	46.77	1.49	45.28
Rayalaseema	62.24	1.79	60.45
Telangana	96.71	2.17	94.54
Andhra Pradesh	205.72	5.45	200.27

Fourth Plan Programmes:

3.7 The total investment proposed on soil conservation during the Fourth Five-Year Plan in the State is Rs. 370.13 lakhs. The total area that is proposed to be covered during the Fourth Plan in the State sector (which excludes the programmes under central sector) is 4.80 lakh acres. Substantial stepping up of the area proposed for soil conservation annually is evident from the fact that average annual outlay in the Fourth Plan is Rs. 74.44 lakhs as against Rs. 24.92 lakhs during the Third Plan and Rs. 52.05 lakhs during the subsequent Annual Plans. The soil conservation schemes are all treated as regional schemes and a brief description is given below:—

Coastal Andhra:

3.8 The total provision for the region is Rs. 88.90 lakhs of which Rs. 48.29 lakhs will be spent bringing 0.83 lakh acres under soil conservation measures while the balance will be utilised for raising 65 acres of coffee plantations.

Rayalaseema:

3.9 The provision is Rs. 145.93 lakhs of which Rs. 127.50 lakhs will be spent on soil conservation schemes bringing an area of 1.69 lakh acres under soil conservation measures. The balance amount of Rs. 9.54 lakhs will be spent on training programme in soil conservation measures both for field staff as well as farmers.

Telangana:

3.10 The provision for the region is Rs. 135.30 lakhs of which Rs. 130.80 lakhs will be spent on soil conser-

vation schemes covering 2.28 lakh acres. The balance of Rs. 4.50 lakhs is intended for the staff meant for soil and water management under Pochampad Project.

Land Development :

3.11 The Land Development Programmes have the object of assisting long-term investment in agriculture and land development by way of loans and subsidies to farmers and farming.

3.12 The expenditure on land development schemes during the Third Plan and the subsequent Annual Plans was Rs. 27.31 lakhs and Rs. 27.19 lakhs respectively.

3.13 The total provision in the Fourth Plan is fixed at Rs. 66.34 lakhs for two State-wide schemes proposed under Land Development. The first scheme relates to the ordinary debenture participation in debentures floated by the Andhra Pradesh Co-operative Central Land Mortgage Bank for which an amount of Rs. 41.70 lakhs is provided in the Fourth Plan. The Bank proposes to advance loans for the purchase of tractors and power tillers at the rate of Rs. 5,000 per power tiller and Rs. 25,000 per tractor. The total loans that will be advanced by the Bank is fixed at Rs. 10.21 crores which will cover about 4,000 tractors and power tillers of which about 1,900 will be in Coastal Andhra, 800 in Rayalaseema and 1,300 in Telangana. The second scheme *viz.*, Reclamation of Government waste lands and resettlement of landless poor is intended for starting about 66 Co-operative Joint Farming Societies on 28 Government waste land blocks to reclaim waste lands and resettle landless agricultural labourers. The Joint Farming Societies will be provided with financial assistance at the rate of Rs. 300 (50 per cent loan and 50 per cent subsidy) per acre for reclamation and Rs. 750 (25 per cent loan and 75 per cent subsidy) per family for resettlement charges. The total Fourth Plan provision for this scheme is Rs. 24.64 lakhs of which Rs. 18.78 lakhs is earmarked for Coastal Andhra, Rs. 3.20 lakhs for Rayalaseema and Rs. 2.66 lakhs for Telangana.

4. DEVELOPMENT OF AYACUTS

It will not be sufficient if Irrigation projects are planned for and completed unless the new potential for land development is quickly utilised and the benefits of the higher agricultural production is brought home to ensure the increased prosperity of the people. A desirable rate of growth on agriculture sector cannot be achieved unless there is optimum efficiency in the development of Ayacuts under all Irrigation projects in the State.

4.2. At the end of 1968-69, against a potential of 18.07 lakh acres, an extent of 14.93 lakh acres were brought under utilisation. Thus a potential of 3.14 lakh acres, created upto the end of 1968-69 has yet to be utilised. Adding to this, the additional potential of 10.17 lakh acres to be created during the Fourth Plan period, the total potential to be utilised during the Fourth Plan period will come to 13.27 lakh acres. In the context of vast ayacut yet to be developed, this programme assumes utmost importance.

4.3. Generally, the schemes provided under this head of development are the localisation of ayacuts, the acquisition of land for and construction of ayacut roads and field channels, the organisation of special agricultural research programmes, soil survey and production of improved seed etc., for reclamation of land, contribution to the debentures to be floated by the Land Mortgage Banks to provide special credit facilities required for this purpose in the Project areas and special animal husbandry programmes for feeding, breeding and upgrading of agricultural livestock.

Objectives :

4.4. One of the basic objectives of the Fourth Five-Year Plan is the early completion of spill-over schemes and utilisation of potential created under these sectors. When large sums of money are being spent in providing new Irrigation facilities at a faster rate, it is necessary that irrigation potential created should be utilised fully and expeditiously. An additional Irrigation potential of 10.15 lakh acres will be created during the Fourth Plan period. Out of this, the additional

potential under Nagarjunasagar Project will be 3.42 lakh acres, Pochampad Project 1.30 lakh acres, and 5.43 lakh acres under other major and medium Irrigation Projects. In order to ensure utilisation of vast Irrigation potential, ayacut development programmes have a crucial role to play during the Fourth Plan period.

Review :

4.5. At the time of formulation of the Third Plan, it was anticipated that various programmes needed for the development of ayacut under the new irrigation projects would be provided by the departments concerned in their own departmental plans and that the allocations necessary would be provided within their respective ceiling. It however became apparent very early during the Third Plan period that these expectations were not being realised due to the pre-occupation of the departments with their own schemes in other areas. It was therefore decided that a separate allotment would be indispensable for the development of ayacuts and that the funds required for various programmes for such development should be separately provided for, although the execution of such programmes would continue to vest with the departments concerned. Accordingly a separate provision of Rs. 2.08 crores was made for these schemes when the plan was revised in 1963. The expenditure incurred to the end of 1964-65 was however very meagre being only Rs. 28.52 lakhs due to, legal complications in the acquisition of land etc. In 1965-66 however the tempo of activities was stepped up and an amount of Rs. 225.85 lakhs was finally spent on ayacut development during the Third Plan period.

During 1966-67, the outlay for Ayacut Development programme was Rs. 244.70 lakhs, out of which the expenditure was Rs. 212.19 lakhs. The provision made for Ayacut Development in 1967-68 was Rs. 118.04 lakhs. Against this, an expenditure of Rs. 78.63 lakhs only was incurred due to delay in the acquisition of machinery. The outlay for Ayacut Development in 1968-69 is Rs. 164.74 lakhs. Against which an expenditure of Rs. 98.78 lakhs was only incurred.

Fourth Five Year Plan Programmes:

4.6. The total outlay on schemes of Ayacut Development during Fourth Plan will be Rs. 12.33 crores. The Department-wise break up of this outlay is as follows:—

	<i>Rs. in lakhs.</i>
Director of Agriculture ...	37.39
Board of Revenue ...	305.20
Chief Engineer (M.I.) ...	157.14
Registrar of Co-operative Societies.	687.24
Director of Animal Husbandry ...	24.87
Agricultural University ...	11.73
I.G. of Registration and Stamps ...	9.47
Total ...	1,233.04

1. Nagarjunasagar Project:

4.7. (a) *Localisation.*—The total extent to be localised under Nagarjunasagar project is 20.54 lakh acres—11.74 lakh acres under Right Bank and 8.80 lakh acres under Left Bank. The entire extent has been localised and finalised, except 65,000 acres under Right Bank and 52,000 acres under Left Bank.

At present no localisation units are functioning.

The provision so far made till 1971-72 is to meet the ¾th State's share of cost on localisation. The outlay proposed during 1972-73 and 1973-74 is to meet the cost of one localisation Unit proposed to be opened under Left Canal for Lift Irrigation scheme and to meet the cost of another unit for attending to relocalisation work in Andhra area with headquarters at Jaggiahpet. An outlay of Rs. 5.53 lakhs has been made in the Plan. Of this the share of Coastal Andhra is Rs. 1.63 lakhs and Telangana is Rs. 3.90 lakhs.

4.7. (b) *Acquisition of Land for Field Channels.*—The provision under this head is utilised for payment of compensation for the land acquired for excavation of field channels.

The total land acquisition programme involved for field channels is 15,067 acres i.e., 9,067 acres under Right Bank and 6000 acres under Left Bank. The requisi-

tions received upto the end of March, 1970 as against the total programme is 9511 acres. The programme achieved to the end of March, 1970 during the year 1969-70 was:—

	R.B.C.	L.B.C.	Total
1. Passing of Awards.	6793	1346	8139
2. Handing over possession	6541	1314	7855

The total programme for 1970-71 and progress Achieved is—

	R.B.C.	L.B.C.	Total
<i>I. Programme</i>			
			acres
1. Passing of awards.	1115	509	1624
2. Handing over possession.	1367	541	1908
<i>II. Progress Achieved.</i>			
1. Passing of awards	348	49	397
2. Handing over possession.	47	41	88

An outlay of Rs. 28.66 lakhs has been made for this purpose. Of this, the share of coastal Andhra is Rs. 27.03 lakhs while that of Telangana is Rs. 1.63 lakhs.

4.7. (c) *Excavation of Field Channels.*—According to Section 3 of Andhra Pradesh Irrigation (Construction and Maintenance of Water Courses) Act, 1965 the construction of field channels is the obligation of the owners of the lands. But, in respect of Nagarjunasagar Project, as the ayacutdars did not come forward to take up the work, the work of excavation of field channels was entrusted to the Chief Engineer, Nagarjunasagar Canals. The C.E., Nagarjunasagar Canals completed the work according to the programme for each year by meeting the expenditure initially from projects funds. The actual expenditure met from the project funds is re-imbursed later.

Year-wise progress of excavation of field channels in Nagarjunasagar Project is as follows:—

	R. B. C.	L. B. C.	(In miles)
1. 1967—68	4242	706	
2. 1968—69	505	325	
3. 1969—70	815	630½	
4. 1970—71	214	348	

For creating additional irrigation potential of 0.55 lakhs during the year 1971-72, it is programmed to excavate field channels for 118 miles under Right Bank and 214 miles under Left Bank. An outlay of Rs. 63.31

lakhs has been made in the Plan. The share of Coastal Andhra out of this outlay is Rs. 28.18 lakhs while that of Telangana is Rs. 35.13 lakhs.

4.7. (d) *Ayacut Roads. 1. Left Canal.*—Under Nagarjunasagar Project Left Canals an Irrigation potential of 2.56 lakhs acres has already been created and water released. By 7/71 irrigation potential is programmed to be created for entire ayacut of 2.83 lakh acres in the blocks 1 to 13 of Left Canals.

The total length of ayacut roads proposed to be laid in blocks 1 to 13 is 676 miles costing Rs. 154 lakhs for forming earth work, construction of structures and acquisition of land. So far, roads for a length of 54 miles have been taken up incurring an expenditure of about Rs. 11.50 lakhs for formation of earth work and few structures. These works are under various stages of completion.

(ii) *Ayacut Roads, Right Bank Canal.*—The total length of ayacut roads for execution under Nagarjuna-sagar Right Canal is 1180 miles with 2233 structures. So far 184 miles of ayacut roads with 40 structures has been taken up for execution incurring Rs. 20.00 lakhs.

An outlay of Rs. 98.30 lakhs has been made for the purpose. Of this the share of Coastal Andhra comes to Rs. 68.70 lakhs while that of Telangana comes to Rs. 29.60 lakhs.

II. Pochampad Project :

4.8. (a) *Localisation.*—According to the Master Plan of Pochampad Project an extent of 5.7 lakh acres is proposed to be localised. During the year 1966, one localisation unit with two non-gazetted teams started functioning from 3rd June, 1966.

The year-wise programme and progress achieved so far is as follows:—

Year	Programme (in acres)	Progress (in acres)
1966—67	36,000	1,820
1967—68	72,000	1,06,166
1968—69	1,08,000	98,200
1969—70	1,51,500	65,918
1970—71	1,32,000	61,075
Total	5,02,500	3,33,179

The reasons for short fall are as follows:—

During 1969-70, one more localisation unit with four non-gazetted teams was sanctioned with Headquarters at Peddapalli. But, the post of Special Deputy Collector was vacant upto November, 1969 and the Special District Agricultural Officer posted, was on leave from November to end of February, 1970.

The post of Special Deputy Collector, Localisation Unit Jagtial was vacant for the period from June, 1970 to November, 1970 and the Special Agricultural Officer was on leave from November, 1970 to February, 1971.

In view of the suggestion given by the World Bank Team, the localisation work was with-held from July, 1970 to January, 1971.

The balance of 2,28,000 acres may be finalised by the present unit in two years 1971-72 and 1972-73. Further, the localisation unit has to attend to the localisation of Antimalarial zone and the distributory wise revision in Irrigation pattern from distributory 30 to 83. In addition, the area proposed under the command beyond Manair is also to be localised on receipt of proposals from the P.W.D. Thus there would be sufficient work load for one Localisation unit upto 1973-74. An amount of Rs. 9.92 lakhs is made for this purpose.

4.8. (b) *Excavation of Field Channels*.—The excavation of field channels in Pochampad Project is entrusted to the Chief Engineer, Pochampad Project. The expenditure on this item is initially met from the project funds and is reimbursed later from the ayacut development funds. An outlay of Rs. 20.80 lakhs is made in the plan.

4.8. (c) *Ayacut Roads*.—To start the preliminaries and take up investigation, the Chief Engineer, Roads and Buildings required two divisions costing Rs. 20.60 lakhs. However, the provision available for this, scheme in the plan is only Rs. 14.10 lakhs.

Thus towards localisation of ayacuts, excavation of field channels and for Ayacut roads, an outlay of Rs. 213.19 lakhs for Nagarjunasagar Project and

Rs. 49.70 lakhs for Pochampad Project has been made. For undertaking similar types of works under projects in Rayalaseema region an outlay of Rs. 35.75 lakhs has been made in the plan. The Chief Engineer (P.W.) is also implementing the works relating to excavation of field channels culverts and formation of ayacut roads under Tungabhadra Project High Level Canal Stage-I, Kurnool-Cuddapah Canal, Tungabhadra Project Low Level Canal and Bhairavanitippa Project. A provision of Rs. 115.07 lakhs is made for this purpose. Of this the share of Rayalaseema is Rs. 102.13 lakhs while that of Telangana is Rs. 12.94 lakhs.

4.9. *Seed Farms.*—With the advent of irrigation under Nagarjunasagar Project, new cropping patterns are being developed and improved seeds are to be supplied to this area. To meet the requirements of improved seeds, three seed farms, two under the Right Bank Canal, and one under the Left Bank Canal have been established. These seed farms were started during 1967-68 and require to be developed. An outlay of Rs. 12.29 lakhs—Rs. 8.98 lakhs in the Plan of Coastal Andhra and Rs. 3.31 lakhs in the Plan of Telangana was made.

4.10. *Administration under the Nagarjunasagar Project.*—With a view to planning an overall development of all Agricultural activities and for fuller utilisation of the vast irrigation potential created under Nagarjunasagar Project a well unit extension organisation has been created. An outlay of Rs. 10.51 lakhs—Rs. 5.45 lakhs in the plan of Coastal Andhra and Rs. 5.06 lakhs in the plan of Telangana has been provided. Towards appointment of special staff for undertaking propaganda under Tungabhadra Project High Level Canal and other projects in Rayalaseema an outlay of Rs. 1.97 lakhs was made. Similarly towards appointment of special staff for undertaking propaganda under Kadam, Rajolibanda Diversion scheme, and also for undertaking pre-irrigation survey and soil survey under Pochampad, an outlay of Rs. 12.84 lakhs has been made in the plan of Telangana region.

5. ANIMAL HUSBANDRY

The development of livestock and animal health has to be visualised in the context of a number of objectives. It provides food products of highly nutritional value; provides for diversified system of rural economy involving less risk and increased security, provides better employment; provides for improvement in the diet of the people; and lastly, enables a better utilisation of agriculture by-products. The demand for livestock products is considered more elastic and is expected to grow at the rate of 5.5 to 6.4 per cent per annum. Further animal husbandry is particularly significant as a supplementary activity to marginal and small farmers.

5.2. The emphasis during the earlier plans in the context of animal husbandry was primarily on animal health and secondarily on improved breed. During the Third Plan and subsequent annual plans, a new cattle breeding policy was evolved involving cattle development projects implying package programmes. In terms of poultry the emphasis shifted to commercial poultry.

In Andhra Pradesh livestock is a very important sector in the State's economy and is next only to agriculture. Accordingly, considerable attention and priority is given for development of animal husbandry in the State Plan.

Objectives:

5.3. The objectives of Animal Husbandry programme in the State are:—

- (a) provision of adequate animal health facilities;
- (b) development of cattle through intensive cattle development projects and key villages blocks in order to create exportable surplus of animal products especially to urban areas;
- (c) encouragement of commercial poultry with a view to provide subsidiary occupation to the rural population;
- (d) development of feed and fodder with a view to provide much needed base for development

of animal husbandry especially in areas which are drought affected and which require development of special types of fodder.

Strategy :

5.4. The strategy for development of Animal Husbandry is in terms of:—

- (a) Giving highest priority for disease control and animal health programmes to stabilise the animal health;
- (b) improving breeds of livestock by cross-breeding in select compact areas;
- (c) improving the supply and production of balanced feed and nutritious fodder—especially fodder in drought affected and dry areas;
- (d) encouraging commercial poultry and sheep development in appropriate areas delineated on the basis of topography, climate and tradition;
- (e) delineating milkshed areas and development of cattle to coincide with the dairying programmes; and
- (f) making a beginning in the provision of marketing and storage facilities for animal husbandry products.

Regional Approach :

5.5. In keeping with the overall objectives of the development of animal husbandry institutional development for animal health is given maximum attention in all the three regions. Cattle development has been given priority in all the three regions, but greater emphasis has been made on cattle development in Rayalaseema where the potentiality of agriculture according to present indications is particularly low. Even with regard to the sheep development slightly less than half of the total allocation in the State has been made in Rayalaseema. In Telangana, the greatest emphasis is on animal health followed by cattle development. Poultry development has also attracted attention to a significant extent. In keeping with the tradition, provision for piggery development has been made in Coastal Andhra only.

Review :

5.6 The State has a livestock population of 315.94 lakhs animals according to 1966 livestock census. It occupied fourth place in respect of livestock population and first place in poultry and sheep population among the various States in India. Cattle and Buffaloes account for 61 per cent (191.3 lakhs) of the total livestock population in the State. Next in importance are sheep and goats accounting for 37 per cent (117.6 lakhs). The poultry population in the State was 147.1 lakh birds, consisting of 143.1 lakh fowls, 3.8 lakh ducks and 0.2 lakh other birds.

Of the three regions in the State, Telangana has the largest population of livestock with 129.3 lakhs followed by coastal region (112.4 lakh animals) and Rayalaseema (74.2 lakh animals). While Telangana has the largest number of drought animals (31.1 lakh animals) coastal region has more number of Milch cattle (27.7 lakh animals) among the three regions. The uneconomic cattle in Telangana are highest with 2.4 lakh animals and lowest in Rayalaseema with only 60 thousands.

There is no upto date estimate of yield of milch cattle. Latest estimate available was based on a sample survey conducted in 1961. As per this survey the average yield of a buffalo is 4.14 lbs., per day and the lactation period is about 260 days. The average milk yield of a cow was estimated at 2.2 lbs., per day with a lactation period of about 223 days in a year. These yields are far lower than the yields of improved breeds like Murrah and Marathawada buffaloes which yield nearly 14.4 and 11.0 lbs., per day respectively and cow breeds like Sindhi which yield 12.8 lbs., per day.

Though reliable data are not available about average productivity of other livestock and poultry, it is common knowledge that their production is also far from satisfactory. The average yield of the hens under village conditions in Andhra Pradesh was reported in 1966 livestock census as 60 eggs per year by a desi bird as compared to 140 eggs per day by an improved bird.

Animal husbandry sector was given considerable importance in the second and third five year plans and the subsequent annual plans. The outlay on Animal Husbandry in the State was 235.82 lakhs in Second Plan and 190.74 lakhs in third plan. During the subsequent annual plans, the outlay was Rs. 78.22 lakhs in 1966-67, Rs. 36.00 lakhs in 1967-68 and Rs. 34.49 lakhs in 1968-69. The break up of these outlays on various broad categories of programmes are as follows:

Expenditure on Animal Husbandry development :

Sl. No.	Item	Expenditure (in lakhs) during			
		II Plan	III Plan	1966-69	Total
1.	Cattle Development.	85.62	68.57	39.31	193.50
2.	Feed and Fodder Dev.	—	6.35	21.67	28.02
3.	Sheep Development.	12.53	8.59	0.63	21.75
4.	Poultry Development.	23.58	11.52	11.32	46.42
5.	Piggery Development	—	—	14.47	14.47
6.	Veterinary aid	106.07	45.57	22.94	174.58
7.	Other schemes.	1.02	50.14	38.39	96.55
Total :		235.82	190.74	148.73	575.29

It is seen from the above table that Cattle development programmes received Lion's share of the total development funds available for the sector followed by veterinary aid and poultry development. While outlay on veterinary aid decreased considerably in absolute and relative terms over the successive plan periods, cattle and poultry development programmes maintained their share in the total outlay. Outlay on sheep development has decreased considerably. Feed and fodder development programmes gained importance in the third plan and subsequently annual plans.

The introduction of Intensive Cattle Development Projects during the period 1966-69 represents a significant development in the animal husbandry programmes which when taken up in small and scattered areas, could not make much impact on account of

insufficient inputs, lack of tie-up with proper marketing and inadequate coverage of cattle population. The Intensive Cattle Development Projects eliminate these deficiencies.

The State has two Intensive Cattle Development Projects one at Vijayawada and the other at Hyderabad. These projects have 10 Regional Cattle Development Units (6 for Vijayawada project and 4 for Hyderabad project). There are 154 and 148 sub-units in Vijayawada and Hyderabad project areas.

As a result of developmental effort put in during the last three Five-Year Plans, and subsequent annual plans, a number of veterinary aid and livestock and poultry development institutions have come into operation.

At the beginning of Fourth Plan there are 1,184 veterinary aid institutions to serve nearly 191 lakhs cattle population. Thus there is one veterinary aid institution for every 16 thousand cattle population. There are 1,070 artificial insemination units functioning in the State. They serve nearly 15.5 per cent of the total breedable population. There are 12 semen collection centres and 11 cattle dairy-cum-livestock farms to supply the stud animals and semen required for cattle development in the State. There is one sheep farm in each of the three regions of the State. Seven sheep demonstration units and 22 sheep and wool extension units attend to the extension work of sheep development. Poultry development is served by 12 poultry farms. These are supported by three poultry units and three poultry marketing centres with two sub-centres.

Fourth Plan Programmes :

5.7. An amount of Rs. 185.32 lakhs is provided in the Fourth Plan for Animal Husbandry Development. Besides, an amount of about Rs. 24.88 lakhs is provided under Ayacut Development for animal husbandry programmes in ayacut areas of major irrigation sources. The amount of Rs. 185.32 lakhs is allotted to

various programmes and the three regions in the State as shown in the following table:

Scheme-wise and region-wise allocation of Fourth Plan Outlay :

Sl. No.	Item	(Rs. in lakhs)			Total
		Coastal Andhra	Rayalaseema	Telangana	
1.	Cattle development	10.51	17.63	14.32	42.46
2.	Feed & Fodder Development	0.40	..	1.01	1.41
3.	Sheep development	1.85	5.12	2.65	9.62
4.	Poultry development	7.36	7.32	5.86	20.54
5.	Piggery development	2.43	..	..	2.43
6.	Animal health	27.61	15.38	27.65	70.64
7.	Education, research and Training	4.04	2.20	2.79	9.03
8.	Administration and Miscellaneous	1.84	0.50	0.92	3.26
9.	Special Development schemes for Rayalaseema	..	25.93	..	25.93
	Total	56.04	74.08	55.20	185.32

All the three regions in the State received almost equal provisions in the animal husbandry programmes. Coastal Andhra is provided with Rs. 56.04 lakhs, Rayalaseema with Rs. 74.08 lakhs and Telangana with Rs. 55.20 lakhs.

Regarding the allocation to various major heads of developments activity there are only minor shifts in emphasis from that in earlier plans. In the earlier plan major emphasis was on cattle development programmes. But in the Fourth Plan, the major emphasis is shifted to animal health programmes which are provided with Rs. 70.64 lakhs (38 per cent of the total as compared to only 30 per cent in the earlier plans).

Cattle development also received substantial provisions of Rs. 42.46 lakhs though less than in previous plans. Sheep and poultry development programmes received only Rs. 9.62 lakhs and Rs. 20.54 lakhs respectively which constitute higher percentage to total provision (5 and 11 per cent respectively) than in earlier plans (3 and 8 per cent respectively).

Animal health programme proposed in the Fourth Plan include increase in the number of veterinary dispensaries under Own Your Veterinary Dispensary Scheme, upgrading of existing dispensaries and hospitals, establishment of animal health centres. Under cattle development activities programmes relating to extension of existing intensive cattle development blocks, opening of new key village blocks, strengthening and expanding existing livestock farms and semen collection centres are included. Sheep development programmes include strengthening and expanding existing sheep breeding farms and sheep and wool extension centres and importing exotic sheep from foreign countries. Poultry development is envisaged through developing a State level marketing organisation for poultry products, increasing the number of poultry sub-centres and strengthening the existing district and regional poultry farms.

5.8. *State-wide Schemes.*—State-wide schemes which benefit the three regions of the State require an amount of Rs. 26.90 lakhs. From this provision an amount of Rs. 16.64 lakhs are planned to be utilised for expansion and strengthening the Veterinary Biological Research Institute. The amount will be utilised for expansion of vaccine production to cater to the needs of vaccination in the three regions and for research work. The rest of the amount is to be utilised on investigation of diseases like T.B. and Brucellosis and advanced training for technical staff etc.

The rest of the plan provision amounting to Rs. 158.42 lakhs is provided for regional schemes. Of this, Coastal Andhra is allotted Rs. 42.33 lakhs, Rayalaseema Rs. 68.13 lakhs and Telangana Rs. 41.71 lakhs. Details of the regional schemes are discussed below :

Regional Schemes :

Coastal Andhra :

5.9. An amount of Rs. 56.04 lakhs is allotted for Animal Husbandry Development in this region. An amount of Rs. 10.70 lakhs is proposed to be spent on

State-wide schemes. The allocation of funds on regional schemes is shown in the following table:

Regional Schemes in Coastal Andhra region

S. No.	Programme	Outlay allotted in Rs. in lakhs.
1.	Cattle Development.	10.41
2.	Feed and Fodder Development.	0.40
3.	Sheep Development.	1.85
4.	Poultry Development.	7.08
5.	Piggery Development.	2.43
6.	Education, Research and Training Schemes.	3.01
7.	Animal Health.	18.84
8.	Administration and Miscellaneous.	1.32
	Total	45.34

Animal Health, Cattle and Poultry Development will be the important programmes in this region.

Livestock Development.—Cattle Development Programmes in this region are provided with an amount of Rs. 10.41 lakhs. It is proposed to add one more Regional Cattle Development Block to the existing six in the Vijayawada Intensive Cattle Development Project to boost up the milk production in Vijayawada milk shed area. In other areas four new key village blocks will be started and one key village block will be expanded. Two Semen Collection Centres will be developed. A dairy breed unit will be established in one of the livestock farms and three livestock farms will be strengthened. The capacity of the three feed mixing plants will be expanded from 50 tonnes per day to 100 tonnes per day in each plant.

Poultry Development.—In poultry development, one poultry marketing centre will be strengthened and seven sub-centres will be opened at a cost of Rs. 5.02 lakhs. Three district poultry farms will be

strengthened and an organisation to take up poultry feed manufacturing and egg marketing at the State level on a commercial basis will be created. Under piggery development, 12 piggery development blocks will be established at a cost of Rs. 0.80 lakh and the bacon factory will be expanded at a cost of Rs. 1.63 lakhs.

Animal Health Programmes.—An amount of Rs. 18.84 lakhs is provided for these programmes. Twenty-eight dispensaries under own your veterinary dispensary scheme and thirteen rural veterinary dispensaries will be opened. One animal health centre at a cost of Rs. 0.70 lakh will be opened to explore, investigate and unearth new diseases in the region. The need for such a centre has arisen because of the increase in new cross breed and exotic cattle population which are easily vulnerable for several new diseases due to production stress on their systems. The animal health centre will compose of a team of specialists in biology, pathology, etc.

Rayalaseema :

5.10. An amount of Rs. 74.08 lakhs is allotted to this region during the current plan (out of which an amount Rs. 4.29 lakhs is proposed to be spent on State-wide schemes) Scheme-wise allocation of the outlay provided for regional schemes is shown in the following table. Cattle Development, Animal Health Services and Poultry Development will be the important programmes in this region.

Regional Schemes in Rayalaseema

<i>S. No.</i>	<i>Programme</i>	<i>Outlay provided in Rs. in lakhs.</i>
1.	Cattle Development.	17.58
2.	Sheep Development.	5.12
3.	Poultry Development.	7.20
4.	Animal Health.	12.05
5.	Administration and Miscellaneous. Research and Training.	1.91
6.	Provision allotted under Special Development Schemes in Raya- laseema.	25.93
	Total	69.79

Cattle Development Programmes.—Under Cattle Development Programme, one Regional Cattle Development Unit will be opened to intensify the activities in the region. Two new key village blocks will be started while strengthening two existing blocks. Three of the four existing livestock farms and one centralised semen collection centre will be strengthened. The cost of these programmes is estimated at Rs. 17.58 lakhs.

The existing sheep breeding farms and eleven sheep and wool extension centres will be reorganised and expanded at a cost of Rs. 5.12 lakhs. Two poultry marketing centres and four sub-centres will be opened at a cost of Rs. 6.97 lakhs.

Animal Health Programmes.—Veterinary aid facilities will be extended by opening 27 new dispensaries of which 9 under own your veterinary dispensary scheme, and two ambulatory clinics at a cost of Rs. 12.05 lakhs.

Telangana:

5.11. Telangana region is provided with an amount of Rs. 55.20 lakhs. Of this, an amount of Rs. 11.91 lakhs is allotted for State-wide schemes. Programme-wise allocation of the outlay proposed for regional schemes is shown in the following table:

Regional Schemes in Telangana

S. No.	Programme	Outlay allotted in Rs. in lakhs.
1.	Cattle Development.	14.25
2.	Feed and Fodder Development.	1.01
3.	Sheep Development.	2.65
4.	Poultry Development.	5.60
5.	Animal Health.	17.61
6.	Education, Training and Research.	1.58
7.	Administration and Miscellaneous.	0.59
	Total	43.29

Cattle Development Programmes.—Under cattle development activities, one Regional Cattle Development Unit will be added to the existing Hyderabad Intensive Cattle Development Project. In other areas, three new key village blocks and four sub-centres will be opened. Three of the existing livestock farms will be strengthened. The capacity of the existing feed mixing plant at Bhongir will be raised from 50 tonnes per day to 100 tonnes per day. Most of the 14 sheep and wool extension centres will be expanded and re-organised at a cost of Rs. 2.65 lakhs. Under poultry development programmes, four new sub-centres will be started and one old sub-centre will be strengthened under the existing poultry marketing centres at a cost of Rs. 4.24 lakhs.

Animal Health Programmes.—An amount of Rs. 17.61 lakhs is planned to be spent to expand veterinary aid facilities in the region. Under these programmes, 15 dispensaries under own your veterinary dispensaries scheme will be opened and 12 existing dispensaries will be upgraded at a cost of Rs. 10.90 lakhs. Two new clinical laboratories will be started while the existing three units will be strengthened.

One new unit to control Liver Fluke in irrigated areas of Nagarjunasagar Project will be started during the current plan. Under this unit, there will be 25 sub-units. The cost of the scheme is estimated at Rs. 4.50 lakhs.

6. DAIRYING AND MILK SUPPLY

6.1. Dairying and milk supply is fast developing into an important organised export industry. Andhra Pradesh has a number of advantages in milk production over many other areas due to its relatively well developed agriculture, abundance of by-products of agriculture and a tradition of good dairying. A substantial shift in the policy from establishment of colonies of milk cattle near bigger cities to milk production in rural areas and provision of marketing facilities through a net work of milk cooling and chilling centres and supply of milk to urban areas has enabled a breakthrough in dairy development in the State.

6.2. Experience in the recent past has shown that dairying schemes have enormous spread effect in terms of increasing the prosperity of the farmers in the rural areas by providing profitable avocation very well suited to their tradition, environment and with a capacity to utilise the abundant by-produce of agriculture. Dairying schemes can also benefit the small farmers and the marginal farmers by virtue of the general tradition and their capacity to devote personal attention to the management of cattle. It has therefore, been decided by the State Government to accord high priority for dairy development schemes.

Objectives :

6.3. The objectives of dairy development in the State are :—

- (a) to meet the growing needs of milk and dairy products in the State especially in urban areas;
- (b) to develop dairying as an export industry and supply of milk and milk products to important cities outside the State also;
- (c) to enable development of industries based on milk and thus, bring about greater diversification of rural economy; and
- (d) to develop dairying as an important supplementary occupation in the rural areas especially for the landless labour and the marginal farmers.

Strategy :

6.4. The strategy of dairy development is in terms of:—

- (a) provision of net work of milk cooling and chilling centres through integrated milk projects in areas delineated for this purpose *viz.*, milk shed areas;
- (b) co-ordination of the dairying programmes with animal health and cattle development programmes;
- (c) establishment of milk powder factories to absorb excess milk; and
- (d) arrangement for effective transportation system to carry milk from the various cooling centres to the market areas as also to areas outside the State.

Regional Approach :

6.5. The development of dairying could be visualised at two different levels. At one level it is meant primarily for local consumption and the activities are highly localised to a few urban small centres. At the second and higher level a bigger net work is created whereby metropolitan centres and bigger urban centres like Hyderabad, Vijayawada, Guntur, etc., are provided with milk.

Dairy Development has to take cognizance of the availability of such big centres in different areas as also the basic infrastructure in terms of availability of fodder and other agro-climatic conditions in the neighbourhood of such areas.

Thus, in Coastal Andhra the provision of Milk Powder Factory at Vijayawada due to substantial milk surplus in and around Vijayawada is an important item. On the other hand, in respect of Telangana the provision of net work in terms of integrated milk project to enable milk supply to the twin cities is given importance. In respect of Rayalaseema, the programme is primarily developing dairying facilities to cater to number of fairly important dispersed centres like Kurnool, Anantapur and Tirupathi. Further, a milk products factory is proposed to siphon off the excess milk in the milk shed area,

Review :

6.6. The Integrated Milk Project started during Third Five-Year Plan demonstrated the effect of providing integrated services of developmental inputs, like improvement in the breed of milch cattle, supply of nutritious feed, and credit for purchase of milch cattle matched by marketing facilities etc. in a compact area on accelerating milk production. Besides increasing milk production, the project benefitted lower income groups *viz.* small and marginal farmers, etc.

The expenditure on dairying and milk supply was Rs. 25.00 lakhs in First Plan, Rs. 34.42 lakhs in Second Plan, Rs. 255.98 lakhs in Third Plan and Rs. 188.04 lakhs in the Annual Plans 1966-69. Thus a really significant emphasis on this programme was evident only in Fourth Plan which was further carried forward in the subsequent annual plans.

To meet the milk requirements of the twin cities of Hyderabad-Secunderabad, an integrated milk project costing Rs. 4.35 crores was taken up in the Third Plan to procure milk in the Vijayawada milk shed area and transport it to the twin cities by rail and road. An expenditure of Rs. 1.96 crores was incurred on this project in the Third Plan and Rs. 157.97 lakhs in the three Annual Plans 1966-69 and four chilling centres were opened by 1st April, 1969 around Vijayawada. The Central Dairy at Hyderabad was handling about 49 thousand litres per day including milk transported from Vijayawada milk shed area. About 10 thousand litres of milk per day was sold at Vijayawada.

Besides the Integrated Milk Project, a few schemes were also taken up to meet the milk needs of other urban areas. The dairies at Visakhapatnam, Nellore and Warangal which were under the control of the Animal Husbandry Department and Co-operatives, were taken over by the Milk Commissioner. These three dairies were handling about 3.9 thousand litres of milk per day. A Milk Powder Factory at Vijayawada was under construction at the beginning of Fourth Plan.

Fourth Plan Programmes :

6.7. An amount of Rs. 385.46 lakhs is provided for Dairying and Milk Supply Schemes in the normal

Fourth Plan of the State. At the beginning of the Fourth Plan, the Vijayawada-Hyderabad Integrated Milk Project and some other dairies taken up under Intensive Milk Supply Schemes were incomplete. Hence priority is given to complete these spill over works.

Under new schemes, it is proposed to increase milk collection in the milk shed areas of Vijayawada and Hyderabad by opening more milk chilling centres. Besides it is proposed to have two more milk products factories in Hyderabad and K.C. Canal areas where substantial surplus milk in the peak procurement season is anticipated during the Fourth Plan. The proposed milk powder factory at Hyderabad will have 4 to 5 tonnes per day capacity and the milk product factory in K.C. Canal area will handle 1.5 lakh litres of milk per day.

Under intensive milk supply schemes a rapid coverage of many of the big towns in the State is envisaged. The new towns that are proposed to be covered are Rajahmundry, Kakinada, Srikakulam in Coastal Andhra, Chittoor, Tirupathi, Cuddapah, Proddatur, Anantapur and Kurnool in Rayalaseema; Warangal and Nizamabad in Telangana. It may be noted here that almost all the towns, in West Godavari, Krishna and Guntur and Ongole districts falling under Vijayawada milk shed area are to be covered by Vijayawada Milk Project and similarly the towns falling in the milk shed area of Hyderabad.

The scheme-wise provision of Plan funds are given in the following table:

Scheme-wise allocation of outlay in the Fourth Plan.

Sl. No.	Scheme	(Rs. in lakhs)			
		Outlay in			
		Coastal Andhra	Rayalaseema	Telangana	Andhra Pradesh
I.	Integrated milk project at Hyderabad and Vijayawada :				
(a)	Milk supply to the twin cities ..	..	..	115.59	115.95
(b)	Milk Powder factory at Vijayawada ..	106.38	..	..	106.38
(c)	Dairy development				
	Office Staff ..	0.10	..	..	0.10
	Sub-Total ..	106.48	..	115.59	222.07

II. Intensive Milk Supply :

(a) Warangal, Rajahmundry and Mulugu ..	6.71	..	16.00	22.71
(b) Chittoor, Nellore, Visakhapatnam and Srikakulam ..	31.74	5.11	..	36.85
(c) Mydukur, Kurnool, Anantapur ..	..	103.83	..	103.83
Grand Total ..	144.93	108.94	131.59	385.46

An amount of Rs. 222.07 lakhs is provided for Vijayawada-Hyderabad Integrated Milk Supply Schemes. An amount of Rs. 58 lakhs is set apart for milk products factory in K.C. Canal area. The remaining cost of the factory is anticipated from private sector.

All the schemes under this head are regional schemes and there are no State-wide schemes.

6.8. With the above investment, the average milk procurement per day by the Government agency is anticipated to increase from 58 thousand litres per day to 4.75 lakh litres per day by the end of Fourth Plan. The dairy-wise details of this anticipated increase is shown in the following table :

Dairy-wise target for Milk procurement in the State during Fourth Plan.

(in '000 Litres)

Dairying	Average milk procured per day in 1968-69	Target for average milk procurement by the end of IV Plan
(1)	(2)	(3)
1. Milk Powder Factory Vijayawada	nil	175 0
2. Central Dairy, Hyderabad	49.3	150.0
3. Visakhapatnam	1.7	18.0
4. Nellore	1.7	12.5
5. Warangal	0.5	12.5
6. Chittoor	..	12.5

(1)	(2)	(3)
7. Rajahmundry	..	18.0
8. Kurnool	..	18.0
9. Nizamabad Chilling Centre	..	18.0
10. Mydukur Chilling Centre	..	12.5
11. Ramabhadrapuram Chilling Centre	..	12.5
12. Anantapur Cooling Centre	..	4.0
13. Srikakulam Cooling Centre	..	4.0
14. Karimnagar Cooling Centre	..	4.0
15. Nirmal Cooling Centre	..	4.0
Total	53.2	475.5

Coastal Andhra:

6.9. In 1968-69 Visakhapatnam and Nellore Dairies were taken over by Milk Commissioner and were handling about 3,400 litres of milk per day. Four chilling centres were functioning in the Vijayawada Integrated Milk Project area. These four chilling centres were handling 18 thousand litres of milk per day. Of this, about 10 thousand litres were sold at Vijayawada and the rest was transported to Central Dairy at Hyderabad. A milk powder factory was also under construction at Vijayawada.

An amount of Rs. 106.38 lakhs is provided in the Fourth Plan for Vijayawada Integrated Milk Project. It is proposed to increase the procurement of milk in this area from 18 thousand litres per day at the beginning of the Fourth Plan to 1.75 lakh litres per day by the end of the Plan period by starting additional milk chilling centres at Bhimavaram, Narasaraopet, Tiruvur, Angalakuduru, Returu, Kolluru, Gurazala, Ongole and Chilkolu at a cost of Rs. 35.58 lakhs. The milk procurement is proposed to be done through 300 Co-operative Societies. All technical assistance will be extended to the members of the Co-operative Societies in respect of selecting milch breed, economic feeds, and management. The Vijayawada complex will supply the milk required in the urban areas of West Godavari, Krishna and Guntur districts. Besides an amount of Rs. 64.61 lakhs will be used for expanding the capacity of the Vijayawada Milk Powder Factory and produce milk products like ghee etc. The balance amount of Rs. 5.98 lakhs under the Integrated Milk Project will be utilised for staff purposes.

At the beginning of the Fourth Plan, Visakhapatnam and Nellore Dairies are each handling about 1,700 litres of milk per day. It is proposed to raise the daily average milk handled at Visakhapatnam to 18 thousand litres and Nellore to 12 thousand litres. An amount of Rs. 9 lakhs to Visakhapatnam dairy and Rs. 7 lakhs to Nellore dairy is provided for this purpose.

A cooling centre with a capacity of 4 thousand litres per day will be located at Srikakulam to meet its milk needs. An amount of Rs. 2.25 lakhs is provided for this purpose.

Rajahmundry dairy will come into operation during 1969-70. It meets the milk requirements of Rajahmundry and Kakinada. A sum of Rs. 6.71 lakhs is provided for this dairy and it will be processing 18 thousand litres per day by the end of the Fourth Plan.

The Government of India have suggested establishment of rural dairy centres to cater to the needs of small towns and major Panchayats and send the surplus milk to the nearest urban centre. Under this programme, a rural dairy centre with a capacity to handle 4 thousand litres of milk per day will be started at Ramabhadrapuram at a cost of Rs. 10.00 lakhs. This will cater to the needs of Salur, Parvathipuram and Bobbili in the first instance. The surplus milk in the later stages will be sent to Srikakulam.

Royalaseema :

6.10. An amount of Rs. 108.94 lakhs is provided in the Fourth Plan for milk supply and dairying schemes in Royalaseema which will be utilised for taking up milk supply schemes in Chittoor, Tirupathi, Cuddapah, Proddatur, Anantapur and Kurnool towns and for starting a multipurpose milk products factory in K.C. Canal area.

An amount of Rs. 27.25 lakhs is provided for Kurnool dairy in the Fourth Plan. It will handle 18 thousand litres per day by the end of the Plan.

An amount of Rs. 5.11 lakhs is provided in Chittoor dairy. It will supply milk to Chittoor and Tirupathi towns. It will have a capacity of 12.5 thousand litres per day.

A cooling centre at a cost of Rs. 6.31 lakhs will be started in the Fourth Plan to supply milk to Anantapur town. It will have a capacity to handle 4 thousand litres per day.

A chilling centre will be started at Mydukur in Cuddapah district at a cost of Rs. 10.02 lakhs. It will have a capacity to handle 12.5 thousand litres per day. It will supply milk to nearby Cuddapah and Prodatur towns.

It was estimated that in the K.C. Canal area of Cuddapah district there will be a surplus of 50 to 70 thousand litres of milk per day. Due to lack of marketing facilities the production of milk remained stagnant. At present, the surplus milk is being converted into ghee by individual milk producers. Hence it is proposed to start a multipurpose milk products factory with a capacity of 1.50 lakh litres per day with an approximate cost of Rs. 2 crores. An amount of Rs. 58 lakhs is provided for this project in the Fourth Plan.

Telangana:

6.11. An amount of Rs. 131.59 lakhs is provided in the Fourth Plan for Milk Supply and Dairying Schemes in Telangana region. At the beginning of the Fourth Plan, a Central Dairy at Hyderabad and a chilling centre at Warangal were functioning. These dairies will be strengthened and expanded further during the Fourth Plan. In addition, Nizamabad, Adilabad, Karimnagar and Nirmal will also be supplied with milk from Government dairies.

6.12. Central Dairy at Hyderabad is mainly intended to serve the milk requirements of the twin cities of Hyderabad and Secunderabad. As the milk procurement from the surrounding areas of the twin cities was not adequate in the initial stages to meet the requirements of the twin cities, it was envisaged to transport surplus milk from Vijayawada milk shed area. The integrated milk project was conceived in this context. The Central Dairy at Hyderabad was selling about 49 thousand litres of milk per day in 1968-69. Out of this some milk was being obtained from Vijayawada. As time passed, the milk procurement in the surrounding areas of twin cities picked up

and showed considerable potential. Hence it is envisaged to make this dairy self-sufficient dispensing with the need for transporting milk from Vijayawada. An amount of Rs. 115.59 lakhs is provided for expanding the Central Dairy at Hyderabad. The milk handled at the dairy will be raised from 49 thousand litres per day to 150 thousand litres per day.

At the beginning of the Fourth Plan, a chilling centre at Shadnagar, cooling centres at Kadthal and Bhongir are functioning and supplying milk to the central dairy. In addition, chilling centres at Medak, Alair and Chityal will also be started in the Fourth Plan period at a cost of Rs. 23.69 lakhs out of the total provision of Rs. 115.59 lakhs provided for Central Dairy.

It is expected that by 1973, there will be surplus milk of about 30 thousand litres between peak procurement of milk and average sales of Central Dairy at Hyderabad. This has to be converted into butter, ghee and milk powder. Vijayawada Milk Powder Factory will not be in a position to handle this surplus milk. Hence it is proposed to have a milk powder factory with 4-5 tonnes per day capacity along with butter and ghee sections. An amount of Rs. 45 lakhs out of the Rs. 115.59 lakhs for Central Dairy will be spent on this factory.

The Warangal Dairy started functioning in the year 1968-69 and is handling 500 litres of milk on an average per day. An amount of Rs. 7.75 lakhs is provided to raise this capacity to 12.5 thousand litres per day.

To supply milk to Karimnagar town, a chilling centre and a cooling centre will be started. The Karimnagar cooling centre cost Rs. 2.50 lakhs and will handle 4 thousand litres per day.

A cooling centre is proposed to be started at Mulug at a cost of Rs. 2.00 lakhs and another at Nirmal with an outlay of Rs. 2.50 lakhs. Each of these centres will handle 4 thousand litres per day while the surplus milk from Mulug will be supplied to Warangal dairy and that at Nirmal to Adilabad.

7. FORESTS

One of the important natural resources is Forests. While the direct benefits of forest wealth are known and can be identified there is no precise data on which the indirect contribution of forests to general economy of the State and in particular to agriculture by its effect on the climate etc., can be isolated or measured. Forest development could be visualised with a view to realising a number of objectives *viz.*, increase the productivity of forests so that it makes a net addition to the wealth of the nation directly; as an aid to develop forest based industries; as a support to rural economy in terms of provision of fodder and fuel; as a means to prevent soil erosion and help moisture retention to avoid silting of reservoirs and canals and generally maintain the necessary meteorological and ecological balance. In order to realise these objectives a number of measures could be thought of such as intensive survey of forest resources, extending the forests under quick growing species, exploitation and rational utilisation of existing resources, regeneration of areas where forest is removed, protection from uncontrolled exploitation and lastly supporting facilities in terms of communications and water ponds.

While effort is directed towards all these activities in any Plan of development of forests the relative emphasis varies depending upon economy of the particular area and the over all strategy of development of the forestry in the State as a whole.

7.2. The national forest policy approved by the Government of India in 1952 lays down that the proportion of land to be kept permanently under forests should be 1/3rd of the total land area, increasing to about 60% in mountainous tracts liable to erosion and decreasing to a minimum of about 20% in the plains. In Andhra Pradesh however the area under forests is only 22% of the State's total geographical area. The per capita forest area in the State is 0.18 hectares as against 0.22 hectares for the country as a whole. In addition some forests are lost due to submersion under reservoirs and also assignment of lands to the poorer sections by virtue of the hunger for land. Thus plan

for forestry should aim at making maximum use of the existing forest resources and increasing the productivity of the forests.

Objectives :

7.3. The objective of forestry development in Andhra Pradesh may be summarised as—

- (a) Consolidation and increase of the productive capacity of existing forests;
- (b) Emphasis on fast growing species with satisfactory economic and industrial potential;
- (c) Improvement and strengthening of research and training facilities; and
- (d) For soil and water conservation and for fodder development as a protective measure for dry areas especially Rayalaseema and to certain extent in Telangana.

Strategy :

7.4. The strategy of forest development that is followed in the Plan is:

- (a) survey of forest surface in as many areas as possible to enable scientific development of forests and this is done in the Central sector;
- (b) as an immediate measure, growing commercial plantation especially teak plantations casuarina, red sanders and quick growing species;
- (c) measures to intensify forest management including communications and forest protection to enable exploitation of economic plantations; and
- (d) emphasise soil and water conservation in the forest as a protective measure and also for providing employment for people primarily through Central Sector Schemes.

Implicit in the strategy is emphasis on commercial plantations in the State plan in all the regions as far as the Fourth Plan is concerned.

Regional Approach :

7.5. The establishment of zoological gardens, intensification of forests management are covered by the State sector. In terms of regional strategies, however, the pride of place in the State is given to teak plantations in all the three regions. This is because of the fact that teak could be grown profitably in all the three areas and also because the gap between demand and supply of commercial wood in the State is likely to increase to 1,057 million cft., by 1975 and priority had to be given to meet this demand. In Coastal Andhra, the emphasis is, in addition to teak plantations, on quick growing species and casuarina. In Rayalaseema it is on teak plantations and red sanders and cashewnut plantations. In Telangana it is on teak plantations and quick growing species.

Review :

7.6. During the First Plan period, an outlay of Rs. 26.40 lakhs was incurred on this sector. In the Second Plan period an expenditure of Rs. 97.13 lakhs was incurred. In the Third Plan there was a stepping up to Rs. 138.68 lakhs. In the three Annual Plans, there was further stepping up and the expenditure was Rs. 128.99 lakhs. In physical terms during the Second Plan period an extent of 384 hectares was planted with teak, 286 hectares with casuarina and 9,878 hectares with cashewnut plantations. In the Third Plan the plantation programme was geared up especially since 1963-64. Teak was planted over an area of 7,191 hectares, casuarina over an area of 1,381 hectares, eucalyptus over an area of 948 hectares and red sanders over an area of 234 hectares. Establishment of integrated saw mill, and Zoological Park at Hyderabad are also distinguishing activities of this sector during the Third Plan. During the Plans in 1966-69 teak was planted in 6,278 hectares, fuel plantation in 2,568 hectares and quick growing species in 6,450 hectares. Thus by the beginning of the Fourth Plan a reorientation in pro-

grammes of forestry towards quick species and fuel plantations could be observed. These measures as mentioned already are proposed to be further extended in the Fourth Plan.

Fourth Plan Programmes:

7.7. An outlay of Rs. 306.50 lakhs is proposed for forestry development in the Fourth Plan. Of this an amount of Rs. 47.21 lakhs is proposed to be spent on State-wide Schemes, and the balance of Rs. 259.29 lakhs on Regional schemes. The scheme-wise and region-wise details of the proposed outlay is given in the following table:

Schemewise and regionwise details of the Fourth Plan Outlay.

(Rs. in lakhs.)

Sl. No.	Scheme	Coastal Andhra	Rayala seema	Telan-gana	Total
1	2	3	4	5	6
<i>State wide Schemes</i>					
1.	Nehru Zoological gardens	.. 16.03	6.87	11.45	34.35
2.	Intensive Forest Management	.. 3.51	1.50	2.49	7.50
3.	Forest education	.. 2.03	0.88	1.45	4.36
4.	Forest research	.. 0.47	0.20	0.33	1.00
	Total (State wide Schemes)	.. 22.04	9.45	15.72	47.21
<i>Regional Schemes</i>					
5.	Teak Plantation	.. 32.57	17.14	71.46	121.17
6.	Red Sanders Plantation	.. —	5.35	—	5.35
7.	Cashew Plantation	.. —	5.00	—	5.00
8.	Casuarina Plantation	.. 26.34	0.10	—	26.44
9.	Bursera Plantation	.. —	—	1.35	1.35
10.	Quick growing species	.. 43.52	—	28.42	71.94
11.	Forest consolidation	.. —	—	5.43	5.43
12.	Game sanctuaries	.. —	—	5.08	5.08
13.	Forest education	.. —	—	6.00	6.00
14.	Forest research	.. —	—	2.35	2.35
15.	Buildings	.. —	2.62	3.12	5.74
16.	Communication	.. —	1.44	—	1.44
17.	Cultural Operations	.. —	2.00	—	2.00
	Total Regional Schemes	102.43	33.65	123.21	259.29
	Total (all schemes)	124.47	43.10	138.93	306.50

Among the State-wide schemes, the scheme for development of Nehru Zoological Park is the most important one. A master plan for the establishment of the Zoo in Hyderabad at an estimated cost of Rs. 120 lakhs was prepared during the Third Plan period. The park was declared open in October 1963. A sum of Rs. 45.42 lakhs in the Third Plan and Rs. 14.41 lakhs in the subsequent Annual Plans upto 1968-69 were spent. An outlay of Rs. 34.35 lakhs is proposed for the Fourth Plan period. With this amount it is proposed to construct enclosures to existing animals and add a few more new species to the Zoo. Next in importance is forest management scheme under which it is proposed to constitute a working plan unit and a resources survey division at a cost of Rs. 7.50 lakhs. A sum of Rs. 4.36 lakhs for forest education and Rs. 1.00 lakh for forest research are also proposed to be spent to benefit the entire State.

Major portions of the Plan funds for forest development amounting to Rs. 259.29 lakhs out of Rs. 306.50 lakhs for all the forest programmes are provided for regional schemes. Among the regional schemes, major share amounting to Rs. 232.43 lakhs is provided for economic plantation (Rs. 59.60 lakhs) and quick growing species (Rs. 71.94 lakhs).

Teak plantations are the most important plantations raised in all the three regions of the State. A sum of Rs. 121.17 lakhs is provided for increasing the area under it by 25,432 hectares during the Plan period. The other economic plantations are all regional and are not raised in the entire State. Casuarina plantation is proposed to be raised in Coastal Andhra in 3,826 hectares at a cost of Rs. 26.34 lakhs. Red sanders and cashewnut plantation are proposed for Rayalaseema in 220 and 330 hectares at a cost of Rs. 5.35 lakhs and Rs. 5.00 lakhs respectively. Bursera plantation is proposed for Telangana to be raised in an area of 100 hectares at a cost of Rs. 1.35 lakhs.

A considerable sum of Rs. 71.94 lakhs is proposed to be invested for planting quick growing species in an area of 10,776 hectares in Coastal Andhra and Telangana regions.

Among other schemes forest consolidation, education, research and development of game sanctuaries at Pakchala in Warangal district are proposed for Telangana region. Construction of buildings are proposed for both Telangana and Rayalaseema regions at a cost of Rs. 5.74 lakhs. Development of communications at a cost of Rs. 1.44 lakhs and cultural operation costing Rs. 2.00 lakhs are proposed for Rayalaseema region.

Coastal Andhra :

7.8. An amount of Rs. 124.47 lakhs is provided for this region for development of forests during the Fourth Plan. The share over the State-wide schemes is Rs. 22.04 lakhs while the balance of Rs. 102.43 lakhs will be spent on regional schemes. The outlay is distributed among the various schemes as shown in the following table :

*Scheme-wise allocation of plan outlay for
Regional Schemes—Coastal Andhra Region*

S.No.	Scheme	Outlay proposed in Rs. lakhs.	Area proposed to be covered by the schemes (Hectares)
I Forestry schemes;			
(a)	Teak Plantation	32.57	14,902
(b)	Casuarina	26.34	3,826
II	Quick growing species	43.52	6,488
	Total	102.43	

Teak is proposed to be planted in an area of 14,902 hectares at a cost of Rs. 32.57 lakhs. An area of about 3,826 hectares is proposed to be brought newly under casuarina plantation, which is useful as fuel, at a cost of Rs. 26.34 lakhs. Eucalyptus and bamboo are the quick growing species. An area of about 6,488 hectares is proposed to be planted with these quick growing species which are useful as raw-material for paper and pulp industries.

Rayalaseema :

7.9. An amount of Rs. 43.10 lakhs is provided for forest development programmes during the Fourth Plan. The region's share in the State-wide schemes works to Rs. 9.45 lakhs. While the remaining Rs. 33.65 lakhs will be spent on regional schemes. The scheme-wise allocations of the outlay provided for regional schemes is shown in the following table :

*Scheme-wise allocation of plan outlay
Regional Schemes—Rayalaseema Region*

Sl. No.	Scheme	Outlay proposed in Rs. lakhs.	Area to be covered in Hectares.
1.	Teak Plantation	17.14	1,445
2.	Red Sanders	5.35	220
3.	Cashew Plantation	5.00	330
4.	Communications	1.44	..
5.	Buildings	2.62	..
6.	Cultural operations	2.00	..
Total		33.65	

An area of about 1,445 hectares is proposed to be newly brought under teak plantation at a cost of Rs. 17.14 lakhs during the Fourth Plan. Red Sanders-wood is a good foreign exchange earner. It is a monopoly of the forest areas of Cuddapah and Chittoor districts. It is proposed to augment the natural growth with works of re-generation with a view to step up production. An area of about 220 hectares is proposed to be planted with this species at a cost of Rs. 5.35 lakhs. An outlay of Rs. 5.00 lakhs is proposed to be spent to raise cashew plantation in an area of 330 hectares. An amount of Rs. 2.00 lakhs is proposed to be spent on Cultural Operation to raise necessary nurseries and about Rs. 2.62 lakhs on buildings and improving communications in forest areas.

Telangana :

7.10. The provision for Forest Development in the Fourth Plan for Telangana region is Rs. 138.93 lakhs. The region's share in the State-wide schemes is

Rs. 15.72 lakhs. While the balance of Rs. 123.21 lakhs will be spent on regional schemes. The scheme-wise allocation of the outlay for regional schemes is shown in the following table:

Scheme-wise allocation of plan outlay
Regional Scheme—Telangana Region

Sl. No.	Scheme	Outlay proposed	Area to be covered in hectares
1.	Teak Plantation	71.46	9,085
2.	Bursera Plantation	1.35	100
3.	Quick growing species	28.42	4,288
4.	Forest Consolidation	5.43	..
5.	Game Sanctuaries	5.08	..
6.	Forest Education	6.00	..
7.	Forest research	2.35	..
8.	Buildings	3.12	..
Total		123.21	

Telangana forests are rich in teak plantation. An additional area of about 9,080 hectares is proposed to be planted with teak in the Fourth Plan at a cost of Rs. 71.46 lakhs. An area of 100 hectares is proposed to be brought under this plantation at a cost of Rs. 1.35 lakhs. This is an experimental plantation taken up in Telangana only. Eucalyptus and bamboo trees are proposed to be planted in an area of about 4,288 hectares. This wood is the raw material for paper and pulp industries. The cost of the scheme is Rs. 29.07 lakhs. Forest consolidation is intended to carry out works of survey and demarcations of forest areas and settlement of illicit cultivation and clearance of notifications under various sections of Forest Act etc. An amount of Rs. 5.43 lakhs is provided for this purpose. Game sanctuaries are proposed to be developed in the region at a cost of Rs. 5.08 lakhs. There is a forest school at Yellandu. Its intake of foresters is proposed to be stepped up at a cost of Rs. 6.00 lakhs. An amount of Rs. 2.35 lakhs is proposed to be spent on forest research and Rs. 3.12 lakhs on forest buildings in the region.

8. FISHERIES

The State has vast potentialities for the development of both marine and inland fisheries. The Natural Water resources *viz.*, the Sea, Rivers and Lakes and the artificial reservoirs and tanks constructed for irrigation purposes offer high potential for the development of fisheries as one of the important primary sectors along with agriculture and animal husbandry in Andhra Pradesh. The State has a long coast line of 960 Km. with a big continental shelf which offers huge scope for the development of marine fisheries. Besides, there are the famous lakes of Collair and Pulicat. The three major rivers flowing through the State and the reservoirs formed on them and about 40,000 ponds and tanks with a total water spread area of 8 lakh acres offer enough scope for the development of inland fisheries in a big way. The contribution of fisheries to State income was Rs. 24.71 crores in 1968-69 forming 1.2 per cent of the total. The national Fourth Plan has three main objectives *viz.*:

(1) Increase in fish production to meet protein requirements, (2) development of export potential and (3) improving the economic conditions of the fishermen. It is contemplated that the demand for fish in the country will grow at a rate of over 6 per cent per annum.

Objectives and Strategy:

8.2. The objectives of fisheries development programme are firstly to develop marine fisheries through construction of mechanised boats and secondly to develop inland fisheries through improvement to the Fish farms and Nurseries for production of fish seed. Training in fisheries and utilisation of institutional finance by a loaning programme to fishermen co-operatives and development of marine fisheries by utilising the loan from the Agricultural Refinance Corporation are also envisaged in the plan.

The regional approach is evident from the fact that the development of marine fisheries with its vast potential has necessarily to be provided for in Coastal Andhra while in the other regions inland fisheries has to be developed.

Review :

8.3. The development of fisheries in the State is gaining momentum though slowly but steadily by gradual step up of outlay from plan to plan. The expenditure on this sector's development rose from a mere Rs. 10.39 lakhs in the First Plan to Rs. 63.61 lakhs in the Second Plan and Rs. 138.48 lakhs in the Third Plan. The expenditure incurred in the subsequent three annual plans was Rs. 123.22 lakhs.

In the First and Second Plans the effort was mainly confined to collection and distribution of fish seed. But the Third and the subsequent annual plans have seen the development of marine fisheries in a big way.

The importance of marine fisheries was recognised even during the Second Plan and steps taken to go in for mechanised boats. A 20-ton ice-cum-cold storage plant was commissioned during the Second Plan. But it was only during the Third Plan and the subsequent Annual plans, considerable efforts were made to accelerate the development of fisheries in the State. Some of the important achievements during the earlier plans are detailed in the following paragraph.

Under the Expanded Nutrition Programme, 17 Community Development Blocks were taken up for production of fish and free distribution to the selected beneficiaries (School children and expectant mothers) while another 30 Blocks were selected for intensive development of fisheries which were given grant-in-aid. Cold storage plant were established at Nizam-sagar, Nagarjunasagar Project, Tadepalligudem, Nellore and Kakinada. A deep freezing plant at Visakhapatnam, a Canning plant and a Shark Liver Oil Factory at Kakinada were also commissioned. For quick transport of the fish catches, 9 refrigerated van and one insulated vehicle were purchased and put to use. The capacity of the boat building yard at Kakinada was increased and 51 boats during the Third Plan and 73 boats during the subsequent Annual Plans were built. Over 300 fisheries boys and about 100 departmental Officers were trained in mechanised fishing upto the end of 1968-69. The survey of river Godavari was completed.

Fourth Plan Programmes :

8.4. In the Fourth Five Year Plan the total provision for fisheries development programme is Rs. 208.36 lakhs. Out of this, Rs. 154.64 lakhs is meant for Coastal Andhra, Rs. 20.01 lakhs for Rayalaseema and Rs. 33.71 lakhs for Telangana. The larger allocation for Coastal Andhra is necessitated by the need to develop marine fisheries and in particular the marine fisheries Centre at Kakinada alone. The development of Marine Fisheries Centre at Kakinada involves an outlay of Rs. 101.64 lakhs. This is exclusively meant for construction and mechanisation of boats including the strengthening of Boat Building yard at Kakinada. It is proposed to construct and mechanise atleast 263 of boats during the Fourth Plan period. In addition, an amount of Rs. 5 lakhs is indicated for development of marine fisheries at Kakinada by a loans from the Agricultural Refinance Corporation.

Improvement to Fish farms, Nurseries and production of fish seed is given importance for the development of inland fisheries and allocation of Rs. 40 lakhs is made for this scheme. Loans to Fishermen Co-operative Societies are proposed involving Rs. 10.71 lakhs. Training in fisheries is given special attention in the plan and an outlay of Rs. 6.5 lakhs is earmarked for this purpose. In order to help the smaller fishermen to enable them to obtain indigenous crafts an amount of Rs. 7.00 lakhs is proposed. Development of reservoir fisheries of Nagarjunasagar and other reservoirs which are State-wide schemes taken up about Rs. 5 lakhs.

Statewide Schemes :

DEVELOPMENT OF RESERVOIR FISHERIES IN NAGARJUNASAGAR AND OTHER RESERVOIRS :

8.5. After the expiry of the Annual Plan 1968-69 this scheme is being treated as spill over scheme in the Fourth Five-Year Plan. The Research units at Nagarjunasagar and Pochampad are being continued and experimental-cum-exploratory survey units are being set up.

8.6. *Training in Fisheries.*—Departmental staff is being imparted training at various institutions in, (i) Construction and maintenance of Boat Building Yards, (ii) Fishing second helds, (iii) Radio Telephone Operator, (iv) Gear Technician course, and (v) Coastal Fisheries under colombo plan. An Inland Fisheries Training Centre at Warangal has been established to give training to fishermen. A Deep Water Netting Training Centre has also been established in Anantapur for the benefit of fishermen of Rayalaseema Region. The divisional Officers as well as the Directorate will be strengthened with necessary staff in connection with accelerate the seed production, development of Reservoir Fishery, Welfare measures for fishermen and collection and compilation of statistical data.

Regional Schemes :

Coastal Andhra :

8.7. Provision has been earmarked for continuing the Research staff at Nagarjunasagar besides, construction and improvement of nurseries in the vicinity of reservoirs. Construction and mechanisation of boats to a larger number besides repairs to seized boats, expansion of Departmental Boat Building Yard, Kakinada and also continuing the essential staff is envisaged in the plan. Improvement of fish farms and nurseries has also been contemplated. Share capital contribution will be sanctioned to Andhra Fishermen Central Co-operative Society in connection with implementation of Agricultural Refinance Corporation Scheme at Kakinada. Provision is made for taking up the Master Plan for Pulicat and Collair Lakes. Development of Marine Fisheries will be taken up at Upputeru, Masulipatnam, Vizag and Krishnapatnam. Subsidy on engines and hull, managerial assistance to Andhra Fishermen Central Co-operative Society and share capital contribution to the Co-operatives by Government will be given. Survey units staff and training of candidates at various Institutions will be continued. Provision is also contemplated towards grant of loan to fishermen Co-operative Societies for purchase and distribution of fishery requisites to fishermen at subsidised rates.

Establishment of a Fishing Corporation besides giving assistance to a number of companies for marine fishing in Andhra Pradesh is also envisaged for which a token provision of Rs. 3.00 lakhs is made. Grant of subsidy to smaller fishermen for purchase of indigenous craft will be continued.

Incentives to private industrialists and entrepreneurs to accelerate the mechanisation programme, by financial support from the commercial banks and by the Government are also contemplated.

The economic condition of the fishermen will be improved and construction of feeder roads in the coastal fishing villages for transport of fish, will also be taken up.

Rayalaseema :

8.8. It is proposed to take up improvements to nurseries in the vicinity of reservoirs at a cost of Rs. 2.00 lakhs besides construction and improvements to Fish Farms at a cost of Rs. 8.00 lakhs. A Deep Water Netting Training Centre in Anantapur has been established for the benefit of fishermen. A loan of Rs. 3.38 lakhs will be given to Zilla Parishad, Kurnool for establishment of a fish farm at Nandyal. Subsidy to smaller fishermen for purchase of indigenous craft as also the ameliorative needs to fishermen will be provided for which necessary provisions are made in the Fourth Five Year Plan.

Telangana :

8.9. The Research work of Nagarjunasagar and Pochampad will be continued. Improvements to fish farms and nurseries will be continued for production of seed. The fishermen will continue to receive the training in the Departmental Training Centre at Warangal. Loans will be given to the Fishermen Co-operative Societies for purchase and distribution of fishery requisites at subsidised rates to fishermen. The divisional offices will also be strengthened with necessary staff. The smaller fishermen will be given subsidy at the prescribed rates for the purchase of indigenous craft also and will be provided the ameliorative needs.

9. WAREHOUSING AND MARKETING

Warehousing facilities and adequate marketing facilities are essential to avoid losses of foodgrains in storage, to enable credit from institutions, to assure reasonable price for producer and in general as an aid to rapid strides in agricultural production.

Objectives and Strategy :

9.2. The objective of this programme in the Plan is to strengthen the organisation relating to the market-yards and marketing committees *etc.*, to strengthen directorate of marketing and provide for grading facilities for important commodities in important centres with a view to ensure adequate marketing facilities and provide economic return for the farmer. The provision of warehousing and marketing facilities is covered under a number of schemes such as the Food Corporation of India in respect of important cereals, the godowns constructed by the Co-operative Marketing Societies under the Co-operative Sector *etc.* In the Plan, the provisions indicated here are primarily on the organisational side with a marginal emphasis on provision of grading facilities. There is, however, a provision for contribution of share capital to State Warehousing Corporation which is expected to provide physical Warehousing facilities in markets.

Of special regional significance are the facilities contemplated for creation of grading facilities for cotton in Rayalaseema and Telangana regions.

Review :

9.3. A State Warehousing Corporation was established in 1958 with an authorised capital of Rs. 2 crores to be shared equally by Central Warehousing Corporation and the State Government to construct warehouses and create storage facilities on scientific lines. The Corporation rents storage space to agriculturists to avoid distress sales.

The Director of Marketing in the State Government look after the development and regulation of marketing of agricultural commodities in the State.

Marketing of all agricultural commodities in the Telangana region was regulated by Regulated Markets Act, 1930. But in Coastal Andhra and Rayalaseema regions, only commercial crops were covered by Madras Commercial Markets Act, 1937. After the formation of Andhra Pradesh, an integrated statute by name "Andhra Pradesh (Agricultural Produce and Livestock) Markets Act", 1966 was enacted and it replaced the old acts from 19th October, 1967.

Besides regulating the marketing of agricultural produce by statutory power, Marketing department undertakes also quality control and grading of agricultural produce at farmers level and in regulated markets, and collection and publication of market intelligence.

The expenditure on warehousing and marketing schemes in the third and the subsequent three Annual Plans is shown in the following table.

Scheme wise expenditure in the third and subsequent annual plans upto 1968-69

Rs. in lakhs.

Sl. No.	Scheme	Expenditure incurred in		
		III Plan	1966-69	Total
1.	Market Organisation	2.57	0.98	3.55
2.	Market intelligence	3.77	0.47	4.24
3.	Market extension and publicity	0.99	—	0.99
4.	Loans and subsidy to regulated markets	5.11	—	5.11
5.	Export promotion	—	1.37	1.37
6.	Sub-total development of Markets	12.44	2.82	15.26
7.	Grading	4.24	0.66	4.90
8.	Warehousing	7.35	3.00	10.35
9.	Miscellaneous	—	0.66	0.66
	Total	24.02	7.14	31.17

So far an amount of Rs. 15.26 lakhs was spent on development of markets which included development of marketing organisation, organisation for collecting market information, publicity and extension.

Twenty three new market centres were regulated under the relevant Acts since beginning of the Third Plan. At present there are 108 notified areas under section 3 of the Markets Act, 1966, for establishment of Market Committees. Of these Telangana accounts for 61, Coastal Andhra for 22 and Rayalaseema for 25 areas. There are seven sub-yards under the control of three main markets.

The provision of integrated Markets Act are enforced by appointing Regional Assistant Directors. At the beginning of the fourth plan there are three Regional Assistant Directors in the three regions of the State.

The market committees were extended Rs. 5.11 lakhs as loans, advances and subsidies to develop market yards in the Third Plan and the three subsequent Annual Plans.

An organisation is developed to collect prices of important agricultural commodities from 136 centres. Daily prices of important commodities are broadcast from Radio stations in the State. Market surveys are also undertaken to aid, plan and improve marketing of specific agricultural products.

An amount of Rs. 4.90 lakhs was spent in the Third Plan and subsequent annual plans 1966-69 for developing facilities for grading agricultural produce in farms as well as in regulated markets. As a result quality consciousness was created in respect of groundnut, castor, Turmeric, Jaggery, Onions etc. Three laboratories and two sub-stations were started to grade ghee and oil in the State.

In the Third Plan and the three subsequent annual plans, an amount of Rs. 10.35 lakhs was contributed as share capital to State Warehousing Corporation. The Corporation constructed 16 godowns and 70 cubicles and purchased five godowns. The total capacity of all these godowns is 38 thousand Metric Tonnes.

Fourth Plan Schemes:

9.4. A sum of Rs. 16.09 lakhs is provided in the fourth plan for warehousing and marketing in the State. State-wide schemes are provided an amount of Rs. 14.04 lakhs and regional schemes with an amount of Rs. 2.05 lakhs. The major programmes in this sector are share capital to State Warehousing Corporation and strengthening of Directorate of Marketing. Loans to market committees and provision of grading facilities for cotton are also contemplated.

State-wide Schemes:

9.5. A sum of Rs. 5.94 lakhs is proposed to be contributed as share capital to State Warehousing Corporation. The Corporation proposes to construct 8 godowns with a capacity of 16 thousand tonnes.

The present organisational set-up of the Regional Assistant Director for each Region is found inadequate to improve marketing facilities and enforce the provisions of the new Act. Hence it is proposed to strengthen the marketing department by appointing one Assistant Director of marketing with requisite staff in each district. The cost of the scheme during the Fourth Plan is estimated at Rs. 6.22 lakhs. All the Districts will be covered by the end of the plan.

The engineering cell in the Directorate of Marketing is proposed to be strengthened by appointing one Executive Engineer to Head Office and two Assistant Engineers at Kurnool and Karimnagar for expediting construction works undertaken by Market Committees.

*Regional Schemes:**Coastal Andhra:*

9.6. An amount of Rs. 85 thousands is proposed to be given as loans to Market Committees in the region for developing market yards.

Rayalaseema:

9.7. An amount of Rs. 56.0 thousands is earmarked for creating grading facilities for cotton. An amount of Rs. 20 thousands will be given as loans to market committees for development of markets.

Telangana:

9.8. An amount of Rs. 44.0 thousands is proposed to be spent for creating cotton grading facilities in the region.

10. CO-OPERATIVES

Co-operatives as an important form of organisation for bringing about growth has been accepted in the national policy. The Co-operative form of organisation could be viewed as being suitable to every type of communal activity. Specifically in terms of the State policy co-operative form of organisation plays a significant role in terms of credit (short, medium and long term), marketing and aiding processing units, co-operative farming, consumer co-operatives and co-operatives for weaker sections.

There is long tradition of co-operative form of organisation for credit. Rapid strides were made in the development of credit in the past. The role of co-operatives in the processing industries is of more recent origin. The co-operative form of marketing is a field in which some emphasis was placed but had not developed substantially till recently. The co-operatives for weaker sections is a field with great potential which has to be explained in terms of objectives of social justice. Consumer co-operatives has been given great importance in the national perspective.

While substantial emphasis is placed on co-operative farming in the Second and Third Plans, the experience has not been very encouraging in this regard. However, efforts to strengthen and expand co-operative farming are proposed in the Fourth Plan also.

10.2. Before defining the objectives and strategy of co-operatives in the Fourth Plan of the State a brief survey of the strength and weaknesses of the co-operative system in the State would be relevant. The major activity of the co-operatives in the State is credit. The most important source of institutional credit for the agriculture sector of the economy is co-operatives. The credit that has been actually provided by the co-operatives is very meagre compared to total credit requirements and is estimated to be less than 1/10th of the total short term credit requirement. Even with regard to the sections to which this credit has flown, indications are that the agricultural credit

through the co-operatives has not flown in desired measure to the backward areas and weaker sections of the population. The non-viability of the societies is yet another problem and the process of amalgamation proposed is a formidable one. The control of the co-operatives by certain vested interests is yet another aspect which requires examination. The weak internal resources of both primary and some of the central banks has resulted in bottlenecks in the flow of short term credit.

In terms of long term credit rapid strides have been made especially in financing land development, ayacut development and minor irrigation programmes. Even here the weakness that has been found relates to the fact that the resources have flown to more prosperous areas and more prosperous sections of the population. Apart from the fact that these societies are controlled by the vested interests, there have been certain structural deficiencies probably those relating to security *etc.*, in the functioning of these co-operatives which has led to this situation.

10.3. A number of irrigation projects and programmes have been taken up which involve either direct participation of the co-operatives or supporting facilities through the co-operatives for full realisation of the benefits. Hence priority has to be given to support the required projects and programmes and as such the possibilities for new ventures are restricted to the balance of resources available.

10.4. The experience with regard to the working of the Co-operative Farms has not been particularly encouraging. Therefore, the emphasis has necessarily to be on the strengthening of the existing Co-operatives. Concurrently, the State Government is taking steps to appoint a Committee to go into the working of the Co-operative Farms in the State with a view to identify the bottlenecks in the successful working of the Co-operative Farms and accordingly take action to rectify the defects. Hence, increased allocations and large scale expansion of co-operative farming has to await the report of the Committee.

10.5. With regard to consumer co-operatives also it is proposed to have a detailed examination of the working of this form of organisation. Accordingly, a project is proposed to study the working and hence increased allocations for this branch of activity should also await the report of the Committee.

10.6. Experience in the past has shown that benefits from the working of the co-operative institutions have not accrued in desired measure to the weaker sections of the rural population. Accordingly, legislative and executive measures to provide for weightage for the weaker sections especially the small farmers both in respect of management of these organisations and in terms of reservation of substantial portion of the benefits for the weaker sections is contemplated.

Objectives :

10.7. The objectives of co-operatives in the State Fourth Five-Year Plan are :

- (a) to effectively utilise the co-operative form of organisation as a channel for short, medium and long-term credit to support the agricultural sector;
- (b) to develop the processing and marketing facilities in the co-operative sector as an aid to profitable and progressive agriculture;
- (c) to ensure through appropriate legal and administrative action, that interests of social justice are served by making available the resources through co-operative institutions to small farmers and marginal farmers in the agricultural sector;
- (d) to organise and promote co-operatives specially designed for weaker sections such as rural artisans, milk co-operatives etc.;
- (e) to make best use of the co-operative form of organisation to attract institutional finance to all productive and profitable activities espe-

cially involving small farmers, marginal farmers and weaker sections.

Strategy:

10.8. The strategy of development of co-operative form of organisation is inevitably interlinked with the general programmes of development. The strategy will be—

- (a) to strengthen the co-operative structure especially through amalgamation of primary credit societies and financial support to weak central banks;
- (b) to provide a clear cut definition of the small farmers and the weaker sections and insist on certain percentage of representation to these sections in the management of various co-operatives through legislative measures and also ensure that priority is given to these sections in respect of flow of co-operative credit by insisting that almost whole of the resources should flow these sections;
- (c) to press the co-operatives into maximum use in ayacut development including land development to ensure optimum utilisation of the irrigation potential credit;
- (d) to make use of the co-operative form of organisation to develop minor irrigation potential especially in backward and drought affected areas;
- (e) the acceptance of the fact that co-operative plays an important part in the multi agency approach to the developmental process of agriculture and allied activities wherein the co-operative activities are significantly co-ordinated and integrated with the activities of the commercial banks, dairy development, small farmers' development schemes etc.;
- (f) to allow for the appropriate expansion and strengthen of co-operative processing and

marketing facilities in keeping with the production programmes; and

- (g) continuance of the emphasis on the co-operative farming and consumer co-operatives.

Regional Approach :

10.9. While the strategy is uniformly applicable to all the regions of the State, the activities contemplated in different regions of the State have a specific bearing on the strategy of development of the three different regions of the State. Credit accounts for about 46 per cent of the total allocation in Coastal Andhra whereas in Telangana slightly more than 50% of the total allocation is for credit. Marketing and processing facilities account for about 18 per cent of the total allocation in Coastal Andhra where substantial advances have already been made and greater strides are contemplated in the Fourth Plan in terms of agriculture production. In Telangana where marketing is identified as one of the crucial problems in the context of agricultural development a similar emphasis is made on marketing and processing. Sugar factories account for nearly 15 per cent of the total outlay of co-operatives in the State. The provision for weaker sections in the Plan is apparently low being only about Rs. 47 lakhs. Significantly Telangana accounts for a substantial amount in this regard. However, in all the regions the programme for weaker sections is intended to be substantially taken care of in the credit programme itself in as much as credit is identified as the greatest bottle-neck in the development of weaker sections.

Review :

10.10. The co-operatives were strengthened in the past through various measures like increasing the number of societies to cover a larger number of villages hitherto not covered by co-operative societies; increasing the disbursement of short, medium and long-term credit, strengthening of co-operative marketing through the organisation of primary marketing societies, enlargement of co-operative processing activity which has contributed substantially to the growth of

agro-industries in the State; organisation of the co-operatives to benefit particularly the weaker sections of the community; strengthening the consumer co-operative movement and providing training and education for the personnel required for the co-operative movement.

The number of Primary Agricultural Credit Societies in the State rose from 9,692 with a membership of 7.50 lakhs in 1956-57 to 15,181 with a membership of 19.54 lakhs in 1968-69. The increase in membership was achieved not only by opening new societies but also by enrolling more members in the existing societies. Thus, the average membership per society increased from 77 in 1956-57 to 128 in 1968-69. The volume of short-term and medium-term credit made available to cultivators has also increased substantially over this period from Rs. 6.30 crores in 1956-57 to Rs. 25.89 crores in 1968-69. Thus while the membership rose to about two and half times the credit disbursement rose to about four times.

In the field of long-term credit, the progress was even more marked. Not only has there been a significant increase in the number of Land Mortgage Banks, which rose from 104 at the beginning of the Second Plan to 179 at the beginning of the Fourth Plan (providing almost one Land Mortgage Bank to each taluk), but the working policies of these Banks have been thoroughly reoriented to meet the agricultural requirements of the population. There has been decentralisation in the activities of these Banks to serve the members with the least possible delay. Today the potential value of the land and not the documented value, is taken for ascertaining the loan eligibility. Because of the several measures taken in this regard, the long-term loan disbursements increased from Rs. 63 lakhs in 1956-57 to Rs. 17.31 crores in 1968-69.

There was also satisfactory progress in the field of co-operative marketing with the result that in 1968-69 the State had 272 primary marketing societies with a membership of Rs. 2.97 lakhs. The share capital of these societies was of the order of Rs. 1.67 crores while the working capital amounted to Rs. 4.24 crores. The 20 District Marketing Societies had on their rolls 14,266

members with a share capital of Rs. 50 lakhs and a working capital of Rs. 7.66 crores. The Apex Marketing Society was functioning with a share capital of Rs. 9.59 lakhs and a working capital of Rs. 3.75 crores. The Co-operative Marketing Societies were strengthened during this period through share capital assistance, loans and subsidies by the State Government. The District Co-operative Marketing Societies were given monopoly in the distribution of chemical fertilizers and other agricultural inputs. These societies issue produce loans to cultivators with a view to enable them to retain their produce for a better price. The Co-operative Marketing Federation through the District and Primary Societies took up the procurement of good grains in the State and purchasing pulses from outside the State. The marketing societies were assisted for the construction of 1,120 godowns. Establishment of processing Industries by the Marketing Societies was also encouraged and over this period loans were sanctioned for installing 104 rice mills at a capital cost of Rs. 1.53 crores. The West Godavari District Marketing Federation had installed a modern rice mill of 4 tonnes per hour capacity for which the State gave a financial assistance of Rs. 27 lakhs.

Fourth Plan Programmes :

10.11. The total outlay for all programmes under Co-operation in the Fourth Plan is fixed at Rs. 10.84 crores. Out of this nearly half or 51 per cent is meant for credit programmes. Marketing and processing is given the next priority and accounts for about 16 per cent of the total outlay. Sugar factories are also given a pride of place in the allocation and account for nearly 14 per cent. The programme for weaker sections which is in the nature of additive programmes in the sense that weightage for weaker sections is given in credit programme also, accounts for about Rs. 0.42 crore.

Credit is easily the most important item in the Co-operative programme. In respect of short-term credit the programme envisages managerial subsidy to potentially viable societies (Rs. 9.23 lakhs) grant for special bad debt reserve of village societies and Central Banks (Rs. 13.39 lakhs) to enable advancing of

loans for small farmers and weaker sections, loan assistance to weak Co-operative Central Banks (Rs. 172.85 lakhs) and share capital contribution to co-operative credit institutions (Rs. 329.26 lakhs). In respect of long-term credit the outlay envisaged under various heads of Rs. 17.68 crores towards debenture participation for the Central Land Mortgage Banks. It is estimated that because of this provision the total long-term credit advances would amount to Rs. 125 crores. The above loaning programme will enable sinking of about 1 lakh wells, installation of about 1.5 lakh pump-sets, purchase of about 5,000 tractors, development of about 3.7 lakh acres of land under irrigation projects and bringing about 27,000 acres under Horticulture programme. The beneficiaries under the above programme are estimated at 5 lakh farmers. The long-term credit will be advanced through Land Mortgage Banks. The broad heads under which the programme is implemented are:—

- (a) Agricultural production (fruit garden and cashew development).
- (b) Land Development (including purchase of tractors and reclamation of land).
- (c) Minor irrigation including digging of wells, tube wells, purchase of oil engines and electric motors.
- (d) Development of Ayacut.

The marketing programme envisages provision of share capital contribution to Primary and District Marketing Societies as also the State Marketing Federation. Major outlay under this item is for the construction of godowns to make up the deficit in storage capacity. Out of a total amount of Rs. 74.72 lakhs for marketing an amount of Rs. 66.25 lakhs is to be utilised for the construction of godowns.

In regard to processing a bulk of the amount is meant to be utilised for payment of share capital as a loan to the various processing units contemplated on the basis of the existing and contemplated agricultural production programmes. A specific allocation is made for Sugar Factories and this is meant towards the share capital assistance to the Sugar Factories in Gura-

jala, Mandasa, Chittoor, Renigunta, Cuddapah, Bhimasinghi, and Miryalguda. The provision is made to cover both expansion programme and establishment of new units. The allocation under co-operative farming is meant for financial assistance to the Societies towards the land reclamation charges and re-settlement charges.

The provision for consumer stores is meant for construction of godowns and buildings and contribution towards share capital to the consumer societies as also managerial subsidy. The provision for co-operatives for weaker sections is meant towards loan assistance to various sections. The societies contemplated relate to washermen, printing societies, auto rikshaw drivers, taxi drivers, rickshaw pullers, labour contract and forest coupes, educated unemployed in urban areas etc.

The distribution of Fourth Plan outlay among different programmes and regions is as follows:

(figures in Rs. lakhs)

<i>Programme</i>	<i>Coastal Andhra</i>	<i>Rayala- seema</i>	<i>Telan- gana</i>	<i>Total for Andhra Pradesh</i>
1. Credit	225.65	119.48	215.22	560.35
2. Marketing	36.89	14.32	27.33	78.54
3. Administration	25.83	7.76	9.20	42.79
4. Training and Education	19.24	7.42	12.22	38.88
5. Miscellaneous	0.51	0.10	0.22	0.83
6. Processing	40.91	14.80	38.10	93.81
7. Sugar Factories	73.55	48.70	35.50	157.75
8. Farming Schemes	1.84	0.47	0.84	3.15
9. Consumer Stores	24.22	12.76	19.25	56.23
10. Weaker Sections	17.19	9.90	24.20	51.29
Total	465.83	235.71	382.08	1083.62

The outlay in each of the regions indicated above includes the share of the region in the State-wide schemes and the cost of the regional schemes to be implemented in the region.

State-wide Schemes:

10.12. In all, an amount of Rs. 41.62 lakhs, will be spent on different schemes which are State-wide in nature. The following are the schemes proposed to be implemented in the Fourth Plan with the outlay mentioned against each.

<i>Scheme</i>	<i>Outlay (Rs. lakhs)</i>
(i) Payment of subsidy to A.P.P.S. C.C.L.M.B. for creation of common cadre	22.00
(ii) Loan assistance to Andhra Pradesh Staff Co-operative Society ...	3.57
(iii) Share capital contribution to Andhra Pradesh Co-operative Marketing Federation ...	2.50
(iv) Managerial subsidy to Apex Marketing Federation for the establishment of promotional and assessment cell	1.32
(v) Establishment of Planning Cell in Registrar's Office	1.76
(vi) Education of members and office bearers	7.82
(vii) Payment of subsidy to Andhra Pradesh Co-operative Union ...	1.81
(viii) Assistance to Co-operative Union.	0.84
Total	41.62

It will be seen that the scheme listed above relate to assistance for Co-operative Development, Development of Marketing, Consumer Co-operatives, Training and Education. The share of Coastal Andhra, Rayalaseema and Telangana in the total cost of the State-wide schemes are Rs. 19.24, 8.36 and 14.02 lakhs respectively.

*Regional Schemes:**Coastal Andhra:*

10.13. An amount of Rs. 446.59 lakhs will be utilised in the Coastal Andhra region on regional schemes for the development of Co-operation. The details of the schemes on which the proposed outlay would be utilised are discussed below:

Credit.—Out of the sum of Rs. 446.59 lakhs an amount of Rs. 213.36 lakhs will be utilised on various schemes relating to credit. The schemes which will be taken up under this head are Managerial subsidy to potentially viable societies, grant for special bad debt reserve of village societies and Central Banks which has become necessary in view of the direction of the Reserve Bank of India that a certain per cent of the credit limits shall be earmarked for the advancement of loans for small farmers and weaker sections involving higher risks, assistance for appointment of additional supervisory staff by the Central Banks and for opening branches, loan assistance to weak Co-operative Central Banks and share capital contribution to credit institutions. The bulk of the outlay will however, be utilised on share capital contribution to the credit institutions which accounts for 66.3 per cent of the total outlay under this head. The next most important scheme under this head is loan assistance to weak Co-operative Central Banks for which an outlay of Rs. 54 lakhs forming 25.3 per cent of the total outlay has been earmarked. Under short and medium term credit an amount of Rs. 25.33 crores will be disbursed as loans in the region by the end of the Fourth Plan. The Fourth Plan target for the region under long-term credit is Rs. 50 crores out of Rs. 125 crores fixed for the State as a whole.

Marketing.—The outlay on the development of Co-operative Marketing in the region in the Fourth Plan is fixed at Rs. 35.11 lakhs. This amount will be utilised on share capital contribution to the Primary and District Marketing Societies, as the All-India Rural Credit Review Committee has suggested that the share capital of the marketing societies shall be strengthened in a phased manner, payment of subsidy for tobacco

marketing, contribution to the price fluctuation fund of the marketing societies under which contribution not exceeding 2% of the value of the outright purchases made in the preceding year by Co-operative Societies will be given to deserving societies and assisting the marketing societies for constructing godowns. More than 90 per cent of the outlay for developing co-operative marketing will be utilised for the construction of godowns as the overall deficit in storage capacity in the Co-operative sector is expected to be large by the end of the Fourth Plan. For this scheme an amount of Rs. 31.43 lakhs is earmarked out of the amount of Rs. 35.11 lakhs provided for marketing.

Processing.—With a view to developing processing units in the co-operative sector in the Coastal Andhra region an amount of Rs. 40.91 lakhs has been earmarked in the Fourth Plan. The bulk of this amount i.e. Rs. 36.92 lakhs will be utilised for payment of share capital and loan to the various processing units in the region where a cashew processing unit in Ongole district, a Cattle Feed Plant at Vijayawada, a Fruit Processing Unit at Gannavaram, a Turmeric Processing Unit at Guntur, a Cold storage at Visakhapatnam besides modernisation of the existing rice mills are expected to come up. The balance amount of Rs. 4.00 lakhs will be utilised for payment of managerial subsidy to the processing units, providing further financial assistance for attachment of an ice plant to the cold storage for Krishna District Vegetable Growers Co-operative Marketing Society and for payment of share capital for margin money for 8 processing units.

Sugar Factories.—The Fourth Plan of the State has earmarked an amount of Rs. 73.55 lakhs for share capital assistance to the Sugar Factories in the Coastal Andhra region. Two Sugar Factories at Gurajala and Mandasa are expected to come up in this region. The outlay earmarked is expected to be utilised on these factories as well as on the factories contemplating expansion proposals.

Farming.—An amount of Rs. 1.84 lakhs has been provided in the Plan for farming schemes in the Coastal Andhra region. The scheme envisages financial assistance to the societies towards land recla-

mation charges at Rs. 300 per acre and by way of subsidy and loan towards resettlement charges at Rs. 700 per acre. The societies in the Diviseema area in Krishna district, Konaseema area of East Godavari district will also be eligible for financial assistance under the scheme.

Consumer Stores.—The Fourth Plan provision under the head 'Consumer Stores' is Rs. 24.22 lakhs of which major amount of Rs. 22.11 lakhs will be given as loan to the existing 7 Central Co-operative Consumer Stores for the construction of godowns and buildings while an amount of Rs. 1.37 lakhs will be contributed towards share capital to the 7 Central Co-operative Consumer Stores and 58 Primary Consumer Stores in the region. The balance amount will be provided as managerial subsidy to the consumer stores and primary societies.

Co-operatives for Weaker Sections.—An amount of Rs. 17.19 lakhs is earmarked for various schemes to benefit the weaker sections of the society.

There are 8 schemes proposed under this head. They are

<i>Scheme</i>	<i>Rs. lakhs</i>
(i) Loan assistance to washermen societies	0.09
(ii) Loan assistance to Printing Societies	1.70
(iii) Loan assistance to Auto-Rickshaw Drivers' Societies ...	0.80
(iv) Loan assistance to Taxi Drivers Societies	1.78
(v) Loan assistance to Societies for destitute widows and disabled persons, etc.	3.56
(vi) Loan assistance to Labour Contract and Forest Coupe Societies	2.56
(vii) Loan assistance to Rickshaw Pullers' Societies	2.02

(viii) Loan assistance to Co-operative Saloons and Co-operative Societies for educated unemployed in urban areas	... ..	4.68
		<hr/>
Total	... ..	17.19
		<hr/>

Training and Education.—Under training programme non-official trainees will be given stipends at Rs. 40 per mensem. An amount of Rs. 14.76 lakhs is provided in the Plan for training and education of the trainees and Junior Personnel.

Administration.—An amount of Rs. 11.62 lakhs is provided for the appointment of additional departmental staff to Co-operative Farming Societies. A provision of Rs. 13.52 lakhs has also been made for additional departmental staff for taluk set-up.

Royalaseema :

10.14. The total provision for the regional schemes is Rs. 227.35 lakhs. The details of the schemes are discussed programme-wise in the following paragraphs:

Credit.—An amount of Rs. 114.20 lakhs will be spent on various schemes relating to credit. A major component of this provision i.e. Rs. 61.00 lakhs will be incurred towards share capital contribution to Co-operative Credit Institutions and an amount of Rs. 47.20 lakhs will be disbursed as loan to weak Co-operative Central Banks. From out of the remaining outlay, Rs. 2.68 lakhs is meant for outright grants for building up Special Bad Debt Reserve to Village Societies and Co-operative Central Banks while Rs. 1.84 lakhs is earmarked for managerial subsidy to potentially viable Societies and Primary Land Mortgage Banks. The balance will be utilised for subsidy to Co-operative Central Banks for branch expansion as well as appointment of additional supervisory staff. The regional target under short and medium term credit disbursement is Rs. 8.00 crores by the end of Fourth Plan while that under long term credit is Rs. 25 crores.

Marketing.—The outlay on the development of Co-operative Marketing in the region is Rs. 13.55 lakhs. About 90 per cent of this amount will be provided as loan assistance to the Marketing Societies for the construction of godowns. From out of the remaining amount Rs. 1.62 lakhs will be utilised on share capital contribution to the Primary and District Marketing Societies and the balance amount will be contributed towards Price Fluctuation Fund of Marketing Societies.

Processing.—An amount of Rs. 14.80 lakhs is provided for various schemes under processing. One Vanaspati Complex is proposed for the region in the Co-operative sector for which an amount of Rs. 12.89 lakhs is earmarked for contribution towards share capital. The balance amount is intended for managerial subsidy to processing units and cold storage and share capital contribution to Margin Money for 4 processing units.

Sugar Factories.—The provision for Co-operative Sugar Factories is Rs. 48.70 lakhs which is meant for share capital contribution to the Sugar Factories at Chittoor, Renigunta and Cuddapah.

Farming.—An amount of Rs. 0.47 lakh is provided for loan assistance to the Farming Societies in the region.

Consumer Stores.—The Fourth Plan provision under this head is Rs. 12.76 lakhs. A major portion of this provision viz. Rs. 11.61 lakhs will be given as loan assistance for the construction of godowns and buildings, share capital contribution and managerial subsidy to the existing 4 Central Co-operative Consumer Stores for general public. An amount of Rs. 0.94 lakh will be utilised towards share capital contribution and managerial subsidy to the Primary Consumers Stores and the balance for training of non-official General Managers.

Co-operatives for Weaker Sections.—The outlay earmarked for various schemes intended for the bet-

terment of the weaker sections is Rs. 9.90 lakhs. The schemes proposed are—

<i>Scheme</i>	<i>Outlay (Rs. lakhs)</i>
(i) Loan assistance to Washermen Co-operative Societies ...	0.14
(ii) Loan assistance to Printing Co- operative Societies	0.65
(iii) Loan assistance to Auto-Rickshaw Drivers Co-operative Societies.	1.00
(iv) Loan assistance to Taxi Drivers Co-operative Societies. ...	1.70
(v) Loan assistance to Co-operative Societies for Destitute Wi- dows and disabled persons ...	1.52
(vi) Loan assistance to Labour Con- tract and Forest Coupe Socie- ties	0.89
(vii) Loan assistance to Rickshaw Pul- lers' Co-operative Societies ...	2.00
(viii) Loan assistance to Co-operatives for educated unemployed in Urban areas	2.00
Total ...	9.90

Training and Education.—An amount of Rs. 5.47 lakhs is provided for training of junior personnel and non-official trainees.

Administration.—The outlay earmarked for the appointment of additional departmental staff in the Farming and Marketing Societies and for the taluk set-up is Rs. 0.60 lakh.

Telangana:

10.15. The outlay proposed for regional schemes of Telangana in the Fourth Plan is Rs. 368.06 lakhs.

Credit.—The provision for 'Credit' is Rs. 206.43 lakhs. The major amounts are provided under two schemes *viz.*, share capital contribution to credit institutions (Rs. 122.66 lakhs) and loan assistance to Weak Co-operative Central Banks (Rs. 71.65 lakhs). These two schemes together account for nearly 93 per cent of the total provision under this head. The other schemes proposed are Managerial subsidy to potentially viable societies, grant for 'special bad debt reserve' of village societies and Central Bank which has become necessary in view of the direction of the Reserve Bank of India that a certain percentage of the credit limits shall be earmarked for disbursement of loans for small farmers and weaker sections involving higher risks and subsidy for appointment of additional supervisory staff by the Central Banks and for opening branches.

The proposed level of disbursement of short and medium term credit by the end of Fourth Plan is Rs. 16.67 crores while the target fixed under long term credit for the Fourth Plan is Rs. 50 crores.

Marketing.—The outlay on development of Co-operative Marketing in the region is Rs. 26.06 lakhs. Nearly 90 per cent of Rs. 23.09 lakhs is earmarked for assistance to the Marketing Societies for the construction of godowns as the requirement of storage capacity is likely to increase by the end of the Fourth Plan. An amount of Rs. 2.61 lakhs will be utilised for share capital contribution to the Primary and District Marketing Societies. This is in accordance with the suggestion made by the All-India Rural Credit Review Committee that the share capital of marketing societies should be increased in a phased manner. The balance amount of Rs. 0.33 lakh will be contributed to the Price Fluctuation Fund of the Marketing Societies.

Processing.—With a view to developing the co-operative processing units in the Telangana region an amount of Rs. 38.10 lakhs is provided in the Fourth Plan. About 95 per cent or Rs. 34.40 lakhs is earmarked for payment of share capital and loans to the various processing units existing as well as those which are likely to come up in the region. The units that are likely to come up are a Maize Starch Factory in Karim-

nagar, Castor Seed Crusher at Devarakonda, Cotton Processing and Turmeric Processing Units in Adilabad district, modern rice mill in Pochampad Project area, Cattle Feed Plant and a Cold Storage Unit in Warangal district and an Ice Plant to the cold storage unit for the Zaheerabad Fruit Growers' Society. The balance amount will be utilised for payment of managerial subsidy and share capital for Margin Money to processing units.

Sugar Factories.—An amount of Rs. 35.50 lakhs is provided for share capital assistance to the proposed Sugar Factory at Bheemasingi, which is in the formation stage, and the one likely to come up in Miryalguda by the end of the Fourth Plan.

Farming.—The Fourth Plan provision under 'Co-operative Farming' in the region is Rs. 0.84 lakh which is intended for assistance to the societies towards land reclamation charges at Rs. 300 per acre and by a way of subsidy and loan towards resettlement charges at Rs. 700 per acre.

Consumer Stores.—The outlay proposed under this head is Rs. 19.25 lakhs. A major portion of this i.e., Rs. 17.38 lakhs will be given as loan for the construction of godowns. An amount of Rs. 0.25 lakh will be given as managerial subsidy and Rs. 1.30 lakhs as share capital contribution to Primary Consumer Stores.

Co-operatives for Weaker Sections.—An amount of Rs. 24.20 lakhs has been earmarked for various schemes to benefit the weaker sections of the society. There are 8 schemes meant for different classes of people which are listed below:

<i>Scheme</i>	<i>Rs. lakhs</i>
(i) Loan assistance to Washermen Societies	0.08
(ii) Loan assistance to Printing Societies	2.72
(iii) Loan assistance to Auto-Rickshaw Drivers Societies	3.80

(iv) Loan assistance to Taxi Drivers Societies	7.71
(v) Loan assistance to Societies for Destitute Widows and disabled persons	2.52
(vi) Loan assistance to Labour Contract and Forest Coupe Societies	2.87
(vii) Loan assistance to Rickshaw Pullers' Societies	2.02
(viii) Loan assistance to Co-operatives for educated unemployed in Urban areas	2.42
Total ...	24.20

Training and Education.—Under training programme the non-official trainees will be paid a stipend of Rs. 40 per mensem. In order to meet the cost of stipends and other expenses for education and training of non-official members and junior personnel an amount of Rs. 8.97 lakhs is provided for the region.

Administration.—An amount of Rs. 8.49 lakhs is provided for the appointment of additional departmental staff to co-operative marketing and farming societies and also for the staff at taluk level.

11. COMMUNITY DEVELOPMENT

The Community Development Programme was first introduced in this State on 2nd October, 1952. This programme covered the entire Rural area in the State by the end of March, 1964. There were as many as 326 Blocks in the State and 121 new Blocks were created during the Third Plan.

11.2. During the First Five Year Plan an expenditure of Rs. 286.02 lakhs was incurred. The outlay spent in the second plan period was Rs. 1,609.35 lakhs against the outlay of Rs. 1,621.54 lakhs. The State's Third Plan carried a provision of Rs. 2,426.79 lakhs. Against this provision the expenditure incurred was Rs. 2,402.53 lakhs.

11.3. During the Second Five Year Plan period the Community Development Programme has consolidated itself. A basic reappraisal and reorganisation of the programme took place at this time on the basis of the recommendations of the study team led by Sri Balwantarai Mehta. In December, 1959 this reorganisation brought about a change in the administration as well as the financial frame work of the programme. The original classification of the Blocks as National Extension Service Blocks, Community Development Blocks, and the Post-Intensive Blocks was revised and only two phases of Five Years each was introduced, first phase which was one of the more intensive development being called stage I and the second phase which is a post intensive stage was called the stage II of the Block. Prior to Stage I, one year period of pre-extension work was also introduced. On this basis the State was delimited into 448 Blocks.

11.4. In the light of the experience gained in the administration of the Panchayat Samithi Blocks the State Government decided in 1965 to examine whether there was any scope for more effective utilisation of Community Development and other funds allotted to Panchayat Samithis, if necessary by territorial organisation of Blocks and by pruning staffing pattern where necessary. A High Power Committee was appointed to go into the question of territorial reorganisation of Blocks with a view to achieving economy in expenditure, consistent with efficiency

administration and without adversely affecting the tempo of the developmental activity. In pursuance of the recommendations of this Committee the total number of Blocks in the State have been reduced from 448 to 321. The staffing pattern of the reorganised blocks has also been modified suitably on pragmatic basis depending on the work load so as to enable the Panchayat Samithis to discharge successfully the enhanced responsibility. The distribution between Stage I, Stage II and Post Stage II of the Community Development Blocks was given up as the reorganised Blocks comprised of population drawn from the pre-extension pattern also. The financial assistance in the form of Community Development funds coming from the India will however continue to be on the basis of 448 Notional Blocks in various stages without any change. The Community Development funds along with the other funds to be provided by the State Government will be released to the reorganised Blocks. The distribution of funds to the reorganised Blocks is on the basis of their classification as "Advance", "Ordinary", "Backward", and "Tribal Blocks" depending upon their level of development. Funds will be allotted on varying per capita basis in inverse proportion to the level of development achieved by the Blocks so that Blocks which are less developed will get larger funds compared to others which are better off.

With effect from 1965, funds to the Panchayat Samithis are being released in lumpsum with reference to the formula enunciated by the High Power Committee for all developmental activities under the Community Development Programme. The Panchayat Samithis have been empowered to utilise the funds according to the felt needs of the area.

During Annual Plans of 1966-67 and 1967-68, an expenditure of Rs. 200 lakhs and Rs. 115.03 lakhs respectively was incurred against the provision of Rs. 200 lakhs and Rs. 135 lakhs.

Fourth Five Year Plan Proposals :

11.5. The Sub-group on Community Development while giving its report, recognised the need to have a special provision in Fourth Five-Year Plan for the post Stage II Blocks so that during the Plan period,

a minimum tempo of activities can be maintained in all the Blocks. They have also felt that there is a strong need for making a provision for giving programme assistance to the Post Stage II Blocks and have suggested that a Plan provision of Rs. 40,000 per annum per post-stage II Block should be provided so that the Community Development Programme may be able to recover its impetus and endeavour to have greater impact on rural development. On the basis of the notional phasing of Blocks it is estimated that an outlay of Rs. 12.57 crores is required for Community Development. But having regard to the limitation of ceiling, and competing claims of various sectors, it has been possible for the State to provide only Rs. 699.90 lakhs for Community Development. Out of the balance of Rs. 153.29 lakhs, a sum of Rs. 66.46 lakhs is allotted for Rural-Man-Power Programme and Rs. 72.80 lakhs towards State's share for applied Nutrition Programme.

12. IRRIGATION

The importance of Irrigation as a means of stabilising Agriculture and for increasing the productivity of lands by diversifying the cropping pattern in the State needs no emphasis. Improvement of productivity in agriculture is closely linked with augmentation of facilities of Irrigation. Being predominantly an agricultural State, with its vast potentialities of water and 70 per cent of its population dependent on agriculture, one of the main strategies of rapid economic development of the State is to exploit the large irrigation potential available as quickly as possible both for achieving a rapid increase in the per capita income and also for laying foundations for the future diversification of the economy of the State.

Objectives and Strategy:

12.2. The objective of the irrigation development in the State in the context of Major, Medium Irrigation projects are as follows:—

- (a) ensure maximum utilisation of the irrigation potential already created;
- (b) ensure completion of the large projects already taken up especially Nagarjunasagar and Pochampad projects;
- (c) complete the continuing major and medium irrigation projects; and
- (d) take up a few medium irrigation projects particularly in scarcity affected or backward areas such as Rayalaseema and Srikakulam.

12.3. The strategy of development in this regard is implicit in the objectives and involves specifically creation of potential as and when some work progresses and utilisation of this potential immediately. Pochampad project and the areas in Telangana that would benefit from Nagarjunasagar are given special importance in view of the necessity for development of Telangana area.

Review :

12.4. A statement showing the Major and Medium Irrigation projects taken up in the first, second, third and the three Annual Plans 1966-1969 and the proposals in the Fourth Plan is given in Annexure.

The Irrigation Plan in the Third Five Year Plan consisted of one Multipurpose River Valley Project *viz.*, Nagarjunasagar, 41 spillover Major and Medium Irrigation schemes and 6 new schemes. Out of the 41 spillover schemes, 22 schemes have been physically completed during the Third Plan period. During the third plan period, a sum of Rs. 93.02 crores was spent on irrigation sector in the State comprising Rs. 65.00 crores on Nagarjunasagar Project, Rs. 4.37 crores on Pochampad Project and the balance of Rs. 23.65 crores on other Major and Medium Irrigation schemes. The total irrigation potential created under the Major and Medium Irrigation Projects during the I, II and III Plan periods was of the order of 9.65 lakh acres, the actual utilisation being 6.60 lakh acres representing about 68 per cent of the potential created.

During the three Annual Plans 1966-69, an expenditure of Rs. 59.36 crores was incurred on Major and Medium Irrigation projects. Of this, as much as Rs. 43.50 crores was spent on Nagarjunasagar Project and Rs. 5.63 crores on Pochampad. During this period, an additional Irrigation potential of 9.10 lakh acres was created taking the cumulative irrigation potential created to 18.74 lakh acres. The actual utilisation of this Irrigation potential by 1968-69 was —14.92 lakhs acres.

Fourth Plan Programmes :

12.5. The approach in the Fourth Plan under this sector is to pay special attention for the completion of projects already under construction with a view to securing optimum benefits from them during the Fourth Plan period and also to provide adequate outlay for those new schemes for which people's contribution by way of betterment levy is forthcoming. With this end in view, a provision of Rs. 132.88 crores has been provided for Major and Medium Irrigation schemes including Nagarjunasagar and Pochampad projects. The following table will show the distribu-

tion of the outlay on Irrigation, Flood Control, Investigation and Research programmes included in the Fourth Plan:—

<i>Irrigation</i>	<i>(Rs. in Crores)</i>		
	<i>Expenditure in Third Plan</i>	<i>Expenditure in Annual Plans '1966'-59</i>	<i>Outlay proposed in the Fourth Plan</i>
1. Irrigation			
(a) Continuing	90.37	56.98	103.53
(i) Nagarjunasagar	65.00	42.50	44.50
(ii) Pochampad	4.38	5.63	30.00
(iii) Other Projects	20.99	8.85	29.03
(b) New	0.85	1.86	25.62
(c) Provision for land acquisition schemes	..	..	0.15
2. Flood Control and Drainage	1.38	0.25	2.10
3. Investigation and Engineering Research	0.42	0.26	1.48
	93.02	59.35	132.88

12.6. The Region-wise break up of the Fourth Plan outlay on Irrigation according to the nature of schemes is as follows:—

<i>Irrigation</i>	<i>(Rs. in lakhs)</i>			
	<i>Outlay in Fourth Five Year Plan</i>			
	<i>Coastal Andhra</i>	<i>Rayalaseema</i>	<i>Telangan</i>	<i>Total</i>
I. Irrigation				
(a) Continuing	3727.39	1562.62	5063.43	10353.44
(i) Nagarjunasagar Project	2738.28	..	1711.72	4450.00
(ii) Pochampad	..	..	3000.00	3000.00
(iii) Other Projects	989.11	1562.62	351.71	2903.44
(b) New	2142.00	419.72	..	2562.02
(c) Provision for land Acquisition	6.34	8.25	0.78	15.37
(d) Flood Control and Drainage	200.00	..	10.00	210.00
(e) Investigation and Engineering Research	71.56	24.00	52.29	147.85
Total	6147.59	2014.59	5126.50	13288.68

It will be observed from the above, that the Plan for the Irrigation sector in the Fourth Plan will be more or less a spill over plan. For completion of Major and Medium schemes other than Nagarjunasagar and Pochampad which have spilled over into the Fourth Plan, an outlay of the order of Rs. 31.00 crores was required. As against this, an allotment of Rs. 29.03 crores has been made in the Fourth Plan for these schemes and it is expected that almost all these schemes would be completed during the Fourth Plan period.

It is expected that with an outlay of the order of Rs. 132.88 crores during the Fourth Five Year Plan period, an additional Irrigation potential of 9.65 lakh acres will be created in the State, taking the cumulative potential on all plan projects to 28.40 lakh acres by the end of the Fourth Plan.

Coastal Andhra :

12.7. An allotment of Rs. 61.48 crores has been made for Coastal Andhra. Out of this, the share of Andhra in respect of Nagarjuansagar Project, as per the principles enunciated by Bhargava Committee, comes to Rs. 27.38 crores. An amount of Rs. 9.89 crores has been made for 8 continuing Medium Irrigation schemes and it is expected that all these schemes would be completed in the Fourth Plan period. For new Irrigation schemes an amount of Rs. 21.42 crores has been made and this amount is distributed as follows:—

	<i>Rupees in crores.</i>
(1) Yeleru Reservoir	... 2.00
(2) Godavari Barrage	... 7.63
(3) Vamsadhara Project	... 8.04
(4) Somasila Project	... 3.25
(5) Drainage Schemes in the Krishna Godavari Deltas	... 0.50
Total	... 21.42

An outlay of Rs. 2.00 crores is made for Flood Control Schemes.

With this outlay, it is expected that an additional irrigation potential of 3.92 lakh acres will be created

in Coastal Andhra region taking the cumulative potential under all plan projects in this region to 12.28 lakh acres by the end of the Fourth Plan.

Rayalaseema :

12.8. The provision for Rayalaseema for the development of irrigation is Rs. 20.15 crores. An amount of Rs. 15.63 crores has been made for spill-over schemes. This amount will be utilised to complete or substantially complete all the 6 spill over schemes in the region. It is also proposed to take up two new schemes i.e., Pulivendla scheme and Togurupeta project and an allotment of Rs. 3.98 crores has been made for this purpose.

With this outlay an additional irrigation potential of 2.37 lakh acres will be created during the Fourth Plan period in this region taking the cumulative potential under all plan projects to 8.71 lakh acres by the end of the Fourth Plan.

Telangana :

12.9. An allotment of Rs. 51.26 crores has been made for the development of irrigation in Telangana. It can be said that the total irrigation plan of Telangana is altogether a spill over plan, as out of the total outlay as much as Rs. 50.63 crores is proposed to be spent on spill over schemes and the remaining Rs. 0.63 lakh on Land acquisition, Flood control and Investigation and Engineering Research. The share of Telangana in respect of Nagarjunasagar Project, as per the principles enunciated by Bhargava Committee, is Rs. 17.12 crores. For Pochampad Project, an outlay of Rs. 30.00 crores has been made. As a result of this, it has not been found possible to take up any new Irrigation schemes in this region. The additional irrigation potential to be created in this region during the Fourth Plan period would come to 3.34 lakh acres taking the cumulative potential to 7.40 lakh acres by the end of Fourth Plan.

The details of the schemes to be taken up during the Fourth Plan period are given below:—

Nagarjuna Sagar Project :

12.10. The project in execution comprises the construction of a Masonry Dam (with spill way crest level

at E.L. +546 with crest gates upto E.L. +590) across the River Krishna, and construction of two canals, one on the Right side for a length of 126 miles and another on the Left side for a length of 111 miles in the first phase to irrigate in all 22 lakh acres (including 1.5 lakh acres under second crop in Krishna Delta) in Nalgonda, Khammam, Krishna, Guntur, Kurnool and Nellore Districts of Andhra Pradesh. The Nagarjuna Sagar Dam is situated in $1\frac{1}{2}$ miles down stream of Nandikonda Village in Miryalaguda Taluk in Nalgonda District. The Right Canal takes off from the head regulator located in Dam while the left canal takes off from the foreshore of Nagarjuna Sagar Reservoir at its left flank above 6 miles away from the main course of the river. The project was taken up in the year 1955-56.

During the Third Plan period the work on the Project progressed satisfactorily according to the programme drawn up under the accelerated programme of construction launched in the second half of 1964-65 with a view to creating an irrigation potential of 5.79 lakh acres by the end of June, 1965. During the Third Plan period an expenditure of Rs. 65.00 crores was incurred on this project taking the total expenditure incurred upto the end of Third Plan period to Rs. 104.18 crores. During the three Annual Plan years 1966-69, an expenditure of Rs. 42.50 crores was incurred bringing the total expenditure upto the end of 1968-69 to Rs. 146.68 crores. The following is the progress of works to the end of 31st March 1969.

Dam.—Masonry and concrete for Masonry Dam was completed. Earth work banking for Earth Dam was also completed.

Right Canal.—All the works necessary for letting out water in the first 57 miles of Right Main Canal and in the branches and distributories in Blocks 1 to 10 and Part II, to cover an ayacut of 6.1 lakh acres, were completed and irrigation potential created to that extent.

Left Canal.—All works necessary for letting out water in the first 58 miles of the Main Canal and in the branches and distributories in Blocks 1 to 9 and also in Blocks 10, to cover an ayacut of 1.4 lakh acres were completed and irrigation potential created to that extent.

As against an irrigation potential of 7.5 lakh acres created under this project upto the end of March, 1969, the utilisation was 7.9 lakh acres including an area of 1.98 lakh acres where second crop was raised.

Fourth Plan :

In the State's Fourth Plan, an outlay of Rs. 44.50 crores is made for Nagarjuna Sagar Project. Of this a sum of Rs. 3.67 crores is provided for completing balance work on the Nagarjuna Sagar Dam, Rs. 18.20 crores for Nagarjuna Sagar Right Canal, and Rs. 22.63 crores for Nagarjuna Sagar Left Canal.

Dam.—The following are the balance items of work yet to be completed and part of these will only get completed during the Fourth Plan.

- (1) Balance concrete work in Anchor Blocks.
- (2) Reconstruction of collapsed portion of the Road bridge on down stream side of Nagarjuna Sagar Dam.
- (3) Architectural feature.
- (4) Development of gardens.
- (5) Widening of Earth Dam.
- (6) Formation of shell crete Road on tip of Earth Dam and balance work on parapets.
- (7) Fixing on Electrically operated electors.
- (8) Erection of two Nos. of emergency gates for EL 400 tunnel.
- (9) Erection of gautry crane.
- (10) Fabrication and erection of balance work for the left penstocks.
- (11) Permanent lighting arrangements, and
- (12) Maintenance of spillway slopes, earth, Dam Gates etc.

Right Canal.—During 1971-72 the works taken upto mile 57/0 will be completed and an irrigation potential (cumulative) of 7.38 lakh acres will be created. By

the end of 1973-74, the works on Main Canal upto Mile 70/1 to create an irrigation potential under Peddanandipadu Canal will be completed. The work taken up beyond Mile 70/1 will also be in progress.

Left Canal.—With an outlay of Rs. 22.63 crores on left canal, the works on main canal upto Mile 85 and the distributory system upto Block 15 will be completed to the extent necessary to create an irrigation potential of 3.08 lakh acres by July, 1973 in this canal area.

During the Fourth Plan period an additional irrigation potential to the tune of 3.42 lakh acres will be created. As against this, an extent of 2.26 lakh acres will be brought under utilisation.

Pochampad:

12.11. The Pochampad Project was originally sanctioned for Rs. 40.10 crores and the work on the Project was started in 1963 and the preparation of the detailed designs of the dam and specifications was entrusted to Central Water and Power Commission in 1964. After conducting canal and localisation surveys, it was found that the area available upto Manair river was only 4.58 lakh acres as against the total proposed Ayacut of 5.70 lakh acres. In order to obtain the balance Ayacut of 1.12 lakh acres, it has become necessary to cross Manair river beyond the 88th mile of the canal. Various alternatives for crossing Manair river were considered and it was decided that the best proposal would be to construct a dam across the river Manair. The canal is also proposed to be extended further for 35 miles (Total length would be 123 miles) to achieve the balance area of 1.12 lakh acres of ayacut. It has also been decided to line the main canal throughout its length in view of the fact that the main canal runs through gravelly terrain to avoid seepage losses which will be heavy.

With a view to expediting the pace of execution of the Project, the assistance of the World Bank was sought. The Bank has sent a Reconnaissance Team first in the month of January, 1969 and again in

November, 1969. After detailed discussions with the State Engineers, the Bank agreed to finance the Project. The salient features of the Project that were agreed to by the World Bank are as under :

- (1) The cost of the project as per revised estimate as submitted by the State Government to the Government of India is Rs. 90.25 crores for developing an ayacut of 5.70 lakh acres. As it is not physically practicable and possible to complete the entire balance work on the project in a span of 5 years, and as the World Bank advances loans to such projects for not exceeding 5 years, it was suggested that, a part of the project called phase I may be taken up for financial assistance by World Bank, which could suitably be completed within 5 years.
- (2) Keeping the progress of work on the dam and canal in view it was decided, that this phase I of the Project, should comprise of—
 - (a) Excavation of canal upto the off-take of major branch Canal D/83 (Revised mileage of main canal mile 71/7) for creating a potential of 2.50 lakh acres (from out of 5.70 lakh acres) by June, 1975.
 - (b) Raising the height of the dam sufficiently to enable the diversion and storage of water for 2.50 lakh acres. From regime tables worked out, it was observed that by raising the crest level of the spillway to +1037 and Earth dam to Min. +1078, it is possible to achieve the above objective by June, 1975.
 - (c) To complete the lining of the main canal also along with the excavation of canal by June, 1976 upto mile 71/7.
 - (d) Completion of distributory system upto and part of distributory 83, to create an Irrigation potential of 2.50 lakh acres by June, 1976.

- (e) Construction of field channels and field drainage for the above ayacut.
- (f) Construction of Market Roads in the ayacut area.
- (g) Follow up action for development of ayacut in various spheres by other departments of the Government.

The cost of this project for implementing the first phase is estimated at Rs. 67.90 crores. The World Bank has also stipulated that the provision in the Fourth Plan for this Project should be Rs. 45.00 crores and the potential of 2.50 lakh acres be created by June, 1975 by completing the canal up to mile 71/7. The provision made in the State Plan for this project is Rs. 30.00 crores. The gap of Rs. 15.00 crores in the Plan provision is proposed to be met by obtaining an additional assistance of Rs. 9.00 crores from the Centre over and above the Central assistance agreed to for the State's Fourth Plan, and also to meet the balance of Rs. 6.00 crores from Telangana surpluses. The following table will show the irrigation potential to be created under this project by June, 1975:

Sl. No.	Year	Gross potential (Without lining of main canal)	Restricted potential due to stoppage of water to ID Ayacut during lining of main Canal		
			Acres.	Wet	ID	Total
1	2	3	4	5	6
1.	7/70	41,127	26,571	..	26,571
2.	6/71	41,127	26,571	..	26,671
3.	6/72	41,127	26,571	2,831	29,402
4.	6/73	1,24,000	46,425	14,556	60,981
5.	6/74	1,50,000	52,747	77,575	1,30,322
6.	6/75	2,50,000	84,230	97,253	1,81,485
7.	6/76	2,50,000	84,230	1,65,770	2,50,000

MEDIUM IRRIGATION SCHEMES:

Coastal Andhra:

12.12. SPILL-OVER SCHEMES:

(a) *Thandava Reservoir:*

Estimated Cost: Rs. 403.72 lakhs.

The work on this project has commenced in the Second Plan. An amount of Rs. 284.43 lakhs provided in the Fourth Plan. This project will provide irrigation to 46,090 acres—in Visakhapatnam district.

(b) *Vottigadda Reservoir: Srikakulam District:*

Estimated cost: Rs. 202.00 lakhs.

Total expenditure to end of 1968-69: Rs. 86.34 lakhs.

An amount of Rs. 121.92 lakhs has been provided in the Plan.

It is programmed to create an additional potential of 3,500 acres during 1971-72 as against the ultimate potential of 16,670 acres.

(c) *Kanpur Canal: Nellore District:*

Estimated Cost: Rs. 420 lakhs.

Expenditure to end of 1968-69: Rs. 111.60 lakhs.

The spill-over outlay in Fourth Plan in respect of this project is Rs. 308.00 lakhs and this has been provided. A partial benefit for 1,002 acres has been created during 1970-71 and potential for 158 acres will be created in 1971-72. The ultimate potential to be created under the project is 19,040 acres.

(d) *Guntur Channel: Guntur District:*

Estimated Cost: Rs. 170 lakhs.

Expenditure incurred to end of 1968-69: Rs. 64 lakhs.

An amount of Rs. 106 lakhs spilled over into the Fourth Plan. Under cyclone damage an amount of Rs. 25.00 lakhs was spent in 1969-70. An amount of Rs. 82.00 lakhs is required to complete this project and the amount has been provided in the plan. The Irrigation potential to be created under the project is 27,000 acres.

(e) *Gandipalem Project: Nellore District:*

Estimated Cost: Rs. 125 lakhs.

Expenditure incurred to end of 1968-69: Rs. Nil.

This is a scheme cleared by the Planning Commission during 1966-67. The estimate based on the current schedule of rates is under finalisation. The scheme estimate has to be approved by the Government. Pending this an amount of Rs. 125.00 lakhs has been made in the Plan. The project envisages the creation of an irrigation potential of 18,000 acres.

12.13. NEW SCHEMES:

(a) *Godavari Barriage: East and West Godavari districts:*

Estimated Cost: Rs. 2,659 lakhs.

Expenditure incurred to end of 1968-69: Rs. Nil.

An amount of Rs. 763.39 lakhs is proposed in the Plan. In addition advance betterment fee will be collected from the beneficiaries.

This is a project to ensure the safety of the existing Godavari Anicut which is a century old structure and thereby protect the existing irrigation in Godavari Delta.

(b) *Vamsadhara Project, Srikakulam District:*

Estimated Cost: Rs. 864 lakhs.

Expenditure incurred to end of 1968-69: Rs. Nil.

This is a new major project which will be taken up in the Fourth Plan. An allotment of Rs. 803.00 lakhs is made in the Plan.

(c) Somasila Project, Nellore District :

Estimated Cost: Rs. 1,276 lakhs.

Expenditure incurred to end of 1968-69: Rs. Nil.

This is a major project which envisaged the construction of a Dam across the river Pennar near Somasila for stabilising the existing ayacut in the Pennar Delta and to during the additional ayacut under irrigation in Nellore District.

It is proposed to incur an outlay of Rs. 325 lakhs in the Fourth Plan and also collect advance betterment levy from the beneficiaries.

(d) Yeleru Reservoir, East Godavari District :

Estimated Cost: Rs. 300 lakhs.

This is one of the new Medium Schemes, proposed to be taken up in East Godavari District. This Scheme contemplates assured water supply to the existing ayacut of 80,000 acres besides irrigating a new ayacut of 20,000 acres. An outlay of Rs. 200 lakhs is proposed during Fourth Plan.

*Rayalaseema :***12.14. SPILL-OVER SCHEMES :***(a) Tungabhadra Project High Level Canal Stage II :*

This is one of the major projects started during 1967-68 to benefit the chronically drought affected areas of Anantapur and Cuddapah Districts. An amount of Rs. 1,207 lakhs is proposed to be spent during the Fourth Plan period as against the spill-over amount of Rs. 1,392 lakhs. A partial benefit for 6,500 acres has been created during 1970-71 under the Guntakal branch channel and an additional potential for 7,000 acres is expected to be created during 1971-72. The scheme when completed will irrigate a total ayacut of 1,37,430 acres.

(b) Gazuladdine Project :

This is a medium scheme cleared by the Planning Commission during 1966-67. Modified estimate for

Rs. 254 lakhs has been approved by the Government to complete the project and this outlay has been provided in the Fourth Plan. The ultimate benefit contemplated under the scheme is 25,000 acres

12.15. NEW SCHEMES :

(a) *Pulivendla Scheme, Anantapur District :*

Estimated Cost: Rs. 708.96 lakhs.

Expenditure incurred during 1968-69: Rs. Nil.

This is a major project proposed to be taken up during the Fourth Plan. The net financial commitment on the scheme for the State will be of the order of Rs. 298 lakhs and this amount has been provided in the Plan. The balance cost will be by way of debit for common portion of works already executed under Tungabhadra High Level Canal. The scheme estimate is awaiting clearance from the Central Water and Power Commission. Advance betterment levy is proposed to be collected from the beneficiaries. It is proposed to complete the scheme physically during the Fourth Plan period.

(b) *Thogurupeta Project or Cheyyar Reservoir, Cuddapah District :*

Estimated Cost: Rs. 100 lakhs.

Expenditure incurred during 1968-69: Rs. Nil.

This scheme consists of a reservoir across the river Cheyyar, a tributary of Pennar river at Thogurupeta, to irrigate 10,000 acres. The scheme is under detailed investigation. It is proposed to complete the schemes during the Fourth Plan period. An outlay of Rs. 100 lakhs is made in the plan.

Telangana :

12.16. SPILL-OVER SCHEMES :

Medium Irrigation :

(a) *Swarna Project, Adilabad District :*

Estimated Cost: Rs. 152.94 lakhs.

Expenditure incurred to end of 1968-69: Rs. 54.31 lakhs.

This is a medium scheme continuing from Second Plan. An amount of Rs. 98.60 lakhs will spill-over into Fourth Plan against which Rs. 89.69 lakhs is proposed to be spent during this Plan so that this scheme may be substantially completed. The Scheme, when completed, will irrigate an extent of 7,000 acres.

(b) *Ukkachittivagu Project, Mahboobnagar District:*

Estimated Cost: Rs. 95.20 lakhs.

Expenditure to end of 1968-69: Rs. Nil.

An outlay of Rs. 85.00 lakhs is provided in the Fourth Plan. The project when completed envisages the creation of an irrigation potential of 6,700 acres.

(c) *Kaddam Project, Adilabad District:*

Estimated Cost: Rs. 798.36 lakhs.

Expenditure to end of 1968-69: Rs. 773.09 lakhs.

Work on the project is almost completed. An amount of Rs. 16 lakhs is required in the Fourth Plan to complete the balance works. Subsequently, the scheme for excavating Khanpur Channel to augment supplies to Kaddam reservoir has been sanctioned. Total outlay of Rs. 65.00 lakhs is made in the plan for this project.

<i>Name of the Project</i>	<i>Total Estimated cost</i>	<i>Up to the end of 1968-69</i>	<i>Outlay proposed in the IV Plan.</i>
<i>(Rs. in lakhs)</i>			
I. COASTAL ANDHRA :			
1. Nagarjunasagar	9,203.14	2,738.28	
2. Prakasam Barrage	291.57	252.48	..
3. Ramperu Drainage	128.02	129.68	..
4. Narayanapuram Anicut scheme	96.91	81.82	..
5. Nagavali Right Channel	26.23	20.86	..
6. Sitanagaram Anicut	12.63	12.45	..
7. Gambhiramgadda Reservoir	14.04	13.16	..
8. Remodelling Bandakatur Channel	2.61	2.19	..
9. Nakkalagandi Reservoir	7.29	8.06	..
10. Upputeru Lower Anicut	13.91	10.73	..
11. Vedavathi Anicut	23.32	26.90	..
12. Paleru Reservoir	6.95	4.68	..
13. Thorrigedda pumping scheme	82.03	61.10	7.90
14. Paleru-Bitragunta Channel	26.16	26.00	..
15. Paidigam Project	24.13	24.13	..
16. Varaha Reservoir	111.90	81.07	30.04
17. Thandava Reservoir	403.72	155.52	284.43
18. Denkadu Anicut .. .. .	..	16.84	..
19. Vottigedda Reservoir	202.00	86.34	121.92
20. Kanpur Canal	420.00	111.60	308.27
21. Pampa Reservoir	99.20	67.13	29.00
22. Guntur Channel	170.00	64.00	82.00

XURE

<i>Ultimate potential</i>	<i>Potential created up to the end of III Plan</i>	<i>Potential created upto 1969</i>	<i>Potential upto end of IVth Plan</i>	<i>Utilisation at the end of III Plan</i>	<i>Utilisation up to the end of 1968-69</i>	<i>Utilisation proposed in the IV period</i>
(In thousands acres) Cumulative						
..	..	610.00	784.00	..	591.00	762.00
106.59	97.48	106.59	106.59	79.12	84.21	106.59
10.30	10.30	10.30	10.30	10.32	10.32	10.32
36.83	36.83	36.83	36.83	34.67	36.84	36.84
9.00	9.00	9.00	9.00	7.66	6.37	9.00
4.00	4.00	4.00	4.00	3.27	3.43	4.00
0.60	0.60	0.60	0.60	0.52	0.52	0.52
3.60	3.60	3.60	3.60	3.63	3.63	3.63
1.00	1.00	1.00	1.00	1.53	1.53	1.53
1.90	1.90	1.90	1.90	2.53	2.53	2.53
5.80	5.80	5.80	5.80	3.23	3.23	5.80
1.50	1.50	1.50	1.50	1.17	0.45	1.50
15.40	13.63	12.40	15.40	4.19	6.35	13.63
5.50	5.50	5.50	5.50	5.84	5.37	5.50
4.95	4.95	4.95	4.95	4.92	4.98	4.98
8.06	..	..	8.06	..	..	6.00
45.90	..	..	46.09	..	..	..
..
16.67	..	..	16.67	..	..	..
17.00	..	..	17.04	..	..	..
12.00	..	..	12.00	..	..	12.00
27.00	..	..	27.00	..	..	..

<i>Name of the Project</i>	<i>Total Estimated cost</i>	<i>Up to the end of 1968-69</i>	<i>Outlay proposed in the IV Plan.</i>
	<i>(Rs. in lakhs)</i>		
23. Gandipalem New Scheme .	.. 125.00	..	125.00
Fourth Plan period Schemes.			
24. Yeleru Reservoir ..	.. 300.00	..	200.00
25. Godavari Barrage ..	.. 2,659.00	..	763.39
26. Vamsadhara ..	.. 864.00	9.68	803.91
27. Somasila ..	.. 1,276.00	..	325.00
Flood Control Scheme	.. ..	162.93	199.79
Investigation of Projects	.. ..	15.20	49.92
Drainage Schemes in Krishna Godavari Deltas	.. ..	..	50.00
Engineering Research	.. ..	21.20	20.89
Metric System	.. ..	..	0.39
L. S. for schemes completed in pre- vious Plans.	.. ..	..	6.28
	..	..	6,146.96

XURE

<i>Ultimate potential</i>	<i>Potential created up to the end of III Plan</i>	<i>Potential created up to 1969</i>	<i>Potential up to end of IVth Plan</i>	<i>Utilisation at the end of III Plan</i>	<i>Utilisation up to the end of 1968-69</i>	<i>Utilisation proposed in the IV period</i>
(In thousands acres) Cumulative						
10.00	10.00	..	..	..
100.00
25.00
148.23	100.00	..	..	..
317.00
..
..
..
..
..
..	1,96,090	8,13,970	12,27,830	1,62,620	1,69,760	9,86,370

<i>Name of the Project.</i>	<i>Total estimated cost.</i>	<i>Upto the end of 1968-69</i>	<i>Outlay proposed in the IV Plan.</i>
<i>(Rs. in lakhs)</i>			
RAYALASEEMA :			
1. T. B. P. L. L. C.	1,351.23	1,334.21	14.70
2. T.B.P.H.L.C. Stage I (III Plan) ..	1,816.10	1,941.78	56.17
3. T. B. P. H. L. C. Stage II (1966-'69) .	1,611.08	218.95	1,207.61
4. K.C. Canal	794.54	782.33	9.25
5. Bhairavanithippa project ..	145.77	143.65	..
6. Upper Pennar Project ..	158.62	151.68	..
7. Rallapadu Stage II ..	105.81	91.05	..
8. Kalyani Reservoir	34.69	33.28	..
9. Mallimadugu Reservoir ..	13.94	30.28	..
10. Lower Sileru Project	56.85	55.91	..
11. Siddalagandi Project ..	6.14	9.32	..
12. Vidyaranyaswamigudi Project ..	2.89	2.31	..
13. Channarayanaswamigudi Project ..	32.55	32.65	..
14. Pincha Project	63.22	64.55	..
<i>Second Plan.</i>			
15. Zurreru Reservoir	30.33	25.21	..
16. Swarnamukhi Project .. ..	..	0.02	..
17. Bahuda Reservoir	41.00	20.94	21.02
18. Gajuladinne Project	254.00	..	253.87
<i>New Schemes in Fourth Plan.</i>			
19. Togurupeta Project	100.00	..	100.00
20. Pulivendla Project	708.96	..	298.00

<i>Ultimate potential</i>	<i>Potential created up to the end of III Plan.</i>	<i>Potential created up to 1969</i>	<i>Potential created up to end of IV Plan.</i>	<i>Utilisation at the end of III Plan.</i>	<i>Utilisation upto the end of 1968-69</i>	<i>Utilisation proposed in the IV Plan period</i>
---------------------------	---	-------------------------------------	--	--	--	---

(In thousands acres) Cumulative

157.91	148.87	148.87	157.91	156.07	95.04	145.34
119.12	53.50	119.12	119.12	4.59	75.66	119.00
137.43	..	..	137.43	..	..	10.00
302.00	302.00	302.00	302.00	237.85	232.65	278.00
17.00	12.00	17.00	17.00	8.46	8.76	17.00
9.70	9.70	9.70	9.70	1.09	7.56	9.70
11.00	11.00	11.00	11.00	12.68	12.68	12.68
4.40	4.40	4.40	4.40	4.50	..	4.40
4.00	4.00	4.00	4.00	1.91	1.91	1.91
8.00	8.00	8.00	8.00	9.58	9.54	9.54
0.40	0.40	0.40	0.40	0.10	0.08	0.40
0.20	0.20	0.20	0.20	0.12	0.17	0.26
1.10	1.10	1.10	1.10	0.25	0.70	1.13
3.90	3.90	3.90	3.90	1.49	1.09	3.90
2.30	2.30	2.30	2.30	0.93	1.33	2.30
..
2.88	..	..	2.88	..	..	..
25.00	..	..	25.00	..	..	..
10.00	..	..	10.00	..	..	..
55.00	..	..	55.00	..	..	..

<i>Name of the Project</i>	<i>Total Estimated cost</i>	<i>Up to the end of 1958-59</i>	<i>Outlay proposed in the IV Plan.</i>
<i>(Rs. in lakhs)</i>			
1. Flood Control
2. Investigation of Projects	6.36	15.02
3. Engineering Research (Share)	9.03	9.12
4. L. S. for schemes completed in previous plans (L.A. etc).		8.25
5. Additional funds allotted under Special development schemes of Rayalaseema	21.72
Total	2,014.73

XURE

<i>Ultramate potential created up to the end of III Plan</i>	<i>Potential created up to 1969</i>	<i>Potential created up to end of IVth Plan</i>	<i>Utilisation at the end of III Plan</i>	<i>Utilisation up to the end of 1968-9</i>	<i>Utilisation proposed in the IV period</i>
(In thousands acres) Cumulative					
..
..
..
..
..
..
5,61,370	6,31,990	8,71,340	4,09,620	4,47,170	6,15,560

<i>Name of the Project.</i>	<i>Total estimated cost</i>	<i>Upto the end of 1968-69</i>	<i>Outlay proposed in the IV Plan.</i>
<i>(Rs. in lakhs)</i>			
TELANGANA			
1. Nagarjunasagar		5,465.26	1,711.72
2. Kadam Project including Khanpur Channel	836.36	773.09	65.47
3. Pochampad	9,025.00	1,027.12	3,000.00
4. Rajolibanda Diversion Scheme	383.00	360.18	25.39
5. Koilsagar	91.27	86.57	..
6. Bheemunipalli Project	8.98	7.78	..
7. Saralasar	35.54	35.19	..
8. Sirala Project	2.82	2.82	..
9. Mt si Project	380.00	318.05	25.69
10. Jutpalli Project	23.00	23.64	..
11. Laknapur Project	35.60	48.28	..
12. Swarna Project	152.94	54.31	89.69
13. Salvagu Project	40.57	40.23	..
14. Nellavagu Project	74.20	62.32	12.08
15. Ramadugu Project	35.06	35.96	..
16. Kotipallevagu Project	105.00	67.26	25.12
17. Lankasagar Project	80.15	53.18	23.25
Ukkachettivagu Project	95.20	0.31	85.00
L. S. for schemes completed in the previous plans			0.78
Flood Control Scheme			10.00
Investigation of schemes		26.68	36.58

<i>Ultimate potential</i>	<i>Potential created upto the end of III Plan</i>	<i>Potential created upto 1969</i>	<i>Potential created upto end of IV Plan</i>	<i>Utilisation at the end of III Plan</i>	<i>Utilisation upto the end of 1968-69</i>	<i>Utilisation proposed in the IV Plan Period</i>
<i>(In thousands acres) Cumulative</i>						
..	..	140.00	305.00	..	206.00	297.00
87.00	69.10	58.00	87.00	17.77	23.43	62.00
570.00	..	..	130.00	..	..	130.00
87.50	70.00	83.09	87.50	35.27	18.77	87.50
14.50	14.50	14.50	14.50	7.15	7.15	7.15
1.90	1.90	1.90	1.90	1.06	0.82	1.20
4.20	4.20	4.20	4.20	2.20	2.10	4.20
..
41.80	41.80	41.80	41.80	19.77	29.39	41.80
2.45	1.80	2.45	2.45	0.58	1.45	2.45
2.60	..	2.60	2.60	..	..	2.60
7.00	..	..	7.00	..	..	..
2.85	2.85	2.85	2.85	1.97	2.85	2.85
5.90	..	2.00	5.90	..	..	5.90
5.00	1.40	5.90	5.00	2.02	..	5.00
9.98	..	1.00	9.98	..	..	9.00
5.10	..	2.04	5.10	..	..	4.05
6.70	..	..	6.70	..	..	..

<i>Name of the Project</i>	<i>Total Estimated cost</i>	<i>Upto the end of 1968-69</i>	<i>Outlay proposed in the IV Plan.</i>
<i>(Rs. in lakhs)</i>			
Engineering Research (Share)	..	15.11	14.94
Metric System	..		0.29
Total	5,126.02
Grand Total	13,287.71

XURE

<i>Ultimate potential</i>	<i>Potential created up to the end of III Plan</i>	<i>Potential created up to 1969</i>	<i>Potential up to end of IVth Plan</i>	<i>Utilisation at the end of III Plan</i>	<i>Utilisation up to the end of 1958-59</i>	<i>Utilisation proposed the in IV period</i>
(In thousands acres) Cumulative						
2,07,550	3,61,430	7,22,480	87,790	2,91,960	6,62,700	
9,65,010	18,07,390	28,21,650	6,59,930	14,92,890	22,64,630	

13. POWER

The importance assigned for development of power in our Plans is based on the recognition of the fact that power is indispensable for growth both in Agriculture and Industry. Impressive as the progress in this sector in the last few years of planned development has been, yet it has to be stressed that the per capita consumption of power in the State is very low when compared to other States in the region and the All-India average and that the maintenance of minimum rates of growth in Agriculture and Industry will call for larger outlays on power schemes for augmentation of power supply. The per capita consumption of power in Andhra Pradesh which was 2.5 KWH at the beginning of the First Plan rose to 16.7 KWH and to 265 KWH at the end of Second and Third Plans respectively. At the beginning of the Fourth Plan it was 44 KWH compared to the All-India average of 76 KWH. It is, therefore, imperative that greater efforts will have to be made in this sector by the State to reach at least the All-India average consumption in the next ten to fifteen years.

13.2. The objectives and strategy of power development in the State may be summarised as follows:—

(a) completion of the power schemes for generation which have already been taken up on a priority basis;

(b) making a beginning with regard to certain new schemes for power generation;

(c) ensure dependable distribution through strengthening of integrated grid-system by construction of more trunk transmission lines and major substations;

(d) strengthening of distribution system by constructing a number of sub-transmission and primary distribution lines and sub-stations so that the consumers get reliable supply on satisfactory voltages;

(e) provision of power to backward areas as a matter of deliberate policy by taking up rural electrification;

(f) emphasise the utilisation of funds from Rural Electrification Corporation especially for backward areas;

(g) extension of power to harijanwadas by utilising, if necessary, the finances either from the local bodies or through funds from Government of India and if necessary from the State Plan funds also;

(h) expansion of power to the villages primarily with the object of energising the pumpsets to enable better irrigation facilities and cheaper form of lift of water;

(i) provision of adequate power for purposes of industrialisation especially encouragement of village and small industries;

(j) provision of power on a priority basis to harijanwadas;

(k) provision of power on a priority basis to backward areas in the State especially where the dependence on ground water is essential; and

(l) to enable continuous and dependable supply of power to the consumers.

Regional Approach:

13.3. In respect of generation schemes it is the technical factors that determine the location and activity and these schemes are not of any special regional significance in view of a grid system.

However, the major regional differences should be identified in regard to rural electrification on the basis of the regional strategies of development. Thus, in Coastal Andhra where surface irrigation facilities are in plenty, the percentage of villages and towns electrified by the end of the Fourth Plan will be 30. In respect of Rayalaseema which is particularly dependent on ground water resources it would be 65 by the end of Fourth Five-Year Plan. In respect of Telangana, addi-

tional emphasis is made in view of greater dependence on ground-water development and the target is 41%.

Review:

13.4. The installed generating capacity in the State at the beginning of the Third Plan was 213 MW. In the first 4 years of the Third Plan period, and additional 78.8 MW was added to the installed capacity under Tungabhadra Hydro-Electric Scheme (28.8 MW) Tungabhadra Nellore Hydro-Thermal Scheme (30 MW) and gas turbo sets at Hyderabad (20 MW). The original programme for 1965-66 was to commission one set of 60 MWs each under Upper Sileru and Kothagudem Thermal Scheme Stage I. But this could not be fulfilled on account of the fact that the imported equipment meant for these projects could not be received in time. Thus the installed generating capacity at the end of Third Plan period was only 291.8 MWs.

The outlay on power sector during the Third Plan period was of the order of Rs. 93.61 crores against the total Plan outlay of Rs. 352.53 crores.

Although the targets set for creation of additional installed capacity could not be achieved during the Third Plan period on account of factors beyond the control of the State Government, yet the benefits of past investment under power has yielded results during the three Annual Plans, 1966-69. In 1966-67, two units of 60 MWs., each under Kothagudem Stage I were commissioned while in 1967-68, four units of 60 MWs., each under Kothagudem Stage II and Upper Sileru Hydro-Electric Projects, were commissioned. Thus, the installed generating capacity which was 291.8 MWs. at the end of the Third Plan period rose to 411.8 MWs. at the end of 1966-67 and again to 651.8 MWs. at the end of 1967-68. However, some of the old sets have been retired and therefore, the net installed capacity was 600 MWs. During 1968-69 there was no addition to installed capacity. An outlay of the order of Rs. 97.96 crores was incurred on power schemes during the three Annual Plans 1966-69.

Significant progress was made under Rural Electrification programmes in the Third Plan and the subse-

quent annual plans. Against a target of 979 villages to be electrified in the State during the Third Plan period, 1,663 villages were electrified bringing the total number of villages electrified in the State to 4,318 at the end of Third Plan. Further, 39,257 pumpsets were energised during the Third Plan period bringing the total number of pumpsets energised upto the end of Third Plan to 57,225. During the Annual Plans, 1966-69, emphasis was laid on energisation of pumpsets to increase food production and to complete the balance works in villages where 60 per cent and above of works were completed. In Andhra Pradesh, there are 27,307 inhabited towns and villages (as per 1961 census), 12,535 in Coastal Andhra, 4,396 in Rayalaseema and 10,376 in Telangana. Against this 5,757 towns and villages—2,673 in Coastal Andhra, 1,292 in Rayalaseema and 1,792 in Telangana were electrified upto the end of March, 1969. At the end of March, 1969, the population covered with Rural Electrification programmes will be 58.2 per cent in Coastal Andhra, 52.1 per cent in Rayalaseema and 44.7 per cent in Telangana. At the end of March, 1969, the number of pumpsets energised in Andhra Pradesh was 1,23,167. Of these, 38,566 were in Coastal Andhra, 41,769 in Rayalaseema and 42,832 in Telangana.

Fourth Plan Programmes:

13.5. The major problem that the State has to face in the context of power development in the Fourth Plan is the existence of a large gap between power demand and the generating capacity installed in the State.

A number of generation schemes had already been taken up and investments made and the spill-over commitments themselves are enormous. Due to the increased cost estimates the problem has become more acute. With the result only a beginning could be envisaged for a few new schemes. The total investment on spill-over schemes for generation alone are estimated to cost about Rs. 104 crores and only about Rs. 9 crores are intended for new schemes under generation. With regard to transmission and distribution the investment envisaged is only about Rs. 26.65 crores.

It may be mentioned here that in spite of the investments contemplated the additions to the installed capacity during the Fourth Five-Year Plan would be 282.5 M.Ws., as against the estimated peak load demand of 1,087 MW by the end of Fourth Five-Year Plan. To meet this demand of 1087 MW the system must have an installed capacity of the order of 1440 M.W. The position by the end of the Fourth Five-Year Plan would be that the total installed capacity in the State would be 863 M.W. The firm capacity of the system would however be about 651 M.Ws. as against installed capacity of 1440 M.W. required if the power requirement of the State are to be completely met by generation within the State.

13.6. The total number of villages and towns that are proposed to be electrified during the Fourth Five-Year Plan are 5,243 bringing the percentage of electrification of villages and towns from 21 per cent at the beginning of the Fourth Plan to 40 per cent by the end of the Fourth Five-Year Plan.

The load demand has been increasing rapidly in the State. The peak demand in 1968-69 was 441 M.Ws. and the Sixth Annual Electric Power Survey indicated that the peak demand during the Fourth Plan period would be as follows:—

Year	1969-70	1970-71	1971-72	1972-73	1973-74
Peak demand in M. W.	531	645	755	870	1087

To meet a peak demand of 1,087 M.W. in 1973-74 the system must have an installed capacity of the order of 1,440 M.W. With the completion of Ramagundam Thermal Scheme and the Kothagudem III Stage, it would be possible to add 282.5 M.W. during the Fourth Plan period. With this addition and with the Commissioning of Lower Sileru Unit No. 1 in March, 1974, the net installed capacity would increase to 958 M.W., after taking into account that the gas turbo sets of 20 M.W. will be kept as standby sets and retiring 10 M.W. of Hussainsagar Thermal Capacity. The firm

capacity of the system would, however, be about 651 M.W. only. This would result in a large deficit of about 436 M.W. Although arrangements are at present made for the purchase of power from Mysore, it is unlikely that there would be surplus power in Mysore State by 1973-74. Hence the State could not for long depend on adjoining States to make up the deficits in its power generation and it should take all possible measures for early completion of generation schemes, failing which the development of the State would receive a set-back. It can at best only look to the Southern Regional Electricity Boards for mutual exchange of power to mitigate the hardship of low generating capacity in the State.

13.7. The policy of the State to overcome this situation is to accelerate the pace of execution of Lower Sileru Project and also to take up new schemes like (1) Andhra Pradesh Power House at Balimela, (2) Upper Sileru Hydro-Electric Scheme Stage II and (3) Nagarjunasagar Pumped Storage Hydro-Electric Schemes. These three schemes require comparatively small capital outlays and can be completed quickly within 4 to 5 years duration. Further, these schemes enable the State to utilise fully the already created water potential at these Projects. It is also proposed to take advance action for establishment of another major thermal station in the State in the Fifth Plan period. Provision is made in the Fourth Plan for the new works. Summing up, it may be stated that adequate provisions is made in the plan for commissioning the Kothagudem Stage-III and Lower Sileru Projects according to the scheduled programme and funds are provided for new schemes which require only short gestation periods and small capital outlay. The aim of the State Government is to ensure that the first 100 M.W. unit of Lower Sileru is commissioned in March, 1974 followed by the second unit in September, 1974 and the third and fourth units in 1975. These units, if commissioned in time, would help the State in the first two years of the Fifth Plan period, as there is no other project which can yield substantial benefits to the State in the first three years of the Fifth Plan period.

13.8. By the end of 1968-69 an integrated grid system was developed in the State. During the Fourth Plan period it is proposed to strengthen this grid by constructing more trunk transmission lines and major sub-stations. During the Fourth Plan period, a number of 220 KV and 132 KV trunk transmission lines along with sub-stations will be constructed connecting generating stations and load centres. Provision is also made for enhancing power transformer capacity and for installation of synchronous condensers and PLCC equipment. The distribution system will also be strengthened by constructing a number of sub-transmission and primary distribution lines and sub-stations so that the consumers get reliable supply at satisfactory voltages.

13.9. All State Power grids are to be integrated into regional grids by constructing Inter-State link lines, for the integrated operation of the systems and for assistance from power surplus States to power deficit States. Andhra Pradesh power grid is already connected to Tamilnadu grid by the Chittoor-Katpadi 220 KV line. An inter-State tie with Mysore has been established by constructing the 220/132 KVSS at Hampi. It is proposed to further strengthen the inter-connections by constructing 220 KV line from Hampi to Gooty and another 220 KV line from Nellore to Ennore. There will be an inter regional grid connection with Orissa power grid by construction of the Upper Sileru-Balimela 220 KV line.

13.10. A provision of Rs. 191.86 crores is made for the power sector in the Fourth Plan. The break-up of the outlay on power schemes is given in the following table:

*Outlay on power schemes in the Fourth Plan
(Rs. lakhs)*

Sub-Head of Development

I. Generation: (a) Spill-over:

1. Kothagudem Thermal Stage I.	231.83
2. Ramagundam Thermal B. Station.	552.84

3. Kothagudem Thermal Stage II.	145.44
4. Lower Sileru Hydro-Electric Scheme.	3,251.18
5. Kothagudem Thermal Stage III.	3,549.58
6. Srisailam Hydro-Electric Scheme.	2,100.00
7. Upper Sileru Hydro-Electric Scheme.	-16.56
8. Balimela Dam (Joint Project) and Andhra Pradesh Power House Works.	584.01

(b) *New Schemes:*

1. Andhra Pradesh Power House at Balimela.	120.00
2. Upper Sileru Hydro-Electric Scheme Stage II.	119.94
3. Nagarjunasagar Pumped Storage Hydro-Electric Scheme.	100.00
4. Advance action on Fifth Plan Schemes.	500.00
Total	11,238.26

II. *Transmission:*

2. Trunk Transmission lines.	}	2,665.61
1. Inter-State links.		
3. Distribution Schemes.	}	5,748.34
4. Rural Electrification.		
5. Investigations.		59.37
6. Miscellaneous.		...
Total.		8,473.32
Grand total.		19,711.58

A brief description of the schemes included in the Fourth Plan is given below :

13.11. *Spill-over Generation Schemes:*

(a) *Kothagudem Thermal Schemes Stage I.*—The power house with 2×60 M.W. units is in operation since 1966-67. The provision in the Fourth Plan period is for payments for the foreign exchange debits towards the amount required for completion of the Kinnarasani Dam works, and towards the balance works, of the power house and transmission works.

(b) *Ramagundam Thermal Scheme: 'B' Station.*—This scheme envisages installation of one 62.5 M.W. Thermal unit at Ramagundam. The power house is scheduled for commercial operation from December, 1971. The revised cost of this project is Rs. 14.00 crores. Provision is made in the Fourth Plan for completion of all the works of this scheme.

(c) *Kothagudem Thermal Scheme Stage II.*—Two units of 60 M.W. capacity each under this scheme are in operation since 1967. The provision in the Fourth Plan is towards foreign exchange debits and for balance payment only.

(d) *Lower Sileru Hydro-Electric Scheme.*—This scheme envisages installation of four units of 100 M.W. each. Many major civil construction works are involved. The main dam is located at Donkarayi, 30 K.M. distance from the Upper Sileru Power House. The generation machinery for the first and second units is being imported from U.S.S.R. The shipments from U.S.S.R. have already started arriving and the complete equipment is expected to be shipped by the middle of 1972-73. The excavation of foundations, concreting masonry works of Donkarayi Dam the widening of pilot tunnel to full section of the head race tunnel and the excavation of power canal and power house are in progress. The first 100 M.W. unit is targetted for commissioning in March, 1974. The revised estimated cost of this project is Rs. 49.90 crores and a provision of Rs. 32.51 crores is made in the Fourth Plan. This provision also includes advance payments to be made for BHEL, Haridwar for the supply of third and fourth units.

A small power house at Donkarayi at the power canal intake is also planned with one set of 25 M.W. capacity. The equipment will be ordered after the Planning Commission accepts the proposal.

(e) *Kothagudem Thermal Scheme Stage III.*—This scheme envisages installation of 2×110 M.W. Thermal units of Paloncha near Kothagudem in continuation to the first and second stage works. The first unit is scheduled for commissioning in March/April, 1972 and the second unit in July, 1972. The two units will be in commercial operation during 1972-73. The estimated cost of this project is Rs. 43.80 crores. A provision of Rs. 35.50 crores is made in the Fourth Plan. Out of the foreign exchange requirements of Rs. 25.00 lakhs, Rs. 15.00 lakhs is towards steel plates proposed to be imported during 1971-72 and the balance of Rs. 10.00 lakhs is towards valves for H.P. Steam Piping and Ash Handling Plant and for other minor items.

(f) *Nagarjunasagar Pumped Storage Hydro-Electric Scheme.*—This scheme envisages utilisation of water in the Nagarjunasagar Reservoir for generation of power during the peak period in the system. During the off-peak period the water will be pumped back into the reservoir. The estimated cost of this scheme for installation of 2×50 M.W. reversible units is Rs. 9.69 crores out of which Rs. 0.71 crore is towards proportionate cost of the works executed with the main Dam. This project is very remunerative and envisages only further utilisation of the already existing water potential. The work will spill-over to the Fifth Plan.

Advance action of Fifth Plan Schemes:

13.12. It is proposed to take advance action on Fifth Plan Generation Schemes so that preliminary works can be completed in the Fourth Plan itself and the works of the new project can be executed speedily even from the first year of the Fifth Plan. The provision made in the Fourth Plan is towards preliminary works of a major Thermal Scheme either at Kothagudem or Ramagundam as extension to the existing

stations or at any other load centre in the State as a new station.

(a) *Srisaïlam Hydro-Electric Scheme.*—The Srisaïlam Hydro-Electric Scheme comprises of the following items:—

(i) A.470 ft. High Dam across Krishna river near the famous Srisaïlam Temple in Kurnool district. The length of the Dam including the non-overflow section is 1,690 ft.

(ii) The power house at Srisaïlam Dam will accommodate 4 units of 110 M.W. each in the first stage. During the second stage, three more units will be added.

(iii) The power generated will be stepped up from 11/13.8 KV into 220 KV at the transformer yard and connected to the State grid.

The work on the project was commenced from 24th July, 1963. All the piers of the bridge across the Krishna river are raised to full height and concreting, casting of pier heads, beams and cantilevers for piers is in progress. The bridge work is expected to be completed during the year, 1971. The first unit of the Srisaïlam Project has been programmed to commence generation in the middle 1977. An amount of Rs. 2100.00 lakhs is required for the Civil works in the Fourth Plan for raising the Dam to a level of El. +590.00 and for taking up advance action on works such as power Tunnel, power house complex, Intake structure, Tail race channels, installation of cableways and ropeways.

(b) *Upper Sileru Hydro-Electric Scheme.*—The scheme was completed and the two units of 60 M.W. each were commissioned in 1967-68. Negative expenditure was shown because of realisation of some receipts in 1969-70.

(c) *Balimela Dam (Joint) Project.*—Balimela Dam is a joint project of the States of Andhra Pradesh and Orissa. Andhra Pradesh State will get half of the total flow into Balimela Reservoir at Balimela Dam and, below the Balimela Dam, the entire flow of river Sileru and tributaries is left for the exclusive

use by Andhra Pradesh. The Andhra Pradesh share of the cost of the Balimela Dam is fixed at Rs. 12.00 crores. Provision is made in the Fourth Plan to meet fully the Andhra Pradesh share of expenditure. The project works are under the control of Balimela Joint Control Board.

(d) *Andhra Pradesh Power House at Balimela (Continuing)*.—A Power House of Balimela Dam for utilising Andhra Pradesh share of waters is being constructed by Andhra Pradesh for its exclusive use. Certain civil works of this power house namely, Andhra Pradesh Power Tunnel and Leading Channel to Andhra Pradesh Power House, exclusively required for Andhra Pradesh Power House are being executed by the Balimela Project authorities. Exit cut and diversion tunnel are common for the Andhra Pradesh Power House and the joint project. These works will be completed during the Fourth Plan period. Provision is made in the Fourth Plan to meet fully the anticipated expenditure on these works.

Generation Schemes (New):

13.13. (a) *Andhra Pradesh Power House at Balimela (New)*.—This is a new scheme included in the Fourth Five-Year Plan. Certain Civil Works of the Scheme are already being executed along with Balimela Dam (Joint) Project. It is proposed to take up, the construction of the Andhra Pradesh Power House in 1972-73 to utilise fully the Andhra Pradesh share of waters released from Balimela Dam. Provision is made in the Fourth Plan towards the Civil Works relating to Power House, Switchyard etc., and towards payment to the generating machinery and other electrical equipment. Two units of 25/30 M.W. capacity are proposed to be installed at this Power House. The Power House is likely to be commissioned early in 1975-76.

(b) *Upper Sileru Hydro-Electric Scheme: Stage II*.—This is another new scheme included in the Fourth Five-Year Plan. It is proposed to instal a third unit of 60 M.W. capacity at the Upper Sileru Power House to utilise fully the water potential at Upper Sileru. The Upper Sileru Power House was designed for

installation of four units of 60 M.W. capacity each. Two units were commissioned in 1967-68 and the installation of a third unit is now proposed. The estimated cost of this work is Rs. 4.14 crores. Provision is made in the Fourth Plan to take up Civil works. The 60 M.W. unit is expected to be commissioned in 1975-76.

(c) *Investigations for new schemes.*—Investigations at a number of potential hydel sites are being carried out for selecting most suitable and economical sites for hydel power generation. Project reports for economical hydel generation are already prepared for certain schemes and investigations are in progress at some more sites. A provision of Rs. 60.00 lakhs is made in the Fourth Plan towards this item.

Transmission and Distribution Schemes :

13.14. (a) *Srisaïlam Transmission Scheme.*—This Scheme is originally a part of the Srisaïlam Hydro-Electric Project. But the transmission works included in this scheme require to be completed early irrespective of the commissioning of Srisaïlam Power House to meet the requirements of load demands in the Rayalaseema area. The following trunk transmission lines and major sub-stations will be completed during the Fourth Plan period. The works envisaged in the Scheme will be fully completed during Fourth Plan period.

132 KV lines :—

1. Srisaïlam-Cuddapah (196 KM).

132 KV lines :—

1. Gooty-Kurnool (88 KM).
2. Gooty-Dharmavaram (82 KM).
3. Srisaïlam-Cumbum (72 KM).

220 KV Sub-stations :—

1. Cuddapah 220 KV Sub-station.

132 KV lines:—

1. Srisailam. 2. Dharmavaram. 3. Ongole. 4. Cumbum. The scheme also provides for enhancement of power transformer capacity at Tadepalli and Bhimadole and for PLCC equipment.

(b) *Third Plan Transmission and Distribution Scheme.*—This is a comprehensive scheme envisaging the construction of 220 KV, 132 KV transmission lines and sub-stations and also distribution works in the entire State. The distribution works were completed by 1965-66 and since then only transmission lines and sub-stations works are being executed under this scheme. This Scheme will be completed in full during the Fourth Plan period. The following are the trunk transmission lines and sub-stations to be completed during the Fourth Plan period.

220 KV lines:—

1. Cuddabah-Chittoor-Tamilnadu Border line (180 KM).

132 KV lines:—

1. Kurnool-Srisailam (116 KM).
2. Chittoor-Kalikiri (65 KM).
3. Dharmavaram-Kalikiri (85 KM).

220 KV Sub-stations:—

1. Guzuwaka.

132 KV Sub-stations:—

1. Chittoor.
2. Kurnool.
3. Kalikiri.

This Scheme also provides for enhancement of power transformer capacity at Gundla and Bommuru and for PLCC equipment.

(c) *Fourth Plan Transmission Scheme and Railway Electrification.*—Railway Electrification is a separate

Scheme providing for the transmission lines required for Railway Electrification. Fourth Plan transmission scheme provides for construction of number of trunk transmission lines, and major sub-stations, installation of synchronous condensers, PLC equipment, enhancement of power transformer capacity at various load centres etc., required for strengthening the grid commensurate with the increasing generating capacity and connected load. The following transmission lines and sub-stations are proposed to be constructed during the first phase. The remaining works are likely to spill-over to Fifth Plan.

220 KV lines:

- (1) Kothagudem-Hyderabad (209 KM).
- (2) Kothagudem-Gunadala (125 KM).
- (3) Lower Sileru-Bommuru (107 KM).

132 KV lines:

- (1) Ring main lines around the twin cities (37 KM).
- (2) Hyderabad-Mahaboobnagar (86 KM).
- (3) Ramagundam-Pochampad (118 KM).
- (4) Chittoor-Renigunta (65 KM).
- (5) Nagarjunasagar-Nalgonda (60 KM).
- (6) Kothagudem-Khammam (73 KM).
- (7) Nellore-Sulurpet-Renigunta.
- (8) Adoni-Kurnool (77 KM).
- (9) Hyderabad-Sangareddy (60 KM).

220 KV Sub-stations:

- (1) Chittoor.
- (2) Gunadala.
- (3) Bommur.
- (4) Nellore.
- (5) Shapurnagar.

132 KV Sub-stations :

- (1) Mahaboobnagar.
- (2) Adoni.
- (3) Nalgonda.
- (4) Moula Ali.
- (5) Pochampad.
- (6) Chandrayanagutta.
- (7) Renigunta.
- (8) Khammam.
- (9) Sangareddy.

(d) *Fourth Plan Distribution Schemes.*—This is a part of the Fourth Plan Transmission and Distribution Scheme. This scheme provides for the sub-transmission and distribution works of all categories except agricultural services coming under Rural Electrification. The works relating to release of supply for Bulk Loads are also included in this Scheme. During the Fourth Plan period it is proposed to connect up additionally 7,00,000 services including about 1,50,000 agricultural services, under Plan and non-Plan Programmes. It is also proposed to construct additional sub-transmission and distribution lines and sub-stations commensurate with the load development so that reliable supply at satisfactory voltages is available to the consumers.

Rural Electrification :

Coastal Andhra :

13.15. According to the population census 1961, there are 12,570 inhabited towns and villages in the Coastal Andhra region. Of these 2,673 towns and villages (including 82 towns) were electrified upto 31st March, 1969. During the Fourth Plan period, it is proposed to electrify additionally 1,177 villages, taking the total electrified to 3,850. The percentage of villages and towns electrified by the end of the Fourth Plan will be 30.6 per cent. The progress of Rural Electrification in this region is comparatively slow

because this region is having comparatively better flow irrigation facilities. About 32,000 additional pumpsets are expected to be energised during the Fourth Plan period.

Rayalaseema :

There are 4,396 towns and villages in the Rayalaseema region. Out of these, 1,292 villages and towns were electrified up to 31st March, 1969. During the Fourth Plan period, it is proposed to electrify additionally 1,558 villages. Thus, at the end of Fourth Plan period 65% of the villages are expected to be electrified in this region. There were 41,769 pumpsets in this region as on 31st March, 1969. It is proposed to energise another 48,000 pumpsets during the Fourth Plan period.

Telangana :

In the Telangana region, there are 10,376 towns and villages. As on 31st March, 1969, 1,792 towns and villages were electrified. It is proposed to electrify 2,508 villages additionally in the Fourth Plan, taking the total electrified to 4,300. Thus by the end of the Fourth Plan about 41.44 per cent of the villages and towns in the region will stand electrified. It is proposed to energise about 72,000 agricultural pumpsets during the Fourth Plan period. At the end of Fourth Plan, the total number of pumpsets energised will be about 1,15,000.

(Rs. in lakhs)

Sl. No.	Name of the Scheme	EXPENDITURE IN 1969-70				REVISED OUTLAY IN 1970-71				
		C.A.	R	T	Total	C.A.	R	T	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
A. GENERATION										
(a) Spill-over										
1.	Kothagudem Stage I	..	34.82	13.49	96.62	144.93	4.63	1.98	13.22	19.83
2.	Ramagundam B Station	..	..	..	65.94	65.94	..	..	242.63	242.63
3.	Kothagudem Stage II	..	6.32	2.70	18.02	27.04	12.69	5.44	36.27	54.40
4.	Lower Sileru	..	152.23	65.22	..	217.45	205.23	87.95	..	293.18
5.	Kothagudem Stage III	..	171.74	73.59	490.68	736.01	128.23	54.96	366.39	549.58
6.	Srisaïlam Hydro-Electric Scheme	163.10	69.90	117.00	350.00	163.10	69.90	117.00	350.00	..
7.	Upper Sileru Hydro-Electric Scheme	..(—)	11.60	(—) 4.96	..	16.56	..	..	..	..
8.	Andhra Pradesh Share of Balimela Dam and Andhra Pradesh Power House at Balimela	..	66.67	28.57	..	95.24	63.17	27.28	..	90.45
New Schemes										
9.	Upper Sileru Stage II	..	..	..	..	..	..	..	..	..

10.	Nagarjunasagar Pumped Storage	..	..	..	..	..	..	..	..
11.	Andhra Pradesh Power House at Balimela	..	..	..	..	..	..	..	..
12.	Investigation	..	4.50	1.93	3.21	9.64	5.54	1.57	5.20	12.31
13.	Advance action on Fifth Plan schemes	..	..	..	..	..	..	..	..	..
	Transmission									
14.	Srisaillam Transmission Scheme	..	42.47	18.20	30.33	91.00	43.86	18.79	31.33	93.98
15.	Kothagudem Thermal scheme transmission	..	..	..	..	..	2.24	0.96	6.41	9.61
16.	Third Plan Transmission	..	59.21	25.38	42.30	126.89	9.39	4.03	24.05	37.47
17.	Fourth Plan Transmission	..	129.58	55.54	92.56	277.68	87.83	37.64	100.08	225.55
18.	Fourth Plan Rural Electrification	..	494.02	261.68	491.08	1,246.78	702.49	350.26	560.51	1,613.26
19.	Cluster schemes	..	..	..	..	..	18.44	0.87	2.51	21.85
20.	Rural Electrification under Special Development schemes for Rayalaseema	..	..	..	..	..	..	195.00	..	195.00
	Total	§	133.06	611.24	1,447.74	3,372.04	1,446.84	856.63	1,505.63	3,809.10

(Rs. in lakhs)

Sl. No.	Name of the Scheme	OUTLAY IN 1971-72				OUTLAY PROPOSED IN 1972-73			
		C.A.	R	T	Total	C.A.	R	T	Total
(1)	(2)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
A. GENERATION—(Contd.)									
(a) Spill-over									
1.	Kothagudem Stage I	8.40	3.60	24.00	36.00	7.25	3.11	20.71	31.07
2.	Ramagundam B Station	..	..	85.00	85.00	..	..	140.00	140.00
3.	Kothagudem Stage II	14.93	6.40	42.67	64.00	..	..	..	..
4.	Lower Sileru	404.60	173.40	..	578.00	700.00	300.00	..	1,000.00
5.	Kothagudem Stage III	299.13	128.20	854.67	1,282.00	151.67	65.00	433.33	650.00
6.	Srisaïlam Hydro Electric Scheme	196.00	84.00	140.00	420.00	233.34	100.00	166.66	500.00
7.	Upper Sileru Hydro-Electric Scheme	..	..	..	..	..	..	..	..
8.	Andhra Pradesh Share of Balimela Dam and Andhra Pradesh Power House at Balimela	140.00	60.00	..	200.00	119.00	51.00	..	170.00
(b) New Scheme									
9.	Upper Sileru Stage II	..	..	..	..	14.00	6.00	..	20.00

10.	Nagarjunasagar Pumped Storage	..	..	..	..	35.00	15.00	..	50.00
11.	Andhra Pradesh Power House at Balimela	..	..	..	..	14.00	6.00	..	20.00
12.	Investigation	5.83	2.50	6.67	15.00	2.00	3.00	8.00	13.00
13.	Advance action on Fifth Plan schemes	..	..	..	..	..	..	150.00	150.00
	Transmission								
14.	Srisailam Transmission Scheme.	28.00	12.00	20.00	60.00	14.00	6.00	10.00	30.00
15.	Kothagudem Thermal scheme transmission.	..	..	..	..	..	..	..	..
16.	Third Plan Transmission Scheme and Distribution	29.40	12.60	8.00	50.00	25.20	10.80	12.00	48.00
17.	Fourth Plan Transmission	151.20	64.80	84.00	300.00	259.00	111.00	230.00	600.00
18.	Fourth Plan Rural Electrification.	346.41	283.64	301.27	931.32	250.00	65.00	550.00	865.00
19.	Cluster schemes under Special Development	..	..	..	..	..	..	..	..
20.	Rural Electrification Schemes for Rayalaseema	..	190.00	190.00	..	..	..	..	..
	Total :	1,623.90	1021.14	1,566.28	4,211.32	1,824.46	741.91	1,720.70	4,287.07

(Rs. in lakhs)

Sl. No.	Name of the Scheme	OUTLAY PROPOSED IN 1973-74				TOTAL OUTLAY FOR THE FOURTH PLAN			
		C.A.	R	T	Total	C.A.	R	T	Total
(1)	(2)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
A. GENERATION—(Concl'd.)									
(a) Spill-over									
1.	Kothagudem Stage I					55.10	22.18	154.55	231.83
2.	Ramagundam B Station			19.27	19.27			552.84	552.84
3.	Kothagudem Stage II					33.94	14.54	96.96	145.44
4.	Lower Sileru	813.78	348.77		1,162.55	2,275.84	975.34		3,251.18
5.	Kothagudem Stage III	77.46	33.20	221.33	331.99	828.23	354.95	2,366.40	3,549.58
6.	Srisaïlam Hydro-Electric Scheme	224.00	96.00	160.00	480.00	979.54	419.80	700.66	2,100.00
7.	Upper Sileru Hydro-Electric Scheme					-11.60	-4.96		-16.56
8.	Andhra Pradesh Share of Bilamela Dam and Andhra Pradesh Power House at Balimela	12.82	15.50		28.32	401.66	182.35		584.01
(b) New Scheme									
9.	Upper Sileru Stage II	69.96	29.98		99.94	83.96	35.98		119.94

10.	Nagarjunasagar Pumped Storage	35.00	15.00	..	50.00	70.00	30.00	..	100.00
11.	Andhra Pradesh Power House at Balimela	70.00	30.00	..	100.00	84.00	36.00	..	120.00
12.	Investigation	1.18	2.35	5.89	9.42	19.05	11.32	28.97	59.37
13.	Advance action on Fifth Plan Schemes .. ..	..	..	350.00	350.00	..	..	500.00	500.00
Transmission									
14.	Srisaillam Transmission Scheme.	9.30	3.99	6.65	19.94	137.63	58.98	98.31	294.9
15.	Kothagudem Thermal scheme transmission. .. ..	..	..	..	..	2.24	0.96	6.41	9.61
16.	Third Plan Transmission ..	21.00	9.00	10.92	40.92	144.20	61.81	97.27	303.28
17.	Fourth Plan Transmission	248.90	105.67	300.00	654.57	876.51	374.65	806.64	2,057.80
18.	Fourth Plan Rural Electrification	197.15	65.11	422.87	685.13	1,990.07	1,025.69	2,325.73	5,341.49
19.	Cluster Schemes under Special Development .. ..	..	..	..	..	18.44	0.87	2.54	21.85
20.	Rural Electrification schemes for Rayalaseema. .. ..	..	..	..	..	..	385.00	..	385.00
Total :		1,780.55	754.57	1,496.93	4,032.05	7,988.81	3,985.49	7,737.28	19,711.58

C.A. =Coastal Andhra.

R=Rayalaseema.

T=Telangana.

14. LARGE AND MEDIUM INDUSTRIES

The level of industrial development in Andhra Pradesh is very low despite the vast natural resources the State is endowed with. The absence of the necessary infrastructure might have been one cause for a lack of investment in industry but this is no longer so. The strong Agricultural sector in the State provides the base for Industrial growth and in fact a stage has been reached when unless investment in the industrial sector is stepped up, the overall growth of the State's economy may be hampered.

Objectives and Strategy:

14.2. The objectives of the medium and large industrial development in the State are (a) to develop medium and large industries for the purpose of diversification of the economy and enable a gradual transformation of the State from a primary producing area to a comparatively industrialised area, and (b) to help a more balanced regional development by appropriate location of these activities.

14.3. The strategy that is adopted is one of provision of infrastructural facilities in terms of land, water, power and communications in select areas, promotional and financing activities by the Andhra Pradesh Industrial Development Corporation especially through the medium of joint ventures; provision of incentives to attract private capital to the State; and lastly attract central schemes by arranging concomitant facilities in the State. Further it is proposed to obtain maximum benefit out of the concessions that are likely to be made available by the Government of India and various institutions in respect of backward areas.

Review:

14.4. Keeping the need for diversification of income and rapid industrialisation, the State, despite heavy commitment under Irrigation and Power, has been increasing the outlay on the Industrial sector to the extent possible. The outlay on Large and Medium Industries has gone up from Rs. 10.57 crores in the Second Plan to Rs. 15.19 crores in the Third Plan and to Rs. 7.10 crores in the three Annual Plan years, 1966-

1969 These outlays have to be seen in the context, that, in the strategy of planning in the country, the development of industries, by and large, rests with the Central Government and the private sector. The allocations in the State Plan are generally meant for the provision of infrastructure facilities such as Power, Water, Land etc. while the bulk of the investment in the industrial projects have to come from the Central and Private Sector.

The Industrial production in the State has been increasing steadily. The general index of industrial production in Andhra Pradesh with 1960 as base rose to 179 by 1965 showing an increase of 79 per cent and in subsequent years, i.e., 1966 and 1967 the index moved down to 170 and 167 due to recessionary trends. Complete recovery from the recessionary trends was noticed in 1968 when the index reached 217 accounting for an increase of 21.2 per cent over the level of 1965. The growth was maintained in both 1969 and 1970 when the index rose further to 236 and 288 representing 8.8 per cent and 32.7 per cent increase over 1968 respectively. The performance of individual industry like Jute textiles, cotton yarn, Cement, paper, Machine tools, Cigarettes and sugar which showed higher growth rates contributed to the overall growth of the industry. It has however, to be remembered that because of the industrial base being narrow, despite this apparent growth, the contribution of the industrial sector to the total State income still remains very low.

The efforts of the State Government towards development of large and medium industries was primarily through the development of industrial areas and the activities of the Andhra Pradesh Industrial Development Corporation. Land was acquired in a number of areas and basic facilities like land, water, power and communications made available in these areas. Prominent among them are the areas in Visakhapatnam and Hyderabad. The position relating to individual areas is indicated separately.

The Andhra Pradesh Industrial Development Corporation had promoted a few large units in the initial stages and subsequently a number of medium sized

units. Prominent features in regard to the activities of this Corporation are given separately in this chapter. In addition, the State Government had taken up a scheme for incentives for the industries. The operation of the incentives, however, are in respect of industries that have commenced production after 1st January, 1969.

Fourth Plan Programmes :

It has been estimated in 1968, that an investment of the order of Rs. 400 to Rs. 450 crores in the Fourth Plan period will be required in the State to attain at least 8 to 10 per cent rate of growth in the Industrial sector is of the order of Rs. 117 crores with an employ- This estimated outlay covers the investment in the Central, State and Private sectors. It is doubtful whether this order of investment would really be forthcoming. A brief analysis of the anticipated investments in private and Central sector would be relevant here.

At present there are 153 Large and Medium Scale Industries in the State with a capital outlay of Rs. 280 crores. Out of this, the outlay on the Central, Public sector is of the order of Rs. 117 crores with an employment potential of 26,000. Another 50 industries in respect of which letters of intent, have already been issued, are expected to come up in the next 2 to 3 years with an outlay of Rs. 63 crores in the Private Sector, providing employment for nearly 13,000 persons. One of these is a Horlicks factory to be set up at Dowleswaram, East Godavari District, which is expected to step up considerably the growth of dairying in East and West Godavari Districts. The State Government have also initiated efforts to create interest among the reputed business houses to set up Industrial units in crucial sectors in the backward areas of the State; particularly in the Scheduled areas and in Telangana and Rayalaseema. As a result of these efforts, it is expected that an investment of the order of Rs. 150 crores under Private Sector will take place in the State during the Fourth Plan period.

In the Central sector an allotment of the order of Rs. 3,150.97 crores has been made for the development

of Industries and Minerals. A list of Central sector schemes located in the State and the outlay provided for them in the Central Plan is given in Annexure I.

It is seen from the National Plan that for the three steel plants located at Visakhapatnam, Salem and Hospet an outlay of the order of Rs. 110.00 crores is made. It is assumed that on *pro-rata* basis, an outlay of the order of Rs. 35.00 crores will be spent on the steel plant at Visakhapatnam. For the new fertiliser projects which are proposed to be taken up under public sector, an outlay of the order of Rs. 262.00 crores is made in the National Plan. Subsequent to this, the Government of India have decided to locate a fertiliser plant at Ramagundam. It is not known how much out of this will be spent on the fertiliser plant at Ramagundam. The Government of India have also since approved the setting up of a Zinc Smelter plant at Visakhapatnam at a cost of about Rs. 22.00 crores. Another Central Sector project that is being set up in Hyderabad is the Bharat Dynamics. The Government of India have made a provision of Rs. 25.00 crores to develop Rakha Mines as well as the Lead Copper deposits of Agnigundala. It is not known how much out of this outlay will be spent in Andhra Pradesh on copper deposit scheme at Agnigundala. Considering all these factors, it is estimated that an investment of the order of Rs. 150 crores will be spent in the State under Central Sector. Having regard to the fact that an investment of the order of Rs. 250 crores under central sector is necessary in order to attain a growth rate of 8 to 10 per cent under Industries, and also due to the fact that the investment under Central Sector in the State in the earlier plans was scanty it is necessary that some of the new projects to be taken up under Central Sector should be located in the State.

The State plan effort in developing Large and Medium Industries in the State broadly consists in developing certain growth areas by providing the necessary infrastructure facilities and to offer incentives for attracting capital and entrepreneurs to establish new large and medium scale industries in the State. Keeping this in view, an allotment of Rs. 11.90 crores has been made for large and medium industries. Of this, as much of Rs. 8.53 crores has been allotted

for programmes implemented by the Director of Industries, while the balance of Rs. 3.38 crores has been made towards State's participation in the Andhra Pradesh Industrial Development Corporation.

Out of the sum of Rs. 852.53 lakhs allotted for Director of Industries, a sum of Rs. 462.96 lakhs is proposed to be spent on the scheme of Industrial Development areas, Rs. 109.19 lakhs on Incentives and Rs. 240.61 lakhs on Mehadrigedda Reservoir scheme.

Industrial Development Areas :

14.6. An important programme taken up by the State Government for encouraging the location of industries in the State was the establishment of Industrial Development areas. The aim of this scheme is to acquire and develop large areas of land at strategic places, in the State which will be the growth Centres for development in future. This scheme would avoid the setting up of industries in a haphazard way and would help the entrepreneurs.

Out of the outlay of Rs. 462.96 lakhs earmarked for Industrial Development areas, a sum of Rs. 113.28 lakhs is proposed to be spent in Coastal Andhra, Rs. 50.66 lakhs in Rayalaseema and Rs. 299.02 lakhs in Telangana.

Coastal Andhra :

An area of 2,000 acres has been acquired in and around Visakhapatnam for providing land to certain Central sector projects like Messrs. Bharat Heavy Plants, Zinc Smelter plant and also for setting up industries under private sector. An extent of 500 acres has already been allotted to Bharat Heavy Plate and Vessels Limited. During the Fourth Plan period, it is proposed to acquire and develop a further area of 2,000 acres to provide land for setting up factory units for manufacture of ancillaries in the wake of establishment of steel plant at Visakhapatnam.

It is also proposed to set up an Industrial Development area at Kakinada by taking over 400 acres of land near the Kakinada port which is now in the possession of Animal Husbandry Department.

In Dowleshwaram area it is proposed to develop an area measuring 168 acres of land originally acquired for Andhra Paper Mills into an Industrial Development area. Out of this an extent of 63 acres has already been allotted to 3 entrepreneurs for the manufacture of Milk Food, crucibles *etc.* An extent of about 70 acres has been acquired near Industrial Estate, Vijayawada for setting up large and medium Industries. Development works like road, water and drainage works have yet to be taken up. Taking advantage of the forest land available on the Vijayawada—Guntur highways, it is proposed to locate an Industrial Development area at Mangalagiri, by acquiring an extent of 108 acres of land. It is proposed to establish an Industrial Development area of about 1,000 acres in the vicinity of the Nagarjuna Sagar Dam (Right Canal). An extent of 100 acres has to be acquired.

Rajalaseema :

An extent of 809 acres of Government land is available at Cuddapah for the establishment of Industrial Development area. The work of laying of an approach road to the above area has been undertaken and out of this an extent of 35 acres has been allotted to Messrs. Jyoti Chemicals Limited for the manufacture of Berium Chemicals. It is proposed to develop during the remaining years of the Fourth Five Year Plan this area and also to undertake works to provide water supply facilities to this area.

Telangana :

Lands have been acquired in a number of places in and around Hyderabad for the establishment of Industrial Development areas and Central Sector Projects, *viz.*, Uppal 446 acres, Moulali 316 acres, Nacharam 700 acres, Charlapalli 2,683 acres, Kanchanbagh 601 acres, Jeedimatla and Kutbullapur 1,545 acres, Kukutpalli 1,100 acres, Balanagar 453 acres, Ramachandrapuram 6,455 acres. Development works such as laying of roads, water lines, *etc.*, have been undertaken in the Industrial Development areas of Uppal, Moulali and Nacharam. An extent of about 13,150 acres of land has been allotted to private entrepreneurs and Central Sector Projects like Modern Bakeries,

Atomic energy complex, 2nd Cable factory, D.M.R.C., H.M.T., Synthetic Drugs project, Bharat Heavy Electricals Limited and Bharat Dynamics. About 60 private Industries have also come up in the above area, with a capital investment of Rs. 19.56 crores. The lines of manufactures range from Pharmaceuticals, Chemicals, Machine-Tools, Cotton yarn, Laminated Springs, Railway Signaling Equipment, Starch and Insecticides. During the remaining years of the Fourth Five Year Plan, it is proposed to take up development works such as laying of roads, water lines, drainage works etc., in the industrial development areas in Kukatpalli, Jeedimatla, Balanagar and Charlapalli. An additional area of 1,000 acres of land is also proposed to be acquired and developed around Hyderabad to cater to the growing needs of Industries. The Bharat Heavy Electricals is surrendering an area of about 3,000 acres out of the total area of about 6,000 acres allotted to them as it is not required by them. It is proposed to develop this area after taking over from the Bharat Heavy Electricals.

The Fertiliser Corporation of India requires an area of 900 acres for the Ramagundam fertiliser factory. As part of its offer to provide land free of cost for the project, the State Government have to make available this land. Out of this land, an extent of 424 acres is under the possession of Messrs. Singareni Collieries and the remaining land has to be acquired. Besides this, an area of about 2,000 acres has already been acquired and it has to be developed to make available to prospective industrialists. About 950 acres which was originally acquired for Messrs. Hindustan Allied Chemicals Limited for their proposed fertiliser factory has been taken back to set up an Industrial Development area. This area will be developed to make available to the Industrialists. It is proposed to get an extent of 28 acres of land at Bandla Quarry Camp, Vijayapuri from Chief Engineer (Nagarjuna Sagar) Canals and developed as an Industrial Development area.

Incentives :

14.7. In order to attract more industries to the State and also to encourage the local entrepreneurs to

set up various types of industries in greater numbers, the State Government have proposed to give liberally incentives such as tax relief and power subsidy. Under this scheme, so far 21 industries have got benefit and an amount of Rs. 0.19 lakh has been paid to them. According to the latest orders of the Government all industries that have commenced production after 1st January, 1969 are eligible for the grant of the incentives. An outlay of Rs. 109.19 lakhs has been made for this scheme—Rs. 54.05 lakhs for Coastal Andhra, Rs. 18.04 lakhs for Rayalaseema and Rs. 37.10 lakhs for Telangana.

Mehadrigedda Reservoir Scheme :

14.8. The Water available from Thatipudi Reservoir scheme at Visakhapatnam is more or less fully committed to the existing industries and institutions. With a view to supplying water to the new industries coming up in and around Visakhapatnam, the Government have sanctioned the Mehadrigedda Reservoir scheme. The project is designed to yield 70 lakh gallons of water per day. The work on the project was taken up during 1969-70 and it is expected to be completed by the end of 1972-73. An outlay of Rs. 2.40 crores has been made for this project.

Andhra Pradesh Industrial Development Corporation :

14.9. The Industrial Development Corporation was set up to serve as nucleus for and to give fillip to industrial activity and encouraging managerial talent from within and outside the State to set up industries in the State.

Andhra Pradesh Industrial Development Corporation Limited was incorporated under the Companies Act, 1956 on 16th December, 1960, with an authorised Capital of Rs. 10.00 crores. The present paid-up capital is of the order of Rs. 5.62 crores. The State Government is the only contributor/subscriber to the share capital of the Corporation. The functions of the Corporation are to: Provide finance in the form of long or medium term loans; Gurantee loans from other financial institutions and also guaranteeing deferred payment for the import of plant and equipment; Under-

write new issues of shares; Participation in the share capital of new industrial projects without controlling interest; Direct promotion of Industries; and Acting as holding Companies for specific Projects.

The industries that are eligible for financial assistance from the Corporation are joint stock companies, partnership firms engaged or to be engaged in Andhra Pradesh only.

The Corporation sanctioned during the Third Five Year Plan, financial assistance to 38 industries by way of under-writing, investments, guarantee and Loans, the aggregate of which comes to Rs. 840.00 lakhs. Out of this amount the Corporation invested during this period Rs. 212.49 lakhs in various industries. The employment potential generated upto the end of the Third Five Year Plan was of the order of 11,000 persons.

An important policy direction of the Corporation was in terms of joint ventures—with private enterprise. The Corporation promoted three Public Limited Companies in association with private entrepreneurs for the manufacture of (1) Ball Bearings; (2) Glass Products; and (3) High Tension and Low Tension Insulators. Out of these three Companies promoted, the project promoted for H.T. and L.T. Insulators could not materialise due to the difficulty in obtaining foreign technical collaboration. The other two companies *viz.*, M/S Indo Nippon Precision Bearings Limited, M/S Associated Glass Industries Limited have come into existence.

Indo-Nippon Precision Bearings Limited was originally promoted as a joint venture in association with a private party, but later on as a result of difficulties connected with the adverse affects of devaluation, the project had to go through an unusually long gestation period. The capital outlay of the project is of the order of Rs. 3.53 crores. The Company has now become a Government Company after the private entrepreneur withdrew voluntarily from the Company. The factory has gone into production and the products have come into the market. The foreign collaborators have also appointed this company as their Sole Selling agents for their products which are still imported in

the country. The Corporation's total investment in this unit is of the order of Rs. 164.95 lakhs.

Associated Glass Industries Limited is a very important industry designed for the manufacture of hallow ware and crystal ware products of a sophisticated nature. The collaborators of this project are M/S Komplex of Hungary. The capital outlay of the projects is of the order of Rs. 3.50 crores. The Plant and equipment have been received and installation work has commenced. The plant is likely to go into production by the end of 1971. The Corporation's investment in this Company is of the order of Rs.40 lakhs.

Apart from the above two Companies, the Corporation had to take up Republic Forge Company Limited for which the Corporation gave a deferred payment guarantee to Messrs. Seri Renault of Franco for the supply of plant and equipment. The inability of the Company to fulfil the obligations resulted in the Corporation having to take over the Company which is now being run as a State Sector Unit. This plant has already gone into production and the products are in the market. The Corporation's investment by way of share capital is Rs. 50.00 lakhs, by way of loans Rs. 183.63 and a guarantee for Rs. 103 lakhs.

The notable achievement of the Corporation during the Third Five Year Plan is one of preparing a ground for setting up industries and creating a congenial atmosphere for the healthy growth of industries in the State. It was estimated that the total cost of the projects set up with financial assistances from the Corporation amounted to Rs. 52 crores of which the Corporation has itself given about Rs. 2.50 crores.

Subsequent to the Third Five-Year Plan the Corporation's line of activity has slowly changed based upon the experiences gained during the Third Five-Year Plan period. Accordingly the line of medium type of industry was considered more prospective and encouraging from all points of view *i.e.*, less outlays, and quicker maturity.

The efforts of the Corporation in pursuing this policy proved to a greater extent successful, and

a number of medium sized joint ventures came into existence. In these projects the management is shared equally by the Corporation and the private entrepreneurs on the basis of equal investment although day to day management is entrusted to the private entrepreneurs.

M/s Gangappa Cables Limited was set up in association with a private party for the manufacture of 600 tons of winding wires per annum in Hyderabad. The capital outlay on the project is Rs. 50 lakhs. The investment of the Corporation is of the order of Rs. 11.60 lakhs on a equal basis with the private party.

M/s Alkali Metals Private Limited has been designed to manufacture 240 tons of Sodium Metal per annum in Hyderabad. The capital outlay of the project is about Rs. 13 lakhs. The Corporation's investment is Rs. 2.5 lakhs. The unit is set up entirely with indigenous equipment and know-how and is the first of its kind in the country for manufacture of this product. This project was set up as an ancillary to the Indian Drugs and Pharmaceutical Unit at Hyderabad. M/s Kumar Chemicals and Fertilizers Private Limited is another unit set up in association with a private party for the manufacture of 1,500 tons of Potassium Carbonate, B1-Carbonate and other Chemicals used by the Pharmaceutical Industry. The capital outlay of the project is about Rs. 21.00 lakhs. The Corporation's investment is Rs. 3.5 lakhs. The plant has gone into production. M/s Ferro Electrics Private Limited is another joint venture set up to manufacture 100 tons of Ferrite Rods per annum with indigenous know-how obtained through National Physical Laboratory. The capital outlay is Rs. 15 lakhs. The Corporation's investment is Rs. 2.5 lakhs. Andhra Mechanical and Electrical Industries Limited is a project set up in Hyderabad in association with M/s Industrial Agricultural and Engineering Company (Hyderabad) Private Limited, a well known Engineering firm for the manufacture of Switch-gear items. The capital outlay is Rs. 25 lakhs. The Corporation's investment is about Rs. 3 lakhs only. The plant has gone into production.

The Corporation has on hand proposals for setting up the following projects during the next three years of the Fourth Plan i.e. 1971-72, 1972-73 and 1973-74:—

(1) Automobile Tyres and Tubes. Capital outlay of Rs. 8 crores.

(2) Nylon Filament Yarn. Capital outlay of Rs. 12 crores.

(3) Electronic Components. Capital outlay of Rs. 2 crores.

(4) Scooters. Capital outlay of Rs. 1.50 crores.

(5) Pig Iron Project. Capital outlay of Rs. 2 crores.

While these are at different stages of follow-up and implementation some more industries like Furfural, Salt based industries, are in the process of investigation. The Ball Bearings Project which has already gone into production is envisaging expansion of its capacity to take advantage of buoyant conditions of the market for its products.

The total allotment from the Plan to the Corporation is Rs. 337.87 lakhs.

ANNEXURE

<i>Name of the Central Project located in the State.</i>	<i>Outlay proposed in the National IVth Plan</i>
	<i>(Rs. crores).</i>
1. Bharat Heavy Plates and Vessels.	13.08
2. Seamless Tube Plant.	2.20
3. Bharat Heavy Electrical Ltd., Ramachandrapuram.	4.00
4. Bharat Heavy Electrical Limited.	0.51
5. Bharat Heavy Electrical Limited.	2.00
6. Hindusthan Machine Tools Limited.	3.00
7. Second Cable Factory.	5.50
8. Synthetic Drugs.	1.00
9. Hindusthan Co-opper.	12.50
10. Hindusthan Shipyard Improvement.	19.00
11. Steel Plant at Visakhapatnam.	35.00
	<hr/>
Total.	87.79
	<hr/>

15. VILLAGE AND SMALL SCALE INDUSTRIES

The small scale industries have an important role in providing employment, ensuring a more equitable distribution of income and facilitating effective mobilisation of resources of capital and skills which might otherwise remain unutilised. They also help in reducing regional imbalances.

The small industries are important also as a source of developing entrepreneurial skill for further industries. Small industries have also an important role to play as ancillary to large industries.

In addition, the role of handicrafts has to be appreciated in the context of State like Andhra Pradesh with its tradition of a number of handicrafts. The leather industry is also an important one as a substantially number of people are dependent on leather industry.

Objectives and strategy:

15.2. The objectives of village and small industries development in the State are—

(a) to promote a number of small industries primarily with the object of initiating a process of diversification and industrialisation of economy in various parts of State;

(b) to promote labour intensive small industries especially in scarcity areas with a view to provide employment and regional balanced development;

(c) to encourage small industries in important industrial centres to enable the development of small industries as ancillary to large industries;

(d) to promote the village industries especially handicrafts and leather industry as decentralised employment oriented scheme for the weaker sections.

15.3. The strategy adopted for the development of small industries is in terms of—

(a) provision of tool room workshop facilities for training;

(b) provision of number of quality marketing centres for small industries;

(c) establishment of laboratories for this purpose;

(d) provision of intensive extension and propaganda and training for small industrialists;

(e) provision of physical infrastructural facilities in terms of industrial estates and assisted private industrial estates in growth centres; and

(f) on a very marginal scale provision of financial assistance and incentives on a very marginal scale.

15.4. In respect of handicrafts the approach is one of the assistance to the handicrafts development in terms of financial assistance and marketing facilities through the co-operative form of organisation, setting up of common facility centres, providing for quality marking and provision of training facilities in this regard. In regard to leather industry, the major emphasis is on developing industry on scientific lines through introduction of modern tools and equipment, power operated machines, provision of adequate and marketing training facilities. In general, it is proposed to make use of co-operative form of organisation for certain industrial ventures by provision of managerial assistance and share capital assistance.

Review :

15.5. During the Third Plan period, Rs. 5.32 crores and in subsequent Annual Plans 1966-69 an amount of Rs. 1.12 crores was spent on village and small industries. During this period number of units were started by the Government. Prominent among them are the ceramic unit at Gudur, the steel trunks unit at Samalkot, Production centre at Kakinada, lock manufacturing centre at Tadukupeta, Chittoor, 6 carpentry training-cum-production centres at Srikakulam, Eluru, Guntur, Cuddapah, Kurnool and Nellore.

Consequent on the establishment of Andhra Pradesh Small Scale Industrial Development Corporation, the production-cum-training centres which

were till then under the control of the Government were transferred to the Corporation and the activity of the Department was confined to rapid promotion of Small Scale Industries. For any industrialisation, promotional activity and campaign, conceived with imagination are essential factors. An intensive campaign was therefore launched in 1967 to secure applications from Small Scale Industrial Units for the supply of machinery on hire-purchase basis through National Small Scale Industrial Corporation. The response was commendable and applications for machinery worth Rs. 10.98 crores were received. The Government have also established a tool room centre at Hyderabad. The idea behind this scheme was the imparting of training facilities to technical personnel in tool, die and mould-making and under taking servicing facilities to small scale industrial units in designing and developing machine tools and recommending measure for standardisation of components of dies, gigs and other tools. During the period 1966-69 the ten departmental quality marking centres set up at Rajahmundry and at Sanathnagar were at various stages of implementation.

During the past 20 conventional industrial estates (including two rural industrial estates) 15 assisted private industrial estates were set up at a cost of Rs. 346 lakhs.

In Coastal Andhra so far 965 plots and 232 sheds were made available for occupation to the small industries. Actually 95 sheds and 214 plots have been occupied. Out of 95 sheds occupied 74 are working and out of 214 plots occupied only 47 have raised buildings. In Rayalaseema region, the sheds have a capacity of 41 factory sheds and 279 developed plots. Out of 41, 39 have been occupied and 33 are working at present. Out of 279 developed plots 148 have been occupied but only 44 occupied and constructed factory estates. In respect of Telangana 398 sheds and 363 developed plots were made available. Out of 398, 350 units have been occupied and only 250 units are working. Out of 363 developed plots 223 have been occupied and 110 units are working. In respect of handicrafts during the Third Plan and subsequent Annual Plans emphasis was laid on trading, design especially quality

in improvement and its control, provision of financial assistance, in the shape of working capital loans and grants towards managerial assistance to the handicrafts co-operative societies. Common facility centres were also set up for the artisans which involve installation of small machines. A model tannery unit was taken up in Guntakal during 1967-68 with the object of improving the quality of leather which is being produced locally by rendering technical assistance and extending service facilities by introduction of modern tools implements, equipments machines etc., production of certain leather goods and lastly training of candidates in the fabrication of all types of leather on scientific lines. Hyderabad tanneries and utility leather goods centre at Mushirabad which was under the Directorate of Industries subsequently transferred to Andhra Pradesh Small Scale Industries Corporation.

The following table will show the expenditure incurred during the Third Plan period and in the three Annual Plan periods.

	(Rs. in lakhs)	
	<i>Expenditure incurred in Third Plan period.</i>	<i>Expenditure incurred during 1966- '9.</i>
1. Small Scale Industries	211.27	33.34
2. Coir Industry	4.23	1.76
3. Industrial Estates	239.62	29.45
4. Handicrafts	16.42	16.36
5. Industrial Co-operatives	6.19	0.42
6. Leather Industry	34.07	20.65
7. Khadi and Village Industry	7.71	0.42
8. Sericulture	9.24	0.90
9. Rural Industries	—	8.10
Total	531.75	111.40

Fourth Plan Schemes:

15.6. In the Fourth Five-Year Plan, the total allocation of Rs. 277.28 lakhs is made out of which Rs. 116.54 lakhs is meant for small scale industries

Handicrafts accounts for Rs. 57.19 lakhs and the development of industrial estates Rs. 45.27 lakhs. Leather industry is given importance and an amount of Rs. 39.11 lakhs is provided. Coir Industry and industrial co-operative accounts for Rs. 4.40 lakhs and Rs. 3.85 lakhs respectively. Towards khadi and village industries a provision of Rs. 2.42 lakhs is made.

Small Scale Industries :

15.7. One of the important schemes proposed to be taken up during the Fourth Plan period relates to the strengthening of the Tool-Room Workshop. Out of the total allotment of Rs. 116.54 lakhs for this head of Development, as such as Rs. 36.06 lakhs has been allotted for Tool-Room Servicing Workshop scheme. This centre has been designed to undertake making and supplying of cutting tools, cutting dies, gigs and fixtures involving a high degree of technical skill and precision. The centre has already made pressure die casting dies for several firms including M/s Hyderabad Usha Works and Electronic Corporation of India. Under the expansion programme, it is proposed to purchase one more pressure die-casting machine of 250 tonnes capacity and Tool-Milling Machine with Jig Boring and Jig Grinding attachments. To meet the demand for pressure die-castings, the unit has been working second shift. The unit has also been imparting training to the graduate apprentices in tool design, drawing and estimates, planning and production of tools dies etc. and manufacture of components with dies and tools. It is proposed to extend this training facility to the L.M.E. and I.T.I. candidates.

Under block loans to State Aid to Industries Act an amount of Rs. 17.29 lakhs will be disbursed to the needy units. Under the scheme for quality marking of light Engineering goods at Sanathnagar it is proposed to undertake quality marking of light Engineering products in order to improve the quality and attain standardisation and uniformity in the quality of products. It is proposed to introduce quality marking in respect of number of items such as—Buckets, Agricultural implements, Cycle parts, Auto-spares, Sheet moulding etc. Under the programme for quality marking of small scale industries products, a

Centre has been set up at Rajahmundry for quality marking of the Ceramic products such as Mangalore tiles, Graphite crucibles, stoneware pipes, refractory bricks, pickle jars and acid jars etc.

Lack of testing laboratory facilities is one of the impediments in the manufacture of quality products by small scale industries units. With a view to remedying this, action was taken to set up a testing laboratory at Hyderabad. Similar laboratories will be set up at Vijayawada and Anantapur.

With a view to making use of advanced technology available in the country and to establish new Industries with sophisticated machinery, Mechanical and Electronics wings have been set up in the Directorate of Industries to help the entrepreneurs. These wings will act as liaison between the small entrepreneurs and Technical Institutes.

With a view to stimulating the growth of small scale industries at the district level, seminars and conferences were conducted at Anantapur, Medak, Krishna, Mahaboobnagar, Karimnagar, Warangal, Chittoor and other places to study the problems of the Small Scale Industrial Units and to suggest measures for their effective functioning.

The Department of Industries also extends financial assistance to a limited extent particularly to such of the small units which normally find it difficult to get the same from Commercial Banks.

The role of industrial estates in the development of small industries has been amply emphasised. The major emphasis in the Fourth Five-Year Plan is on strengthening the existing industrial estates and enabling the fuller utilisation of the facilities already created by appropriate measures including provision of missing links in the physical facilities. With this object in view, an amount of Rs. 45.27 lakhs is made in the Fourth Plan. The region-wise break-up in the allocation is Rs. 10.04 lakhs for Coastal Andhra, Rs. 3.38 lakhs for Rayalaseema and Rs. 31.85 lakhs for Telangana. In Coastal Andhra, it is proposed to complete balance of civil works like the development of vacant areas and completion of roads. In addition, development of rural industrial estates at Narasaraopet and

setting of assisted private industrial estate at Ongole is proposed. In respect of Rayalaseema, it is proposed to take up works for completing the balanced civil works and providing adequate water supply. In respect of Telangana, it is proposed to strengthening the existing estates and also set up an industrial estate at Zaheerabad.

Handicrafts :

15.8. Andhra Pradesh has through centuries established a reputation for the number and exquisite variety of its handicrafts. Many of these crafts are unrivalled in their beauty, skill of workmanship and uniqueness of design which have earned for themselves an appreciation both in the home and foreign markets. The important handicrafts of the State are Pile Carpets and Durries of Eluru and Warangal. Ivory and Horn works of Visakhapatnam and Secunderabad, Wooden toys of Kondapalli, Etikoppaka, Nirmal and Tiruchanur, Bidriware, Himree and Nirmal work of Hyderabad. Silver Filigree work of Karimnagar, Kalamkari work of Masulipatnam and Kalahasti, Grass mats of Mahaboobnagar, the Seamle's Quilts of Kuppam, Tie and Dye Weaving of Pochampalli and Chirala, Stone Carving of Durgi, Beaded Embroidery of Pembarthy and Nalgonda, Handmade Lace of Narsapur, Artistic wood work of Udayagiri, Musical Instruments of Pitapuram, Bobbili and Jaggayyapet, and Metalware of Pembarthy.

In proposing the schemes in the Fourth Five-Year Plan, the growing demands for the Handicrafts articles and their export potentials have been kept in view. The need for expanding the production and for improving the designs so as to keep pace with the changing tastes have also been given due consideration. The production programme of Handicrafts is mostly in the co-operative fold. The Handicrafts Co-operatives are in need of financial assistance not only to maintain the tempo of production but also to expand it and provision has accordingly been made.

Schemes for artisans :

15.9. *Common facility centres.*—Next important type of assistance given to the artisans is in the shape

of setting up of common facility centres. In these centres facilities like lathes, shaping and buffing machines, looms and tools, dyeing and carding equipment etc., are provided. The popularity of the centres so far established and the active manner in which the equipment and facilities offered through these centres have been utilised by the artisans has given rise to a demand for more common facility centres on the one hand for expansion of some of the existing centres, on the other to meet this demand and to extend the common facility centres to as large a number of crafts as possible, this scheme has been taken up.

Training.—Training of artisans has been an essential feature of the programmes of development in Handicrafts sector from the beginning. The training programme has to fold objectives, viz., the revival of traditional crafts on the one hand and training of artisans in crafts the product of which have greater demand, both within and outside the country. There are at present 7 training centres, 3 in Coastal Andhra and 2 each in Rayalaseema and Telangana. It is proposed to continue these training centres and also to expand it wherever necessary during the Fourth Plan period.

Quality marking.—Andhra Pradesh is the Second State to introduce quality marking in Handicrafts. Goods valued at over Rs. 14 lakhs are being quality marked each year. There are at present 4 quality marking centres in the State, two in Coastal Andhra and two in Telangana. In view of the fact that considerable portion of the products are being exported and since some of the exporters insist on quality marking, it is proposed to continue these Centres during the Fourth Plan period.

Handicrafts Emporium at New Delhi.—The emporium in New Delhi was started in August, 1967 and it is progressing well. As against the purchase of articles worth Rs. 6.04 lakhs effected in 1970-71, the receipts from sales effected by the emporium came to Rs. 6.53 lakhs. Besides this, the emporium has also taken up direct export business. A provision of Rs. 4.42 lakhs is made for running this emporium.

Scheme for construction of show room buildings for handicrafts emporium.—The need for well equipped

show rooms with adequate scope for display situated in important marketing centres has become more important than before since the development of marketing techniques have come to play an important role in increasing the sales. As most of the emporium run by the Department are short of accommodation and do not have sufficient scope for putting up proper displays, it is proposed to construct show rooms for the emporia run by the Department. A provision of Rs. 57.19 lakhs has been made for the development of handicrafts Rs. 26.86 lakhs for Coastal Andhra, Rs. 13.31 lakhs for Rayalaseema and Rs. 17.02 lakhs for Telangana.

Leather Industry :

15.10. The main object of this scheme is (i) to improve the quality of foot-wear locally manufactured on scientific lines, by introduction of modern tools and equipment, and power operated machines, (ii) to train up the qualified candidates in the manufacture of foot-wear and leather goods on modern lines to cater to the increasing demand, (iii) to give employment to a large number of persons having footwear manufacture as their hereditary profession and (iv) to build up export of footwear through the agency of N.S.I.C., New Delhi. The scheme has been completely revised on commercial lines during 1964-65.

The unit at Vijayawada has been executing several bulk orders placed on it by various Government Departments, viz., Fire Services, Inspector-General of Police, Road Transport Corporation and Municipalities etc. For the continuance of this unit a provision of Rs. 13.39 lakhs has been made in the Plan. The development of model tannery in Guntakal which was started in 1957-58 is one of the important features of the Plan. In addition, to provide financial help to the deserving leather artisans and tanners every year a loan assistance to the tune of Rs. 3.88 lakhs is made in the Plan.

Industrial Co-operatives :

15.11. Under a scheme for managerial assistance to select Industrial Co-operatives the Services of Co-operative Sub-Registrars and Senior Inspectors are

placed at the disposal of the societies which are in need of constant guidance. The salary of the Manager will be borne by Government and the Society on a tapering basis. It is proposed to extend this assistance to 15 societies during the Fourth Plan.

During the last 3 years of the Fourth Plan it is proposed to revive 50 dormant societies each year by enabling the societies to raise their borrowing capacities by sanctioning share capital loan of Rs. 100 to each member.

A scheme envisaging subsidising the difference of interest between the concessional rate and the usual rate of interest at which the Co-operative Banks advance loans to the Industrial Co-operatives is also proposed.

Khadi and Village Industries :

15.12. During the years 1968-69 and 1969-70 Government have permitted the Khadi Board to dispose of the accumulated stocks allowing 5% additional rebate while agreeing to reimburse the amount involved. The Khadi Board has claimed an amount of Rs. 2,14,476 under this account, out of which an amount of Rs. 50,000 was paid so far. Provision was made to pay off the out-standing balance in 3 instalments during 1971-72 to 1973-74.

16. MINERAL DEVELOPMENT

Andhra Pradesh is richly endowed with a variety of minerals. The important minerals found in the State are Coal, Manganese, Iron ore, Limestone, Mica, Barytes, Asbestos, Quartz and Clay. Apart from these, deposits are also found of graphite, steatite, copper, lead, slate, marble, gypsum, gold and diamond. Though the State is rich in minerals, the level of mineral exploitation and utilisation has remained some what unsatisfactory.

16.2. Coal is the most important mineral in the State, accounting for nearly 90 per cent of the total value of mineral production. The State's coal reserves are estimated at 1,000 million tons proved to a depth of 1,000', probable reserves calculated to a depth of 2,000' being of the order of 1,320 million tons. Coal deposits are concentrated in Khammam, Adilabad and Karimnagar Districts. The coal-bearing areas have been given on lease to M/S. Singareni Collieries Company Limited. In all, there are 14 mining leases, covering a total of 800 square miles. Out of these leases, however, the leases that are worked are Kothagudem, Yellandu, Ramagundam and Tandur. The Singareni Coal is of steam raising, non-coking type, and contains high ash content. This coal has been found suitable for the manufacture of producer gas and for production of domestic coke through low temperature carbonisation process. The coal reserves open wide prospects for development of super thermal power stations in the State. The production of coal in the year 1969-70 was 37.7 lakh tonnes, valued at Rs. 14.22 crores.

16.3. Extensive deposits of limestone are found in the State suitable for manufacture of cement and for use in other industries. Limestone from the deposits in Guntur, Krishna, Kurnool, Adilabad and Karimnagar is being utilised for manufacture of cement. High-grade limestone from certain deposits in Anantapur, Kurnool and Guntur districts is useful in chemicals, sugar, paper and other industries. Limestone deposits are also found in Cuddapah, Mahboobnagar, Hyderabad, Nalgonda and Visakhapatnam districts. Deposits of flux grade limestone (for use in steel metallurgy) have been proved in Krishna district. The

production of limestone in the State during 1969-70 was 21.52 lakh tonnes, valued at about Rs. 95 lakhs.

16.4. Mica is a mineral of strategic importance, used mainly in the electrical and electronics industries. Andhra Pradesh ranks next to Bihar and Rajasthan, in the production of mica. The entire production comes from Nellore district. Here, the mica belt covers an area of 60 miles long and 15 miles wide. The mines in Nellore district are worked by open cast as also under-ground methods. As synthetic mica and other substitutes are being developed, there is a potential threat to the mica industry in the country, in general. Small deposits of mica are found in Visakhapatnam, West Godavari and Khammam districts. The production of crude mica in 1969-70 was 8,205 tonnes, valued at Rs. 67 lakhs.

16.5. Andhra Pradesh ranks 5th in the production of manganese ore in the country. Ore produced in the State is of low grade compared to that of Madhya Pradesh. The manganese deposits occur in Srikakulam district. Smaller deposits are also found in Visakhapatnam district. The reserves are estimated to be of the order of 3 to 4 million tonnes. In 1969-70 1.40 lakh tonnes of manganese ore was produced in the State, valued at Rs. 40 lakhs.

16.6. Andhra Pradesh has virtual monopoly in the country in regard to production of superior quality chrysotile asbestos. Asbestos is used in the manufacture of asbestos cement, Shingles, boards, plastics, paints, brake linings and filter pads, Asbestos fibre is woven into fire proof textiles and made into aprons, gloves and curtains. Asbestos production in the State in 1969-70 was 503 tonnes valued at Rs. 7.5 lakhs. The deposits are mainly found in Pulivendla Taluk of Cuddapah district. The mineral is at present worked in the Chinnakudala area.

16.7. Barytes is locally known as "Muggurai". Barytes is mainly used in the manufacture of paints, textiles, paper, rubber gramophone records, printing inks, etc. Andhra Pradesh produces about 75 per cent of the total barytes production in the country. The deposits of barytes are found in Cuddapah, Kurnool, Anantapur and Khammam Districts, the chief produc-

ing centre being Pulivendla in Cuddapah District. Here, the area between Vempalli and Velpula contains the most important deposits which have been under intensive exploitation for a long time. Reserves of barytes in Cuddapah and Khammam districts are estimated at 1.24 million tonnes. These reserves are expected to be sufficient to meet the internal demand of the country for several years to come. The production of barytes in 1969-70 was 65,942 tonnes valued at Rs. 13 lakhs.

16.8. The total iron ore reserves in the State are estimated to be 400 million tonnes. Deopsits are found in Anantapur, Chittoor, Cuddapah, Khammam, Adilabad, Krishna, Kurnool and Visakhapatnam districts. The production of iron ore in 1969-70 was 92,000 tonnes valued at Rs. 6.5 lakhs. Bulk of the deposits are not of high quality. Anantapur ore is appreciably high grade ore. The deposits are worked by open cast methods with little mechanical power. The entire output of iron ore from Andhra Pradesh is exported abroad.

16.9. Copper is an important metal indispensable in several industries, specially in electrical and telecommunications industry. In our country, excepting copper mines near Moabhandar in Bihar and Khetri in Rajasthan, and the refinery near Mesabani in Bihar, there are no other areas where copper is produced or refined. Large copper deposits have of late been discovered and proved in Andhra Pradesh. Large scale explorations undertaken at Agnigundala in Guntur district have given encouraging results and the lead copper deposits in 3 blocks *i.e.*, Dhukonda, Nallakonda, and Bandalamottu are estimated to be of the order of over 18 million tonnes (12 million tonnes with 6.5 per cent lead and 6 million tonnes with 1.5 per cent copper).

The Government of India have recently finalised collaboration with a U.S. firm for the execution of a mining project at Agnigundala.

Exploration of deposits of copper at Mailaram in Khammam District have revealed existence of 7 lakh tonnes of ore with 2.02 per cent copper.

Objectives and Strategy:

16.10. The objectives of mineral development are:

- (a) to identify the mineral deposits in different areas in the State;
- (b) to estimate the economic importance of these deposits if necessary by re-surveys;
- (c) to enable economic exploitation through provision of technical advice; and
- (d) lastly take up mining and processing in the public sector itself with the help of Andhra Pradesh Mining Corporation.

16.11. The two main instruments of implementing the development are the Director of Mines and Geology and the Andhra Pradesh Mining Corporation. In addition, the central sector has an important role to play in mineral surveys, exploration and exploitation through geological survey, exploratory work for gold and diamond, extension of the operation of Kolar gold field for exploitation and lastly exploitation of copper deposits in Agnigundala area.

16.12. The Director of Mines and Geology would concentrate on intensification of mineral surveys, co-ordination and research work, and pilot studies. The Andhra Pradesh Mining Corporation is expected to concentrate on prospecting of strategic and important minerals, especially in backward areas, mining of minerals and establishment of mineral based industries giving priority to backward areas.

Director of Mines and Geology:

16.13. During the Third Plan period, greater emphasis was obviously laid on mineral surveys to facilitate prospecting and exploratory work, on investigation of ferrous and non-ferrous minerals and for expansion of the chemical laboratory. The total expenditure incurred during the Third Plan under the Scheme 'Mineral Development' was Rs. 4.96 lakhs.

The expenditure for the State during the Annual Plans 1966-67, 1967-68 and 1968-69 is Rs. 1.84 lakhs, Rs. 1.99 lakhs and Rs. 3.15 lakhs respectively.

In view of the changing economics and improving technological advances, several mineral occurrences

hitherto considered poor now deserve reassessment both in respect of quality and quantity. Besides proving new deposits, even those deposits about which a general idea is available will have to be explored in detail to ensure conservation of better quality material and its proper utilisation in specific industries.

The stress has also shifted to the quality control of different raw materials. The ores are not uniformly good and some of them might need beneficiation for use in the industry or export. It is in this context that intensified mineral exploration programme will have to be taken up in the State. Survey and prospecting and systematic sub-surface studies are necessary to determine the extent of deposits on surface and at depths and also variations in quality. Trenching and pitting, as well as exploratory drilling are essential for this. As the mineral bearing areas in the State are very large and the demand for minerals from the industrial sector is growing considerably, a programme of mineral exploration should be drawn up to explore fully the potentialities of mineral occurrences which would facilitate drawing up plans for exploration and thus ensure systematic development of the deposits. Having the above strategy in view an outlay of Rs. 14.04 lakhs has been provided for the schemes of department of Mines and Geology in the Fourth Five-Year Plan. All the schemes included are State-wide Schemes. The amount earmarked for State-wide Schemes is Rs. 14.04 lakhs.

The schemes included in the Fourth Plan are (1) Intensification of Mineral Surveys, (2) Co-ordination and Research Work and (3) Pilot Plant Studies, with an outlay of Rs. 14.04 lakhs. Under the schemes of 'intensification of mineral surveys', an intensive programme of mineral exploration has been drawn up to fully assess the potentialities of mineral occurrences and this would facilitate drawing up plans for exploitation and ensure systematic development of the deposits, keeping in view the conservation aspects also. An amount of Rs. 12.04 lakhs has been earmarked for this scheme. Under the scheme of "Co-ordination and Research" an amount of Rs. 1.77 lakhs has been provided to co-ordinate the activities of different Central and State agencies engaged in exploration of minerals. For the scheme of "pilot plant studies"

an amount of Rs. 0.20 lakh has been provided for meeting the charges of the National Metallurgical Laboratory at Jamshedpur, for pelletisation studies.

Andhra Pradesh Mining Corporation:

16.14. The Andhra Pradesh Mining Corporation was established in 1961 as a Government Company with an authorised capital of Rs. 50.00 lakhs. This authorised capital was increased to Rs. 2.00 crores subsequently. The Government invested a sum of Rs. 40.00 lakhs in the shares of the Corporation during the Third Five-Year Plan period. In the three Annual Plans 1966-69, a further sum of Rs. 37.00 lakhs was invested by the State Government in the equity share capital of the Corporation.

The important objectives of the Corporation are to undertake prospecting of strategic and important minerals, mining of such minerals and establishment of mineral-based industries.

The Andhra Pradesh Mining Corporation has at present the following mines working: The Ramathirtham Limestone Mine in Kurnool district; the Pocharam Barytes Mines in Khammam district; the Choulapalle Quartz Mine near Shadnagar in Mahaboobnagar district; the Punyakshetram Clay Mine at Punyakshetram in East Godavari district; the Sree Venkateswara Clay Mine at Dwaraka Tirumala in West Godavari district; the Brahmanapalle Asbestos Mine in Pulivendla, Cuddapah district.

In addition to the above, the Corporation is running a mica bricks manufacturing unit at Gudur based on the process patented by the National Research Development Corporation.

The investment of the State Government in the Andhra Pradesh Mining Corporation during the Fourth Plan period will be Rs. 51.15 lakhs. The share of the three regions in this outlay will be Rs. 17.85 lakhs for Coastal Andhra; Rs. 13.27 lakhs for Rayalaseema; Rs. 20.03 lakhs for Telangana.

Under the perspective Plan the Corporation has prepared the following schemes for the three regions of the State.

Coastal Andhra :

16.15. It was decided to take up bauxite mining in Sunkarametta, Visakhapatnam district. The Corporation has also filed M.L. applications under M.C. Rules covering the area under investigation by the Geological Survey of India. It was proposed to assess the ilmenite in beach sands of Srikakulam, Visakhapatnam, East and West Godavari districts and also Krishna district and to prepare a feasibility report on utilisation of ilmenite for manufacture of titania in order to promote the titania industry with desirable collaboration. Fluxgrade limestone is available in Jaggayyapet area, Krishna district. The Corporation decided to collect bulk samples as desired by the Ministry of Steel, Government of India, for testing by the National Metallurgical Laboratories, Jamshadpur. If the limestone is found suitable, mining of limestone in that area will be taken up after obtaining leases from Government to build up capacity in a phased programme to meet the requirements of the proposed Steel Plant at Visakhapatnam. After preparation of the feasibility report by the Department of Mines and Geology, the Corporation will take up, if the reserves are encouraging, mining of the low grade iron ore and also beneficiation and pelletisation of iron ore in Ongole.

Telangana :

16.6. The Corporation is having two mining leases for Quartz in Choulpalle and Elkatta near Shadnagar, Mahaboobnagar district. The quartz mines is presently being used for processing into glass sand, foundry sand and for use in the manufacture of asbestos cement products as a filler. The monthly production is 1,500 tonnes and it has got capacity to produce 4,000 tonnes a month. Before the Corporation takes it, it is decided to obtain a feasibility report which is estimated to cost Rs. 50,000 from a Consultancy Organisation. If the proposal is found feasible a unit for manufacture of fibre glass can be set up. The Corporation is presently engaged in mining of quartz and processing of the same to glass sand near Sadnagar, Mahaboobnagar district. The present production is of the order of 9,000 tonnes per annum

valued at Rs. 5 lakhs. The quartz deposits occurring in and around Hyderabad and Mahaboobnagar districts are known to be of a very superior quality and glasses processed out of this has a great demand particularly from the South and West Indian Markets where major glass factories are located. The proposal for expansion of the glass and processing unit from 9,000 tonnes per annum to 30,000 tonnes per annum is under consideration. The value of the increased production is estimated to be Rs. 16 lakhs. The expansion programme would cost an additional investment of Rs. 10 lakhs in civil construction and equipment. It is proposed that a detailed feasibility study be made through a consultancy organisation about the utilisation of the ore in manufacture of copper based chemicals. This is estimated to cost Rs. 50,000 and a report would be available within 6 months from the date of appointment of the consultants. The study would be in the nature of promotional work. If the proposal is found feasible, a mining unit and a concentrator will be considered at a capital cost of Rs. 50 lakhs. Based on the mine, a unit for manufacture of copper based chemicals of import substitution value will be worked out. M/s Hyderabad Tools Ltd., Hyderabad, have a proposal for setting up of a Ferro Silican Plant near Kothagudem. One of the important raw materials in the manufacture of ferro silican is quartz and the company's requirements would be 20,000 tonnes per annum from about the middle of 1972. The Corporation has an area near Pocharam about 35 miles from Kothagudem in Khammam district where quartz of the required specifications is available along with the barytes. The company has already been requested formally to enter into an advance contract with the Corporation for supply of this raw material. It is estimated that capital investment for civil construction and equipment would be Rs. 2 lakhs.

Rayalaseema :

16.17. The Corporation commenced preliminary operation for asbestos mining in 1964-65 and opened up a first unit in 1966-67. The Corporation proposes to expand its activity in the asbestos field subject to availability of funds. The following areas are avail-

able to the Corporation for exploitation in Pulivendla, Cuddapah district:—

1. Velidandla Western Block—45.2 acres.
2. Velidandla Central Block—88.87 acres.
3. Velidandla Eastern Block—63.12 acres.

Formal sanction of Government under M.C. Rules is pending. The deposits in the above areas will last for 15 years including the initial period of 3 years, if the average production is maintained at about 20 tonnes per unit per month with three mining units located in the Velidandla area. Ramanuthalapalli area was also investigated by the Geological Survey of India for asbestos which indicated reserves up to a depth of 60 metres and the reserves are estimated at 12,813 tonnes which has got a life of 50 years at the rate of 20 tonnes per month. This area was already taken up for development by the Corporation during the year 1970-71. On the basis of observations made a stopping to development ratio of 2:5 would have to be maintained for economical operation. As the country's requirements of asbestos are of the order of 35 to 40 thousand tonnes per annum, it would be advantageous to change over to mechanical processing of asbestos fibre to enable confirmation to international standards so that the indigenous consumers of asbestos would find it easier to purchase the indigenously produced asbestos fibre. Therefore, it is proposed to instal an asbestos processing plant of about 1,500 tonnes per annum capacity for use in Cuddapah areas. The estimated capital cost is Rs. 10 lakhs (for 1971-72, Rs. 2 lakhs and during 1972-73 Rs. 8 lakhs). The Corporation's existing mines and proposed mining units would be producing about 1,200 tonnes per annum by 1973-74. In the meanwhile, processing plant for a capacity of 1,500 tonnes per annum would be underutilised. But to go in for a smaller capacity plant might not be economical. To the extent possible the production from Corporation's mines could be supplemented by processing the asbestos crude from the private mine owners. Asbestos-based products like asbestos cloth, yarn, lining, have got great demand in the country. It is, however, necessary to get a feasibility study made on this proposal.

For proper exploitation of mineral resources it will require technical advice from technical experts in Mining and Geology. Hence, it is proposed to create a cell which is estimated to cost Rs. 90,000 initially which is likely to be expanded depending on the response from the private mine owners and also subject to the availability of funds.

17. HANDLOOMS

The handloom industry is by far the largest and the most important Cottage Industry in the State. There are about 5 lakhs handlooms in the State. Due to implementation of several development schemes, the economic condition of the weaver has shown a steady improvement over the plans. The development of this industry has a significant contribution to make in realising the objectives of the Plan in regard to expanded employment, larger production and more equitable distribution of income.

Objectives and Strategy:

17.2. The main objectives of the programmes included in the Fourth Plan for the development of this industry are:—

- (a) to bring the bulk of handlooms into the Co-operative fold by Organising Weavers Co-operative Societies;
- (b) to increase the production of handloom cloth thereby creating employment potential and improve the standard of living of the weavers through the progressive increase in their earning capacity;
- (c) to improve the quality of cloth produced on handlooms by providing requisite technical guidance; and
- (d) to improve the method and means of marketing of cloth produced on handlooms.

Review:

17.3. The policy of the Government has been to encourage the development of handloom industry on a co-operative basis. An amount of Rs. 360.81 lakhs in the Third Plan and Rs. 180.66 lakhs in the three Annual Plans 1966-69 was spent on the development of Handloom Industry.

Fourth Plan Programmes:

17.4. An outlay of Rs. 352.24 lakhs is provided for the development of Handlooms in the Fourth Plan.

Out of this, the provision for Coastal Andhra is Rs. 159.18 lakhs, Rayalaseema, Rs. 84.17 lakhs and for Telangana Rs. 108.89 lakhs. A major part of the outlay in the Fourth Plan will be spent on granting of rebate on handloom cloth sales, development of power looms and improvement of techniques. The schemes included in the Fourth Plan are briefly described below :—

(a) *Rebate Scheme.*—Among the factors responsible for promotion of marketing of handloom cloth through Co-operative Channels, special importance should be assigned to the scheme of rebate on sales. The rebate scheme is intended to reduce the price gap between the prices of handloom cloth and mill cloth. As it has not been possible to provide within the plan ceilings the full amount of rebate allowed by societies for reimbursement, this scheme has been kept in abeyance with effect from 1st June, 1967. However, on certain special occasions, the State Government have been permitting the Weavers' Co-operative Societies to allow special rebate at 10 per cent. A provision of Rs. 189.78 lakhs has been made in the Plan for this scheme. Out of this Rs. 91.76 lakhs will be spent in Coastal Andhra, Rs. 45.81 lakhs in Rayalaseema and Rs. 52.21 lakhs in Telangana.

(b) *Power looms.*—In the matter of installation of power looms in the Co-operative Sector, the progress in the past has not been very encouraging. However, a large number of Co-operative Societies are now coming forward to instal powerlooms and in order to provide financial assistance for this purpose, an amount of Rs. 44.20 lakhs is provided in the Fourth Plan. Out of this, Rs. 20.87 lakhs will be spent in Coastal Andhra, Rs. 5.97 lakhs in Rayalaseema and Rs. 17.36 lakhs in Telangana. As it is not found possible to provide adequate funds in the Plan for sanction of loans to Weavers Co-operative Societies for installing powerlooms, institutional financing agencies like Industrial Development Bank of India are also being approached to provide part of the funds required by the societies for capital investment.

(c) *Improved appliances and technical assistance.*—The weakness of the Handloom Industry, particularly in Andhra Pradesh, is that production of

cloth is not with reference to the changing tastes of the consuming public. This situation is partly due to the use of outdated tools. Since the weavers were not able to afford to purchase improved appliances, financial assistance is being provided to them under this plan scheme to purchase improved appliances such as frame looms, dobbies, jacquards, healds and reeds. To improve the quality of cloth, the Weavers Co-operative Societies have also been assisted for establishing small dye units and hydro extractors. It is proposed to provide assistance to Weavers Co-operative Societies during Fourth Plan for establishing screen printing unit, wool spinning plant, besides giving assistance under normal technical schemes. The total provision in the Fourth Plan under schemes relating to technical assistance is Rs. 23.97 lakhs, out of which Rs. 12.45 lakhs will be spent in Coastal Andhra, Rs. 6.35 lakhs in Rayalaseema and Rs. 5.17 lakhs in Telangana.

(d) *Share capital loans to members of Weavers Co-operative Societies.*—The principal objectives as now envisaged for this sector is that the proportion of Cotton Handlooms in Co-operative fold should be increased from about 50 per cent at the commencement of the Fourth Plan to 70 per cent by the end of the Plan and also to increase their annual production from about Rs. 7 to 8 crores at present to Rs. 12 to 14 crores by the end of the Plan. Out of the estimated annual production of handloom cloth of about Rs. 30 crores, the production in the Co-operative Sector is only Rs. 7-8 crores though 50 per cent of handlooms in the State are in the co-operative fold. This is mainly due to the inability of the Weavers Co-operative Societies to find adequate working capital. Steps are being taken to ensure that these societies obtain their working capital requirements under the Reserve Bank of India Scheme of finance to Weavers Co-operative Societies. But on account of their weak financial position they have not been able to satisfy the norms laid down by the Reserve Bank of India for sanction of credit limits. One of the reasons for their weak financial position is their inadequate capital base arising out of the incapacity of weaver members to contribute sizeable amounts towards the share capital of their society. The weavers belong to the weaker sections of the community. They have to be assisted for con-

tributing to the share capital of their society, so that the society can pool adequate share capital to carry on its business and also to provide work to its members and to make itself eligible for higher credit limits from the financing agencies. To this end, loans, will be provided to the members, not exceeding Rs. 75 per member, so as to enable every member to hold shares worth Rs. 100. It is also programmed to have State participation in select Weavers Co-operative Societies so that the dormant Weavers Co-operative Societies or Weaver Co-operative Societies where majority of members are Harijans are revived. An amount of Rs. 3.33 lakhs is provided for the scheme in the Fourth Plan Rs. 1.62 lakhs for Coastal Andhra, Rs. 1.01 lakhs for Rayalaseema and Rs. 0.70 lakh for Telangana.

(e) *Marketing Schemes*.—Marketing is the crux of the problem as far as handloom industry is concerned. On account of their weak financial position the Weavers Co-operative Societies have not been able to streamline and strengthen their marketing organisation. The Apex and Primary Weavers Co-operative Societies have therefore been assisted by way of grant to set up sales depots within and outside the State. The subsidy is sanctioned on a sliding scale covering maximum of four years subject to the depots satisfying certain norms prescribed with regard to quantum of sales. There are about 344 depots opened by Weavers Co-operative Societies under plan schemes but still marketing arrangements for the cloth produced in the Co-operative sector is inadequate. Therefore, 50 more new depots have been proposed to be opened in the Fourth Plan with an outlay of Rs. 7.90 lakhs, out of which Rs. 3.25 lakhs will be spent in Coastal Andhra, Rs. 1.26 lakhs in Rayalaseema and Rs. 3.39 lakhs in Telangana.

(f) *Thrift Fund Scheme*.—To ensure loyalty of weavers to the societies, a scheme of sanctioning matching contributions to their thrift fund has been under implementation since the year 1965-66. A weaver member admitted to the scheme has to necessarily contribute to his thrift fund account six paise for every rupee of wage he earns against which matching contribution of two paise by the Societies and four paise by Government is being sanctioned. This amount is sepa-

rately credited in a bank and temporary advances which are recoverable can be sanctioned to the members in times of emergency. Every year an expenditure of Rs. 50,000 was being incurred in implementing this scheme. So far only 23 societies have been covered under the scheme. Even in these societies only limited number of weavers have been admitted. In order to expand the activities under this scheme an amount of Rs. 5.31 lakhs is provided in the Fourth Plan, out of which Rs. 2.60 lakhs will be spent in Coastal Andhra, Rs. 0.86 lakh in Rayalaseema and Rs. 1.85 lakhs in Telangana.

(g) *Housing Colonies.*—While tackling the technical and economic problems of the handloom industry, Government have not overlooked the need for improving the living conditions of the weavers. The Government have sponsored a number of housing schemes for the benefit of the weavers. Under this scheme, 2/3 of the cost of the house will be given as loan and the balance as grant. The amount of assistance will have to be released in instalments with reference to the progress in construction work. A provision of Rs. 7.45 lakhs has been made for this purpose in the Fourth Plan—Rs. 1.88 lakhs for Coastal Andhra, Rs. 1.90 lakhs for Rayalaseema and Rs. 3.67 lakhs for Telangana.

(h) *State's participation in Co-operative Spinning Mills.*—The main raw material of the handloom industry is cotton yarn. With a view to supplying yarn of good quality at reasonable prices, Government have sanctioned the establishment of Co-operative Spinning Mills in the State. The Industrial Finance Corporation while sanctioning working capital loans to the Co-operative Spinning Mills stipulated that they can draw the funds with reference to share capital collected by them. The spinning mills could not collect adequate share capital so as to draw the funds sanctioned by the Industrial Finance Corporation to the full extent. To enable the spinning mills to draw the funds from the Industrial Finance Corporation, assistance by way of share capital contribution is being sanctioned to these mills. A provision of Rs. 12.50 lakhs is made under this scheme in the Fourth Plan—Rs. 6.84 lakhs for Coastal Andhra, Rs. 1.50 lakhs for Rayalaseema and Rs. 4.16 lakhs for Telangana.

(i) *Wool Technical Schemes.*—In Telangana and Rayalaseema areas, about 80 lakhs lbs., of wool are produced bulk of which are generally exported to State like Punjab where is it mixed with fine varieties of wool for being spun into yarn. On account of the export of wool to other States, the wool weavers in the State have not been able to find work throughout the year. The woollen fabrics being produced have also not been able to find a market. To enable the wool weavers to earn better wages and ameliorate their economic conditions it is proposed to set up a wool spinning plant in Mahaboobnagar. Besides the above, working capital loans will be sanctioned to the Apex and Primary Wool Weavers Co-operative Societies. A provision of Rs. 8 lakhs is made in the plan for this scheme, out of which Rs. 7 lakhs is for Telangana and Rs. 1 lakh for Rayalaseema.

18. TRANSPORT AND COMMUNICATIONS

Transport and communications have a crucial role in economic development. In the broadest sense the transport and communications sector encompasses rail, road, Shipping, airways, telephones, post-offices, newspapers, broadcasting *etc.* The State Plan however, is restricted to road-ways, road transport, and to some extent ports. Even with regard to roads, the National Highways are taken up under Central Sector.

In Andhra Pradesh the total road length per lakh of population is 125 Km as on 1st April, 1969 compared to the corresponding figure of 164 Km for All India. The road length per 1000 square Kms. of area in Andhra Pradesh is 197 Kms., on 1st April, 1969 as compared to about 270 Kms. for All-India.

Apart from the aggregate figures, the more important aspect is to relate the road programme to the strategies and levels of economic development and the spatial structure that is contemplated. In this regard it may safely be mentioned that basic road facility is by and large available in the State except in some pockets. So, the removing of certain bottlenecks taking up a few arterial roads would get priority in the road plan. Further roads connecting the villages with Market centres is also essential.

Objectives and Strategy:

18.2. The objectives are to:

(a) Ensure full utilisation of central sector scheme under National Highways to improve the national highways.

(b) Complete important spillover schemes relating to arterial roads, mostly in the nature of improvements to the existing surfaces and construction of bridges at crucial points.

(c) Take up important arterial roads and construction of bridges at the important missing links.

(d) Complete the rural road works already started to enable/connecting the villages with market centres effectively.

(e) Improve the services provided by the Andhra Pradesh Road Transport Corporation, for passenger traffic.

(f) Form approaches for the rail bridges especially the road-cum-rail bridge across Godavari near Rajahmundry, and

(g) Complete the spillover works relating to ports and especially improvements for Masulipatnam port, to make the port resume functioning.

18.3. As can be seen most of the allocation under the transport and communications is meant for spillover commitments and for the construction of approaches to the road-cum-rail bridge across Godavari near Rajahmundry. This had become inevitable due to the meagre allocations available for this sector in the light of the overall plan priorities and the heavy commitments under this sector. However, activity in this sector in the State is likely to be kept up due to the increased emphasis on the National Highways and particularly due to provision of funds for this sector by local bodies, by special provision under backward areas, rural works programme etc.

Roads :

18.4. The roads in the State are maintained by three agencies viz., Chief Engineer (R&B), Zilla Parishads and Panchayat Samithis. The length of all roads in the State as on 31st March, 1969 was 54,231 Kms.

The roads maintained by the Chief Engineer (R&B) are mainly National Highways, State Highways, Major Districts Roads and a few 'Other District Roads' and their length falling under different types of surfaces as on 31st March, 1969 was as follows :

(Figures in Km.)

Category	TYPE OF SURFACE			Unmetalled	Total
	C.C.	B.T.	W.B.M.		
1. National Highways	.. 137	2,155	43	5	2,340
2. State Highways	.. 169	5,248	549	..	5,966
Major District Roads	.. 145	7,968	4,173	561	12,847
Other District Roads	.. .. .	149	473	420	1,042
Total	.. 451	15,520	5,238	986	22,195

The region-wise breakup of the same was as follows :

Coastal Andhra :

National Highways	..	64	1,132	4	..	1,200
State Highways	..	129	1,959	194	..	1,918
Major District Roads	..	78	3,762	1,502	212	5,554
Other District Roads	..	..	6	52	49	107
Total	..	217	6,495	1,752	261	8,779

Rayalaseema :

National Highways	..	1	348	..	..	349
State Highways	..	11	2,720	136	..	2,860
Major District Roads	..	10	1,715	552	55	2,332
Other District Roads	..	..	26	56	..	82
Total	..	22	4,809	744	55	5,630

Telangana :

Category.		C.C.	B.T.	W.B.M.	Unmetalled	Total
National Highways	..	72	675	39	5	791
State Highways	..	29	933	219	..	1,181
Major District Roads	..	57	2,491	2,119	294	4,961
Other District Roads	..	..	117	365	371	853
Total	..	158	4,216	2,742	670	7,786

Besides the above, the Zilla Parishads maintain considerable length of Major District Roads and 'Other District Roads' and village roads, the region-wise breakup of these roads, as on 31st March, 1969 is given below :

(Figures in Km.)

Region.		MD.R's.	O.D.R.S.	V.R's.	Total
Coastal Andhra	..	1,469	4,385	1,608	6,561
Rayalaseema	..	836	1,812	917	3,565
Telangana	..	836	4,300	2,565	7,677
Total	..	3,216	9,597	4,990	17,803

The third agency *viz.*, Panchayat Samithis maintain mainly (Village Roads' and a few other District Roads'). The total length of such roads was 14,234 Kms. of which 9,338 Kms., lie in Andhra region and the rest in Telangan region.

The total road length maintained by the Chief Engineer (R&B) and the Zilla Parishads works to 178 Kms., per thousand square Kms., in Coastal Andhra, 125 Kms., in Telangana and in terms of road length per lakh population it works 79 Kms. in Coastal Andhra 110 Kms., in Rayalaseema and 89 Kms., in Telangana.

Fourth Plan Programmes :

18.5. The total provision for Roads in Fourth Plan is Rs. 1321.71 lakhs of which Rs. 1237.38 lakhs is earmarked for the road works to be implemented by the Chief Engineer (R&B) and the balance of Rs. 84.93 lakhs for those implemented by the Chief Engineer (Panchayati Raj). The Region-wise break-up of this provision is as follows:—

	<i>Coastal Andhra</i>	<i>Rayala- seema.</i>	<i>Telangana</i>	<i>Total</i>
I. Chief Engineer (R. & B.)				
(a) Spillover scheme ..	52.19	5.25	75.55	132.99
(b) New Schemes ..	777.51	159.70	167.18	1,104.39
II. Chief Engineer (Panchayat Raj)	25.83	40.87	17.63	84.33
Total ..	855.53	205.82	260.36	1,321.71

Road Works proposed by the Chief Engineer (R&B): Spillover Schemes :

18.6. Under spillover works a provision of Rs. 132.99 lakhs is made for such of those schemes which were started during the Third Plan and subsequent Annual Plans 1966-69 but which could not be completed due to paucity of funds.

Important road schemes among these are (i) formation of road from Mondemkallu to Neelakanthapuram

in Srikakulam agency; (ii) Improvements to Garbhamgarividu road (including formation of a portion, metalting and cross-drainage works; (iii) Improvements to Srikakulam-Palakonda road; (iv) Improvements to Salur-Makkurva road; (v) Improvements to Korumithi—Kaleru road (including formation of a position); (vi) Black-tapping of Dammenu—Lankada Kodern road; (vii) Improvement to Gudivada—Pamarru—Nagayalanka road; (viii) By pass at Naidupet on Puthalathu—Naidupet road; (ix) Formation of road from Dhona to Rayala Cheruvu in Kurnool District (x) Improvements to Secunderabad—Kukatpally road (xi) Formation of road between Burgampad and Etur-nagaram; (xii) Improvements to Veligonda—Thorur road; (xiii) Formation of road between Nimmikal and Dantabpalli; (xiv) Formation of road from Utnur to Indanepalli, and (xv) Formation of road from Nagar-kurnool to Kollapur.

There are also several bridge works among spill-over schemes *viz.*, (i) Bridge across coriga canal on Kakinada Yanam road (ii) Bridge across Gannavaram canal in Ryali on Gannavaram—Poddlada—Rajavaram road (iii) Bridge on old Madras road between Guntur and Parchur, (iv) Bridge across river Sabri on Maredu-mitti—Chintur road, (v) Bridge across Manair river on Venkatapur—Mahadevpur road, (vi) Bridge across Maryira river on Bichkonda—Banswada road, and (vii) Bridge across Kadam river at Pembi and a bridge across Palakeruvagu.

In addition to the above road and bridge works an amount of Rs. 10.39 lakhs is provided towards State's share of the National Highways 5 diversion.

New State-wide Schemes :

18.7. There is only one state-wide new scheme meant for the purchase of plant and machinery. As the existing machinery and equipment with the department is inadequate a provision of Rs. 46.53 lakhs is made for this purpose.

New Regional Schemes :

The important new schemes are discussed in the following paragraphs separately under each region.

*Coastal Andhra:**(a) Improvements to Srikakulam—Palakonda Road:*

Srikakulam Palakonda road is an important State-highways in Srikakulam district. It is proposed to strengthen the existing crust to cater to the present day traffic, since the existing road is showing signs of deterioration. The scheme costs Rs. 15 lakh and will be completed by the end of Fourth Plan.

(b) Constructing a bridge across Nagayali near Sankali on Vijayawada—Palakonda Road:

About a decade back, a bridge was constructed across Nagavali river and it was washed off. Due to this unbridged crossing, there have been several interruptions to traffic during rainy season. During recent years there were several representations from the public for the construction of bridge across this river. It is therefore, proposed to take up this work during 1972-73. The approximate cost of the bridge is Rs. 45 lakhs. However, a total amount of Rs. 1.25 lakhs is provided in the plan for preliminary works.

(c) Improvements to Salur—Makkuva Road M.O./O—18/5:

The road runs in forest area and by improving this road, the forest wealth can be exploited well. It is proposed to strengthen the crust and improve the road. The work in the first 4 miles of road is proposed to be completed by the end of this plan at a cost of Rs. 4.171 lakhs. The approximate cost of the scheme is Rs. 15 lakhs.

(d) Improvements to Bobbarlanka—Kothapeta Road:

It is proposed to strengthen the crust since the existing road is sinking. About 9 miles of the road crust will be improved during the Fourth Plan with provision of Rs. 9 lakhs. The total cost of the scheme is Rs. 20 lakhs.

(e) Improvements to Ambajipet—Ganti—Kothapeta Road:

It is proposed to strengthen the crust for about 4 miles of road at a cost of Rs. 4.27 lakhs by Fourth Plan end. Approximate cost of the scheme is Rs. 20 lakhs.

(f) *Constructing bridge across Vridha Gowthami on Amalapuram—Yedurulanka Road:*

The necessity of constructing a bridge is a long felt one. By constructing this bridge, the villages on the otherside of the river which are very fertile and rich and can be connected with central delta. At present there is no road connection to this island and this bridge will open up flow of vehicular traffic. The proposed bridge will have 5 spans of 176', 2 end spans of 60' with 2 floating spans of 10', with 24 clear road way. Approximate cost of the scheme is Rs. 45 lakhs. The work will be started in 1973-74 for which an amount of Rs. 0.56 lakh is provided.

(g) *Constructing bridge across Peddayedlagadi on Eluru—Kaikalur Road:*

Kaikalur is a taluk headquarters, town, situated on the southern flank of Kolleru lake. Eluru is the district headquarters of West Godavari district and is a commercial and industrial town situated at a distance of 5 miles from Kolleru lake. The National Highways 5 passes through Eluru whereas Kaikalur is situated on Gudivada—Someswaram Road. At present, the shortest route by metalled road between Eluru and Kaikalur is 45 miles *via* Gudivada which will come down to 13 miles if only the two water courses namely Peddayedlagadi and Chinnayedlagadi to Kolleru lake are bridged. This incidentally serves as an outlet for the farm produce such as paddy, fish, and eggs from the villages around the lake. The L.W.W. is 82 spans of 15' & 2 spans of 60' with 24' roadway. Estimated cost of the bridge is Rs. 32.62 lakhs. It is proposed to complete the substructure and part of superstructure by Fourth Plan and with the provision of Rs. 4.00 lakhs.

(h) *Road-cum-Rail Bridge across Godavari near Rajahmundry:*

In pursuance of Government of India's decision to have a second Railway line from Madras to Calcutta, the Railway Board have sanctioned the construction of a new Railway Bridge across Godavari on the down stream 3,500' away from the existing Railway Bridge

near Godavari Railway Station. On mutual agreement between the Government of India and the Government of Andhra Pradesh, it was decided to have a road deck slab also for vehicular traffic with 7.5 M. road way and 1.5 M. footpath on either sides over the Railway tract subject to bearing of extra costs by the State Government. On this account the construction of road-cum-rail bridge across Godavari will shorten the distance between Eluru and Rajahmundry and will also serve several villages enroute to have links with Rajahmundry and Kakinada.

It has become necessary to form approaches for the road deck over the Rail Bridge so as to connect this to the New and Old National Highways 5 on either side. The Government of Andhra Pradesh have accorded administrative sanction for Rs. 160 lakhs for the construction of approach roads. The length of approach road on Rajahmundry side, is 3 miles, 315 and that on Kovvur side is 2447' cost of approach roads and road decking is Rs. 436.00 lakhs. The work is proposed to be completed by the end of Fourth Plan period.

(i) Improvements to surface on Pamarru—Palacole Road :

On account of heavy traffic on this road and due to wet fields on either sides of the road, the road condition has deteriorated considerably. It is proposed to strengthen the crust for about 16 miles and by the end of Fourth Plan period, about 9 miles of road will be strengthened which costs Rs. 11.50 lakhs. Approximate cost of the scheme is Rs. 20.00 lakhs.

(j) Improvement to Koderu—Nallajerla Road :

This is a very important road in West Godavari district. Due to heavy traffic and due to high water table, the surface has deteriorated. It is proposed to strengthen the crust for about 16 miles. By the end of Fourth Plan 6 miles of the road will be improved at a cost of Rs. 8.83 lakhs. The total cost of the scheme is Rs. 20.00 lakhs.

(k) Improvements to Guntur—Narasaraopet Road :

This road carries very heavy traffic. It is proposed to improve the existing crust for about 20 miles. By

the end of Fourth Plan, it is proposed to improve about 14 miles of this road at a cost of Rs. 10.00 lakhs. Approximate cost of the scheme is Rs. 15.00 lakhs.

(l) *Improvements to Sattenapalli—Amaravathi Road:*

Amaravathi is a historical place of tourist importance. In view of its tourist importance it is proposed to strengthen the crust of this road. By the end of Fourth Plan about 1 mile of the road will be strengthened at a cost of Rs. 0.50 lakh. Approximate cost of the total work is Rs. 15.00 lakhs.

(m) *Improvements to Guntur—Gurazala Road:*

This is an important State Highway. With completion of Nagarjunasagar project, this road gains considerable importance. The existing road is very badly sinking and it is, therefore, proposed to improve this road. By the end of Fourth Plan period, the existing crust for about 10 miles will be improved with the provision of Rs. 8.00 lakhs. Approximate cost of the scheme is Rs. 20.00 lakhs.

(n) *Improvements to Narasaraopet — Nakrikal — Karempudi Road:*

This is a very important State Highway connecting National Highway 5 and National Highway 9 viz., Nagarjunasagar. This road has to be strengthened since it is deteriorating badly. It is proposed to improve the road for about 12 miles at a cost of Rs. 9.18 lakhs. The total cost of the scheme is estimated to be Rs. 20.00 lakhs.

Rayalaseema:

18.9 (a) *Constructing a bridge in M. 238/1 of Madras—Bombay Road:*

There is at present a big dip which is obstructing traffic very frequently during rainy season. This road being a main State Highway connecting Chittoor district with Bellary district via., Anantapur, there is need to construct a bridge across this dip to avoid interruptions to traffic. The approximate cost of the

scheme is Rs. 15.00 lakhs. It is proposed to complete the substructure by Fourth Plan end with the provision of Rs. 6.50 lakhs.

(b) Improvements to Nellore—Bombay Road :

This is a very important State Highway connecting Nellore with Bombay and the stretch which runs in Anantapur district is sinking very badly due to inadequate crust thickness and it is proposed to strengthen the crust for about 25 miles. During Fourth Plan the road will be improved for about 15 miles at a cost of Rs. 11.30 lakhs. The estimated cost of the scheme is Rs. 15.00 lakhs.

(c) Improvements to Cuddapah—Kodur—Renigunta Road :

This is an important State Highway connecting Cuddapah, a business industrial place with Madras *via.*, Renigunta and Arkonam. This road runs almost parallel to the Madras—Bombay Broad-gauge Railway line. The stretch needs improvements, as the existing road has inadequate crust thickness, to cater to the traffic plying on this road. It is proposed to improve about 25 miles length of the road. By the end of Fourth Plan it is proposed to improve about 18 miles of road at a cost of Rs. 11.50 lakhs. The total cost of the scheme is estimated to be Rs. 15.00 lakhs.

(d) Upgrading Rayachoti—Pincha Road :

Pincha Project is a medium scale irrigation project in Cuddapah district and is situated at about 20 miles from Rayachoti. This road will serve to improve the marketing facilities to the produce from the Ayacut of the Project. It is proposed to strengthen the crust for the entire length of the road. By the end of Fourth Plan period, it is proposed to improve about 8 miles of the road at a cost of Rs. 3.00 lakhs. The total cost of the scheme is Rs. 16.00 lakhs.

(e) Improvements to Puthalapet—Naidupet Road :

This road passes through Tirupathi and Kalahasti, the two famous pilgrim centres of Andhra Pradesh.

and connects National Highway 6 with Chittoor—Kurnool Road. This road is sinking very badly on account of inadequate crust thickness. It is proposed to improve about 30 miles of this road. About 15 miles of the road will be improved at a cost of Rs. 9.49 lakhs in the Fourth Plan. The total cost of the scheme is Rs. 20.00 lakhs.

(f) *Upgrading Bhakarapet—Thalakonda Road:*

At Thalakonda there is a temple and water falls. There is a proposal to form a road from Thalakonda to Papanasanam about 2 miles from Tirumala. When this proposal materialise, pilgrims to Tirumala from Madanpalli, Piler and neighbouring villages can take this route. The proposal is to upgrade the road by metalling and improving the standards. Out of the total length of 15 miles a stretch of about 7 miles will be improved by this plan end at a cost of Rs. 7.50 lakhs. The total cost is estimated to be Rs. 16.81 lakhs.

(g) *Constructing approaches to the proposed Railway over-bridge at M. 350/6 of Guntakal—Tungabhadra Road at Adoni:*

The level crossing where the overbridge is proposed to be constructed is causing much inconvenience and hardship to the Public at Adoni and it is common feature that large volume of traffic is held up for considerable time whenever the gates are closed. There is a persistent demand from the public for the construction of an over-bridge at the existing level crossing. The Railways have proposed 2 spans of 31'—4'. The clearance over the Railway line is 19'3". The approaches to the bridge are proposed in 1 in 35 gradient after a level portion of 50' on either side. The clear road way will be 7.5 M. with 1.5 M wide foot-paths. The cost of the scheme is Rs. 26.50 lakhs. It is proposed to complete part of the work on the approaches by the end of Fourth Plan period for which an amount of Rs. 3.00 lakhs is provided

(h) *Improvements to Chittoor—Kurnool Road:*

Chittoor—Kurnool road is an important State Highway passing through Cuddapah district and

through Kurnool—Cuddapah Canal Ayacut area. Due to inadequate crust thickness and increase in traffic and due to presence of wet fields on either sides of the road, the road is sinking and deteriorating in several places. It is therefore, proposed to strengthen the existing crust for about 30 miles of road. About 15 miles of road will be improved at a cost of Rs. 7.19 lakhs in the Fourth Plan. The total cost of the scheme is Rs. 15.00 lakhs.

Telangana :

18.10. (a) *Improvements to Hyderabad—Nagarjunasagar Road :*

This is an important Major District Road connecting Hyderabad with Nagarjunasagar Project. Because of the tourist importance of the Nagarjunasagar Dam and its Island Museum, the traffic on this road has increased considerably. The road is sinking due to inadequate crust. It is proposed to improve the existing road for about 3 miles in this plan period at a cost of Rs. 1.00 lakh. The approximate cost of the scheme is Rs. 52.00 lakhs.

(b) *Improvements to Peddavooru — Miryalaguda Road :*

This serves as an important link between National Highway 9 and Hyderabad—Nagarjunasagar road and incidentally serves the Ayacut area of Nagarjunasagar. It is proposed to improve the existing road by suitably strengthening the crust to improve the marketing facilities to the produce of the Nagarjunasagar Ayacut Area. It is proposed to improve the road for about 7 miles at a cost of Rs. 2.93 lakhs, in the Fourth Plan. The total cost of the scheme is estimated to be Rs. 20.00 lakhs.

(c) *Improvements to Nakarkallu—Wazirabad Road :*

This is also an important link road connecting National Highways 9 passing through the Ayacut areas of Nagarjunasagar. It is proposed to strengthen the existing crust, so as to improve the marketing facilities to the produce of the Nagarjunasagar Ayacut area.

The approximate cost of the scheme is Rs. 20 lakhs. It is proposed to improve about 7 miles of this road by Fourth Plan end at a cost of Rs. 2.65 lakhs.

(d) Improvements to dips on Karimnagar—Iaxetti-pet Road :

This is a very important State Highway connecting Karimnagar with Chanda of Maharashtra *via.*, Man-cherial, a big industrial place. There are several dips on this road which are causing inconvenience to traffic during rainy season. It is therefore, proposed to construct culverts and small bridges on this road. The approximate cost of the scheme is Rs. 15.00 lakhs. An amount of Rs. 1.00 lakh is provided in this Plan.

(e) Improvements to Sangareddy—Toopran Road :

This is an important link road connecting National Highway 7 and National Highway 9 and several villages enroute. The existing road has to be improved to cater to the needs of future traffic plying on this road. It is proposed to improve about 6 miles of road at a cost of Rs. 6.04 lakhs. The total cost of the scheme is Rs. 22.00 lakhs.

Road Works under Chief Engineer (Panchayati Raj) :

18.11. The provision made for the road scheme implemented by the Chief Engineer (Panchayati Raj) is to cover the spill-over commitment on rural road works started in the Third Plan and the subsequent Annual Plans 1966-69.

Road Transport Corporation :

18.12. The Andhra Pradesh Road Transport Corporation requires a loan assistance of Rs. 7.19 crores from the State Government, during the Fourth Plan to improve its services in the State. However, an amount of Rs. 2.53 crores only has been provided in the Fourth Plan. This amount will be utilised for the purchase of passenger vehicles, equipment *etc.*, to improve the mobility of passenger traffic in the Metropolitan area of Hyderabad and Secunderabad and to improve the transport facilities in the area of its operation.

Ports:

The State has one major port at Visakhapatnam, two intermediate ports at Kakinada and Machilipatnam and five other minor ports including Krishnapatnam. All these ports are in Coastal Andhra region only. The Visakhapatnam port is administered by a separate port trust and is not part of the State Plan.

A provision of Rs. 42.68 lakhs is made in the Fourth Plan for development of Minor Ports in the State. With this outlay it is proposed to complete a few minor spillover works on Krishnapatnam port with an outlay of Rs. 1.5 lakhs and to take up major works on Machilipatnam port to resume its functioning.

As regards development of Machilipatnam port, an expert Committee was constituted by the Government which has submitted its proposals for the development of this port in 1965. These proposals were further examined by a Working Group which recommended that during the Fourth Plan period attention may be confined to execution of such of those schemes mentioned by the Expert Committee as were necessary to make the port resume functioning with a cost of Rs. 77.65 lakhs.

Since the amount available for development of Machilipatnam port in the Fourth Plan is only Rs. 40.0 lakhs, it is proposed to utilise this amount for some of the important components of the project such as the construction of 1000 feet long R.C.C. Jetty, Slope protection works and Sand Pump *etc.*

19. EDUCATION

The System of education should facilitate and promote social change and contribute to economic growth. This could be done firstly by providing facilities for universal elementary education and general education to create the requisite attitudes and climate and secondly by ensuring that the system of education supplies skilled manpower for specific tasks of development.

In the national perspective priority has been given for expansion of elementary education with an emphasis on the provision of facilities for backward areas and communities, and number of activities towards this end have been indicated. It is presumed that the programmes contemplated for the country as a whole would be available for this State especially in terms of publication of books, the teacher training, research in teaching methods *etc.*

Andhra Pradesh is comparatively backward in terms of enrolment of children of the various school age-groups. The State occupies 10th rank in the country in terms of percentage of boys enrolled in classes I to V to the corresponding age-group 6 to 11. In respect of girls, the rank is 6th. In case of percentage of boys enrolled in classes VI to VIII to the corresponding age-group 11 to 14 the rank is 12. In respect of girls it is 11. The retention rates at the elementary stage in respect of boys is 21.3 per cent, giving a rank of 15 and in respect of girls it is 10.4 per cent giving a rank of 16. In respect of percentage of boys enrolled in classes IX to XI to the corresponding age-group 14 to 17, the rank is 10 and for girls the rank is 11.

Objectives and Strategy:

19.2. The objectives of the Fourth Five-Year Plan in respect of education may be broadly summarised as follows:—

(1) Increase of the percentage enrolment in the primary and secondary schools by emphasising the provision of physical facilities at the primary school in terms of quality of mid-day meals served establishment of Central Kitchens, provision of school buildings and adequate furniture.

(2) Expansion and improvement of Mathematics and Science education, upgrading of Upper Primary Schools to High Schools and construction of school buildings at Secondary level.

(3) Introduction of a revised pattern of education through inter-mediate course involving establishment of a number of Junior Colleges with a view to provide higher standards of general education dispersed over a wider area.

(4) Strengthening of the existing Post-Graduate centres and introduction of Post-Graduate Courses in a few Government Colleges and construction of buildings for expanding higher education facilities.

Regional Approach :

19.3. In terms of the facilities available for education and the enrolment of students in the various age groups, wide regional variations could be found between the three different regions of Andhra Pradesh. Telangana region is ill-endowed with the number of institutions compared to the other two regions and the enrolment is also comparatively less at various levels. The total number of primary schools in Telangana was 10,572 in 1968-69 as against 36,702 in the State as a whole. The total number of schools in Telangana in the corresponding year was 12,929 as against 42,475 in the State as a whole. In terms of scholars in the schools, it is found that Telangana accounts for 13.35 lakhs as against 49.14 lakhs in the State as a whole. The percentage of enrolment in the classes I to V to the corresponding age-group is 51.3 for Telangana, 78.6 for Rayalaseema and 86.9 for Coastal Andhra.

In view of this position, the education programme in the Fourth Five Year Plan gives greatest emphasis on expansion of educational facilities in Telangana and to a lesser extent in Rayalaseema. Further in order to emphasize the quality of teachers in Telangana area which is beset with the problem of lower levels of enrolment, teachers training is given higher priority. In general priority is accorded to Telangana in respect of Educational sector,

Review :

19.4. The total expenditure in this sector during the Third Five-Year Plan was Rs. 17.51 crores and in the three subsequent Annual Plans it was Rs. 5.17 crores. In respect of Elementary education the corresponding expenditure was Rs. 9.73 crores and Rs. 0.9 crore; for Secondary education Rs. 51.7 crores and Rs. 1.8 crores and for higher education Rs. 16.3 crores and Rs. 2.0 crores.

Primary Schools :

There are 36,702 Primary Schools in the State. The Second Educational Survey revealed that about 97 per cent of the rural population is served with primary education facilities within one mile of walking distance. Thus Andhra Pradesh has fulfilled to a large extent her obligation under Art. 45 of the Constitution. The villages in the population slab of 300 and above are by and large served by primary schools. The enrolment in Classes I—V constitutes about 72.7 per cent of the estimated child population in the age-group 6—11. Considering the fact that 97 per cent of the population is served by the Primary Schools, it is obvious that in many cases the enrolment has not kept pace with the existing expansion in schooling facilities. This is due, mainly, to wide-spread prevalence of the evil of stagnation and wastage. Girls constitute only about 39.9 per cent of the enrolment in primary schools in the State as a whole.

Upper Primary Schools :

There are 2,870 Upper Primary Schools in the State. In addition, about 70 per cent of the High Schools have also Upper Primary Sections along with classes VIII to X. The Second Educational Survey has revealed that about 72 per cent of the rural population in the State has Upper Primary School facilities either in their own villages or within a three-mile radius.

The enrolment in Classes VI to VIII constitutes about 24.7 per cent of the estimated population in age group 11 to 13. Of the total enrolment in Upper Primary Schools girls constitute only 27.9 per cent

Like the Primary stage the enrolment at Upper Primary stage has not kept pace with the normal expansion of educational facilities. This needs to be corrected by necessary measures.

Secondary Education :

There are 2,903 Secondary Schools in the State. The Second Educational Survey has revealed that 74 per cent of the rural population is served by Secondary Schools within a radius of five miles. About 81 per cent of the habitations in the population slab of 5,000 and above have secondary schools in them. The enrolment in Secondary Schools constitutes 12.9 per cent of the population in the age-group 14 to 16. (Boys 19.9 per cent; Girls 5.9 per cent).

Higher Education :

The number of Degree Colleges for general education (Men and Women) at the beginning of Fourth Plan was 328. The enrolment in these colleges was 1.34 lakhs. On account of heavy rush for admissions, a number of Colleges specially in urban areas are being run in shifts.

Fourth Plan Programmes :

19.5. (a) *Primary Schools :*

It is proposed to enrol about 6 lakhs additional children in the age-group 6—11 (4.85 lakhs) Boys and 1.15 Girls. This, when achieved, will result in 92 per cent enrolment of boys and 60 per cent enrolment of girls in the age-group 6—11. To improve the quality of Midday Meals served in the primary schools, it is proposed to establish central kitchens with the assistance of CARE.

(b) *Upper Primary Schools :*

The main stress at this stage of education during the Fourth Plan is consolidation of the existing facilities. No noticeable horizontal expansion is envisaged. It is proposed to enrol 1.86 lakhs additional children in the age-group 11 to 13 (1.43 lakh Boys

and 0.43 lakh Girls). This will result in enrolment of 41 per cent of boys and 15 per cent of girls in this age-group by the end of the Fourth Plan period. It is proposed to open 1490 Upper Primary Schools (by upgrading the existing Primary Schools) during the Fourth Plan period so as to bring the ratio between Primary and Upper Primary Schools to 8 : 1. The existing ratio of 6 : 7 is not adequate.

(c) Secondary Education :

It is proposed to add 406 new high schools by upgrading Upper Primary Schools during the Fourth Plan and to enrol 91 thousand additional students in this age-group to cover 15 per cent of the population of this age-group (Boys 23 per cent and Girls 7 per cent) by the end of the Fourth Plan. The emphasis is on qualitative programmes in the field of Secondary Education. Consolidation of existing Secondary Schools, expansion and improvement of Mathematics and Science Education through pre-service and in-service training of Mathematics and Science teachers and adequate provision for the construction of Science Laboratories, supply of laboratory equipment, teaching materials and aids will receive priority in the Fourth Plan. The qualitative programmes include among other things, formation of school complexes, establishment of Central Science Workshop, State Science Museum, Science Fairs, Pilot Projects on new curriculum in Science for Class VIII to X, production of teaching materials, testing programmes in schools, training courses for Career Masters and Organising Orientation courses at the District level in the modern methods of teaching for Secondary School Teachers.

(d) Intermediate Course :

Consequent on the introduction of the new ten year pattern of school education in Andhra Pradesh the first batch of students under this arrangement took the Public Examination at the end of the academic year 1968-69. Necessarily two year Intermediate Course will be introduced throughout the State during the year 1969-70.

Under the new pattern the duration of Elementary Education will be of seven years followed by three

years of High School Education and two years of Intermediate Education.

The Junior Colleges are managed separately by Government and private agencies. A Statutory Board has been constituted for regulating and administering various matters connected with the Intermediate Education. The Universities are represented in the Board but have no direct control on it. The Pre-University has now been functionally abolished all over the State with the advent of the Intermediate Education. Selected Zilla Parishad and Municipal Schools up-graded as Junior Colleges are taken over under Government Control.

To begin with during 1969-70, 170 Junior Colleges will be established in the State (142 under Government Management and 28 under Private Managements). During the first two years only the teaching staff will be provided for these colleges namely Principals and Junior Lecturers according to the subject and medium requirements. As it would not be practicable to provide fully for laboratory equipment, furniture and library books, each college will be provided with library books worth Rs. 10,000. In regard to Science equipment and laboratory furniture the estimate of requirements varied from Rs. 80,000 to Rs. 1,20,000 for each college depending on the size of the colleges. However, fairly large amounts are still needed for bringing most of the Government Junior Colleges to the physical standards required of them.

(e) Higher Education :

It is proposed to strengthen and further develop the three existing Post Graduate Centres at Guntur, Anantapur and Warangal besides introducing Post-Graduate Course in a few subjects in at least two select Government Colleges in each University area.

In several cases vacant sites are available for the construction of buildings for Government Colleges. Since construction of pucca buildings may cost a lot, it is proposed to construct, as a measure of economy semi-permanent structures. It is also proposed to pay token grants-in-aid to managements of aided colleges

towards the construction of additional buildings. An amount of Rs. 86.95 lakhs is proposed towards the construction of buildings under Government management in the Fourth Five Year Plan. It may be mentioned in this regard that the local college committees have already remitted to Government nearly Rs. 40 lakhs apart from providing suitable sites at their cost for the construction of the buildings.

(f) *Other Educational Schemes:*

Under this scheme provision has been made to strengthen suitably the Education Directorate, Offices of District Educational Officers and Inspectorate. This will ensure adequate administrative machinery to supervise the implementation of various plan schemes in an effective manner. Expansion of Physical Education facilities, Development of Sanskrit and other languages, Telugu Akademy, Organisation of State level Student Festivals are some of the other schemes.

The total provision for General Education in Fourth Plan is Rs. 16.44 crores of which Rs. 0.74 crore is set apart for State-wide schemes and the balance for regional schemes. The region-wise and programme-wise break-up of its provision is as follows:—

Programme	(Rupees in Lakhs)			
	Coastal Andhra	Rayalaseema	Telangana	Andhra Pradesh
I. State-wide schemes				
Other Educational Schemes (only)	34.31	14.56	24.80	73.67
II. Regional schemes				
(a) Elementary Education	176.75	115.24	253.28	545.27
(b) Secondary Education	93.98	45.97	126.60	266.55
(c) Junior Colleges	102.20	58.74	185.95	346.89
(d) Higher Education	148.71	77.94	133.41	360.06
(e) Teachers' Training	8.23	4.90	15.04	28.17
(f) Other Educational Schemes	9.41	4.43	9.55	23.39
Regional Schemes	539.28	307.22	723.83	1570.33
Grand Total	573.59	321.78	748.63	1644.00

State-wide Schemes :

19.6. The total provision for State-wide schemes in the Fourth Five-Year Plan is Rs. 73.67 lakhs. The maintenance of Telugu Academy accounts for Rs. 25 lakhs. The strengthening of Departments of S.C.E.R.T. for improving the quality of education in schools accounts for Rs. 26.67 lakhs. The other schemes include organisation of State level student festivals, expansion of physical education facilities and strengthening of the administrative machinery.

*Regional Schemes :**Coastal Andhra :*

19.7. Elementary Education accounts for Rs. 176.75 lakhs out of which appointment of additional teachers is likely to involve Rs. 49.15 lakhs. Conversion of single teacher schools to plural teacher schools involves Rs. 38.98 lakhs. Upgrading of primary schools to Upper Primary Schools involves Rs. 29.65 lakhs. Appointment of Language Pandits *etc.*, takes up Rs. 22.59 lakhs. The other major item relates to the establishment of District Institutes of Education for which a provision of Rs. 22.50 lakhs is made. Supply of furniture and equipment involves Rs. 9.11 lakhs. In respect of secondary education the total provision is Rs. 93.98 lakhs out of which new schools, additional section, upgrading of schools *etc.*, takes up Rs. 27.34 lakhs. An amount of Rs. 14.70 lakhs is provided for the construction of school buildings and Rs. 10.00 lakhs for establishment of residential schools. The other major items are organising Science Teacher Workshop (Rs. 3.60 lakhs), formation of school complexes (Rs. 0.39 lakhs) appointment of Language Pandits (Rs. 3.50 lakhs) and grants-in-aid to Oriental Schools Rs. 5.51 lakhs).

A provision of Rs. 102.20 lakhs is made for Junior Colleges. Of this, Rs. 89.20 lakhs is meant for maintenance, Rs. 10.00 lakhs for construction of buildings, furniture and equipment and Rs. 3.00 lakhs is meant for fee compensation for private colleges.

In respect of higher education, a total provision of Rs. 148.71 lakhs is made. The major items are opening

of new colleges and higher classes (Rs. 63.40 lakhs), buildings for colleges (Rs. 30.17 lakhs), grants to University for post-Graduate centres (Rs. 30.50 lakhs). For teacher training an amount of Rs. 8.23 lakhs is indicated.

In physical terms, the percentage of enrolment in classes I—V is expected to be 86.9 by the end of Fourth Plan. In respect of Classes VI to VIII the target at the end of Fourth Plan is 31.5 per cent as against 26.4 per cent in 1968-69. The enrolment for Classes IX to XI is expected to increase from 13.4 per cent in 1968-69 to 14.6 per cent in 1973-74. The percentage of trained teachers in Elementary Schools and in Secondary Schools is expected to increase cent per cent by the end of Fourth Five Year Plan.

Rayalaseema :

19.8. Elementary Education account for Rs. 115.24 lakhs. An amount of Rs. 20.90 lakhs is set apart for appointment of additional teachers, Rs. 15.16 lakhs for conversion of single teacher to plural teacher schools, Rs. 14.50 lakhs for upgrading primary schools to upper primary schools, Rs. 8.84 lakhs for appointment of Language Pandits and B.Ed. Head Masters by upgrading the secondary grade teacher posts. Establishment of Central kitchens accounts for Rs. 35.00 lakhs and establishment of District Institutes of Education accounts for another Rs. 15.00 lakhs. Rs. 3.90 lakhs is provided for supply of furniture and equipment.

In respect of secondary education, an amount of Rs. 45.97 lakhs is provided which includes opening of new schools, additional sections, higher classes etc., (Rs. 10.97 lakhs). The other important schemes are establishment of residential schools (Rs. 7.60 lakhs), construction of school buildings (Rs. 5.39 lakhs), organising Science Teachers Workshops (Rs. 0.87 lakhs), maintenance of extension services (Rs. 1.13 lakhs). For Junior Colleges an amount of Rs. 50.74 lakhs is provided which includes Rs. 50.74 lakhs for maintenance, Rs. 7.00 lakhs for furniture and equipment and construction of buildings. In respect of higher education, an amount of Rs. 77.94 lakhs is provided which includes

Rs. 28.17 lakhs towards grants to Universities for Post-Graduate Centres, Rs. 4.00 lakhs for starting of Post-graduate centres in affiliated colleges, Rs. 26.98 lakhs for opening of new colleges and higher classes and Rs. 9.00 lakhs for buildings for colleges. For teachers' Training an amount of Rs. 4.90 lakhs is provided.

Physical Targets:

In physical terms, the percentage of enrolment in Classes I—V is expected to be 88.1 by the end of Fourth Plan as against 78.6 at the beginning of the Fourth Plan. In respect of classes VI to VIII the target at the end of Fourth Plan is 26.6 per cent as against 24.5 per cent in 1968-69. The percentage of enrolment in Class IX to XI is expected to increase from 11.3 per cent in 1968-69 to 13.2 per cent in 1973-74. The percentage of trained teachers in elementary schools and in secondary schools is expected to be cent per cent by the end of Fourth Five Year Plan.

Telangana:

19.9. For Elementary Education an amount of Rs. 253.28 lakhs is provided. This includes Rs. 37.25 lakhs for appointment of additional teachers, Rs. 40.67 for conversion of single teacher schools, to plural teacher schools, Rs. 29.60 lakhs for upgrading of primary schools to Upper-primary schools, and Rs. 20.23 lakhs for appointment of Language Pandits and B.Ed. Head Masters by upgrading the Secondary grade posts. Expansion and improvement of mid-day meal scheme accounts for Rs. 10.80 lakhs, in addition to the establishment of Central Kitchens for which Rs. 70.00 lakhs is provided. Supply of furniture and equipment (Rs. 8.82 lakhs), construction of school buildings (Rs. 10.00 lakhs) and establishment of District Institutes for education (RsR. 20.75 lakhs) and the other major schemes included in the Plan.

In respect of Secondary Education, the total provision is Rs. 126.60 lakhs. For new schools, additional sections, upgrading of primary schools etc., an amount of Rs. 39.12 lakhs is provided. For upgrading of posts, appointment of Language Pandits and certain other staff Rs. 34.24 lakhs is provided. For establishment

of residential schools Rs. 10.00 lakhs is provided. An amount of Rs. 29.76 lakhs is provided for the construction of school buildings and supply of books, furniture and equipment. The other items of importance are organising Science Teacher Workshops (Rs. 3.24 lakhs), maintenance of Extension Service (Rs. 1.73 lakhs). In respect of Junior Colleges, an amount of Rs. 185.95 lakhs is provided which includes Rs. 165.95 lakhs for maintenance, Rs. 13.00 lakhs for furniture and equipment and Rs. 5.00 lakhs for construction of buildings. In respect of higher education Rs. 133.41 lakhs is provided which includes Rs. 43.96 lakhs for buildings, Rs. 30.15 lakhs as grants to University for Post-Graduate Centres, Rs. 8.00 lakhs for starting of Post-Graduate courses in affiliated colleges and Rs. 26.70 lakhs for opening of new colleges and higher classes For teacher training as much as Rs. 15.04 lakhs has been provided.

In physical terms, the percentage of enrolment in classes I—V is expected to be 52.5 by the end of Fourth Plan as against 51.3 at the beginning of the Fourth Plan. In respect of Classes VI to VIII the target at the end of Fourth Plan is 24.2 per cent as against 22.8 per cent in 1968-69. The enrolment for Classes IX to XII is expected to increase from 11.3 per cent in 1968-69 to 13.2 per cent in 1973-74. The percentage of trained teachers both in elementary and secondary schools is expected to be cent per cent by the end of Fourth Five Year Plan.

TECHNICAL EDUCATION

Provision of technical education facilities is important if the manpower requirements of rapidly growing economy have to be adequately met. The expansion of technical education should be based on a realistic appreciation of the manpower requirements to have adequately trained personnel with special reference to the various branches of specialisation and the various levels at which scarcities are expected. A constant review of the technical education facilities and requirements and timely action to meet the requirements is thus essential.

Objectives and Strategy:

20.2. The basic objective of programme for technical education is essentially the provision of technical institutions appropriately disbursed with a view to create opportunities for technical education and training to meet the requirements of technical personnel not only of the State but of the job opportunities that might be created in different parts of the country. While in the past there has been fast expansion of technical institutions, the job opportunities for the technical personnel could not keep pace with this expansion with the result that a disturbing situation of unemployment of technical personnel arose, necessitating curtailment of admissions in degree and diploma institutions in certain courses. It is proposed to take into account this aspect in drawing up the Fourth Plan and place emphasis on improving the quality and standards of technical education and of establishing facilities in lines where they are not at present available in the State and for which substantial scarcities are expected. A special stress on practical training during the course of education is contemplated.

Review:

20.3. The number of technical institutions and the intake capacity developed over the plans is as follows:

<i>Item</i>	<i>Unit</i>	<i>Position at the end of First Plan</i>	<i>Position at the end of Second Plan</i>	<i>Position at the end of Third Plan</i>	<i>Position at the beginning of Fourth Plan.</i>
<i>Degree Courses:</i>					
(a) Institutions	No.	3	6	7	7
(b) Intake capacity	No.	540	1015	1755	1120
<i>Diploma level.</i>					
(a) Institutions	No.	4	19	22	22
(b) Intake capacity	No.	470	2433	3463	3273

The expenditure on technical education during the Third Plan was Rs. 310.71 lakhs and during the Annual Plans 1966-69, Rs. 44.46 lakhs, Rs. 40.02 lakhs and Rs. 29.52 lakhs respectively.

Fourth Plan Programmes:

20.4. In the Fourth Plan the outlay on schemes of Technical Education is Rs. 165.00 lakhs. Out of this, a sum of Rs. 38.18 lakhs is for State-wide Schemes and Rs. 126.92 lakhs for regional schemes.

The programmes for Technical Education in the Fourth Plan aim at:—

- (a) consolidation of the existing institutional courses,
- (b) quality improvement, and
- (c) expansion of facilities mainly by diversification of sandwich courses and part-time courses.

Under the Fourth Plan, no new institution is proposed to be started at the degree level. The proposed expansion in intake capacity will be in the existing institutions only. At diploma level, 5 new institutions are proposed to be started and the intake capacity will be increased by 620.

20.5. Quality improvement has been given top priority in the programmes of the Fourth Plan. The schemes proposed include curriculum development cells, practical training for staff, liaison with industries, permission to the teaching staff to have consultative practice with industries, permission to the professional engineers employed in industries to have free access to the libraries and teaching institutions, setting up of suitable machinery for establishing and

maintaining liaison between industries and teaching institutions for surveying, planning and placement of teachers and students for practical training and for starting sand-wich courses and part-time courses. Some of the schemes have already been put on ground. As regards curriculum development, an outline of the revised curriculum in mechanical engineering in consultation with industries has already been prepared by an expert whose services were secured from the United States Science Foundation.

A proposal for designing low cost science equipment for secondary schools and its manufacture in the Polytechnics is also under consideration and a scheme has already been sanctioned under which technical teachers are sent for practical training with industries during vacant periods.

20.6. The expansion of physical facilities proposed during the Fourth Plan is mainly for diversification of the diploma education. The State Government has constituted a Committee consisting of industrialists, Principals of Polytechnics and Director of Technical Education to examine this question and submit its recommendations to Government. The Committee's report is nearing completion and it would be possible to implement some of its recommendations from the academic year 1971-72. Under the scheme of diversification courses for chemical engineering, printing, leather and food technology, electronic communication, commercial practice and automobile engineering are proposed to be started in the year 1971-72 mostly in the existing institutions of the respective region.

Proposals are also under consideration for establishment of a Film Technology Institute. Provision has also been made for starting further courses of diversification both at degree and diploma level after the recommendations of the Committee mentioned above are made available.

20.7. A proposal to start for the first time sand-wich type of courses in electrical engineering and electronic engineering at the Government Polytechnics, Hyderabad under the INDO—USSR Credit Agreement of 1966 is under consideration as a fore-runner of these full time and short term courses. The teachers who have to handle diploma courses are being deputed to

U.S.S.R. for training under Russian Experts. The Government of India have suggested starting of more and more sand-wich courses at both degree and diploma level wherever facilities exist. More such courses are proposed to be started during the last 2 years of the Fourth Plan.

Part-time courses are at present offered at the Government Polytechnics, Hyderabad, Vijayawada, Vizag and Kakinada in Electrical, Mechanical and Civil Engineering subjects. Additional units are proposed to be added to the existing five institutions during the year 1971-72 with an intake of 230.

Provision has also been made for opening such courses according to need in the later years of the Fourth Plan.

20.8. The region-wise targets of institutions and intake at degree and diploma level in the Fourth Plan are as follows :

Item	1969—1970				1973—1974			
	C. A.	R	Tel.	A. P.	C. A.	R	Tel	A. P.
1. Engineering College :								
(a) No. of institutions	2	2	3	7	2	2	3	7
(b) In-take	300	240	580	1120	580	380	780	1740
2. Polytechnics:								
(a) No. of institutions	10	4	8	22	12	4	11	27
(b) In-take	1523	480	1270	3273	1812	604	1477	3893

State-wide Schemes :

20.9. Out of the sum of Rs. 38.18 lakhs provided for State-wide Schemes, Rs. 8.93 lakhs will be spent on quality improvement schemes, Rs. 10.08 lakhs on Institute of Printing Textile and Leather Technology, Rs. 5.99 lakhs on Educational Administration, and Rs. 5.12 lakhs on part-time degree and diploma courses and correspondence courses. The share of Coastal Andhra in these State-wide Schemes works to Rs. 17.59 lakhs, and that of Rayalaseema to Rs. 7.57 lakhs and Telangana Rs. 13.02 lakhs.

*Regional Schemes:**Coastal Andhra:*

20.10. A sum of Rs. 51.31 lakhs has been provided for the regional schemes in Coastal Andhra region. The important schemes included are Development of College of Engineering, Kakinada at a cost of Rs. 22.96 lakhs, Development of Polytechnics including Government Ceramic Institute, Gudur, Development of Government Polytechnic for Women, Kakinada and Guntur at a cost of Rs. 8.59 lakhs, expansion of Women's Polytechnics including diversification starting of Sand-wich Courses with an outlay of Rs. 2.44 lakhs, expansion of Polytechnics for Boys including diversification and sand-wich course at a cost of Rs. 6.19 lakhs and for Development of Government College of Music, Vijayawada at a cost of Rs. 6.87 lakhs.

A permanent cell for curriculum development in Civil Engineering is proposed to be established in this region at the Government Polytechnic, Vijayawada.

Rayalaseema:

20.11. The regional schemes for Rayalaseema have an outlay of Rs. 31.03 lakhs. The major schemes proposed are Development of Engineering College, Anantapur with an outlay of Rs. 8.09 lakhs, Development of Polytechnics at a cost of Rs. 10.25 lakhs, Expansion of Polytechnics including diversified courses at a cost of Rs. 4.59 lakhs, expansion of Degree Institutions including diversification and sand-wich courses with an outlay of Rs. 3.00 lakhs.

Telangana:

20.12. The outlay provided for regional schemes of Telangana is Rs. 44.58 lakhs. Schemes having a major share in the outlay are Development of Degree Institution (Nagarjunasagar Engineering College, Hyderabad) with an outlay of Rs. 19.85 lakhs, Sand-wich Polytechnic at Hyderabad with an outlay of Rs. 8.40 lakhs, Development of Polytechnics at a cost of Rs. 4.76 lakhs, strengthening of College of Fine Arts and Architecture, Hyderabad at a cost of Rs. 0.31 lakh, strengthening the Government Music College, Secunderabad at a cost of Rs. 2.59 lakhs.

21. MEDICAL SERVICES

The provision of efficient medical and health services for the well being of the people of the State is one of the primary responsibilities of a welfare State. The plan efforts under this sector have resulted in a significant improvement of the standards of health in the State compared to the standards which obtained in the pre-independence days. It is well-known that the life expectancy of the average Indian was as low as 27 years during pre-independence days. The life expectancy has significantly increased in the country and the State as a whole which is evident from the statement below:—

Item/Year	All—India		Andhra Pradesh	
	Males	Females	Males	Females
1. Life expectancy				
1951-61	41.9	40.6	37.8	36.0
1971-75	57.3	56.0	54.9	53.1
2. Birth and Death rates for population of 1,000				
Birth in the year				
1961				39.7
1971-75	41.7			33.6
33				
Death rate in				
1961	22.7			25.2
1971-75	11.2			13.4

21.2. It may thus be seen that the life expectancy of males and females which was 37.8 and 36 years during the period 1951-61, rose up to 54.9 for males and 53.1 years for females by the year 1971-75. This is obviously due to significant improvement in the standards of living and due to better medical and health services in the country and the State. However, it can be seen that the life expectancy in the State is lower and death rate is higher than All-India that shows the public health measures in the State are inadequate and require improvement. Along with this it is also necessary that emphasis is laid on medical care. The strategy in the Fourth Plan, therefore, has also to take into account the medical facilities available in the different areas of the State at different levels and the need to increase the hospitals in different areas espe-

cially in rural areas. Even where facilities are available there is need to improve the quality of these services.

The efforts in this sector could conveniently be discussed under two sections.

(a) Modern Medicine; and

(b) Indian Medicine and Homeopathy.

Modern Medicine:

21.3. Though the main objective has to be to prevent the incidence of diseases the need for the establishment of hospitals and dispensaries which deal with the curative aspect is still great as the general health and living standards are very low.

Objectives and Strategy:

21.4. The basic object is one of provision of adequate medical facilities dispersed appropriately over the different areas of the State. The objective also includes provision of specialised services in a decentralised fashion. Accordingly the plan envisages strengthening and expansion of taluk hospitals and headquarters hospitals, provision of adequate facilities in public health centres, and facilities for specialised treatment in the District Headquarters Hospitals. Concurrently the importance of Medical Education and Nursing Education is stressed.

Review:

21.5. The standard of curative service depends upon the availability of medical and para-medical personnel. Therefore during the First, Second and Third Plan periods the State bestowed particular attention and showed considerable progress in the field of medical education by establishing Medical Colleges, creating adequate facilities for the training of para-medical personnel. Though considerable progress has been recorded in the field of medical education there has not been equally good progress in providing medical care in general at district and taluk levels.

The following table gives the number of Medical Colleges, the admission capacity and the bed strength during the first three Five-Year Plans.

<i>Item</i>	<i>Unit</i>	<i>Position at the end of the First Plan.</i>	<i>Position at the end of the Second Plan.</i>	<i>Position at the end of the Third Plan.</i>	<i>Position at the beginning of the Fourth Plan.</i>
1.	2.	3.	4.	5.	6.
1. Medical Colleges	No.	5	8	8	8
2. Intake capacity	No.	365	830	1,120	1,150
3. Bed Strength.	No.	10,808	14,521	18,653	20,025

The total expenditure in this field in the Third Plan was Rs. 658.82 lakhs and in the Annual Plans 1969-69 it was Rs. 65.95 lakhs, Rs. 69.18 lakhs and Rs. 64.28 lakhs respectively.

Fourth Plan Programmes :

21.6. An amount of Rs. 348.25 lakhs has been provided for the medical services during the Fourth Plan. The break-up between State-wide and Regional Schemes being Rs. 18.62 lakhs and Rs. 329.63 lakhs. The share of Coastal Andhra, Rayalaseema and Telangana in the provision of Rs. 18.62 lakhs provided for State-wide Schemes is Rs. 8.37 lakhs, Rs. 4.52 lakhs and Rs. 5.73 lakhs respectively. Out of the provision of Rs. 329.63 lakhs for regional schemes, the outlays for Coastal Andhra, Rayalaseema and Telangana are Rs. 127.26 lakhs, Rs. 77.37 lakhs and Rs. 125.00 lakhs.

During the Fourth Plan it is proposed to lay greater stress on facilities for institutional and domiciliary services and treatment and training programmes for medical and para-medical personnel. It is also envisaged to provide laboratory, and diagnostic services and improve rural medical services. About half of the primary health centres in the State will be provided with their own buildings and residential accommodation for the essential staff in about 1/3 of the total Primary Health Centres.

All the taluk and non-taluk headquarters dispensaries will be upgraded into 8 bedded hospital each which would provide in all 368 additional beds. Further 942 beds in the district headquarters hospitals and 92 infectious diseases hospitals will be added during the course of the Fourth Plan.

There are 25 teaching hospitals in the State, 12 in Andhra region and 13 in Telangana region having a total sanctioned bed strength of 9,605 at the beginning of the Fourth Plan. It is proposed to increase the bed strength by 320 during the Fourth Plan period to meet the requirements of teaching medical colleges.

Thus, during the Fourth Plan period, 2,036 additional beds will be provided in the taluk, district teaching and other hospitals bringing the total bed strength to 22,061 at the end of the Fourth Plan.

Apart from increasing the bed strength in the hospitals it is also proposed to provide facilities for specialised treatment in the district headquarters' hospital.

It is proposed to add 50 additional seats to the existing in-take capacity of the medical colleges. Thus the total intake capacity of 8 medical colleges at the end of the Fourth Plan would be 1,200. Further post-graduate departments will be started in 5 medical colleges in the State.

At the College of Nursing, Hyderabad 15 additional seats would be provided during the course of the Fourth Plan under the training programme of Pupil Nurses, Auxiliary Mid-wives and B.Sc., Public Health, the additional intake capacity would be raised by 105, 120, and 15 respectively.

During the Fourth Plan it is also proposed to upgrade 10 T.B. control centres and convert the T.B. clinics into control centres at district level and into sub-centres at taluk levels. The domiciliary T.B. services in Hyderabad and Secunderabad will also be strengthened. Under Leprosy Control Scheme, 10 subsidiary centres would be converted into control units and 325 survey education and training centres will be established.

At the beginning of the Fourth Plan, there were 30 dental clinics, 14 ear, nose, tooth clinics and 14 eye clinics and 26 blood banks in the State. It is proposed to establish additional 6 dental clinics, 5 eye clinics and 6 blood banks during the Fourth Plan.

The important physical targets envisaged under medical services during the Fourth Plan are as follows:—

Item	At the beginning of the Fourth Plan i.e. 1969-70				At the end of the Fourth Plan 1973-74			
	Coastal Andhra	Rayala- seema	Telan- gana	Total	Coastal Andhra	Rayala- seema	Telan- gana	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Seats in Medical Colleges	450	250	450	1150	×	×	×	1200
2. No. of Hospital beds	×	×	×	20025	×	×	×	22061
3. Population per one Hospital bed	2580	2360	1762	2167	2335	2060	1676	19971
4. Population per one Doctor	5070	×	3740	4577	5000	×	3600	4400
5. Population per one Nurse	9377	×	8553	9193	9200	×	8500	9000

× Figures not readily available.

State-wide Schemes:

21.7. Only one scheme of additional staff nurses with a cost of Rs. 18.62 lakhs has been proposed in the Fourth Plan. The share of all the three regions in the above State-wide Schemes being Rs. 8.37 lakhs for Coastal Andhra, Rs. 4.52 lakhs for Rayalaseema and Rs. 5.73 lakhs for Telangana. Under this scheme additional staff nurses have been proposed to be created in teaching and district hospitals in order to meet the deficiency in accordance with the recommendations of the Central Council of Health and also the Indian Nursing Council.

*Regional Schemes:**Coastal Andhra:*

21.8. An amount of Rs. 135.63 lakhs has been provided in the Fourth Plan for the regional schemes of Coastal Andhra region. The schemes having major share in the outlay are (1) Improvements to district and taluk headquarters hospitals—Rs. 65.15 lakhs; (2) Government General Hospital, Kakinada—Rs. 30.83 lakhs; (3) Government General Hospital, Guntur—Rs. 9.07 lakhs; and (4) Medical Education—Rs. 8.15 lakhs.

Rayalaseema:

21.9. An amount of Rs. 77.37 lakhs has been earmarked for the regional schemes of Rayalaseema region. The important schemes, being (1) improvements to district and taluk headquarters hospital—Rs. 33.37 lakhs; (2) Kurnool Medical College—Rs. 12.04 lakhs; (3) Sri Venkateswara Medical College Rs. 9.20 lakhs; (4) S.V.R.K. Hospital, Tirupati—Rs. 7.86 lakhs; and (5) Government General Hospital, Kurnool—Rs. 5.65 lakhs.

Telangana:

21.10. The regional schemes in Telangana have an outlay of Rs. 125.00 lakhs. It is proposed to spend Rs. 12.65 lakhs for the improvements to Gandhi Medical College; Rs. 12.90 lakhs in Gandhi Hospital;

Rs. 10.50 lakhs on Osmania General Hospital, Hyderabad; Rs. 58.30 lakhs on district and taluk headquarters hospital; Rs. 6.79 lakhs on Osmania Medical College, Hyderabad; Rs. 4.89 lakhs for E.N.T. Hospital and Rs. 3.70 lakhs for M.G.M. Hospital, Warangal. The other schemes include establishment of dental clinics, eye clinics, blood banks, central sterils units etc.

Indian Medicine and Homeopathy:

21.11. The Department of Indian Medicine and Homeopathy is administratively concerned with five systems of treatment that is Ayurveda, Unani, Homeopathy, Yoga and Naturopathy. Substantial number of people have faith in homeopathy systems of medicine and appropriate importance to this field is an accepted policy of the State Government.

Objective and Strategy:

21.12. The primary objective of the development in this branch of development is provision of number of dispensaries and necessary clinical training facilities for the students. Special emphasis is given to opening up of dispensaries in Telangana.

Review:

21.13. During the Second and Third Five-Year Plan periods this department had developed and expanded in various spheres by opening of research wards, dispensaries, providing additional beds to the hospitals for providing clinical teaching facilities to the students of Ayurvedic and Unani Colleges.

During the Third Plan an amount of Rs. 13.68 lakhs was spent on Indian Medicine Programmes against the provision of Rs. 19.81 lakhs.

The provision and expenditure during the Annual Plans for 1966 to 1969 and its regional break-up was as under:

Year	Provision				Expenditure			
	Coastal Andhra	Rayala-seema	Telan-gana	Total	Coastal Andhra	Rayala-seema	Telan-gana	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1966-67	0.40	0.26	2.34	3.00	0.34	0.22	0.43	0.99
1967-68	0.78	0.38	1.09	2.25	0.76	0.36	0.97	2.09
1968-69	0.83	0.38	0.99	2.20	0.76	0.37	1.01	2.14

During the three Annual Plans i.e. 1966 to 1969, 17 dispensaries—(10 Ayurvedic, 5 Unani and 2 Homeopathy) were established.

Fourth Plan Programmes:

21.14. With a view to develop the Indian system of Medicine a sum of Rs. 18.79 lakhs has been provided in the Fourth Plan for implementation of various schemes of this Department. Out of the outlay of Rs. 18.79 lakhs an amount of Rs. 0.29 lakh is for State-wide Schemes and remaining Rs. 18.50 lakhs for regional schemes.

The details of region-wise physical targets under important schemes are as under:

	<i>Coastal Andhra</i>	<i>Rayala- Seema</i>	<i>Telangana</i>	<i>Andhra Pradesh</i>
<i>Indigenous System of Medicine</i>				
1. Hospitals Urban	2	—	—	2
2. Dispensaries „	4	8	12	24
3. Beds „	60	—	—	60

State-wide Schemes:

21.15. With an allotment of Rs. 0.29 lakhs for State-wide Schemes only one scheme of strengthening and expansion of the directorate has been proposed. The share of Coastal Andhra, Rayalaseema and Telangana in the above State-wide Scheme is Rs. 0.14 lakh, Rs. 0.06 lakh and Rs. 0.09 lakh respectively.

Regional Schemes:

21.16. The region-wise break-up of the amount of Rs. 18.50 lakhs provided for regional schemes is Rs. 6.88 lakhs for Coastal Andhra, Rs. 2.45 lakhs for Rayalaseema and Rs. 9.17 lakhs for Telangana.

Coastal Andhra:

Three regional schemes have been included in the Fourth Plan for this region with a cost of Rs. 6.88

lakhs. It is proposed to provide necessary clinical training facilities to the students of Ayurvedic College at Vijayawada and Homeo College at Gudivada.

Rayalaseema :

Only one regional scheme with a cost of Rs. 2.45 lakhs has been included in the Fourth Plan for Rayalaseema region. It is proposed to open 7 dispensaries of Indian Medicine and Homeopathy in the rural areas of Rayalaseema.

Telangana :

The provision for Telangana region for regional schemes is Rs. 9.17 lakhs and 8 dispensaries of Indian Medicine and Homeopathy are proposed to be opened in this region.

22. PUBLIC HEALTH

One of the main objectives of Welfare State is caring for health of the people. The preventive measures in terms of public health programmes is of particular significance in this regard.

Objectives and Strategy:

22.2. The object of Public Health Programmes was, in the past, essentially eradication of Malaria, Small-Pox etc. A new orientation is sought to be given in the Fourth Plan by emphasising the strengthening of permanent institutional arrangements in terms of public health centres, analytical laboratories, production of vaccines, and training programme for staff.

Review:

22.3. Under the public health programme almost all the All-India programmes like the National Malaria, Eradication Programme, Family Planning, National Smallpox Eradication Programme, B.C.G. Vaccine, started during the earlier Plan periods were continued to be implemented during the Third Plan and the subsequent 3 Annual Plans. In making a provision of Rs. 192 lakhs for the public health programmes in the Fourth Five-Year Plan this factor has been taken into account. The expenditure on the major programmes during the Third Plan and Annual Plans of 1966-67, 1967-68 and 1968-69 and the distribution of the proposed outlay in the Fourth Plan is indicated in the following table:—

Scheme	Expenditure				Outlay
	Third Plan	Annual Plan 1966-67	Annual Plan 67-68	Annual Plan 1968-69	Fourth Plan 1969-74
(1)	(2)	(3)	(4)	(5)	(6)
1. National Malaria eradication programme	507.01	106.25	105.11	102.00	..
2. National Small Pox eradication programme	81.22	14.00	12.20	10.00	..
3. Maternity and child welfare	0.93	0.20	0.55	0.50	10.00

4. Family Planning system	5.58	4.55	6.72	11.53	
5. P.H.Cs. (Building, strengthening the existing P.H.Cs and opening of new P.H.Cs).					42.56
6. Strengthening of Directorate, P.H. Laboratories. & District offices					46.09
7. Food & Drugs					25.47
8. S.H.T.O.					10.38
9. Buildings for Directorate and I.P.M.					11.00
10. Health Education and School Health services					11.42
11. Production of small pox vaccine					11.05
12. Other schemes	15.57	1.67	2.47	2.75	18.38
	610.31	126.67	127.05	126.80	186.35

It may be seen that during Third Five-Year Plan and subsequent 3 Annual Plans stress was laid on control of communicable diseases and family planning programmes.

Fourth Plan Programmes:

22.4. Out of the provision of Rs. 186.35 lakhs made in the Fourth Plan an amount of Rs. 42.25 lakhs is for State-wide Schemes. The share of Coastal Andhra, Rayalaseema, Telangana region in the State-wide Schemes being Rs. 18.22 lakhs, Rs. 10.23 lakhs and Rs. 13.80 lakhs respectively. For regional schemes an amount of Rs. 144.10 lakhs has been provided, the break-up between the regions being Rs. 57.42 lakhs for Coastal Andhra, Rs. 35.33 lakhs for Rayalaseema and Rs. 51.35 lakhs for Telangana.

The training programme of auxiliary health personnel is proposed to be continued during the Fourth Plan also. During the year 1969-70 12 Officers 8 from Andhra and 4 from Telangana were deputed for training in D.P.H. course in the Osmania Medical College, Hyderabad. During the year 1971-72 16 Officers are proposed to be deputed for undergoing this training.

The scheme of Immunisation programme with Polio vaccin envisages immunisation of children of the age-group of 0.5 years with Polio vaccin. It is proposed to take up the schemes in twin cities of Hyderabad and Secunderabad and in districts at block level at a cost of Rs. 100 lakhs each year.

It is proposed to strengthen the State Food and Analytical Laboratory at Institute of Preventive Medicine at Hyderabad besides establishing the regional laboratories under Prevention of Food and Adulteration Act.

Under the regional schemes of Auxilliary of Health personnel it is proposed to take up Sanitary Inspectors course at Gandhi Medical College, Hyderabad and Kurnool Medical College, Kurnool with an intake of 100 candidates at each College. The course has started in October, 1970 and it is proposed to be continued in the subsequent years of the Fourth Plan.

At present there are 3 Health Education Units located in the State of Andhra Pradesh. These units are inadequate to cover the needs of entire State. Under this scheme sanction has been accorded for appointment of 20 Health Educators at the rate of one for each district, 6 Projectionists-cum-Mechanics for the Rural Health Centres at Pattancheru, Simhachalam, Gollamanadala, Tadikonda, Chandragiri, and Parla. Sanction has also been accorded for purchase of 7 cine projectors for supply to the Rural Health Centres in the Andhra region.

It is proposed to extend the State Health Transport Organisation during the Fourth Plan. At present the number of vehicles are 971 (including Family Planning vehicles) which will be about 1,500 by the end of the Fourth Plan. A Regional Workshop at Karimnagar has been established during 1970, and certain improvements has been effected to the Central Workshop at Hyderabad. It is proposed to establish a Regional Workshop at Cuddapah.

At the beginning of the Fourth Plan there were 509 Public Health Centres functioning in the State. It has been proposed to open 39 new Public Health

Centres in the State during the course of Fourth Plan period especially in scheduled tribes areas where certain Blocks are without Public Health Centres.

School Health Service Scheme envisages immunisation of school-going children under age-group 6-16. 220 selected blocks in all the 21 districts consisting of 35.20 lakhs students, 12.80 lakhs students studying in municipal towns in the State and 2.35 lakhs students studying in the twin cities of Hyderabad and Secunderabad totalling to 5,035 lakhs students will be covered during the Fourth Plan with a cost of Rs. 5.50 lakhs by giving 5 closes of triple antigen during the first year and booster dose in the subsequent years. This scheme will be implemented from 1972-73 onwards.

The region-wise particulars of physical targets under certain important sectors of development under Public Health Programme are shown in the table below:—

Physical Targets during the Fourth Plan under Public Health Programme						
Sl. No.	Name of the Scheme	Units	Targets during the Fourth Plan i.e. '1969—'74			Total
			Coastal Andhra	Rayala-seema	Telan-gana	
1.	Training of Auxillary and Health Personnel :					
	(a) Officers	No.	19*	..	9	28
	(b) Sanitary Inspectors	No.	..	500	500	1,000
2.	Immunization of Children with Polio Vaccine 0-5 age group	No. in lakhs	2.55 lakhs	1.10	1.85	5.50
3.	School Health Services Children in 6-16 age group	No. in lakhs	22.00	12.35	16.00	50.35
4.	Opening of New Primary Health Centres	No.	20	7	12	39

*Represents both Coastal Andhra and Rayalaseema.

State-wide Schemes:

22.5. Eight schemes have been proposed with an outlay of Rs. 42.25 lakhs for public health programmes, out of the total outlay of Rs. 186.35 lakhs. The important schemes included are strengthening the State

Food and Analytical Laboratory at Institute of Preventive Medicine, Hyderabad with an amount of Rs. 6.10 lakhs, production of Small Pox Freez Dried Vaccine with a cost of Rs. 11.05 lakhs, staff schemes for strengthening of directorate at a cost of Rs. 6.30 lakhs. The other schemes included are D.P.H. Course, and Immunisation Programme with Polio Vaccine etc.

Regional Schemes:

Coastal Andhra:

22.6. A sum of Rs. 57.42 lakhs has been provided for the regional schemes. The major schemes included are strengthening of District Medical and Health Officers' Office at a cost of Rs. 16.82 lakhs, opening of New Primary Health Centres at a cost of Rs. 8.66 lakhs, building programme for Primary Health Centres at a cost of Rs. 5.40 lakhs, strengthening of Primary Health Centres with an outlay of Rs. 3.87 lakhs, appointment of Food Inspectors under the Food and Drugs Scheme at a cost of Rs. 6.34 lakhs.

Rayalaseema:

22.7. The regional schemes for Rayalaseema have an outlay of Rs. 35.33 lakhs in the Fourth Plan. The major schemes proposed are building programmes for Primary Health Centres with an outlay of Rs. 7.62 lakhs, appointment of Food Inspectors under Food and Drugs Scheme at a cost of Rs. 5.25 lakhs, opening of Primary Health Centres at a cost of Rs. 4.69 lakhs, strengthening of State Health Transport Organisation at a cost of Rs. 3.78 lakhs, strengthening of District Offices at a cost of Rs. 3.72 lakhs and Training Course at a cost of Rs. 1.00 lakh.

Telangana:

22.8. The outlay provided for regional schemes of Telangana is Rs. 51.35 lakhs. Schemes having major share in the outlay are, strengthening of District Offices with an outlay of Rs. 10.86 lakhs, building programme for Primary Health Centres at a cost of Rs. 6.82 lakhs, Food and Drugs Schemes at a cost of Rs. 7.78 lakhs, opening of Primary Health Centres at a cost of Rs. 4.71 lakhs and strengthening of State Health Transport Organisation at a cost of Rs. 4.71 lakhs.

23. URBAN WATER SUPPLY AND DRAINAGE

Andhra Pradesh State has one Corporation and 82 Municipalities with a population of 4.63 millions as per 1961 census representing 12.4 per cent of the State's total population. The Chief Engineer (R & B) is in charge of water supply schemes of the Hyderabad Corporation while the Public Health Engineering Department is in charge of the water supply and drainage schemes in the municipalities and towns.

Objectives :

23.2. Since provision of water supply and drainage facilities are most essential civic amenities, it is necessary that all the Municipalities in the State are covered atleast with protected water supply schemes. The objective of the Fourth Five-Year Plan under this Sector is to cover as many Municipalities as possible with protected water supply schemes taking advantage of the Plan allocations as well as institutional finances particularly from L.I.C. Similarly in order to augment the water supply potential in the twin cities, it has been proposed to take up the Manjira Water Supply Stage II Scheme.

Review :

23.3. During Third Five-Year Plan there was a provision of Rs. 561.85 lakhs for Urban Water Supply and Sewerage Schemes of Public Health Engineering Department. With this outlay, 36 schemes (24 spill-over from Second Plan plus 12 new schemes) were taken up and an expenditure of Rs. 547.16 lakhs was incurred during the Third Plan. Out of 36 Schemes taken up, 28 schemes were completed and the remaining 8 scheme have spilled-over to the Annual Plans commencing with the Annual Plan 1966-67. An additional amount of Rs. 75.00 lakhs was also made for protected water supply schemes in 58 Town Committees of Telangana region.

During Third Plan, 6 Municipalities *viz.*, Guduwada, Ongole, Anakapalli and Parvathipuram of Andhra region and Nalgonda (under non-Plan) and Sangareddy (Under Regional Committee Works) of

Telangana region were covered with protected water supply facilities. Thus the total number of Municipalities provided with protected water supply facilities were 43 out of 82 Municipalities by the end of Third Five-Year Plan covering a municipal population of 3.72 millions i.e. 80% of the total municipal population of 4.63 millions. Certain improvements to Hyderabad Drainage System were completed and one Municipality namely Vijayawada (Block I and II of eastern area) was provided partly with underground drainage facilities by the end of Third Plan.

During the Annual Plans of 1966-67, 1967-68, 1968-69 only spill-over schemes from Third Plan were in progress and no new schemes could be taken up as the outlay earmarked during the Annual Plans was not sufficient even to keep the tempo of progress on continuing schemes. During 1966-67, one scheme namely, Thatipudi Reservoir Scheme was physically completed augmenting the Visakhapatnam Water Supply by a quantity of 10 million gallons per day and water was also made available to industries on 31st March, 1967. During 1967-68, two drainage schemes, namely Vijayawada Drainage Scheme (Block I and II of eastern area) and Eluru Drainage Scheme (Southern area) were completed to the extent of their Plan provisions. During 1968-69 also, only spill-over schemes were in progress. However, two Water Supply Schemes of Bhainsa and Sadashivpet were completed during 1968-69 under Regional Committee Works Programme.

Thus, by the end of 1968-69, 45 out of 82 Municipalities in the State were covered with protected Water Supply Schemes. Out of 8 spill-over schemes from Third Plan, 3 schemes were completed and the remaining 5 schemes are to be covered during the Fourth Plan. At the beginning of Fourth Plan, 37 Municipalities were without protected water supply facilities.

Fourth Five-Year Plan Programmes:

23.4. An amount of Rs. 17.22 crores is provided in the Fourth Plan for Urban Water Supply and Drainage Schemes in the State. Of this, a sum of Rs. 7.99

crores has been allotted to schemes to be implemented by the Public Health Engineering Department and the balance of Rs. 9.23 crores is for the Manjira Water Supply and Hyderabad Water Supply Improvements Schemes to be implemented by the Chief Engineer (Roads and Buildings). The break-up of the amount of Rs. 17.22 crores is as follows :

P.H. Engineering Department :

(Rs. in lakhs)

1. Spill-over Urban Water Supply Scheme	78.50
2. Hyderabad Drainage Improvements	99.18
3. New Water Supply Schemes	621.32

R and B Department :

4. Improvements to Hyderabad Water Works including Rajendranagar Water Supply Scheme	150.97
5. Manjira Water Supply Scheme Phase I	61.58
6. Manjira Water Supply Scheme Phase II	711.00
Total	923.55

23.5. The provision of water supply and drainage facilities is the most essential of civic amenities. Under State's Fourth Plan, an outlay of Rs. 7.99 crores has been earmarked for Urban Water Supply and Sewerage Schemes under Chief Engineer, Public Health which includes L.I.C. loans to the extent of 2/3rd cost of the Schemes proposed during the Fourth Plan. The entire amount earmarked during Fourth Plan is proposed to be utilised only on Water Supply Schemes and Hyderabad Drainage Improvements Scheme. The outlay indicated in the Plan is not sufficient even to cover all Water Supply Schemes, and Drainage Scheme in all the Municipalities. Therefore, priority has been given to the Water Supply Schemes. Keeping in view the region-wise allocations, it has been proposed to take up 33 schemes (23 original Water Supply Schemes plus 10 Water Supply Improvements) in addition to 5 spill-over schemes and Hyderabad Drainage Improvements. Full provision

has been made for 28 schemes (18 Original plus 10 Improvements and the remaining 5 schemes will spill-over to next Five-Year Plan. With the outlay earmarked in the Fourth Plan it will be possible to cover all the Municipalities of Rayalaseema and Telangana Regions with protected water supply schemes. In the case of Coastal Andhra however, full provision is made for 5 Water Supply Schemes and they are expected to be completed by the end of the Plan.

By the end of Fourth Five-Year Plan, it is expected that 64 out of 82 Municipalities in the State will be covered with protected water supply facilities covering a municipal population of 4.193 millions or 90.5% of total municipal population of the State. In addition to the above, three more schemes will be completed outside the Plan in Telangana region. The region-wise proposals are detailed below.

Coastal Andhra;

23.6. In the Fourth Plan an outlay of Rs. 320.24 lakhs has been made for Water Supply and Sewerage Schemes of Coastal Andhra. There are 40 Municipalities in this region of which 20 are covered so far with protected water supply schemes and the rest 20 Municipalities are yet to be covered. The cost of these 20 Schemes works out to about Rs. 5.00 crores but the provision made in the Fourth Plan is only Rs. 298.24 lakhs. As such, it will not be possible to cover all the Municipalities with protected Water Supply Schemes. Keeping in view the allocation earmarked, it is proposed to include 10 new Water Supply Schemes, one Water Supply Improvements Scheme in addition to 2 Spill-over Schemes. Full provision has been made for the 2 spill-over schemes (Narasaraopet Water Supply Improvement and Gudiwada Water Supply Scheme). One Water Supply Improvements (Guntur Water Supply Improvements) and 5 new Water Supply Schemes (Pithapuram, Mandapeta, Tadepalligudem, Chilkaluripeta and Tenali). The above schemes will be completed by the end of the Fourth Plan. The other 5 new Water Supply Schemes of Bobbili, Samalkota, Narsapuram, Nidadavolu and Bapatla have been provided with partial provision in the Plan and these schemes will spill-over to next Five-Year

Plan. Thus by the end of Fourth Five-Year Plan, 25 out of 40 Municipalities in the Coastal Andhra region will be covered with Protected Water Supply Schemes. It is expected that 2 more schemes namely, Bhimavaram and Amalapuram will also be covered with protected water supply facilities outside the Plan Sector.

Rayalaseema :

23.7. In the Fourth Plan an outlay of Rs. 158.77 lakhs has been made for Water Supply and Sewerage Scheme of Rayalaseema region. There are 18 Municipalities in this region of which 13 are already covered with Protected Water Supply Schemes and the remaining 5 Municipalities are yet to be covered. Apart from this, certain improvements to the existing Water Supply Schemes have to be carried out. With the outlay of Rs. 158.77 lakhs made in the Plan, it will be possible to cover all the Municipalities with Protected Water Supply Schemes, and the Improvement Schemes wherever necessary will be taken up. Provision has been made for 5 new Water Supply Schemes and 7 Water Supply Improvements Schemes which will be completed by the end of 1973-74. Thus, all the 18 Municipalities in Rayalaseema region will be covered with Protected Water Supply Schemes by the end of the Fourth Plan.

Telangana :

23.8. In the Fourth Plan, an outlay of Rs. 319.99 lakhs has been made for Water Supply and Sewerage Schemes of Telangana region. There are 24 Municipalities and one Corporation in this region, of which the Corporation and 12 Municipalities are covered so far with Protected Water Supply Schemes. Of the remaining 12 Municipalities, one more Municipality namely, Zahirabad has been provided with protected water supply facilities during 1970-71 under Regional Committee Works Programme and 3 more Municipalities namely, Medak, Suryapet and Nirmal are being covered outside the Plan sector.

For providing Water Supply Schemes in the remaining 8 Municipalities and for taking up Water Supply Improvements in 2 Municipalities namely,

Bodhan and Adilabad, the Andhra Pradesh Regional Committee has resolved to raise 2/3 cost of the Schemes as L.I.C. Loan, and for the balance 1/3rd, the 1/2 of the 1/3rd cost after deducting centage charges will be met from Special Development Funds of Telangana. The total cost of the 8 new Schemes and 2 Water Supply Improvements Schemes works out to Rs. 205.67 lakhs. The amount to be met from the Special Development Funds for Telangana is Rs. 21.37 lakhs which has not been included in the normal plan outlay.

Full provision has been made for (i) 3 Spill-over Schemes (Warangal Water Supply Improvements, Khammam Water Supply Improvements and Remodelling of Secunderabad Water Supply Scheme), (ii) 8 new Water Supply Schemes (Gadwal, Narayanpet, Bhongir, Siddipet, Jagtial, Mancherial, Kagaznagar and Jangaon, (iii) 2 Water Supply Improvements Schemes (Bodhan and Adilabad). The amount left over after providing for the above schemes is earmarked for Hyderabad Drainage Improvements Schemes. An outlay of Rs. 99.18 lakhs has been made for taking up improvements to the existing Hyderabad Drainage System.

Thus by the end of Fourth Plan, it is expected that all the Municipalities in Telangana region will be covered with Protected Water Supply Schemes. Due to inadequate plan provision it has not been possible to include stage-II (B) of Warangal Water Supply Improvements Scheme which costs about Rs. 5.00 crores.

Chief Engineer (R& B):

23.9. At present water is being supplied to the cities of Hyderabad and Secunderabad from Osman-sagar System, Himayatnagar System and Manjira Water Supply Scheme Phase I. The total supply potential available from the above three systems is of the order of 62.48 million gallons per day by the beginning of the Fourth Plan.

It is estimated that the demand for water in the Hyderabad Corporation area by 1981 would be to the

tune of 95.50 million gallons per day for an anticipated population of 22.00 lakhs. It is proposed to meet the additional demand by executing Manjira Water Supply Scheme, Phase II and by drawing an additional quantity of 5 million gallons per day from the Osman-sagar Reservoir by improvements to Hyderabad Water Works. The schemes included in the Fourth Plan are discussed below :

Improvements to Hyderabad Water Works :

23.10. To meet the immediate requirements of water for the twin cities during pre-Manjira Phase II period, it is proposed to draw an additional quantity of 5 million gallons per day of water from Osmansagar. The scheme consists of the following:—

(a) Construction of R.C.C. intake well of 20 ft. internal dia at Osmansagar;

(b) Treatment works near the barrage to treat well as Osmansagar to distribution chamber at Shaikpet, to carry 5 million gallons of raw water per day.

(c) Laying 27" dia R.C.C. pipe line from Shaikpet to Asifnagar filters to carry 5 million gallons per day of raw water; .

(d) To lay a 24" dia P.S.C. line from Asifnagar filters to Red Hills High Level Reservoir to carry 5 million gallons per day of treated water; and

(e) Construction of additional filter beds at Asifnagar to treat 6 million gallons per day of raw water.

Manjira Water Supply Scheme, Phase I :

23.11. An amount of Rs. 61 lakhs is provided in the Fourth Plan for completing the Spill-over Works under Phase I of Manjira Water Supply Scheme.

Manjira Water Supply Scheme, Phase II :

23.12. Under Manjira Water Supply Scheme, Phase I, a barrage was constructed across river Manjira. At present a quantity of 16 million gallons per day is being drawn through Phase I pipe lines. It is proposed to draw the balance water available through

Manjira Water Supply Scheme, Phase II. The scheme mainly consists of the following:—

(a) Pumping main including pump houses, pumps etc. to pump additional quantity of 33 million gallons per day of filtered water;

(b) Treatment works near the barrage to treat 33.0 million gallons per day of raw water to yield 33 million gallons per day of filtered water;

(c) Service Reservoir at Hydernagar and Alwal of 5.00 million gallons per day capacity each; and

(d) Gravity main and necessary distribution system.

The estimated cost of Manjira Water Supply Scheme, Phase II is Rs. 11.95 crores. However, an amount of Rs. 7.11 crores only is provided in the Fourth Plan. With this outlay, it is expected that the installation of pumping main, pumps and motors and treatment works will be completed by the end of the Plan and a portion of the filtered water will reach up to Lingampalli from where it can be supplied through the existing gravity main of Manjira Water Supply Scheme, Phase I. The scheme is proposed to be completed in all respects in the Fifth Plan.

24. RURAL WATER SUPPLY

The problem of drinking water in rural areas is given importance since the beginning of the Third Five-Year Plan and substantial amounts were spent on this programme. The Plans have the objective of providing adequate drinking water facilities in a phased programme to all villages giving priority according to acuteness of the problem.

The problems of drinking water in villages can be classified into three types *viz.* (1) Lack of any near by source for drinking water. (2) Inadequacy of the available sources of drinking water. (3) Pollution of the available source due to insanitary maintenance and other reasons. Top priority is given for the villages of the first category for providing them with adequate drinking water facilities and the next priority to augmenting supply of water when it is inadequate. The problem of pollution is also attempted to be solved by providing protected water supply.

Objectives and Strategy:

24.2. The objective of Rural Water Supply Programme is to provide adequate and healthy water to all human settlements in the State.

The strategy adopted is to categorise the villages on the basis of the acuteness and the type of the problem and take up the programmes on a priority basis. The utilisation of rigs and other equipment depending on the necessities in the area identified is yet another aspect of the approach to this problem. In addition to the Plan effort, utilisation of the institutional finance by the various local bodies is envisaged. Hence the actual physical coverage of the villages is likely to be more than what is envisaged in the Plan. Infact the object is to attempt full coverage of all villages.

Reviews:

24.3. At the beginning of Third Plan a quick survey was conducted about the availability of drinking water and it revealed that the problem was acute in 31,873 villages and hamlets. Later a detailed enquiry was conducted into the adequacy of drinking water afresh using the yardstick of one well for every hundred persons. This revealed that all the villages and

hamlets (54,145) in Andhra Pradesh come under either one of the first two categories viz. (1) No source of drinking water, (2) inadequacy of the available sources. The region-wise and category-wise distribution of these villages and hamlets are shown below.

Category	Coastal Andhra	Rayalaseema	Telangana	Total
<i>Villages and Hamlets</i>				
Not even one source of drinking water.	16,851	15,210	13,490	45,551
inadequacy of existing drinking water.	3,515	1,682	3,397	8,594
Total:	20,366	16,891	16,887	54,145

More than 84% of the total villages and hamlets did not have even one good drinking water source. Nearly 83 per cent of villages in Coastal Andhra, 90 per cent of villages in Rayalaseema and 80 per cent of villages in Telangana did not have even one good source of drinking water.

An amount of Rs. 655.44 lakhs was spent in the Third and the three subsequent Annual Plans. Adequate water facilities were provided for 31,996 villages and hamlets by the beginning of the Fourth Plan. The region-wise distribution of achievements are shown below:

Item	Table			
	Coastal Andhra	Rayalaseema	Telangana	Total
1. Total No. of Category I villages and hamlets.	16,351	15,210	13,490	45,551
2. No. of villages and hamlets provided with drinking water facilities.	12,190	10,771	9,035	31,996
3. Percentage to the total of villages and hamlets in category (1)	72	74	67	70
4. No. of category I villages and hamlets yet to be provided with drinking water facility.	4,661	4,439	4,458	13,555

Nearly 72 per cent of villages in Coastal Andhra, 74 per cent in Rayalaseema and 67 per cent in Telangana of the Category I villages and hamlets were provided with drinking water facilities. Sufficient water could be found with conventional excavation wells in most of the villages now provided with drinking water facilities. However, this is not the case with many of the other villages yet left to be provided. They will require the use of powerful rigs and hence this will involve considerable cost and some delay. The total amount required to provide sufficient drinking water in all the rest of the villages is estimated at Rs. 8.56 crores and about 51 rigs will be required. Eight rigs provided by UNICEF are now being used for this purpose.

Protected water supply schemes are mainly intended to provide purified water through pipes to villages whose source of water is polluted. Government sanctioned 974 schemes for investigation and preparation of estimates. Out of these villages, 239 schemes were taken up for execution. These schemes include also three comprehensive schemes for groups of villages which are not endowed with underground water at shallow depths. These three schemes are (1) Kondapalli scheme benefitting 14 villages and about 50,000 population; (2) Uravakonda scheme benefitting 17 villages and 56,000 population; (3) Alur scheme benefitting 39 villages and one lakh population. The total cost of all these schemes is estimated at Rs. 10 crores. An amount of Rs. 1.82 crores was provided upto 31st March, 1969 and about 160 schemes were completed and commissioned. The region-wise progress of these schemes is given in the following table :

Table				
Item	Coastal Andhra	Rayala- seema	Telangana	Total
1. Total No. of schemes sanctioned.	465	63	446	974
2. No. of schemes completed and commissioned up to 13-3-69.	73	8	79	163
3. Expenditure in Rs. lakhs.				182.83

Fourth Plan Programmes:

24.4. In the Fourth Plan Rs. 503.81 lakhs are provided for rural water supply schemes and Rs. 250.00 lakhs for protected water schemes. All the schemes are regional schemes. With these amounts, it is proposed to provide drinking water to 10,500 villages and hamlets and complete 200 P.W.S. Schemes.

Coastal Andhra:

24.5. An amount of Rs. 154.33 lakhs is provided for rural water supply schemes and Rs. 96.19 lakhs for protected water supply schemes. The target for rural water supply schemes is fixed at 3,595 villages and hamlets. Thus a total of 15,875 villages and hamlets would be provided with drinking water facilities leaving 4,581 villages and hamlets yet to be provided at the end of Fourth Plan.

In regard to protected water supply schemes 465 schemes were sanctioned originally for investigation for supplying protected water. Of this 91 schemes were taken up for implementation and 73 were completed upto 31st March, 1969. An amount of Rs. 96.19 lakhs are provided to complete the spill-over schemes and take-up 140 new schemes during the Fourth Plan.

Rayalaseema:

24.6. An amount of Rs. 201.43 lakhs is provided for the Rural Water Supply Schemes in the region. It is proposed to provide drinking water facilities to 3,336 villages and hamlets during the Fourth Plan. Thus, a total of 14,107 villages and hamlets would be provided with drinking water facilities leaving 2,785 villages and hamlets still to be provided with adequate drinking water facilities at the end of Fourth Plan.

In regard to protected water supply 63 schemes were sanctioned originally for investigation for supplying protected water. Of this, 10 schemes were taken-up and 8 schemes were completed upto the end of 1968-69. An amount of Rs. 59.66 lakhs is provided to complete the spill-over schemes and take up 64 new schemes during the Fourth Plan.

Telangana:

24.7. An amount of Rs. 148.05 lakhs is provided for the Rural Water Supply to provide drinking water to 3,569 villages and hamlets. Thus, the total number of villages and hamlets provided with drinking water facilities at the end of Fourth Plan would be 12,604 leaving 4,283 villages and hamlets still to be provided with adequate drinking water facilities.

In regard to protected water supply 446 schemes were sanctioned originally for investigation to supply protected water. Of these, 139 schemes were taken-up and 79 schemes were completed. An amount of Rs. 94.15 lakhs is provided to complete the spill-over schemes and to take up 130 new schemes.

25. HOUSING

The ultimate objective of all economic development is to increase the welfare of the people and welfare is closely connected with the satisfaction of three basic needs *viz.*, food, shelter and clothing. Apart from its welfare objective, housing activity is also important for economic development because of its capacity to stimulate growth in other sectors connected with building materials and because it creates employment.

In our plans, a major part of the investments on housing will be in the private sector and the role of the Government in the provision of housing is relatively limited to the construction of houses or provision of loan assistance for house construction to the weaker sections of the society.

The problem of housing is different in rural and urban areas. While in rural areas the problem is mainly related to providing housing facilities to economically weaker and socially backward sections of the society, the problem in urban areas is related to providing adequate accommodation to rapidly growing migrant population from rural areas.

The essential tasks in the sphere of village housing will be to get appropriate layouts made for the growing villages, to provide basic amenities such as water and sanitation facilities, and to stimulate private building and renewal activity. Encouragement will have to be given to co-operative effort. Special housing schemes for the Scheduled Castes or other under privileged classes should be integrated into the village layout along with general housing programmes.

Objectives and Strategy:

25.2. The objectives of housing programmes in the State are—

- (a) to provide house sites and housing facilities in the rural areas especially to Scheduled Castes and Tribes;

- (b) to provide housing facilities in select villages on a planned basis in the rural areas;
- (c) to make a modest effort towards slum clearance in the urban areas;
- (d) to provide housing for industrial workers; and
- (e) the first objective is proposed to be achieved through special programmes while provision is made in the plan to meet the other objectives. The effort towards housing provided in the plan is only partial and a number of other institutions like State Housing Federation, Scheduled Castes and Scheduled Tribes Housing Federation, State Housing Board etc. are expected to play a leading role in providing housing facilities by attracting institutional finance outside the plan.

Review :

25.3. The State Plan Schemes on housing in urban areas consists mainly of (1) assistance by way of loans for construction of houses and (2) construction of houses for giving them away to needy on rental or hire purchase terms. They mainly cater to slum dwellers, industrial workers and low income groups. The schemes relating to slum dwellers are implemented by Hyderabad Municipal Corporation for Hyderabad City, Director of Municipal Administration and Andhra Pradesh Housing Board. Andhra Pradesh Housing Board also undertakes construction of houses for Low Income Groups to be given on rental or hire purchase basis. Registrar of Co-operative Societies implements schemes relating to Low Income Groups and Industrial Workers by giving loans to the concerned Co-operative Housing Societies. Housing for industrial workers is also promoted by Commissioner of Labour.

Under rural housing a village housing project was taken up during the Second Five-Year Plan as a centrally sponsored project which involves development of selected villages in a planned manner by giving assistance for housing and other amenities.

The scheme-wise and department-wise expenditure incurred so far on housing from 1961-62 to 1968-69 is shown in the following table:

Schemewise and Departmentwise expenditure incurred on Housing in State plans from 1961-62 to 1968-69.

Department	Rs. in lakhs				
	Slum Clearance and sweepers housing	Industrial labourers housing	Low income group housing	Rural housing	Total
1	2	3	4	5	6
1. Registrar of Co-op. Societies			121.84		121.84
2. Director of Municipal Adm.	37.93			16.35	54.28
3. Housing Board	1.71			33.91	35.62
4. Director of Town Plannig				41.34	41.34
5. Commissioner of Labour		50.15			50.15
6. Hyderabad Municipal Corporation	61.33				61.33
7. Others	0.43				0.43
Total	101.40	50.15	172.10	41.34	364.99

The region-wise and department-wise expenditure on housing from 1961-62 to 1968-69 is shown in the following table:

State Plan Expenditure on Housing schemes in Andhra Pradesh in the Third and subsequent Annual Plan.

Sl. No.	Department	Rs. in lakhs			State total
		Coastal Andhra	Raylaseema	Telangana	
1.	Registrar of Co-op. Societies	62.22	10.37	49.25	121.84
2.	Director of Mun. Admn.	33.41	11.20	9.67	54.28
3.	Housing Board	—	—	35.62	35.62
4.	Director of Town Planning	17.84	8.67	14.83	41.34
5.	Commissioner of Labour	30.38	0.55	19.22	50.15
6.	Hyderabad Municipal Corporation	—	—	61.33	61.33
7.	Others	—	—	0.43	0.43
	Total	143.85	30.79	190.35	364.99

Fourth Plan Programmes:

25.4. An amount of Rs. 764.13 lakhs is provided for housing programmes in the Fourth Plan. This includes an amount of Rs. 534.44 lakhs to be obtained as a loan from the Life Insurance Corporation which will be redistributed among various schemes as per their requirements from year to year. The region-wise and department-wise break-up of this Plan provision is shown in the following table:

Regionwise and Departmentwise allocation of IV Plan
Provision for housing.

Sl. No.	Department	Rs. in lakhs			
		Coastal Andhra	Rayala-seema	Telanga	State total
1.	Registrar of Co-op. Societies	39.19	25.41	4.40	69.00
2.	Director of Mun, Admn.	14.46	7.09	11.81	33.36
3.	Housing Board	9.16	4.13	6.49	19.78
4.	Director of Town Planning	3.04	1.38	2.48	6.90
5.	Commissioner of Labour	3.64	4.95	4.46	13.05
6.	Hyderabad Municipal Corporation	—	—	87.60	87.60
7.	L.I.C. loans)Plg. Dept.)	260.25	102.95	171.24	534.44
	Total	329.74	145.91	288.48	764.13

There is no State-wide scheme implemented under this head except an amount of Rs. 0.27 lakh proposed for Andhra Pradesh Co-operative Housing Federation as managerial assistance.

*Regional Schemes:**Coastal Andhra:*

25.5. This region is provided with an amount of Rs. 329.74 lakhs. Of this an amount of Rs. 260.25 lakhs is financed from L.I.C. loans.

An amount of Rs. 14.46 lakhs is provided to Director of Municipal Administration from State Plan funds for Slum Clearance Scheme. It is proposed to utilise this amount to develop 924 plots in various towns in the region.

Under Industrial Labour Housing, an amount of Rs. 3.64 lakhs is provided to Commissioner of Labour. It is proposed to construct 50 single room tenements in Guntur, 29 single room tenements for labourers in Sarvaraya Textiles in Chelluru, and some more houses for workers in Andhra Pradesh Paper Mills at Rajahmundry in Co-operative sector in addition to 72 houses already constructed in 1968-69.

Low Income Group Housing Schemes consist of provision of loans for construction of houses, and also construct houses for giving them to Low Income Group population on rental or hire purchase terms. The loans for construction of houses are given through Co-operative Housing Societies. This scheme is implemented by Registrar of Co-operative Societies. An amount of Rs. 39.19 lakhs is provided for this scheme in this region. In another scheme, Andhra Pradesh Housing Board constructs houses and sells them on hire purchase terms. An amount of Rs. 9.16 lakhs are provided for this scheme.

The objective of Village Housing Project is to develop selected villages in a planned manner by providing housing and other amenities. Zilla Parishads have selected Panchayat Samithis which in turn selected 156 villages for which Master Plans were prepared. The scheme is so far implemented in 79 villages and about 1,325 houses were constructed; 5.38 kms. of streets and 2.67 kms. drains were laid; 80 house sites were allotted. It is proposed to continue the Scheme with provision of Rs. 3.04 lakhs during the current plan.

Rayalaseema:

25.6. Slum Clearance Scheme is intended to construct shelters to slum clearance and clear slum areas. The scheme is implemented by Director of Municipal Administration. An amount of Rs. 7.09 lakhs is pro-

vided to have 468, open developed plots in Fourth Plan period. Industrial Labour Housing Scheme is intended to assist construction of houses for industrial workers. The scheme is implemented by Commissioner of Labour. An amount of Rs. 4.95 lakhs is provided for this scheme in the region. It is proposed to construct 100 single-room tenements in Adoni, 40 two-room tenements in Co-operative sector in Guntakall, and assist construction of 18 two-room tenements by Panyam Cements in Bugganapally of Kurnool district. Low Income Group Housing Scheme is intended to assist and construct houses for low income groups. The scheme is partly implemented by Registrar of Co-operative Societies by advancing loans and constructing share capital to Andhra Pradesh Housing Federation which in turn gives loans to Co-operative Housing Societies. Andhra Pradesh Housing Board constructs houses and sells them to low income group household on hire purchase terms. An amount of Rs. 25.41 lakhs is provided to Registrar of Co-operative Societies and Rs. 4.13 lakhs to Housing Board for these schemes in this region.

The objective of Village Housing Project is to develop selected villages in a planned manner and provide housing and other amenities. Zilla Parishads have selected Panchayat Samithis which in turn selected villages for implementation of this scheme. Ninety-six villages have been selected for which Master Plans have been prepared. About 177 houses were constructed and 1.5 kms. of streets were formed. It is proposed to continue the scheme for which an amount of Rs. 1.38 lakhs is provided during the current plan..

Telangana :

25.7. Slum Clearance Scheme is intended to construct houses for slum dwellers and clear the slums. The scheme is implemented by Hyderabad Municipal Corporation in Hyderabad and Director of Municipal Administration in other municipal towns. An amount of Rs. 99.41 lakhs is provided for Telangana under this head. Of this, an amount of Rs. 87.60 lakhs are to be spent in Hyderabad and the rest Rs. 11.81 lakhs in other towns of Telangana. It is proposed to develop 726 open developed plots in the municipal towns other than Hyderabad city.

Industrial Labour Housing Scheme is intended to construct houses for labourers working in industries. The scheme is implemented by Commissioner of Labour. An amount of Rs. 4.46 lakhs is provided for this scheme in the region. It is proposed to construct 200 single-room tenements in Sirpur Kagaznagar, 50 two-room tenements in Peddapally of Karimnagar district, 100 single-room tenements for labourers in Allwyn Metal Works in Hyderabad.

Low Income Group Schemes consist of provision of loans and construction of houses to low income groups. One scheme is to give loans to low income group households for constructing houses through Co-operative Housing Societies. This scheme is implemented by Registrar of Co-operative Societies and an amount of Rs. 4.40 lakhs provided for this scheme in the region. Andhra Pradesh Housing Board constructs houses and sells them on hire purchase terms. An amount of Rs. 6.45 lakhs is provided for this scheme.

The objective of Village Housing Project is to develop selected villages in a planned manner and provide housing and other amenities. Zilla Parishads have selected Panchayat Samithis which in turn selected 198 villages. The scheme is implemented in 103 villages. 2,161 houses, 7.14 kms. of streets, 3.06 kms. of drains were completed. The scheme is proposed to be continued with a sum of Rs. 2.48 lakhs provided during the current plan.

26. WELFARE OF SCHEDULED TRIBES

The tribal population in the State was 13.24 lakhs as per the 1961 census. About 2/3rds of this population *viz.*, 8.83 lakhs was in Coastal Andhra, while 1.52 lakhs or 11.5 per cent was in Rayalaseema and 2.89 lakhs or 21.0 per cent in Telangana. Out of the 212 tribal groups listed in the Scheduled Tribes (Modification) order 1956, 33 tribal groups are resident in this State. Gond, Koya, Konda Reddi, Savara, Bagatha, Valamiki, *etc.*, tribes are the major groups. Yanadi, Yerukala and Sugali tribes form distinct groups though some of them inhabit the plain regions of the State. Other important tribes in the State are Bill, Mali, Manne Doar, Naik and Reddi Dora.

The total scheduled area in Andhra Pradesh is 29,683 sq. kms. accounting for over 10 per cent of the geographical area of the State. The scheduled areas can be classified into three broad categories *viz.*, (1) the upper Agency area covering Araku, Anantahagiri, Munchingutta, Paderu, Gangarajumadgole, Pedabayaul and Chintapalle areas of Visakhapatnam district; (2) the lower Agency area covering Koyyuru in Visakhapatnam district, Seethapet, Pachipenta and Bhedragiri Blocks of Srikakulam district, Rampachodevaram Maredumilli, Addateegala and Rajavommangi Blocks of East Godavari district and Polavaram and Buttayagudem Blocks of West Godavari district; and (3) the Tribal Development Blocks of Khammam, Warangal and Adilabad districts. The scheduled area in Andhra Pradesh covers 4,346 villages in the districts of Srikakulam, Visakhapatnam, East Godavari, West Godavari, Khammam, Warangal, Adilabad and Mahbubnagar. There are at present 24 Tribal Blocks in the State with an area of 22,212.40 square K.Ms. covering a tribal population of 5.31 lakhs. About 7.93 lakh tribals are living outside the Tribal Development Blocks. Out of this, 2.90 lakh tribals live in isolated pockets in the State while 5.03 lakh tribals live in the plains. According to the 1961 population census literacy among the scheduled tribes was only 4.41 per cent compared to 31.2 per cent among the total population in the State. As regards occupational pattern 29.5 per cent of the tribals were cultivators and 20.8 per cent were agricultural labourers. Thus in all 82.3 per cent

of the workers among scheduled tribals were engaged in Agriculture and Agricultural labour. In addition, the collection of minor forest produce such as tamarind, myrobolams, soapnuts, etc., is a subsidiary occupation for tribal people. Podu cultivation is also common among tribals more particularly among the Bagathas, Savaras, Gabadas and Khonds. The chen-chus of Nallamalai Forest in Kurnool district and Mahbubnagar district have still not out-grown the primitive stage of food gathering and hunting in forest areas, while the main occupation of the Yanadis is fishing. Land is the most prized possession of the tribals. The land owned by tribals has not so far been surveyed and settled in the scheduled areas of Andhra region. The pressure on land has been increasing and the tribal areas represent a typical example of an impoverished economy eking out a precarious existence at substandard subsistence levels. The low yield in agriculture the total lack of industrialisation, inadequacy of transport and communication facilities, a high ratio of tribal population below 14 years of age, illiteracy, ignorance, superstition, custom-bound traditions and a low standard of living would more or less sum up the living conditions of the tribal population of this State.

Objectives :

26.2. The objectives of the tribal development plan are:—

- (a) to emphasise programmes of permanent economic uplift of the tribals resulting in higher standards of living ensuring continuity of the positive culture of the tribals;
- (b) to provide the necessary facilities for exploitation of the identified economic base especially agriculture in terms of land assignments, land tenures, tenancy regulation etc.;
- (c) to ensure adequate educational, health and housing facilities both within the plan and outside the plan through the proposed Housing Corporation;
- (d) to ensure that the day-to-day requirements of the tribals are provided at reasonable prices and also reasonable price is assured for

- the tribals for their products especially for the minor forest produce procured by strengthening the Girijan Co-operative Corporation;
- (e) to provide essential facilities for agricultural development of the tribals in terms of plough bullocks, agricultural implements and short term inputs, *etc.*;
 - (f) to diversify the economy of the tribals by encouraging animal husbandry programmes, taking up trades by the tribals and also train up tribals in a number of avocations; and
 - (g) to ensure adequate integration of the State plan programmes with a variety of Central sector programmes for tribal development.

Strategy :

26.3. The strategy for the development of tribals in the Fourth Plan takes into account the various tribal groups spread over different areas with different Socio-economic levels. The programmes appropriate to their background have been worked out in keeping with the broad strategy. This has resulted in diversification and re-orientation of the programmes meant for the development of the tribals in the earlier plans. Enhanced emphasis is laid on the economic uplift programmes involving identification of the major economic base namely, Agriculture and taking up activities resulting in permanent asset formation such as irrigation facilities. A more profitable agriculture is intended to be brought about through additional emphasis on the supply of short term inputs as also the provision of bullocks and agricultural implements *etc.* Concurrently, the provision of basic socio-economic facilities in terms of Education and Housing will also be taken up. A crash programme for housing is intended to be executed not only through normal plan funds but also with the help of the proposed Housing Corporation for Scheduled Castes and Scheduled Tribes. The re-orientation in educational facilities is in terms of greater allocation for Ashram schools, school buildings and Hostel buildings and other facilities.

26.4. In agency areas special Legislative measures to afford relief from exploitation of tribals by the non-tribals in terms of land transactions and credit have

been taken up. More specifically, the reforms in the protective Legislation to plug the loop holes in the laws are the following:—

- (a) Assignment of land to non-Tribals has been totally prohibited in the Scheduled areas;
- (b) Survey and Settlement of un-surveyed Scheduled areas has been undertaken as per the Andhra Pradesh Scheduled areas Ryotwari Settlement Regulation, 1970;
- (c) Intermediary Tenure has been abolished by law [Andhra Pradesh Muttas (Abolition and Conversion) into Ryotwari Regulation 1970] pending regular survey and settlement, the Collectors are issuing provisional pattas by getting the land under the occupation of each Tribal, measured;
- (d) The Andhra Pradesh Land Transfer Regulation 1959 has been suitably amended and now there is absolute prohibition of transfer of immovable property in Scheduled areas to persons other than Tribals;
- (e) Debt Relief and Regulation of Private Money Lending are also covered by suitable Legislation; and
- (f) Arrangements have also been made to provide alternative institutional credit as a corollary to the Debt Relief and Money Lending Regulations.

26.5. Most of the tribals live under perpetual indebtedness to money lenders and petty traders from the plains. The traders were supplying the tribals with their daily requirement in exchange of minor forest produce to the disadvantage of the tribals. The minor forest produce and agricultural produce being seasonal and perishable, the tribals had no option but to sell the produce in shandies to the merchants at un-economic prices. With a view to prevent this exploitation by petty traders the Girijan Co-operative Corporation was established. The Corporation mainly serves as a welfare institution and protects the economic interests of the tribals. It offers better prices for the agency produce to the tribals and supplies them their

daily requirements on no profit—no loss basis. The Corporation also advances loans at nominal interest to the tribals under various Categories. During 1968-69,, Rs. 22.20 lakhs worth of minor forest produce and Rs. 8.34 lakhs worth of agricultural produce was purchased from the tribals while the Corporation sold daily requirements worth Rs. 68.20 lakhs to the tribals.

A provision of Rs. 12.75 lakhs is made towards assistance to the Corporation to expand its activities in the Fourth Plan.

Review:

26.6. Efforts made in the previous Plans brought a new ray of hope to the tribals in the State. Welfare schemes were designed and drawn up during these years to achieve integrated development of tribal areas covering Agriculture, Animal Husbandry, Communications, Education, Cottage Industries, Health and Medical facilities etc. The total expenditure during 1951 to 1969 was Rs. 621.51 lakhs which roughly works out to Rs. 47 per capita of Tribal population. It was during the Third Plan that significant progress in tribal development was achieved in this State. 20 Tribal Development Blocks were also started during this period in addition to four existing Multipurpose Blocks in the tribal areas.

An amount of Rs. 179.71 lakhs during the Third Plan and Rs. 73.80 lakhs during the subsequent Annual Plans was spent for implementing various tribal welfare programmes covering agriculture, minor irrigation, soil conservation, communications, education and other economic uplift schemes. Under agriculture cultivating families were supplied plough bullocks seed and other inputs free of cost besides maintaining several demonstration units, pilot farms and horticulture units for training the tribals in improved methods. The programmes under soil conservation consisted of mainly raising coffee plantations in Coastal districts to provide employment to the tribals there. The schemes covered under education were Ashram schools, Award of Scholarships, Running of hostels, provision of midday meals etc., which were meant for spreading education among the tribal children. Other economic uplift programmes included credit and

marketing facilities through co-operatives and development of cottage industries utilising forest produce as raw materials.

Communication being an important infrastructure for opening up the area and integrating the tribal economy with the rest, is given highest priority in the previous plans. In the third plan a major part of the outlay i.e., Rs. 87.48 lakhs was incurred on communications. The tempo is maintained in the subsequent three Annual Plans by incurring an expenditure of Rs. 34.49 lakhs.

Education is another important factor for changing the outlook of tribals. Educational facilities were provided at a cost of Rs. 13.09 lakhs in the Third Plan and Rs. 7.02 lakhs in the subsequent Annual Plans. As a result of these investments in the earlier plans 367 hostels with a strength of 10,475 of scheduled tribe boys, 68 hostels with a strength of 2,204 of denotified tribe boys and 112 Ashram schools with 6,000 boarders were functioning in the State. In addition, there were 379 aided primary schools, 797 Government Primary Schools, 37 Upper Primary Schools and 20 Secondary Schools serving the tribal population at the beginning of the Fourth Plan.

Besides providing infrastructure and education facilities, programmes for economic upliftment of the tribals were also taken up to accelerate their development. These programmes included development of agriculture, irrigation, credit, marketing and cottage industries. An important development in the economic uplift programmes was the establishment of the Girijan Co-operative Corporation to free the tribal population from the clutches of the petty traders, money lenders and other exploiters. The Corporation directly makes purchases of forest and agricultural produce from the tribal people and supplies their needs at economic prices. The expenditure incurred for these programmes was Rs. 60.47 lakhs in the Third Plan and Rs. 28.98 lakhs in the subsequent Annual Plans.

The problem of health and housing of tribal people are well known and they received their due attention in the earlier plans. An amount of Rs. 18.67 lakhs in

the third plan and Rs. 3.31 lakhs in the subsequent Annual Plans was incurred on these schemes.

Fourth Plan Programmes :

26.7. An amount of Rs. 581.09 lakhs is provided for economic and cultural development of tribal population in the State Region-wise allocations are Rs. 311.62 lakhs for Coastal Andhra, Rs. 72.98 lakhs for Rayalaseema and Rs. 196.49 lakhs for Telangana. Apart from more than two fold increase in the total provision as compared to third plan which was only Rs. 179.71 lakhs, there is also marked departure in the allocation of funds between different programmes. In the third plan and the subsequent Annual Plans major share of the Plan provision (nearly 50 per cent) was spent on communications alone. As compared to this, the emphasis is shifted to economic uplift programmes (including Housing and Health) which are given a provision of Rs. 245.20 lakhs which works out to more than 42 per cent of the total outlay, while no amount is provided for communications programme which is supposed to be taken care of in the general plan. An allotment of Rs. 151.78 lakhs is earmarked for education schemes.

The programme of economic uplift of tribals includes supply of plough bullocks, Minor Irrigation, Colonisation scheme, Assistance to set up trades, free distribution of agricultural inputs, Housing grants, financial assistance to Girijan Co-operative Corporation etc., intended for the betterment of the tribals. The schemes proposed under Education programme are Establishment of Hostels and Ashram Schools, Supply of books, slates etc., Scholarships and Financial assistance for tribal boys seeking employment to enable them perform necessary journeys for the purpose.

State-wide Scheme :

26.8. There is only one State-wide scheme under which scholarships will be awarded to post-matric students, the rate of scholarship depending upon the class and course. An amount of Rs. 11.83 lakhs is provided for this scheme and all the tribal students studying in post-matric classes will be provided scholarships.

REGIONAL SCHEMES :

*Coastal Andhra :*26.9. (a) *Education :*

Under the scheme supply of books, slates and clothing, each student is paid an amount of Rs. 20 for the purpose of a slate, books and a pair of clothes dress etc. The total provision under this scheme is Rs. 6.98 lakhs. The total amount provided for Hostels for Tribals is Rs. 21.23 lakhs. This amount will be utilised for maintaining the Hostels existing and starting 8 more new hostels in the region. An amount of Rs. 12.87 lakhs is provided for the construction of buildings and starting of 25 Ashram Schools in this region. It is proposed to start one Central Hostel in this region and an amount of Rs. 2.50 lakhs is earmarked for this purpose. The strength of this Hostel will be 100 where bright tribal boys will be admitted and given special coaching facilities so as to bring them on par with non-tribal students. On account of the discontinuance of the practice of supplying Nationalised Text Books under the "Gift Scheme" a scheme for free supply of Nationalised Text Books is included in the plan for which a provision of Rs. 4.00 lakhs is made. A scheme for providing financial assistance to tribals studying professional courses and also those who are in need of finances to perform journeys to and from the place of interview is envisaged. Actual cost of journey to be performed and the charges for boarding and lodging will be paid to the needy people. An amount of Rs. 2.80 lakhs is earmarked for this purposes.

(b) *Economic Uplift :*

Tribals who have been assigned land and those who are not in a position to cultivate the land already under their possession due to lack of plough bullocks will be supplied a pair of plough bullocks and a plough free of cost. The provision under this scheme viz., supply of plough bullocks to agency tribals is Rs. 7.51 lakhs. In all, about 1,690 tribal people will be benefited by this scheme. An amount of Rs. 13.01 lakhs is earmarked for taking up small Minor Irrigation schemes which do not fall within the purview of the Public Works Department. Under a scheme for 'Colonisa-

tion' tribals will be settled on reclaimed land and facilities like irrigation etc., will be provided. This scheme is aimed at weaning away Tribals from "Podu" cultivation. The outlay proposed is Rs. 9.00 lakhs. An amount of Rs. 3.00 lakhs is provided for financial assistance to the Girijan Co-operative Corporation to expand its activities. A scheme for sanction of grants to tribals for setting up various trades such as Flour Mills, Teashops, provision stores, Cycle shops etc., in order to diversify the occupational pattern of the tribals is envisaged. An amount of Rs. 4.60 lakhs is earmarked for this purpose. Agricultural Schemes are proposed to help the tribals to take to settled agriculture. Under this scheme seed, fertilisers etc., will be supplied to the tribals free of cost and an amount of Rs. 7.00 lakhs is earmarked for this purpose.

(c) Health, Housing and Other Schemes :

Assistance at the rate of Rs. 500 per family will be given to the tribals for housing. An amount of Rs. 11.64 lakhs is provided for this purpose. An amount of Rs. 9.21 lakhs is earmarked for supplying a pair of plough bullocks and a plough to each cultivating family of Yarukalas. Assistance at the rate of Rs. 400 per family for the purchase of a pair of bullocks will be provided to 2,450 families under this scheme. An amount of Rs. 10.07 lakhs is provided for sinking of community Drinking water wells. Provision is made for establishing 2 ten-bedded hospitals at a cost of Rs. 4 lakhs. Besides, two mobile medical units will be started at a cost of an additional Rs. 2.00 lakhs.

(d) Training of tribals as Village Officers :

An amount of Rs .040 lakh is provided to start a training centre where the tribals will be imparted training so as to enable them to pass the prescribed tests for being appointed as Village Officers.

Rayalaseema :

26.10. *(a) Education :*

Under the scheme "supply of books, Slates and Clothing" Rs. 20 is paid to each tribal student for the

purchase of a slate, books and a pair of clothes. The amount provided for this purpose is Rs. 1.69 lakhs. There are already 5 hostels functioning in this region. An amount of Rs. 8.83 lakhs is provided for maintaining the existing hostels and starting 5 more new hostels. Rs. 6.00 lakhs is provided for the construction of buildings and starting of 7 Ashram Schools during the plan. An amount of Rs. 2.50 lakhs is earmarked for starting one Central Hostel with a strength of 100 boarders. This hostel also will function on the lines of the Hostel mentioned under Coastal Andhra schemes. For free supply of Nationalised Text Books provision of Rs. 1.00 lakh is made. This scheme is similar to the one mentioned under Coastal Andhra schemes. An amount of Rs. 1.60 lakhs is earmarked for financial Assistance to tribals seeking employment and to undergo training in Nursing *etc.* The scheme envisages provision of financial assistance to tribals desirous of undergoing professional training and also to those who are unable to meet the expenses to perform the journeys to appear for interviews for jobs.

(b) Economic Uplift :

An amount of Rs. 5.90 lakhs is earmarked for free supply of plough bullocks and plough to cultivating tribals. The beneficiaries under this scheme in this region will be Chanchu tribals. 1,000 tribal families will be benefitted by this scheme. Under Colonisation scheme tribals will be settled in land and facilities like land reclamation and irrigation will be provided to them. A namount of Rs. 5.16 lakhs is earmarked for this purpose. An amount of Rs. 2.20 lakhs is earmarked for assistance to tribals to set up trades. The scheme is the same as the one mentioned under Coastal Andhra Schemes. Under Agricultural schemes Rs. 3.00 lakhs is provided for free supply of fertilizer seeds, implements *etc.*, to the cultivating tribals.

(c) Health, Housing and other Schemes :

A provision of Rs. 5.26 lakhs is made for providing financial assistance to tribals for the construction of houses at the rate of Rs. 500 per family, 1,360 families will be benefitted by this scheme. An amount of Rs. 3.80 lakhs is earmarked for free supply of 1,372

pairs of plough bullocks and equal number of ploughs. Rs. 6.05 lakhs is earmarked for construction of community drinking water wells. An amount of Rs. 2.00 lakhs is provided for the opening of ten-bedded hospital in the tribal areas of this region. Rs. 1.00 lakh is provided for starting of one Mobile Medical Unit in the tribal areas of this region.

Telangana :

26.11. (a) *Education :*

An amount of Rs. 5.47 lakhs is earmarked for the purpose of providing Slates, books and clothes at the rate of Rs. 20 per student. The total allocation for the "Hostels for tribals" scheme is Rs. 30.61 lakhs. Under this scheme, 15 new hostels will be started besides the maintenance of the existing 18 hostels for tribal students. Rs. 27.39 lakhs is earmarked for the maintenance of 5 existing Ashram Schools and opening of 30 Ashram Schools as also the construction of Ashram School buildings in this region. An amount of Rs. 2.25 lakhs is provided for starting of one Central Hotel in this region. Rs. 4.00 lakhs is provided for free supply of Nationalised Text Books. An amount of Rs. 1.85 lakhs is provided for Financial Assistance to tribals seeking employment and admission in Nursing and Veterinary courses in this region.

(b) *Economic Uplift :*

Rs. 7.45 lakhs is provided for supplying 1,978 pairs of Plough Bullocks to cultivating tribals. An amount of Rs. 10.93 lakhs is provided for taking up small Minor Irrigation Works which do not fall within the purview of the Public Works Department. Rs. 15.70 lakhs is provided to take up colonisation scheme in this region. The tribals will be settled in colonies and provided with agricultural lands and irrigation facilities. An amount of Rs. 6.75 lakhs is provided for extension of the activities of the Girijan Cooperative Corporation to Telangana area.

Rs. 2.60 lakhs is earmarked for starting 6 Rural Veterinary Dispensaries during the Fourth Plan. An amount of Rs. 3.50 lakhs is earmarked for starting

3 Minor Veterinary Dispensaries in tribal areas during the Fourth Plan. Rs. 6.45 lakhs is set apart for the purpose of giving grants to tribals for setting up trades like provision stores, tea shops, etc. An amount of Rs. 0.47 lakhs is provided for the Survey and settlement operations of the scheduled areas of this region. Under agricultural schemes an amount of Rs. 9.50 lakhs is provided for free supply of agricultural inputs to the cultivating families of tribals.

(c) Health, Housing and other Schemes :

Rs. 16.34 lakhs is earmarked for providing financial assistance at the rate of Rs. 500 per family for the construction of houses and 3,200 families will be accommodated under this. An amount of Rs. 12.71 lakhs is provided for free supply of 3,135 pairs of plough bullocks to tribals. An amount of Rs. 12.30 lakhs is provided for construction of drinking water wells. Two ten-bedded hospitals with the buildings will be opened in the tribal areas of this region. The provision made for this purpose is Rs. 7.59 lakhs. Three Mobile Medical Units will be started at a cost of Rs. 3.10 lakhs in the tribal areas of this region. An amount of R. 0.50 lakh is provided for training of tribals as Village Officers.

27. WELFARE OF SCHEDULED CASTES AND OTHER BACKWARD CLASSES

It is not possible to achieve any measure of social justice in our society without raising the social and economic standards of the Scheduled Castes and other Backward Classes which form the bulk of the lower income groups in the society. In order to raise the social, educational and economic standards of backward classes, special schemes have been taken up in the earlier plans. The Scheduled Castes formed roughly 14 per cent of the population of the State as per 1961 census. The Scheduled Castes population in Coastal Andhra was 18.87 lakhs forming 37.9 per cent of the total Scheduled Castes population in the State while it was 9.21 lakhs or 18.5 per cent in Rayalaseema and 21.66 lakhs or 43.6 per cent in Telangana.

According to the 1961 population census, literacy among the Scheduled Castes in the State was 10.0 per cent compared to 21.2 per cent among the total population. The levels of literacy were also different among the three regions *viz.* 12.2 per cent in Coastal Andhra, 7.7 per cent in Rayalaseema and 9.0 per cent in Telangana. There were 7,202 matriculates among Scheduled Castes in Coastal Andhra, 2,056 matriculates in Rayalaseema and 3,096 in Telangana. As regards, occupational pattern, 78.1 per cent of the workers were engaged in agriculture—22.4 per cent as cultivators and 55.7 per cent as agricultural labourers. Though there was not much variation among the regions in the proportion of total workers engaged in agriculture, the proportion of cultivators varied widely from region to region. The cultivators formed 14.0 per cent in Coastal Andhra, 22.8 per cent in Rayalaseema and 29.5 per cent in Telangana.

Objectives :

27.2. The objectives are :

- (a) to strengthen and expand educational facilities first by providing land for cultivation more hostels, award of fellowships, book grants *etc.*, with a view to giving greater opportunities for permanent uplift and absorb them in the stream of national life;

- (b) to emphasize programmes of economic uplift, first by providing land for cultivation—government land and land made available through effective implementation of land legislation, second by making maximum use of co-operatives and institutional finances, and third, within the plan, by providing physical inputs like bullocks etc.; and
- (c) to provide adequate housing facilities by establishment of a Housing Corporation.

Review :

27.3. The levels of well-being among Scheduled Castes and Backward Classes have not risen considerably and the process of their integration with the rest of the communities has not been rapid enough. The programmes meant for Scheduled Castes fall under three categories *viz.* Education, Economic uplift and others including Health and Housing while those intended for Backward Classes are mainly educational schemes barring a few schemes under economic uplift.

The expenditure incurred on the programmes under this head during the Third Plan and the subsequent Annual Plans 1966-69, was Rs. 171.09 lakhs on Scheduled Castes and Rs. 39.82 lakhs on Backward Classes. Out of Rs. 171.09 lakhs spent for Scheduled Castes, Rs. 143.06 lakhs was on educational schemes, Rs. 7.57 lakhs on economic uplift schemes and the rest of Rs. 19.92 lakhs on health, housing and other schemes. From out of the amount incurred on programmes meant for Backward Classes, Rs. 36.29 lakhs was on education and the rest was on economic uplift schemes.

The following were the region-wise institutions started for the welfare of Scheduled Castes and other Backward Classes during the previous plans and functioning at the beginning of the Fourth Plan.

Institution	Coastal Andhra	Rayala- secma	Telan- gana	Total
1. High Schools	4	—	—	4
2. Elementary Schools	373	146	—	529
3. Govt. Hostels	98	51	168	317
4. Training-cum-Production Centres	10	6	9	25
5. Homes for the aged & disabled	1	—	1	2

In addition to the above Government Institutions, there were 676 hostels run by the social workers and voluntary organisations at the beginning of the Fourth Plan which were getting subsidies from the Social Welfare funds for providing free lodging and boarding facilities to the Scheduled Castes and other economically Backward Classes students.

Besides the above institutions operating for the betterment of Scheduled Castes and Backward Classes children there is a scholarship scheme under which pre-matric scholarships are issued to deserving students both belonging to Scheduled Castes as well as Backward Classes. Under the scholarship scheme, 18,232 pre-metric scholarships were given to the Scheduled Castes students while 14,766 scholarships were granted to other Backward Classes students during the Third Plan and subsequent Annual Plans. Monetary aid was also given to students of primary classes belonging to Scheduled Castes and 90,720 students of Backward Classes. In addition to the provision of free boarding facilities in the Government hostels, 25,944 boarding grants were given to those staying in private hostels. Under the economic uplift programme for the Scheduled Castes, 1,213 pairs of plough bullocks were supplied free of cost and another 4,765 persons were given monetary aid for starting cottage industries. 3,776 Backward Classes persons were also given aid for starting cottage industries.

Fourth Plan Programmes:

27.4. An amount of Rs. 107.03 lakhs is provided for educational schemes for Scheduled Castes, and Rs. 32.25 lakhs for Backward Classes, schemes for economic uplift, meant only for Scheduled Castes cost Rs. 47.00 lakhs.

All the schemes will be implemented on uniform basis throughout the State. The provision for Coastal Andhra, Rayalaseema and Telangana regions will work out to Rs. 68.54 lakhs, Rs. 86.07 lakhs and Rs. 56.36 lakhs respectively under Scheduled Castes programme and Rs. 14.42 lakhs, Rs. 8.18 lakhs and Rs. 11.65 lakhs respectively under other Backward Classes programme.

Scheduled Castes Programme :

27.5. There are six educational schemes viz., Stipends and Scholarships to the students studying in Industrial Training Institutes, Maintenance of Government hostels, Monetary aid for clothing, Book Banks, Construction of Government hostel buildings and Nutrition and three economic uplift schemes viz. Interest free loans, Supply of Milch Cattle and Assistance to agriculturists.

Under educational schemes to Scheduled Castes students 5,110 pre-matric stipends will be given to the students in Industrial Training Institutes while 78,000 Government hostel students will receive monetary aid for clothing during the Fourth Plan. 326 Government hostels will be opened for the benefit of Scheduled Castes. There are 29 hostels run by the Department exclusively meant for the Scheduled Castes students of post-matric classes. It is proposed to open some more hostels exclusively for post-matric Scheduled Castes students. Book banks will be opened in 51 hostels during the Fourth Plan period and 12 Government hostel buildings will be constructed. CARE food will be supplied to 5,47,200 Scheduled Castes boarders in Government and subsidised hostels along with an equal number of pre-school age outside children and pregnant and lactating women.

During the Fourth Plan period, under the scheme "Economic uplift" interest free loans will be given to 650 persons particularly to the educated unemployed belonging to Scheduled Castes. Milch cattle will be supplied to 1,080 families. In addition, 1,300 families will receive agricultural aid for the purchase of plough bullocks, agricultural implements etc.

Backward Classes :

27.6. There are four schemes for Backward Classes viz. stipends to students studying in Industrial Training Institutes Nutrition programmes to the hostel students Government hostels and supply of milch cattle.

Under the above schemes stipends will be granted to 2,356 students of Industrial Training Institutes, and 127 new Government hostels will be opened, 75,600 Backward Classes students of the Government and subsidised hostels will be supplied CARE food irrespective of the age-group along with an equal number of pre-school age children and pregnant and lactating women. Milch cattle will be supplied to 501 families during the Fourth Plan period.

28. SOCIAL WELFARE

The programmes under social welfare broadly aim at the welfare and development of the weaker and more vulnerable sections of the population by social reform, and provision of social assistance which includes supplementary welfare services mainly at the local level by financial aid to agencies working for eradication of social evils. The Director of Women Welfare, the Director of Social Welfare and the Inspector-General of Prisons operate these programmes.

As a result of the concerted efforts made during the Third Plan and the subsequent Annual Plans 1966-69, there are a number of welfare institutions functioning in the State. A beginning was also made in the Third Plan towards the development of basic services for education and rehabilitation of the physically handicapped and the extension of welfare services for women and children in rural areas.

Women and Child Welfare:

28.2. The Women Welfare Department is incharge of implementing women and child welfare schemes. An amount of Rs. 34.27 lakhs was spent during the Third Plan and a sum of Rs. 11.08 lakhs during the subsequent Annual Plans 1966-69. At the beginning of the Fourth Plan 37 Children's Homes, 34 Creches, 28 Balavihars, 5 Service Homes and 4 State Homes for Women, 2 District Tailoring Centres and 7 Vocational Training Centres were functioning in the State, the regional break-up of which is as follows:—

Regions	Child-rens' Homes	Creches	Bala-vihars	Service Homes	State Homes	District Tailoring Centres	Vocational Training Centres
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coastal Andhra	11	10	8	3	1	..	2
Rayalaceema	9	8	9	1	1	1	3
Telangana	17	16	11	1	2	1	2
Andhra Pradesh	37	34	28	5	4	2	7

28.3. A provision of Rs. 22.96 lakhs is made in the Fourth Plan for Women and Child Welfare Schemes, of which Rs. 0.67 lakh is for Coastal Andhra, Rs. 6.79 lakhs for Rayalaseema and Rs. 15.50 lakhs for Telangana. The Women and Child Welfare Schemes included in the Fourth Plan are described below.

28.4. There is one State-wide scheme *viz.* Reorganisation of the Department under which it is proposed to purchase three jeeps for the three regions in the State, besides opening 2 Childrens' Homes and 5 Creches in the Telangana region. There are no regional schemes in Coastal Andhra. There are six regional schemes in Rayalaseema *viz.*

- (i) Regional Home for Physically Handicapped;
- (ii) Opening of Creches;
- (iii) Construction of 'State Home' Building at Kurnool;
- (iv) Construction of 'service Home' Building at Anantapur;
- (v) Study tours for the officers; and
- (vi) Grant-in-aid to State Social Welfare Advisory Board for starting one Family and Child Welfare Project.

Under these schemes one Regional Home for physically handicapped children and 2 Creches will be opened in Rayalaseema besides the construction of buildings for the 'State Home' and 'Service Home' at Kurnool and Anantapur respectively. In the 'Regional Home' to be started, handicapped children of 1-5 age-group will receive preprimary education and those in 6-18 age-group will be sent to local Government Schools for education. The Andhra Pradesh State Social Welfare Advisory Board has proposed to implement one Family and Child Welfare project in the region for which Rs. 0.54 lakh is provided in the Plan towards grant-in-aid.

28.5. The two schemes proposed to be taken up in the Telangana region in the Fourth Plan are—

- (i) Schemes for providing employment to women at district headquarters and

- (ii) Women welfare branches in tribal areas under which 8 Tailoring units in all district headquarters except Hyderabad and 15 Women Welfare branches and 5 Creches in tribal areas of Telangana will be opened. The Women Welfare branches proposed in the tribal areas will serve as nuclei for integration of all activities for the social and economic uplift of the tribal women.

Other Social Welfare Programmes :

28.6. The Inspector-General of Prisons is incharge of some of the social welfare schemes connected with the eradication of beggary, juvenile delinquency etc. During the Second and Third Five-Year Plans, one Junior Certified School and one Senior Certified School for Boys and one Girls Certified School and a Remand Home for Girls were started at Hyderabad. A Borstal School for confinement of adolescent offenders at Visakhapatnam and a Junior Certified School at Eluru were also started. During the Third Plan, Welfare Officers were appointed in jails and the probation services were developed in phases. A scheme for control and eradication of juvenile vagrancy and begging was also started during the last phase of the Third Plan.

28.7. During 1967-68 the department was strengthened with the appointment of 5 Probation Officers. Certain facilities for the children of female prisoners were also made available at the Central Jail, Hyderabad and the State Jail for Women at Rajahmundry. During 1968-69 5 more Probation Officers were appointed.

28.8. The Fourth Plan provision for the schemes to be implemented by the Inspector-General of Prisons is Rs. 3.89 lakhs. There are two schemes proposed of which one is a State-wide scheme *viz.* strengthening of field staff for probation work. The provision for this scheme is Rs. 2.76 lakhs. Under the second scheme one Remand Home will be established in or around Tirupati in Rayalaseema region at a cost of Rs. 1.13 lakhs. With this all the three regions will have Remand Homes.

28.9. Several other schemes meant for the welfare of the weak and vulnerable sections of the society were also implemented during the Third Plan period. The old age pension scheme was implemented in the State at a cost of Rs. 40.04 lakhs. A social and moral hygiene and after care programme for men was also implemented at a cost of Rs. 0.89 lakh. Beggar homes were run at a cost of Rs. 0.91 lakh. Ten Welfare Extension Projects were also continued during the Third Plan at a cost of Rs. 1.34 lakhs.

28.10. An amount of Rs. 3.75 lakhs is provided in the Fourth Plan for the schemes of the Director of Social Welfare. With this provision, it is proposed to open two orphanages one each in Rayalaseema and Telangana regions.

29. CRAFTSMEN TRAINING AND EMPLOYMENT SCHEMES

The programme under this Sector consists of three groups. The first group includes Labour Welfare Schemes, Administrative Machinery for conciliation of disputes and assistance to Trade Union. The second group comprises the schemes of setting up Employment Exchanges, collection of employment market information and establishment of Vocational Guidance Units. The third group relates to the schemes for Training of Craftsmen in order to provide technical hands to meet the manpower requirements of the factories.

Objectives :

29.2. The objectives are—

- (a) to provide facilities for starting two labour welfare centres and also to provide certain equipment to the centres already set up in the earlier Plan period;
- (b) to provide medical facilities to industrial workers and their families by appropriate contribution to E.S.I. Schemes;
- (c) to establish Vocational Guidance Units at Srikakulam, Ongole, Cuddapah and Adilabad, Nalgonda and Sangareddi; and
- (d) to introduce in Industrial Training Institutes more popular and employable trades like Tractor Mechanics, Motor Mechanics, Tool and Die-making, Instruments Mechanics etc.

Review :

29.3. As against an outlay of Rs. 104.14 lakhs provided in the State's Third Plan, an expenditure of Rs. 94.07 lakhs was incurred under this Head of Development. Of this, an amount of Rs. 73.76 lakhs on Craftsmen Training Schemes, Rs. 13.99 lakhs on Labour Welfare Schemes and Rs. 4.86 lakhs towards the State's share of E.S.I. schemes was incurred. During the Third Plan period, 3,884 additional seats were provided in various trades by way of establishing

12 new I.T.Is., and expansion of six I.T.Is. Two new trades viz., "Building construction" and "Stenography" were introduced at I.T.I. at Hyderabad. The total intake capacity of I.T.Is., by the end of Third Plan was 7,420. During the 3 Annual Plan years, an expenditure of Rs. 48.34 lakhs was incurred.

Fourth Plan Programmes:

29.4. An outlay of Rs. 52.54 lakhs was made for this Sector of development. Three Heads of Departments are implementing the schemes under this head of development. The amount allotted for each Department and the region-wise break-up of this outlay is as shown below:

	(Rs. in lakhs)			
	Coastal Andhra	Rayalaseema	Telangana	Total
1. Craftsmen Training schemes	14.18	7.82	13.79	35.79
2. Employment Service schemes	0.30	0.30	2.25	2.85
3. Labour & Labour Welfare schemes	1.99	1.14	1.57	4.70
4. E. S. I. schemes	4.20	1.97	3.03	9.20
	20.67	11.23	20.64	52.54

29.5. No expansion of Industrial Training Institutions either in number or in capacity is proposed to be taken up. However, in place of certain over crowded trades like Carpentry, Blacksmithy fitting etc., certain popular and employment oriented trades like tractor mechanics, motor mechanics, tool and die-making instrument mechanics etc. were introduced. It is also proposed to introduce in some of the I.T.Is. new trades like mechanic farm equipment on a phased programme. It is also proposed to start new I.T.Is. at Mudhole and Gannavaram. To mitigate rising unemployment especially among the educated ones, vocational guidance, giving advice on choice of proper career and furnishing information on various occupations of which they have little information has assumed considerable importance. Vocational guidance units are proposed to be started at Srikakulam, Ongole and Cuddapah in Andhra and Adilabad, Nalgonda, and Sangareddi in Telangana.

29.6. It is proposed to establish 2 labour welfare centres one at Rajahmundry and other at Gudur during the Fourth Plan period. With a view to consolidating the labour statistics on a scientific manner, it is proposed to establish a statistical cell in the Office of the Commissioner of Labour. It has been decided to have a separate machinery to deal with the Acts, viz., "The Payment of Bonus Act 1965", "Trade Unions Act, 1926, The Workmen Compensation Act, 1923". It is proposed to appoint three Labour Enforcement Officers one each at Hyderabad, Visakhapatnam and Kurnool to attend to the enforcement work.

30. STATISTICS

All the schemes under this head are State-wide schemes.

30.2. During the Third Plan period, the various Statistical units in the Bureau of Economics and Statistics were strengthened and two new units *viz.*, Labour Statistics Unit and Official Statistics Unit were established. Besides, in order to improve the quality and timeliness of agricultural statistics at the primary level, Taluk Statistical Assistants were appointed in all the taluks. During 1966-67 the State Income Unit was strengthened and a Public Finance Unit was established in the Bureau to undertake studies pertaining to resource mobilisation. The Agricultural Statistic Unit at the headquarters and the statistical agencies at the district level were further strengthened in 1967-68.

30.3. The main objective of the schemes proposed in the Fourth Plan is to fill up the gaps in the availability of the data required in the context of Planning and also to improve the quality and timeliness of the data already available. It is proposed to take up surveys on distributive trade, goods traffic by roads, housing facilities and working class family budget enquiries besides strengthening the Bureau for over-all Planning purposes. The Fourth Plan outlay proposed for all the schemes of the Bureau of Economics and Statistics is Rs. 10.20 lakhs.

